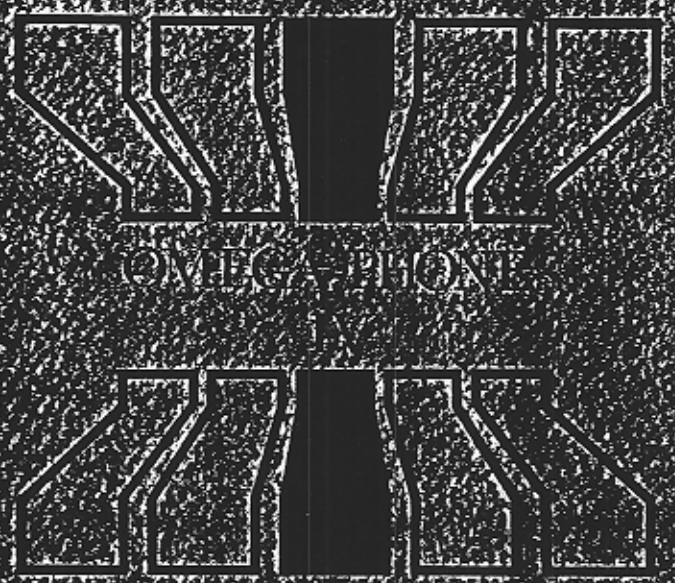
EX-1232/2464

ELECTRONIC KEY TELEPHONE SYSTEM

INSTRUCTION MANUAL



OMEGA-PHONE

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ELECTRONIC KEY TELEPHONE SYSTEM

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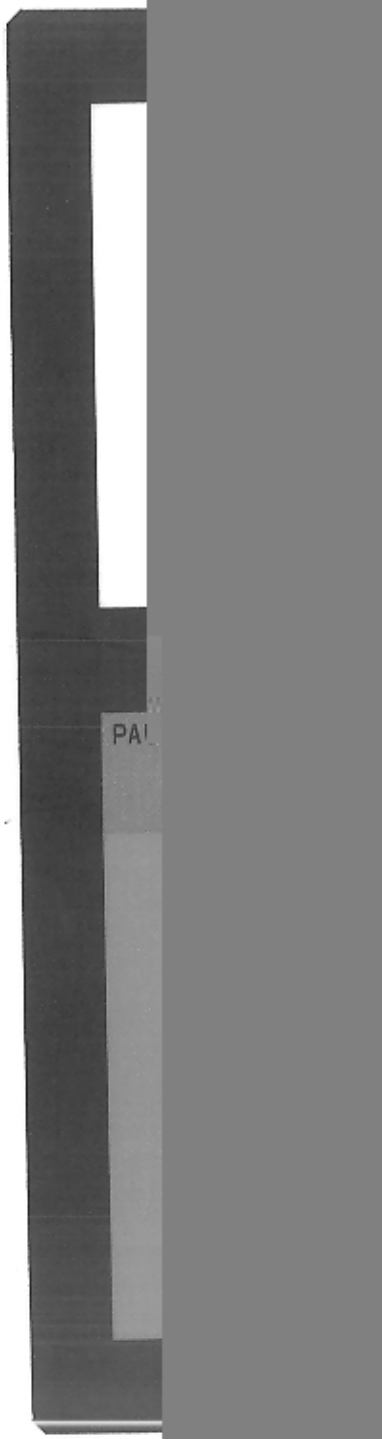
OMEGA-PHONE®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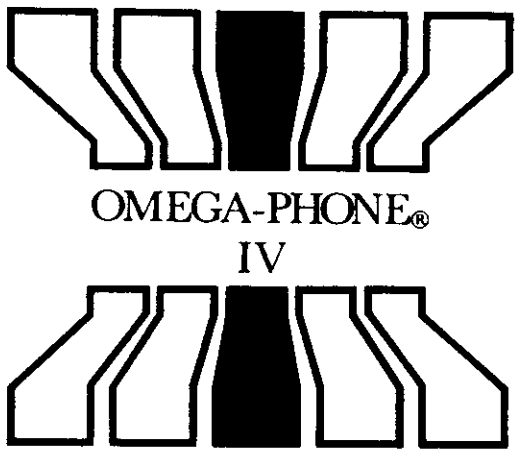

2.1 GENERAL

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2.1.2.2 Abbreviations

The meanings of the abbreviations used in Part 2 of this manual are given in Table 2.1.2.2.

Table 2.1.2.2 Abbreviations in Part 2

No.	Abbreviation	Meaning
A	ADD	Add-on conference key
	ADJUST	Adjust function key on attendant console
	ALL	All-call key
	ANA	Automatic night assignment
	AOT	Add on tone
	ATTND	Attendant
B	BBB	Busy bypass burst
	BACK	Back function key on programming terminal
	BFWD	Busy call forward
	BGM	Background music
	BLF	Busy lamp field
	BLF-M	EX-Busy Lamp Field Unit-M
	BT	Busy tone
C	CALC	Calculator key
	CBT	Callback tone
	CLASS	Class function key on programming terminal
	CLR	Clear function key on programming terminal
	CO	Central office or central office line
	COL	Central office line
	CONC	Connect function key on attendant console
	CONF	Conference trunk (CONF-ME)
	COTS	Camp on tone for SLT
	CPT	Call progress tone
	CT	Confirmation tone
	CTA	Confirmation tone for attendant
	C-HOLD	Consultation hold
D	DDD	Direct distance dialing
	DECR	Decrement function key on programming terminal
	DEL	Delete function key on programming terminal
	DND	Do not disturb

Table 2.1.2.2 Abbreviations in Part 2 (con.)

No.	Abbreviation	Meaning
V	VCB	Voice call burst
	VCL	Voice call
	VP	Versa Phone
	VS	Voice synthesizer
W	WATS	Wide-area telecommunications service
	WT	Warning tone
Z	ZONE n	Direct Zone Call key

2.1.3 Operation Symbols

The following symbols are used in this manual for describing system operarions:

(1) ——— Dial or sender

Example: means dial number 9.

means one of dial numbers 1 through 7.

(2) ——— Hook

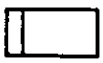
Example: means on-hook operation.

means on-hook state.

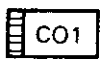
means off-hook operation.

means off-hook state.

means flashing switchhook. (only for SLT)

(3)  ——— Key and lamp (see Table 2.2.2.3.1 Visual Indications)

Example: means depressing a key.

 means the CO 1 key for "I-Use".

means the intercom key for incoming calls.

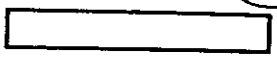
means the feature key for any indication. (initial state)

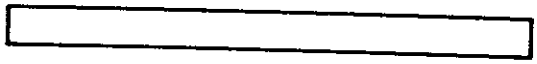
means the message key for any indication (initial state)

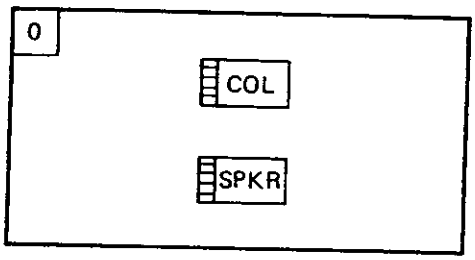
(4) —— Audible indication (see Table 2.2.2.4.6.C and D Audible Indications)

Example: means the ring-back tone.

means the COL ringing tone.

(5)  —— Display (A key telephone LCD unit)

(6)  —— Display (An LCD Unit for DSS)

(7) 

— State of station

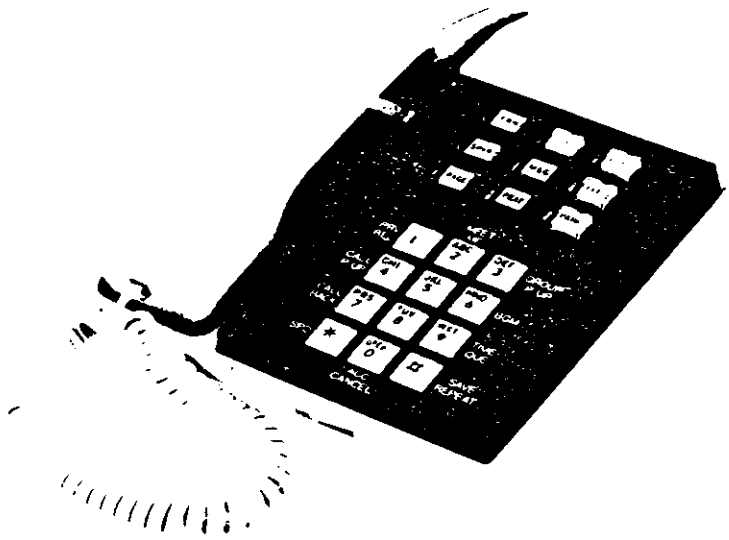
(8) —— Connecter

(9) —— State transition

(10) [ ] —— Condition

Page: 2.2-35
Line: Figure 2.2.2.2.E
Remarks: M

(Original)



(Correction)

Page: 2.2-59
Line: 3 to 4 from bottom (conversing Trunk No column)
Remarks: M

(Original)

Talking Trunk Number
Talking Trunk Number

(Correction)

Conversing on
Conversing on

Page: 2.2-60
Line: Bottom line (Station forced release column)
Remarks: M

(Original)

<EXT 20> Lock Out

(Correction)

<EXT 20> Station Locked Out

Page: 2.2-62
Line: System Constants column, Item 4
Remarks: M

(Original)

4	Hold Recall Time (seconds)

(Correction)

4	Hold RCL Timeout (seconds)

Page: 2.2-62
Line: System Constants column, Item 11, 12
Remarks: M

(Original)

11	<TNT [A]> Overflow Transfer
12	<TNT [A]> Overflow Transfer

(Correction)

11	<ATT [1]> Overflow Transfer
12	<ATT [1]> Overflow Transfer

Page: 2.2-67
Line: Toll Restriction column, Item 2, 3
Remarks: M

(Original)

2	<P[1]-C[1]> TOL (Mode) [0]-[21]-[01]-[05]-(Exception Table #) [11]-[07]-[13]
3	<Exception [1]-[1]> Toll [1234]-[01]-[03]

(Correction)

2	<P[1]-C[1]> TOL (Mode) [0]-[21]-[01]-[05]-(Dial Table #) [11]-[07]-[13]
3	<Dial TBL [1]-[1]> Toll [1234]-[01]-[03]

Page: 2.2-70
Line: Station class of service column, Item 7
Remarks: M

(Original)

7	7. Mail Class Attribution

(Correction)

7	7. Message Attribution

Page: 2.2-72
Line: Clock and Calender column, Item 3
Remarks: M

(Original)

3	Summer Time

(Correction)

3	Daylight Seving

Page: 2.2-79
Line: Bottom line added
Remarks: M

Optimized dial tone (DT)		KT/VP SLT	350/ 440Hz

TEXT (6) (SEC. 2.3)

2.2.1.2 Logical Configuration

System software consists of five packages: one standard package, and packages A to C. Table 2.2.1.2 outlines the feature packages.

Table 2.2.1.2 Software Packages and Their Features

Package	Features	Note
A	Toll Restriction Optimized Call Routing Access Floating COL Group Access E&M Tie Line Access Calculator System Data Printout	Option
B	Voice Message Waiting Reminder Absence Message Night Automatic Answering Voice Mail Electronic Mail (Text Mail) Remote Programming	Option

2.2.1.3 Feature Reference Table

The relationship between features and hardware is shown in the following tables:

Symbols X : available
◇ : necessary

Note: The following cards are necessary:

(a) CTRK-ME if COL is used.

(b) SUBK-ME if key telephone is used.

(c) SUBS-ME or SUBS-ME1 if single-line telephone (PULSE) is used.

(d) SUBS-ME, AUXC-ME and RECV-ME if single-line telephone (DTMF dial) is used.

No.	Feature	Trunk		Station				Feature Package		Hardware
		COL	ICM	KT	VP	SLT	ATTND	A	B	
D-2	Direct COL - Assignment	X		X	X					
D-3	Disconnect	X	X	X	X	X	X			(DSS-M/N, DSBF-ME)
D-4	Display Mode Change			X						EX-824/1648 D/DN
D-5	Do Not Disturb	X	X	X	X					
D-6	Do Not Disturb - Forced Release						X			DSS-M/N, DSBF-ME, DSLD-M
E-1	Electronic Mail								◇	DG1, MDRS-ME
E-2	Equal Access Dialing	X		X	X	X				
E-3	E/M Tie Line Service	X		X	X	X				EMTK-ME
F-1	Flash (Dial Tone Reorder)	X	X	X	X			◇		
F-2	Flexible Key Assignment			X	X		X			
F-3	Floating COL Group Access	X		X	X	X		◇		
F-4	Follow Me	X	X	X	X	X Only DTMF				
H-1	Hands-free Stations (Built-in Speakerphone)		X	X						SSPU-M/N/NS/RN1
H-2	Exclusive Hold	X	X	X	X	X				
H-3	System Hold	X		X	X					
H-4	Consultation Hold		X	X	X	X				
H-5	Consultation Hold Recall		X	X	X	X				
H-6	Automatic Hold	X	X	X	X		X			(DSS-M/N, DSBF-ME)
H-7	Music On Hold	X		X	X	X				
H-8	Hold Recall	X	X	X	X	X				
H-9	Ring Back Tone On Hold	X								
I-1	ICM Calling - Calling Mode Change		X	X	X					(RGNT-ME)
I-2	ICM Calling - Hands-Free Answer		X	X	X					HFAB-R (only VP)

No.	Feature	Trunk		Station				Feature Package		Hardware
		COL	ICM	KT	VP	SLT	ATTND	A	B	
I-3	ICM Calling • Establishment of ICM Calling Method		X	X	X	X				
I-4	ICM Path Termination		X	X	X	X	X			
I-5	Incoming COL Call	X		X	X	X				
M-1	Master Group Hunt Call		X	X	X	X				

No.	Feature	Trunk		Station				Feature Package		Hardware
		COL	ICM	KT	VP	SLT	ATTND	A	B	
O-4	Handset Adapter			X						SHSA-M
O-5	External Station Loud Ringer	X		X						SRNG-M
O-6	External Alarm Signal	X								LRAD-ME External loud ringer

No.	Feature	Trunk		Station				Feature Package		Hardware
		COL	ICM	KT	VP	SLT	ATTND	A	B	
P-13	Programming - System Programming Terminal						X			DSS-M/N, DSBF-ME, DSLD-M, PROV-M1
P-14	Programming - Dynamic Programming						X			DSS-M/N, DSBF-ME, DSLD-M, PROV-M1
P-15	Programming - Programming COL Lines	X		X	X	X				
P-16	Programming - Programming From KT/VP			X	X					
P-17	Programming - Remote Programming								◇	DG-1, MDRS-ME
Q-1	Quick Mode Operation			X	X		X			
R-1	Redialing	X		X	X					
S-1	SCDR	X		X	X	X				SCDR-M, Printer
S-2	Secretarial Hot Line Termination		X	X	X					
S-3	Sender Time Out	X		X	X	X				
S-4	Soft Ringer	X	X	X	X					
S-5	Speed Dialing	X		X	X	X				
S-6	Station Class of Service			X	X	X				
S-7	Station Lock Out			X	X					
S-8	System Alarm Indications									
S-9	System Initialization									
T-1	Tenant Service	X	X	X	X		X			
T-2	Timed Trunk Queuing	X		X	X					
T-3	Transfer	X	X	X	X	X				
V-1	Voice Mail	X	X	X	X				◇	EX-VML1, VMIF-ME

2.2.1.4 Key Telephon/Versa Phone Key Operation

The key operation on KT/VP are listed in the following table. However, the Calculator and Display feature are applied only on KT with display.

* Can be abbreviated

*: Can be abbreviated

	Feature	Conditions	Number Plan
Camp On	Camp On	COL/ICM Conversation	TRN (ICM Call Operation) ▯↓
	Camp On	COL/ICM Conversation	TRN (ICM Call Operation) SPKR (: On)
	Camp On Pick Up	(Off-hook ∨ SPKR On) ∧ Idle	FEAT * 4 n n (nn: Camp On Called EXT No.)
COL Selection	COL Selection	Off-hook ∨ SPKR On	COL
	COL Selection	On-hook ∧ SPKR Off	COL ▯↑
	COL Selection	On-hook ∧ SPKR Off	COL SPKR
Conference	Add On Conference from COL Conversation	COL Conversation	ADD (ICM Calling Operation) (Called Party Answer) ADD
	Add On Conference From COL Conference	COL CONF	ADD (ICM Calling Operation) (Called Party Answer) ADD
	Add On Conference From Conference Hold	Off-hook ∨ SPKR ON	COL
	Add On Conference From Conference Hold	On-hook ∧ SPKR Off	COL ▯↑
	Add On Conference From Conference Hold	On-hook ∧ SPKR Off	COL SPKR
	Add On Conference by Executive KT/VP	Off-hook ∨ SPKR On	COL
	Add On Conference by Executive KT/VP	Off-hook ∧ SPKR Off	COL ▯↑
	Add On Conference by Executive KT/VP	Off-hook ∧ SPKR Off	COL SPKR
	ICM Add On Conference From ICM Conversation	ICM Conversation	ADD (ICM Calling Operation) (Called Party Answer) ADD
	ICM Add On Conference From ICM Conference	ICM CONF	ADD (ICM Calling Operation) (Called Party Answer) ADD
	COL Conference Hold	COL Conference	HOLD DND
	COL Conference Hold	COL Conference	COL (: COL during a call)
	COL Conference Hold Pick Up	Off-hook ∨ SPKR On	COL
	COL Conference Hold Pick Up	On-hook ∧ SPKR Off	COL ▯↑

*: Can be abbreviated

	Feature	Conditions	Number Plan
	Exclusive Hold (ICM)	ICM Conversation	HOLD DND
	Exclusive Hold Pick Up (ICM)	Off-hook v SPKR On	ICM
	Exclusive Hold Pick Up (ICM)	On-hook ^ SPKR Off	ICM ↑
	Exclusive Hold Pick Up (ICM)	On-hook ^ SPKR Off	ICM SPKR
	System Hold	COL Conversation	HOLD DND
	System Hold Pick Up	Off-hook v SPKR On	COL
	System Hold Pick Up	On-hook ^ SPKR Off	COL ↑
	System Hold Pick Up	On-hook ^ SPKR Off	COL SPKR
	Consultation Hold	ICM Conversation	ADD
	Consultation Hold	ICM Conversation	TRN
	Consultation Hold Pick Up	Off-hook v SPKR On With Consultation Hold	ADD
	Consultation Hold Recall	Off-hook v SPKR On With Consultation Hold Recall	ADD
	Consultation Hold Recall	Off-hook v SPKR On With Consultation Hold Recall	ICM
	Automatic COL Hold by Paging	COL Conversation	PAGE (ALL, ALL GRP, ALL ZONE, GRP 1 to 4, ZONE 1 to 3)
	Automatic COL Hold by Transfer	COL Conversation	TRN
	Automatic COL Hold by Add On	COL Conversation	ADD
	KT/VP Automatic COL HOLD by Automatic ICM Hold	COL Conversation	DSS
ICM Calling	Calling Mode Change	ICM DT	n n (nn: Destination extension number)
	Calling Mode Change	ICM Calling	#

*: Can be abbreviated

	Feature	Conditions	Number Plan
Master Group Hunt Call	Master Group Hunt Call (Group 1)	DT	[8] [7] [0]
	Master Group Hunt Call (Group 2)	DT	[8] [7] [1]
	Master Group Hunt Call (Group 3)	DT	[8] [7] [2]
	Master Group Hunt Call (Group 4)	DT	[8] [7] [3]
	Direct Master Group Hunt Call (Group 1)	DT ∨ (On-hook ∧ SPKR Off)	[HNT_0]
	Direct Master Group Hunt Call (Group 2)	DT ∨ (On-hook ∧ SPKR Off)	[HNT_1]
	Direct Master Group Hunt Call (Group 3)	DT ∨ (On-hook ∧ SPKR Off)	[HNT_2]
	Direct Master Group Hunt Call (Group 4)	DT ∨ (On-hook ∧ SPKR Off)	[HNT_3]
Meet Me	Meet Me	Off-hook ∧ Idle	[FEAT] * [2] [n] [n] (nn: Paging station number)
Message	Absence Message (Return Time)	Off-hook ∧ Idle	[FEAT] [MSG] [2] [H] [H] [M] [M] (HHMM: Time)
	Absence Message (Return Day)	Off-hook ∧ Idle	[FEAT] [MSG] [3] [W] (w: Day of Week 0 to 7)
	Absence Message (Latch Return Time)	Off-hook ∧ Idle	[FEAT] [MSG] [4] [H] [H] [M] [M] (HHMM: Time)
	Absence Message (Meeting Return Time)	Off-hook ∧ Idle	[FEAT] [MSG] [5] [H] [H] [M] [M] (HHMM: Time)
	Absence Message (Telephone Number)	Off-hook ∧ Idle	[FEAT] [MSG] [6] [d_1] ... [d_{16}] [*] (d: Dial Code)
	Absence Message Cancellation	Off-hook ∧ Idle	[FEAT] [0] [MSG] [2–6]
	Message Waiting Resistration	ICM Calling ∨ BT	[MSG] [#]

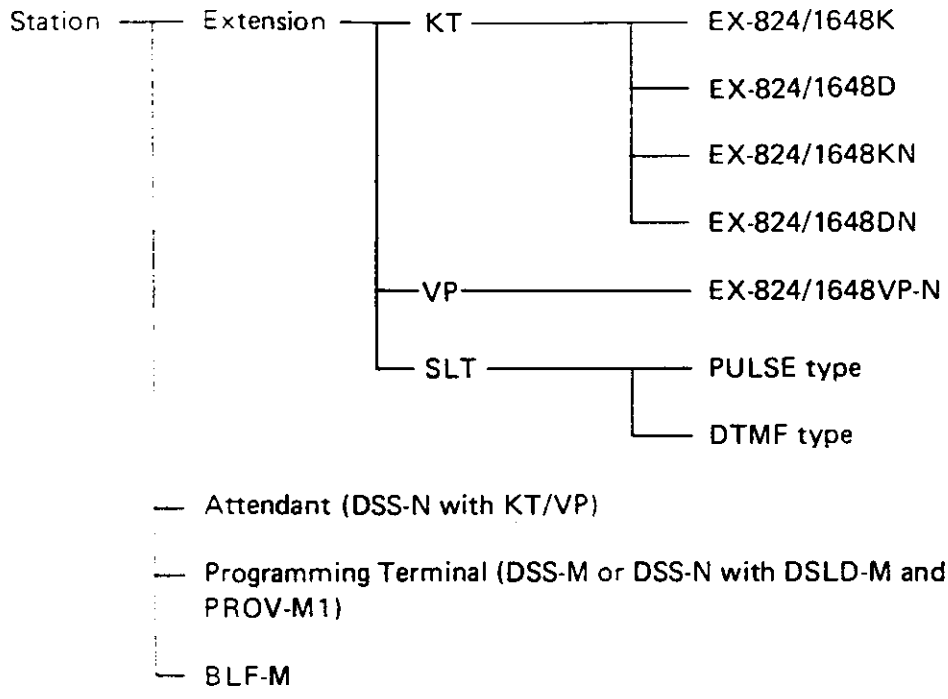
•: Can be abbreviated

	Features	Conditions	Dial
	Conference Camp On	ICM Conference	↓ ↑ (DT) ICM Call Operation - [ ]
	Dial Tone Reorder	After ICM Originating	↓ ↑
	Direct Call Pickup	DT	[1] [4] [n] [n] nn: Called station No.
Disconnect	COL/ICM Disconnect	COL/ICM Conversation	[ ]↓
Equal Access	Equal Access	After COL Access With PIN code	[•] [n] [•] [9] [m] 0≦n≦9 1≦m≦7 (COL Group No.)
	Equal Access	After COL Access Without PIN code	[•] [n] [#] [9] [m] 0≦n≦9 1≦m≦7 (COL Group No.)
	Equal Access (Manual Dial)	After COL Access	10xxx + (1) + 7/10 digits (Not presubscribed)
	Equal Access (Manual Dial)	After COL Access	1 + 7/10 digits (Presubscribed)
	Equal Access (Manual Dial)	After COL Access	10xxx# + PIN + (1) + 7/10 digits (Cut through)
Floating COL Group Access	Optimized Call Routing Access	DT	[9] [0] [n1] ... [n] nn: Destination Customer No.
	Floating CO Group Access	DT	[9] [g] [n1] ... [n] nn: Destination Customer No. g: COL Group No. (1 to 7)
	Follow Me	DT	[1] [5] [#] [n] [n] nn: Call Forward activating EXT. No.
Holding	Exclusive Hold	COL Conversation	↓ ↑
	Exclusive Hold Pickup	With Exclusive Hold	(DT) [1] [1]
	Consultation Hold	ICM/COL Conversation	↓ ↑
	Consultation Hold Pickup	Off hook With Consultation Hold	↓ ↑
	Consultation Hold Recall Pickup	Off hook With Consultation Hold Recall	↓ ↑
	Consultation Hold Recall Pickup	On hook With Consultation Hold Recall	[ ]↑
ICM Calling	ICM Calling	DT	[n] [n] (nn: Called station No.
	ICM Calling Mode Change	ICM Calling	[#]

*: Can be abbreviated

	Features	Conditions	Dial
	ICM Conference Hold Pickup	Off hook With ICM Conference Hold	[ ]↑ + ↓ ↑
	Multi-Line Conference	COL Conversation With COL Hold	↓ ↑ (DT) [1] [1]
	Trunk To Trunk Conference	Multi-line Conference	↓ ↑
	Conference Camp On	ICM Conference	↓ ↑ (DT) ICM Call Operation + [ ]↓
	Dial Tone Reorder	After ICM Originating	↓ ↑
	Direct Call Pickup	DT	[1] [4] [n] [n] nn: Called station No
Disconnect	COL/ICM Disconnect	COL/ICM Conversation	[ ]↓
Floating COL Group Access *	Optimized Call Routing Access	DT	[9] [0] [n_1] ... [n_n] nn: Destination Customer No.
	Floating CO Group Access	DT	[9] [9] [n_1] ... [n_n] nn: Destination Customer No. g: COL Group No. (1 to 7)
Holding	Exclusive Hold	COL Conversation	↓ ↑
	Exclusive Hold Pickup	With Exclusive Hold	(DT) [1] [1]
	Consultation Hold	ICM/COL Conversation	↓ ↑
	Consultation Hold Pickup	Off-hook With Consultation Hold	↓ ↑
	Consultation Hold Recall Pickup	Off-hook With Consultation Hold Recall	↓ ↑
	Consultation Hold Recall Pickup	On-hook With Consultation Hold Recall	[ ]↑
ICM Calling	ICM Calling	DT	[n] [n] (nn: Called station No.)
	ICM Calling Mode Change	ICM Calling	[2]
Master Group Hunt Call	Group 1	DT	[8] [7] [0]
	Group 2	DT	[8] [7] [1]
	Group 3	DT	[8] [7] [2]
	Group 4	DT	[8] [7] [3]
	Meet Me	DT	[1] [2] [n] [n] (nn: Paging station No.)
Message Waiting	Registration	ICM Calling or BT	↑ ↓ (DT) [1] [6]

The names of these terminals and their classifications are shown below.



External views of the individual terminals are shown in the following figures:

Figure 2.2.2.2A EX-824/1648K

Figure 2.2.2.2B EX-824/1648D

Figure 2.2.2.2.C EX-824/1648KN

Figure 2.2.2.2.D EX-824/1648DN

Figure 2.2.2.2.E EX-824/1648VP-N

Figure 2.2.2.2.F BLF-M

Figure 2.2.2.2.G DSS-M with DSLD-M

Figure 2.2.2.2.H DSS-N with DSLD-M

Figure 2.2.2.2.I DSS-M with DSLD-M and PROV-M1

Figure 2.2.2.2.J DSS-N with DSLD-M and PROV-M1

Figure 2.2.2.2.D EX-824/1648DN

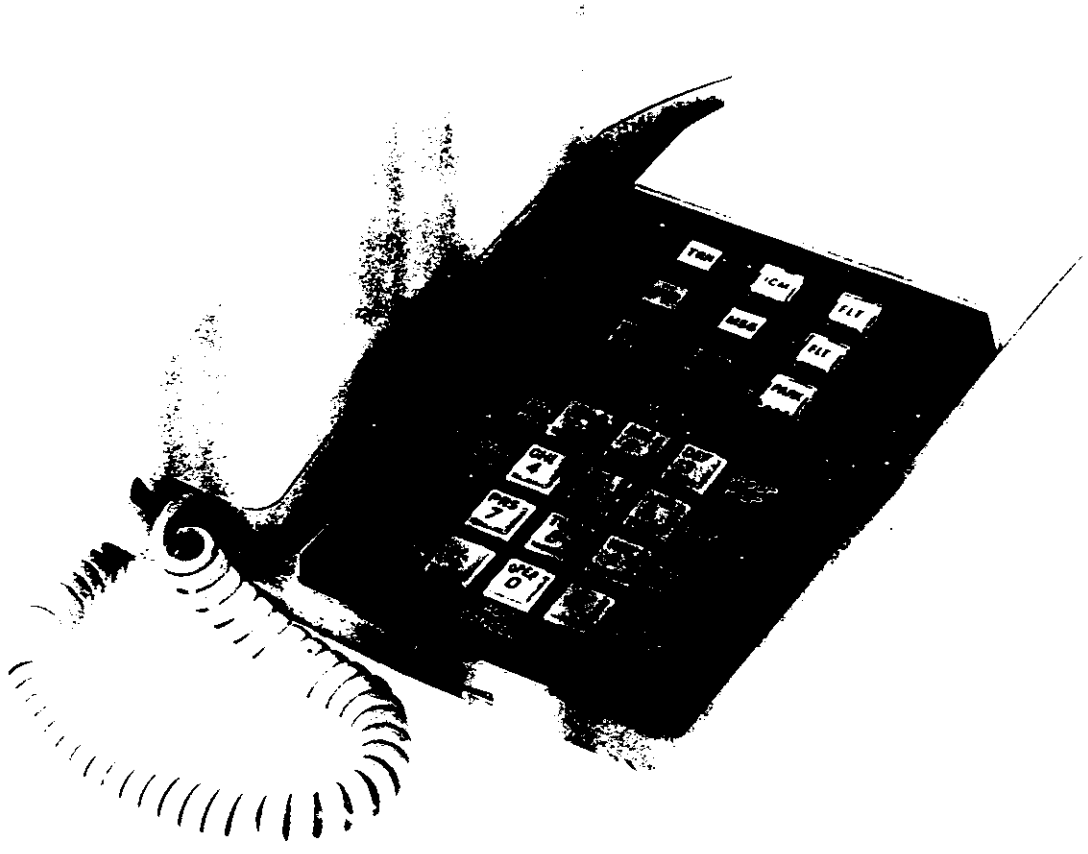
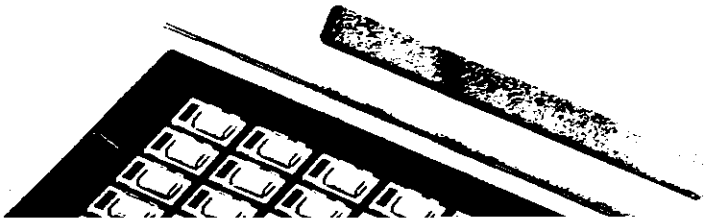


Figure 2.2.2.2.E EX-824/1648VPN



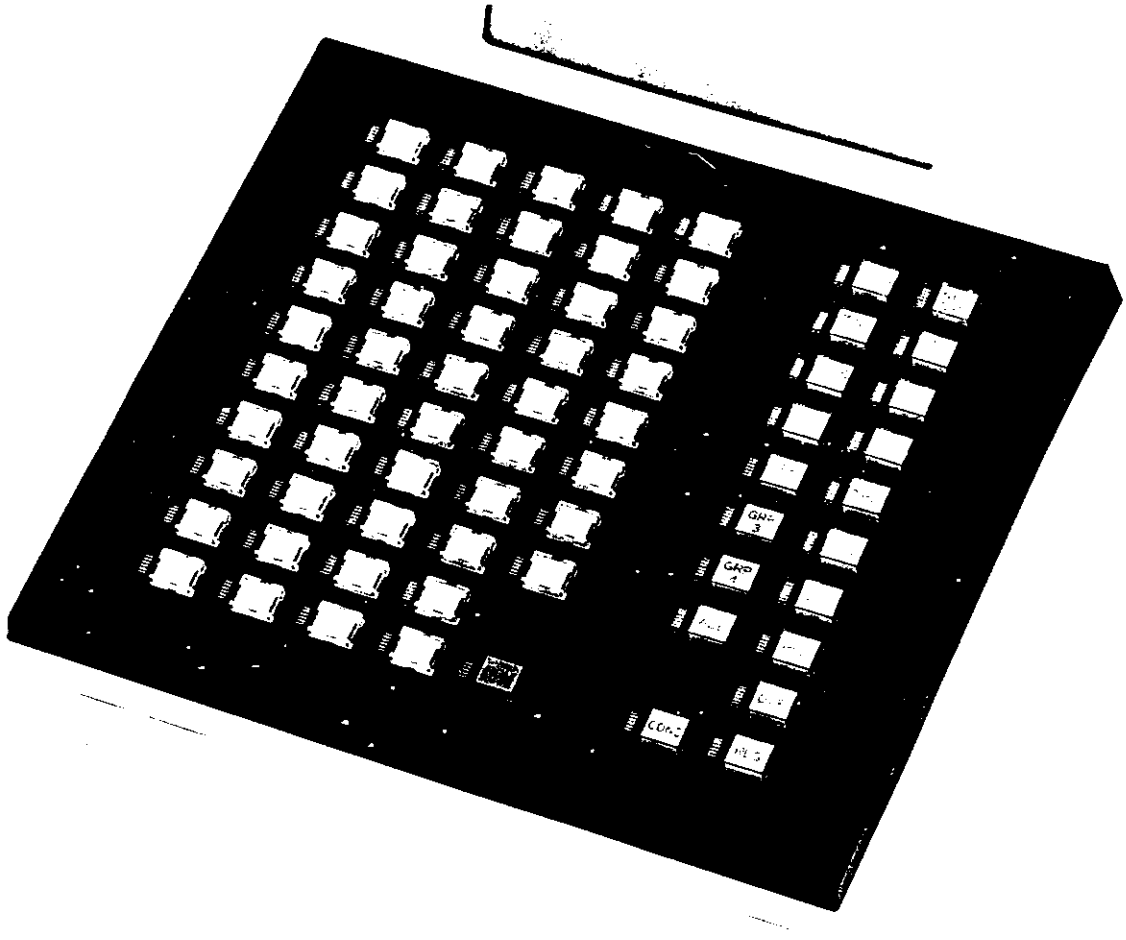


Figure 2.2.2.2.H DSS-N With DSLD-M

2.2.2.3.2 Visual Indications of Trunks

Visual indications on key lamps of KTs/VPs to indicate COL/ICM status are as listed below.

Table 2.2.2.3.2 Visual Indications of Trunks

Trunk	Visual Indications	Note
COL	Idle	COL not used or can not be used.
	Busy	Used by another station. Cannot be seized from the KT/VP. (Refer to 2.3.0.6.3 Executive Override.)
	System Hold	On System-hold by another KT/VP.
	Incoming	Incoming call.
	Hold Recall	Hold Recall or Camp On Recall is ringing.
	I-Hold	COL held at the KT/VP, one COL of multi-line Conference, or COL in Trunk to Trunk Conference.
	I-Use	COL that is used by the KT/VP.
ICM	Idle	ICM that is available.
	Incoming	ICM call ringing.
	Hold Recall	ICM Hold Recall ringing.
	I-Use	Engaged on an ICM call.
	I-Hold	ICM call placed on-hold.

KT display unit displays five levels as listed below.

Class	Contents
1	Clock & Calendar
2	Incoming Call
3	Duration of Call
4	Dial Number
5	Calculator/Electronic Mail

The key telephone has a 16-digit alphanumeric display for receiving various services.

2.2.2.3.4.1 Account Code

When Account Code is entered during a COL call, the content is displayed. The display remains for 10 seconds after input is complete.

```
Acct Code 123456
```

2.2.2.3.4.2 Transfer

When a COL call is transferred by various means, the transfer originating station number is displayed at the answering KT. Display appear in the following cases:

i) ICM Voice/Tone Call: Station that originated the (Busy) Call Forward

ii) ICM Camp On: Station that originated the Camp-On

iii) COL RGT: Station that originated the (Busy) Call Forward

iv) COL Camp On: Station that originated the Camp-On

v) COL Camp On Recall: Camp-On called station

```
Forward From 21
```

vi) COL Callback

(COL No.)

= 1 5 C a l l b a c k

vii) COL Incoming

(COL No.)

= 3 C a l l

viii) COL Incoming (Forward)

(COL No.) (FWD EXT No.)

= 3 C a l l	F M 2 1

ix) COL Camp-On

(COL No.) (Operating EXT No.)

= 7 C a m p O n	F M 2 0

x) ICM Hold Recall

I C M R e c a l l

xi) ICM Callback

I C M C a l l b a c k

xii) ICM Camp-On

(Operating EXT No.)

I C M C a m p O n	F M 2 0

2.2.2.3.4.15 Message

When messages are received, they are displayed in sequence of priority.

(4th) (3rd) (2nd) (1st Priority)

```
MSG    30 25 23 20
```

2.2.2.3.4.16 Clock and Calendar

Clock and calendar are displayed when no display exists.

(day) (day of week) (hour) (minute)

```
23 SAT  12:34 PM
```

2.2.2.3.4.17 Absence Message

When a station with Absence Message assignment is called, the following appears on the display.

```
Absence MSG  20
```

2.2.2.3.5.11 Programming

For System Programming Terminal display, see Section 2.4, Programming Feature.

2.2.2.3.5.12 Attendant Alphanumeric Display

Contents of the Attendant displays for individual features are shown in the following pages.

Table 2.2.2.3.5.12 Attendont Alphanumeric Display

Condition	Display (31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0)
Attendant Recall	ATT Recall CO [1] Forward From [27]
	ATT Intercept No Answer CO
	ATT Intercept CO [11] Busy EXT [28]
Clock & Calendar	(Day) [20] (Month) [MAY] (Year) [86] (Week) [TUE] [7]:[45]:[12] [PM]
Through dialing	<EXT [20]> Toll CLS=[4]/OUTG Level=[2]
Prior incoming Call Trunk NO	Incoming Trunk Number CO [17]
	Incoming Trunk Number ICM [3]
Conversing Tunk NO	Conversing On CO [16]
	Conversing On ICM [4]
Attendant Call Park Pick up NO	ATT Call Paak Pick up NO [02]
Attendant Call Park NO Answer	P01 = [*1 17] [*2] P03 # 11 P07 = 04 P05 = 01

* 1 Pick up NO
* 2 Trunk NO

Table 2.2.2.3.6 System Programing Terminal Display

Class	Item	Display (31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0)
	13	<TNT [A]> ICM Call Mode (V:0/T:1) [0]
	14	<TNT [A]> Paging Speakers [3]
	15	System Prefix [0]
	16	Automatic Pause Length [5]
	17	Timed Trunk Queuing Interval [1][0]
	18	<ATT[1]-Key[1]> Key Assign DSS [ ]
	19	<ATT[1]> ATT Extension Assign

Table 2.2.2.3.6 System Programing Terminal Display

Class	Item	Display (31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0)
Line Specification	1	<CO 1> Line Class [10]
	1	<ICM 1> Line Class [5]
	2	<CO 1> Tenant Group [0]
	2	<ICM 1> Tenant Group [1]
	3	<CO 1> Universal Night Assign [1]
	4	<CO 1> Automatic Night Assign
	5	<CO 1> Outgoing Level [3]
	6	<CO 1> Toll Restriction Group [4]
	7	<CO 1> Flash Signal Interval [11]
	8	<CO 1> Prefix Dial [1]
	9	<CO 1> Disconnect Signal [1]
	10	<CO 1> Attendant Intercept [1]
	11	<CO 1> Individual Incoming EXT
	12	<CO 1> Outgoing Group [7]

Table 2.2.2.3.6 System Programing Terminal Display

Class	Item	Display (31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0)
	15	<NO[1]-COD[200]> ADD. Office [1]-[08]
	16	<NO[1]> ADD. [1]-[0P5123456789055432]
	17	<TNT [A]-NO[1]> Specific Code [6]
	18	<TNT [A]-NO[1]> EA [12345678901234 56]
	19	<TNT [A]-NO[1]> Pin Code 1234567890
	20	<TNT [A]-NO[1]> Pin Code Timing [1]
	21	<TNT [A]-NO[1]> EA Prefix [1]
	22	<CO[1]-NO[1]> EA Toll Group [5]

Table 2.2.2.3.6 System Programing Terminal Display

Class	Item	Display (31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0)
Speed Dial	1	1 . S P D < T N T [A]-[1]> [1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6]
	2	2 . S P D < T N T [A]-[1]> I n v i s i b l e [1]
	3	3 . S P D < E X T [2 0]-[1]> [0 P 5 1 2 3 4 5 6 7 8 9 0 1 2 3]

2.2.2.4 Audible Indications

Audible indication functions of terminals are as shown below.

1. From Key Telephone/Versa Phone Speaker
2. From Single-line Telephone Ringer/Handset
3. To ATTND/Programming Terminal
4. From ICM
5. To COL/EXT with COL Conversation
6. Priority of Call

Each station of the system can give audible indications.

2.2.2.4.1 Key Telephone/Versa Phone Speaker

The audible indications from key telephone/Versa Phone speakers and their priority order are shown in Table 2.2.2.4.1.A.

Table 2.2.2.4.1.A

Priority	Audible Indication	Notes
1	ICM Voice Call	Involving Voice Call Burst and Intercept Tone
2	Reminder	
3	Consultation Hold Recall	
4	COL Recall	Abbreviated when busy
5	COL Callback	Abbreviated when busy
6	COL RGT (Camp-On)	Abbreviated when busy
7	ICM Hold Recall	Abbreviated when busy
8	ICM Callback	Abbreviated when busy
9	ICM Tone Call (Camp-On)	Prior to Consultation Hold Recall in case of priority call
10	Group Call	

Table 2.2.2.4.6.B Priority of Audible Indications

Priority	Incoming Call Class
1	ICM Voice Call, ICM Tone Call with priority *
2	Reminder
3	Consulation Hold Recall
4	COL Recall
5	COL Callback
6	COL RGT
7	ICM Hold Recall
8	ICM Callback
9	ICM Tone Call
10	Group Call, All Call

* ICM Tone Call from Executive KT/VP Attendant

Audible indications on the CPT appear on Table 2.2.2.4.6.D.

Table 2.2.2.4.6.D Audible Indications (CPT)

Classification and Symbol	Pattern	Service	Tone
Optimized dial tone (DT)		KT/VP SLT	350/440 Hz

Contents of messages from the voice synthesizer appear on Table 2.2.2.4.6.E.

Table 2.2.2.4.6.E Voice Message from System

MSG No.	Item	Contents
1	Reminder	~ ~ [Reminder (Set Time) (Set Day)]
2	Absence message (Return time)	Station (EXT =) I'm out I'll return at [(Return Time)]
3	Absence message (Return day)	Station (EXT =) I'm out [I'll return (Return Day)]
4	Absence message (Lunch return time)	Station (EXT =) I'm out to lunch I'll return at [(Return Time)]
5	Absence message (Meeting return time)	Station (EXT =) I'm in a meeting I'll return at [(Return Time)]
6	Absence message (Telephone No.)	Station (EXT =) I'm out please call [(Telephone No.)]
7	Voice message waiting	Station (Calling EXT =) Please call back at [(Call Back Time)]
8	Night message (Telephone No.)	Hello we're closed today [for emergency please call (Telephone No.)]
9	Night message (Open day)	Hello we're closed today [We'll open (Return Day)]
10	Prompt 1	Enter password
11	Prompt 2	Enter class
12	Prompt 3	Enter data
13	Prompt 4	Enter number
14	Prompt 5	Enter item
15	Prompt 6	Illegal data
16	Prompt 7	Accepted

~ : burst tone
( ) : variable
[ ] : repeat

2.3.C.4.1.2 Single-Line Telephone

Operations and conditions about Call Forward with SLT are described below.

C

- Conditions

  o To perform Call Forward, a SLT user should register the destination.

2.3.C.4.1.2.1 Registration

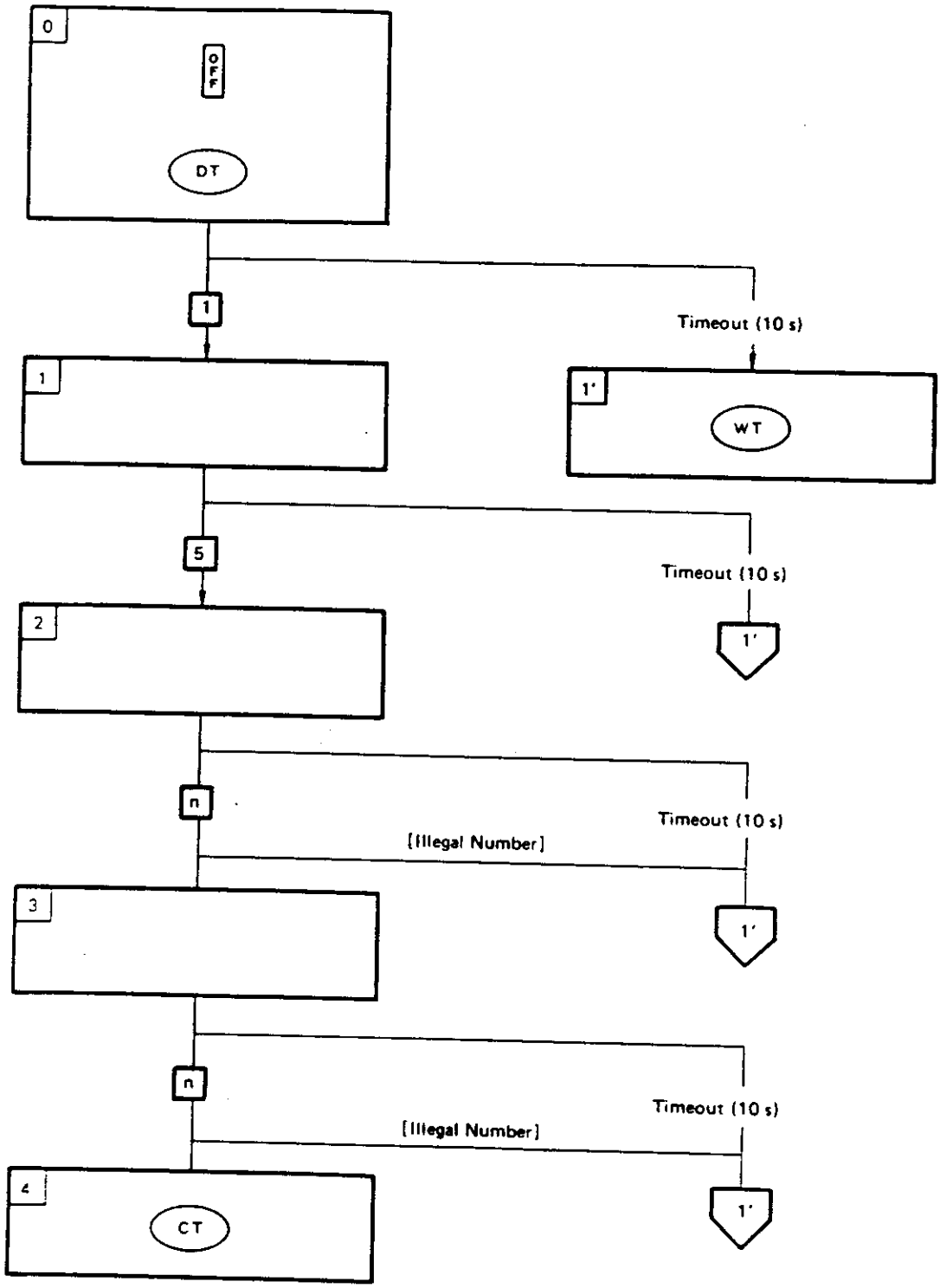
- Condition

  o A SLT user are not permitted to register station of another tenant and uninstalled station as a destination.

- Operation Guide

  (DT) [1] - [5] + [n] + [n] nn: Destination EXT No.

■ Operation Flow



2.3.C.5 Call Monitor

A KT/VP user may utilize call monitor facility while conversing.

- **Conditions**

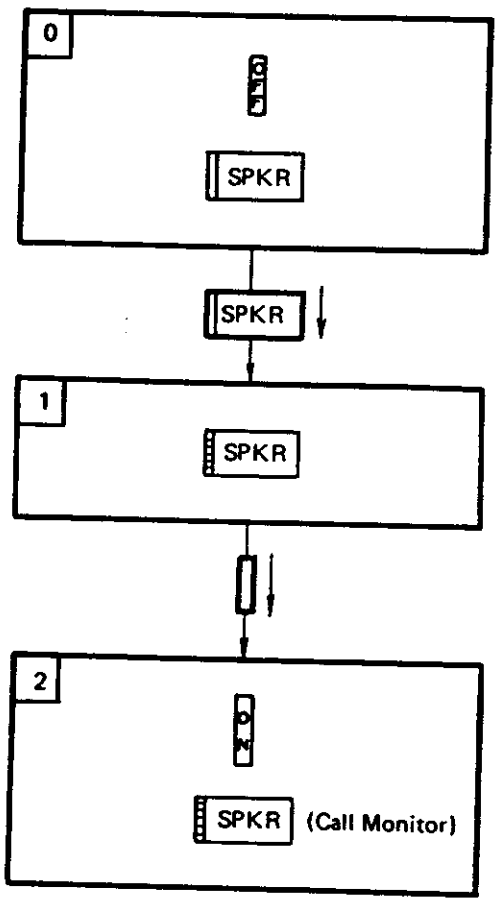
  - o A KT/VP with speakerphone should have the microphone off to utilize Call Monitor. (See Section 2.3.H.1 Hands Free Stations.)

- **Operation Guide**

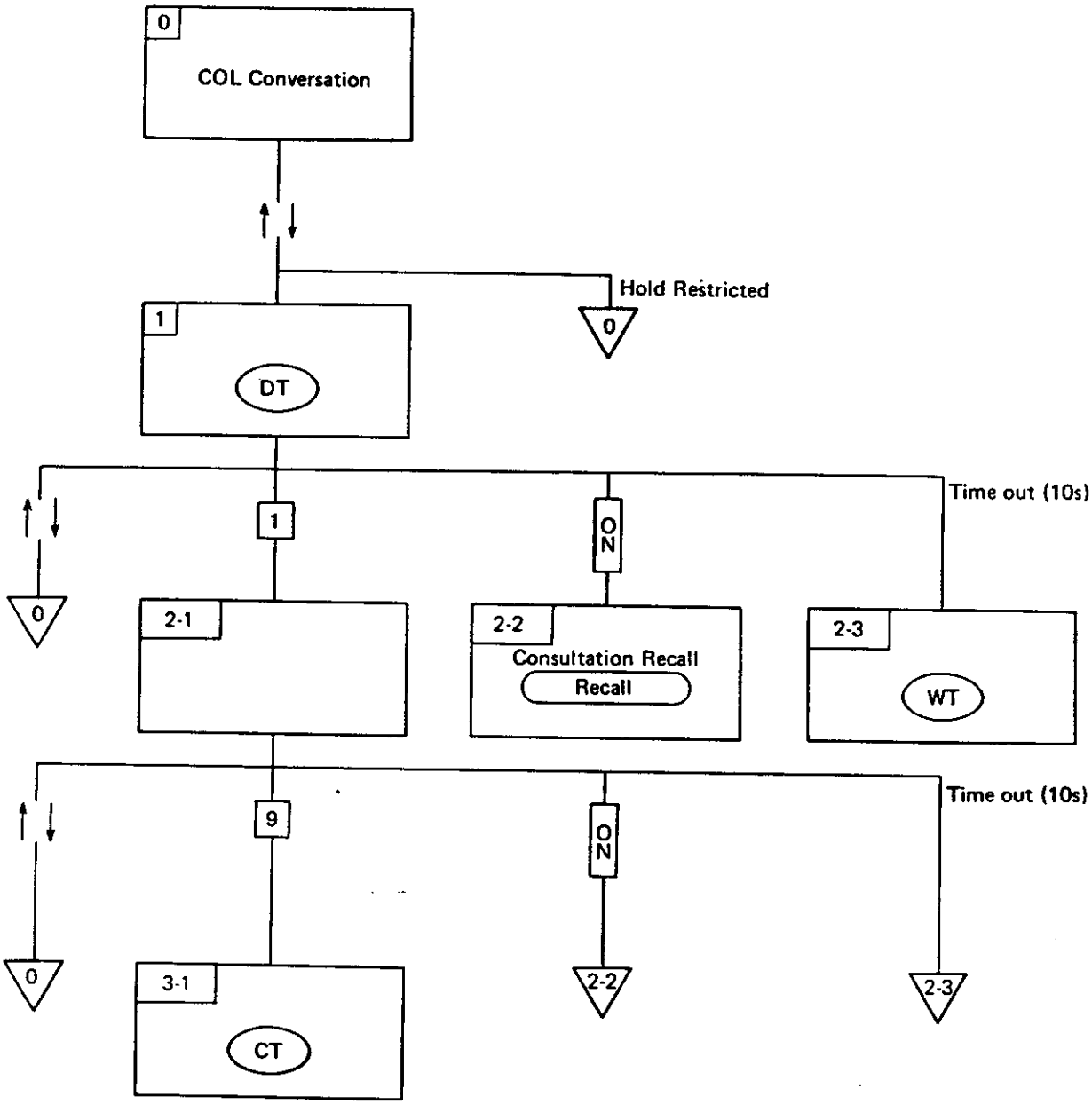
  (Conversation with handset and SPKR off) SPKR + [ ]

  (Conversation with Speakerphone) Microphone off

- **Operation Flow**

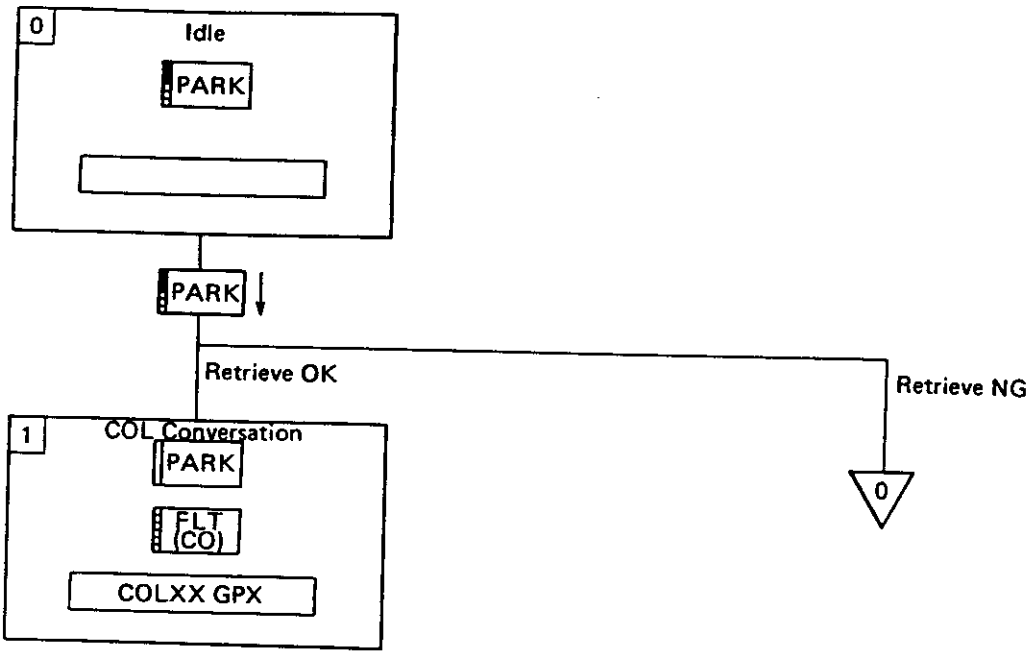


■ Operation Flow

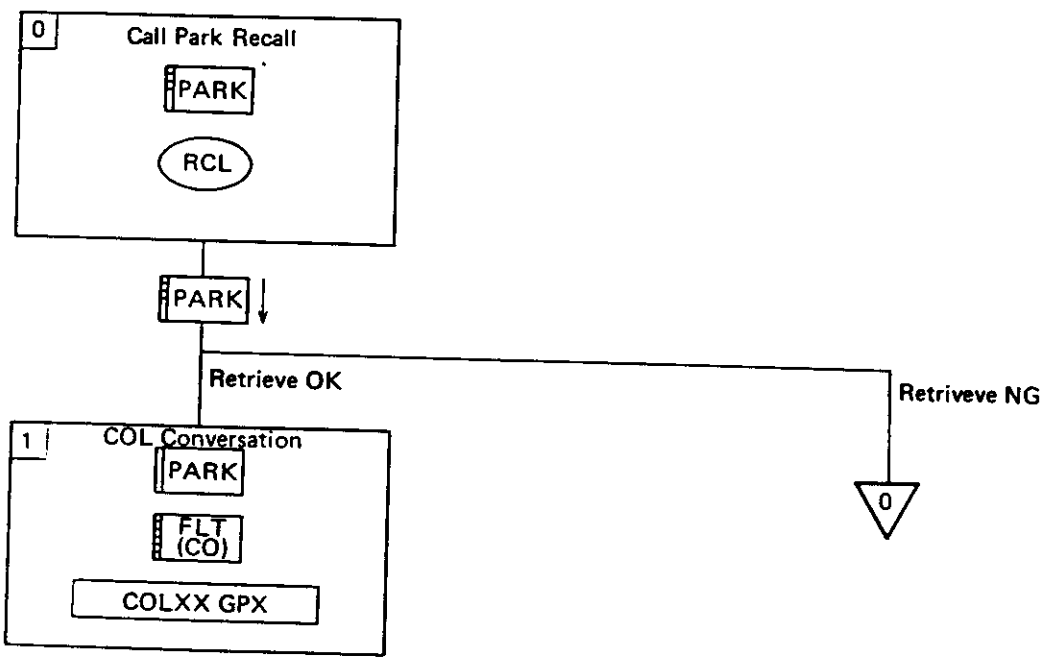


- Operation Flow

i) Local Retrieve



ii) Local Retrieve From Call Park Recall



2.3.C.6.2.1.2 Single Line Telephone

- Conditions

  o A SLT user can retrieve a call placed on Call Park by dialing the special number (19).

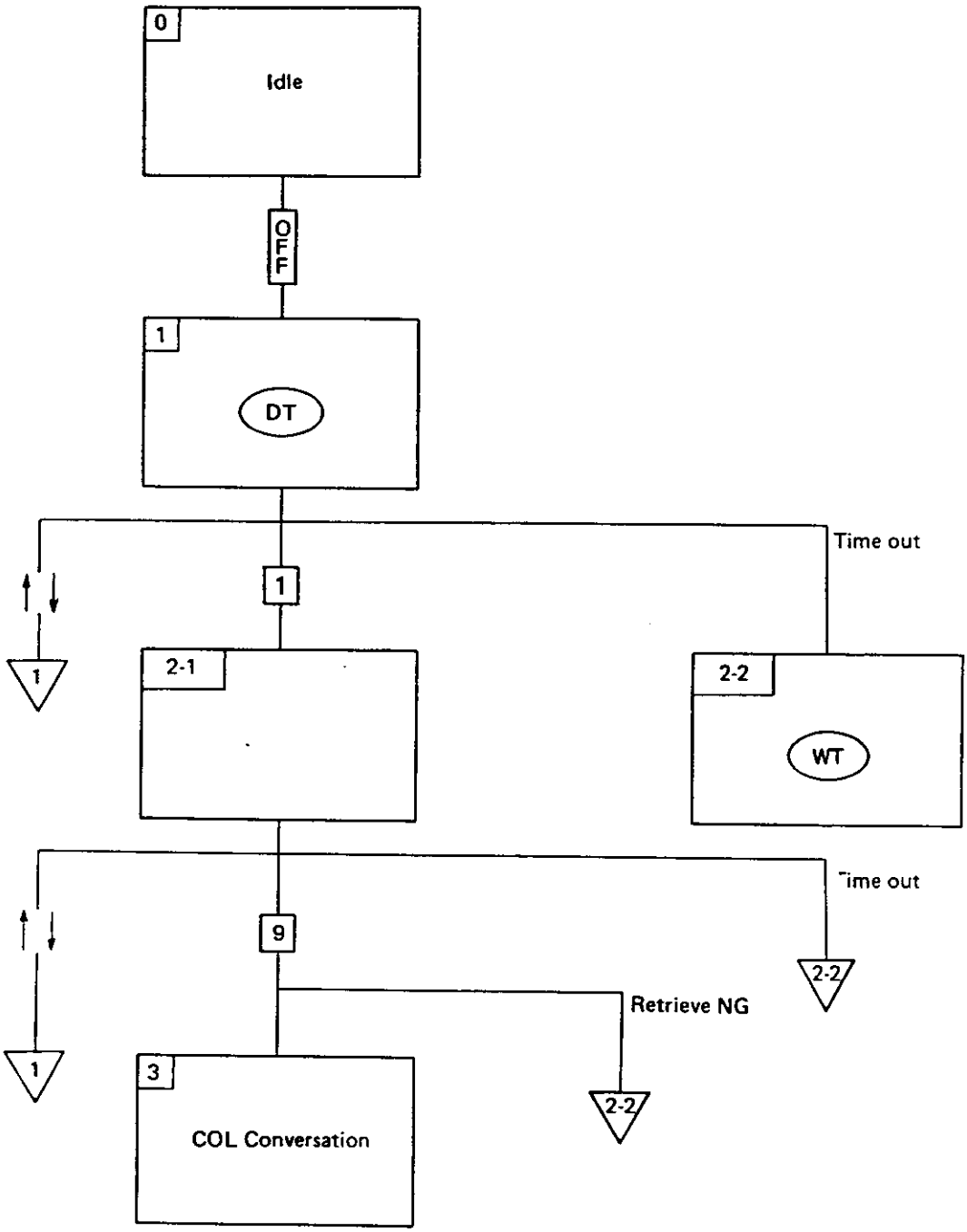
  o A parked call is changed to Call Park Recall the moment hold timeout. Once a parked call changes to recall, it cannot be pickedup by dial '19' and lifting handset it is answered.

- Operation Guide

(Idle) [Off] + [1] + [9]

- Operation Flow

i) Local Retrieve



2.3.C.6.2.1.3 Attendant Call Park Pickup

- Conditions

  o The newest call is picked up among from those placed on Call Park by the Attendant.

  o While conversing on COL or ICM, it is disconnected when the Attendant operates this feature.

  o When the parked call is picked up by depressing [P-UP] key, the key lamp flashes for approximately 1.5 second.

- Operation Guide

  (off-hook or SPKR on) [P-UP]

2.3.C.6.2.2.2 Single Line Telephone

- **Conditions**

  - o A pickup restricted SLT user is not allowed to retrieve.
  - o Call Park Recall is not to be picked up with this feature.
  - o When a Call Park is retrieved, The PARK key lamp on the park operating KT indicates Idle indication.

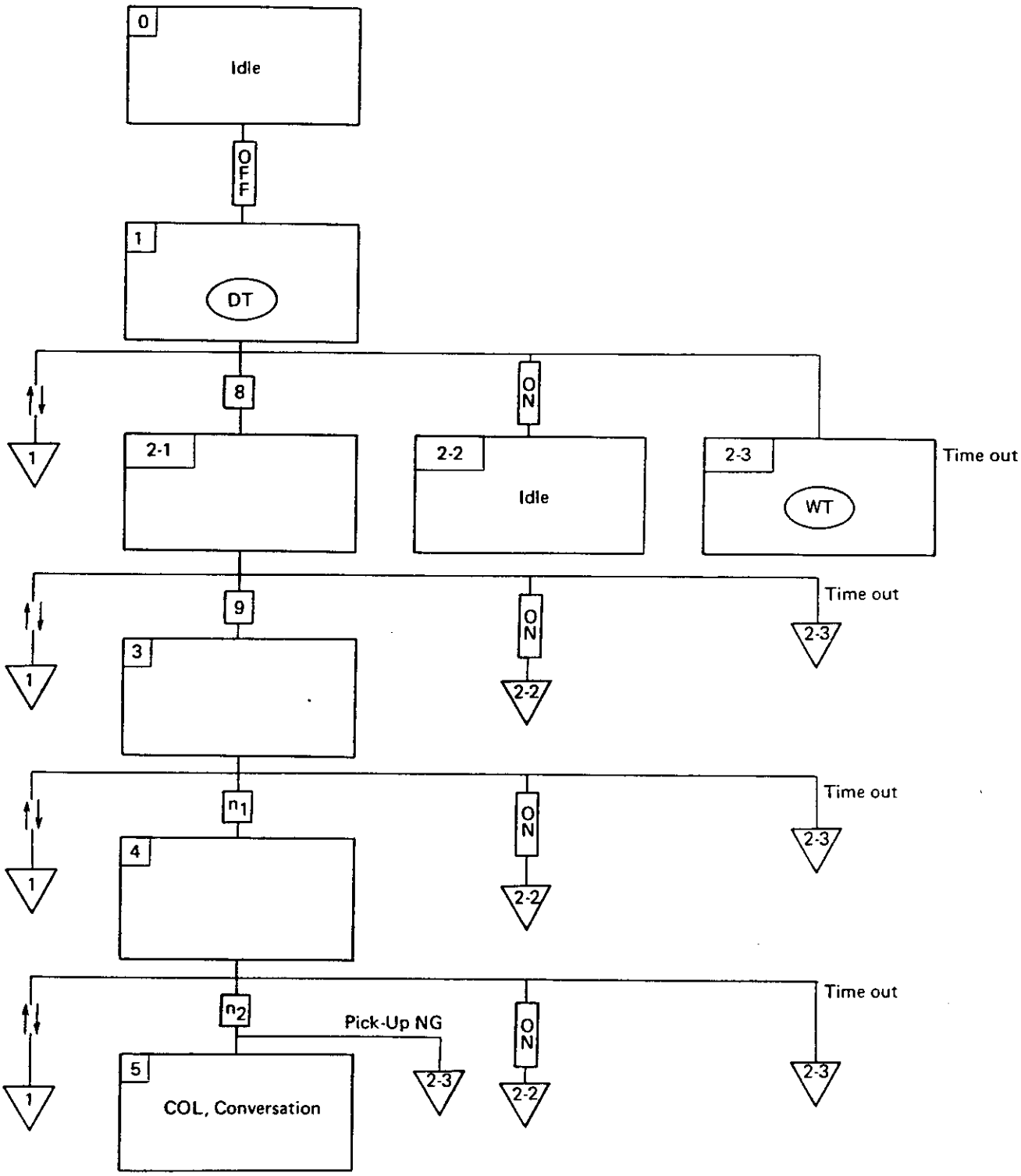
- **Operation Guide**

  (Off-hook) [8] + [9] + [n1] + [n2]

  n1, n2: Call Park Orbit Number

■ Operation Flow

C



2.3.C.6.3 Call Split

While conversing on COL, with Call Park operation, the current call is placed on Call Park and a call already placed on Call Park is automatically answered.

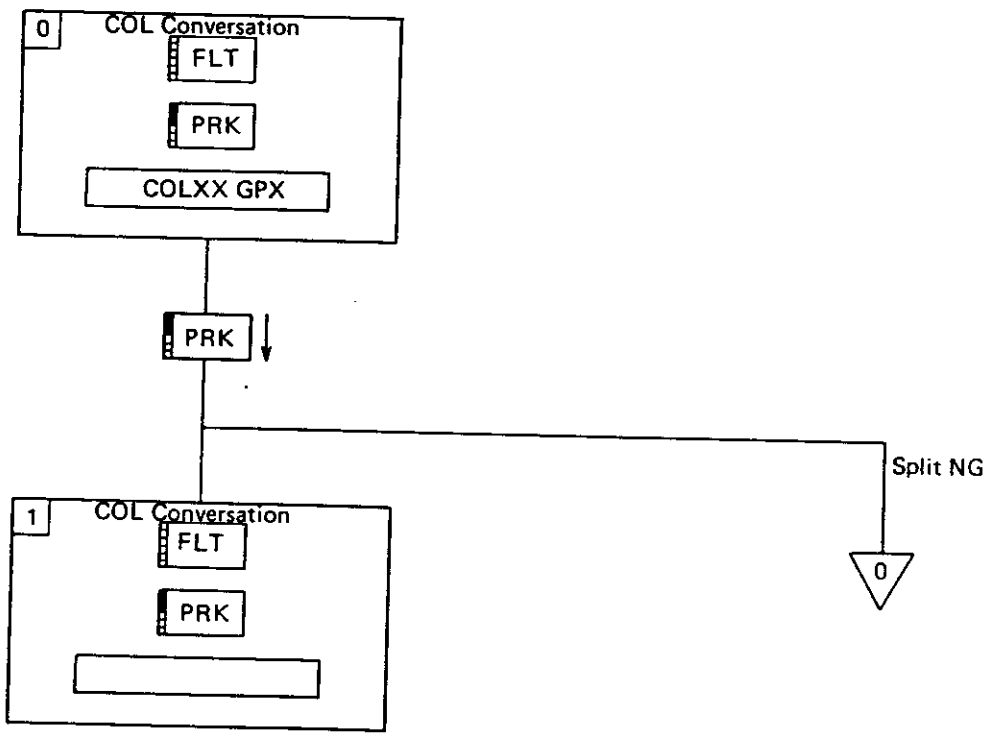
2.3.C.6.3.1 KT/VP

A KT/VP user may use the Call Split feature.

- **Operation Guide**

  (Call Park On and COL conversation) PARK

- **Operation Flow**



2.3.C.6.3.2 Single Line Telephone

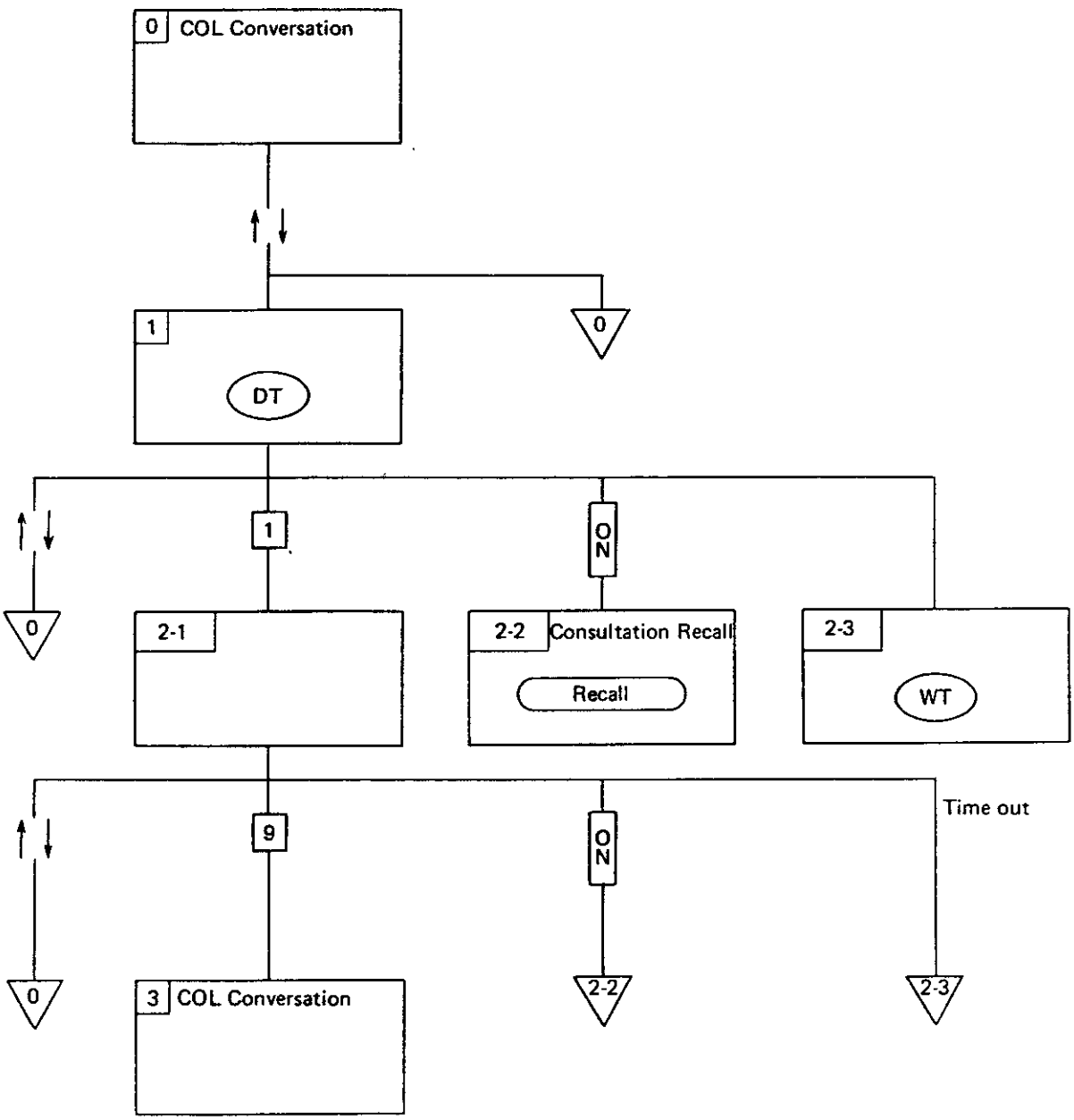
A SLT user may use the Call Split feature with the special number (19).

C

- **Operation Guide**

  (Call Park On and COL Conversation) ↑↓ + [1] + [9]

- **Operation Flow**



2.3.C.8.1.1 Attendant

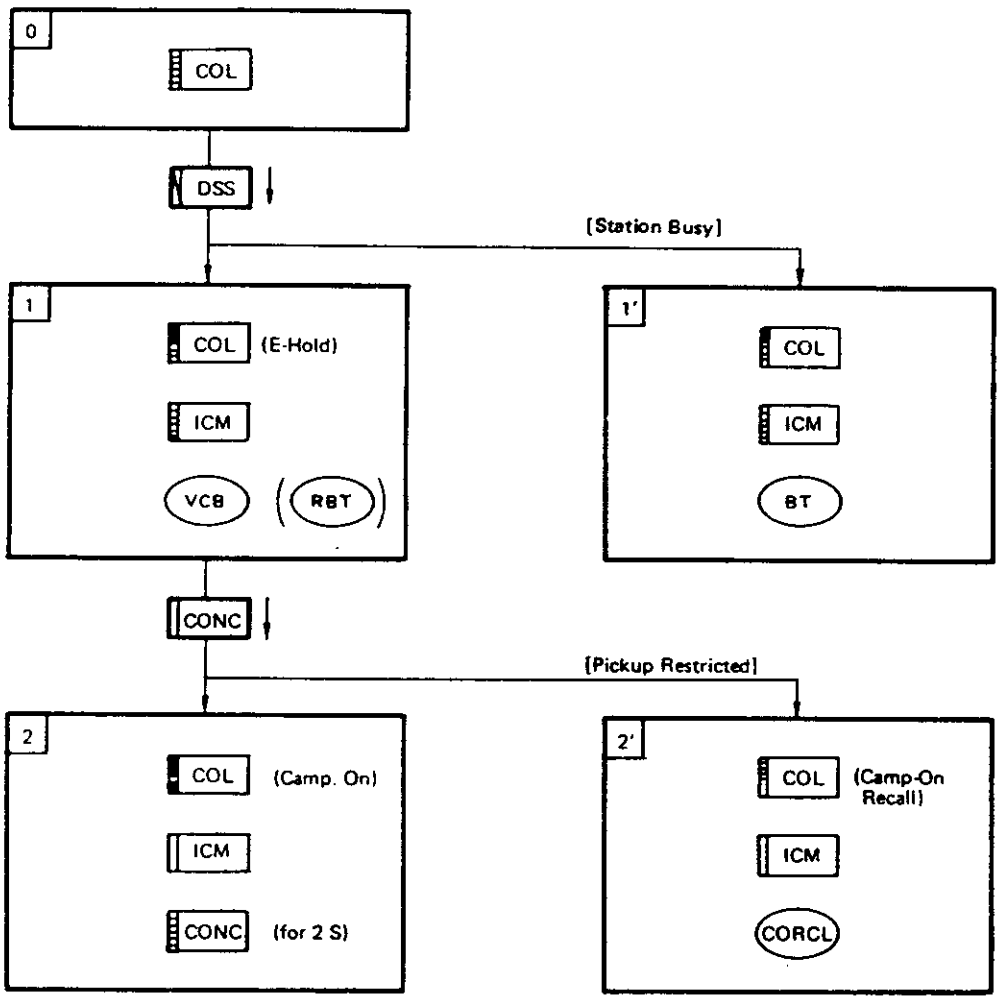
While conversing on COL, Attendant can perform Camp On call with DSS key and CONC key. (See Section 2.3.C.11.2 Automatic Add On.)

C

- **Operation Guide**

  (COL Conversation) [DSS] + [CONC]

- **Operation Flow**



2.3.C.8.1.2 Key Telephone/Versa Phone

While conversing on COL, a KT/VP user can perform Camp On with the TRN key.

- **Conditions**

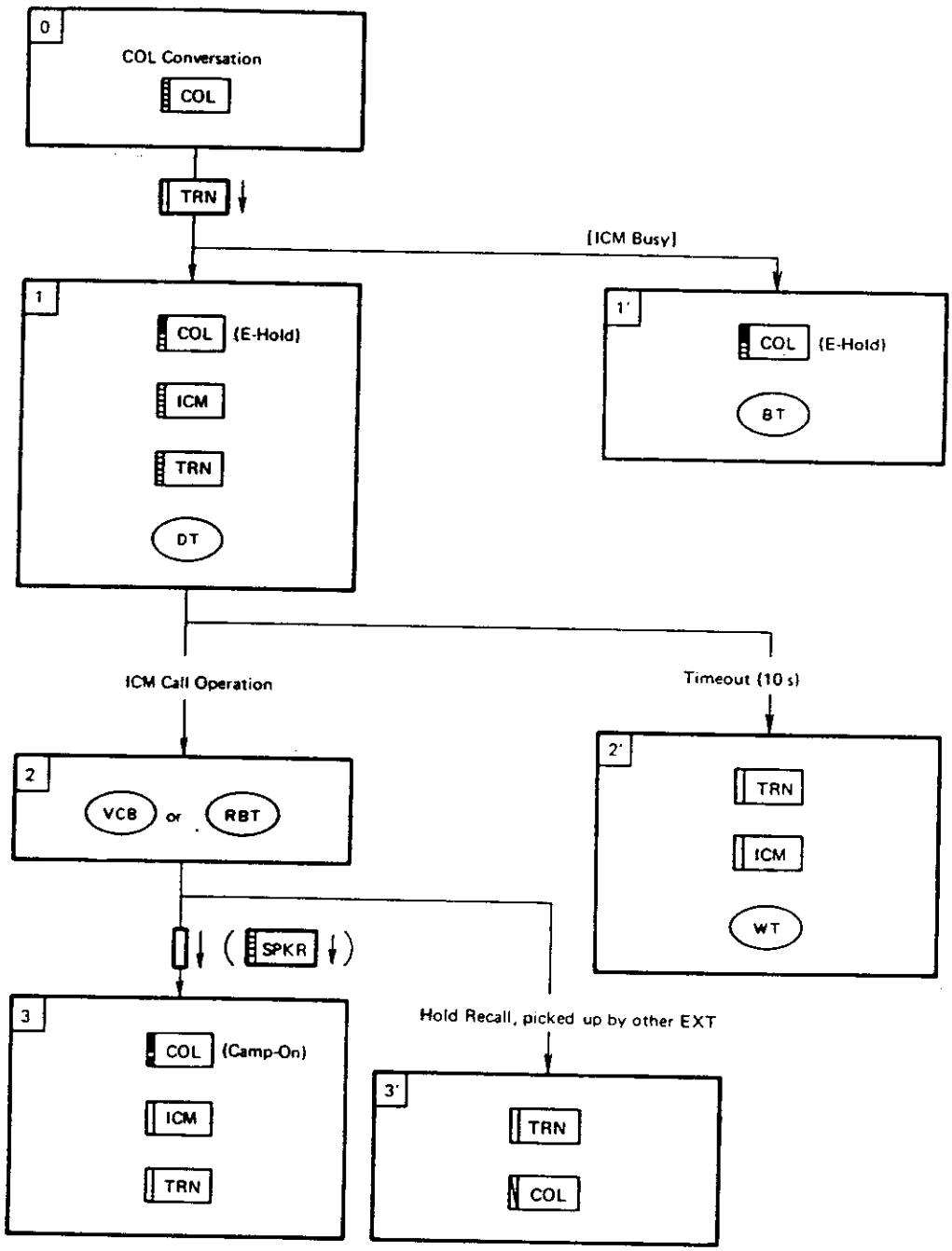
  - The COL is placed on Exclusive Hold when the operation is started.

- **Operation Guide**

  (COL Conversation) [TRN] + ICM Call Operation +[ ]↓ ([SPKR]: SPKR on)

C

■ Operation Flow



2.3.C.8.2.2 Single-Line Telephone

A SLT users can perform ICM Camp On after flashing switch-hook.

C

- **Operation Guide**

  (ICM Conversation) ↓↑ + ICM Call Operation + □↓

2.3.C.8.3 Camp On Pickup

Camp On call can be retrieved from another station than Camp On called station. (See Section 2.3.D.1 Direct Call Pickup.)

- **Conditions**

  o A station user is not allowed to retrieve the Pickup Ristricted COL Calls.

2.3.C.8.3.1 Key Telephone/Versa Phone

- **Operation Guide**

  ((Off-hook or SPKR on) and Idle) ([FEAT]) + [4] + [n] + [n]
  nn: Camp On Called Station No.

- **Operation Flow**

  See Section 2.3.D.1.1.

2.3.C.8.3.2 Single-Line Telephone

- **Operation Guide**

  (DT) [1] + [4] + [n] + [n] nn: Camp On Called Station No.

- **Operation Flow**

  See Section 2.3.D.1.2. Direct Call Pickup: SLT

2.3.C.10 COL Selection

2.3.C.10.1 KT/VP

Originating a COL call a station user can select COL which is not Pickup Restricted and in the same tenant as the station. (See Section 2.3.D.2 Direct COL Assignment.)

- **Conditions**

  - o Only a COL which has direct appearance on the station can be selected among them.
  - o When a station user originates a call, he can access only a COL which is not outgoing restricted. (See Section 2.3.O.5 Outgoing Restriction.)

- **Operation Guide**

  (Off-hook or SPKR on) [COL]

  (On-hook and SPKR off) [COL] + [ ]↑ ([SPKR])

2.3.C.10.2 SLT

To originate a COL outgoing call with SLT, an idle COL in designated COL group is seized automatically.

- **Conditions**

  - o System assigns an idle COL in the same tenant as the caller, a COL which is not pickup restricted and is not outgoing restricted.
  - o System searches COLs in the group from one with the largest COL number.
  - o COL group number 1 to 7 are designated by dial number 91 to 97 correspondingly.

- **Operation Guide**

  (DT) [9] + [n] n: 1, 2, 3, 4, 5, 6, 7

- **Programming**

  Line Specification Item 12

  CO Outgoing Group (COL No.)
  1 ~ 7 Group
  0: Not Assigned
  Default is Group 1.

2.3.C.11 Conference

Up to three internal party can be connected to a COL simultaneously. And up to four party can be joined to an internal call. A station can seize two COL simultaneously.

- **Conditions**

  o Conference features are listed below.

  1. Add On Conference
  2. Automatic Add On
  3. Conference Hold
  4. Multi Line Conference
  5. Trunk To Trunk Conference
  6. Conference Camp On

2.3.C.11.1.1.3 Add On Conference From Conference Hold (KT/VP)

If the COL engaged in an Add On Conference is placed in any of the following conditions, other KT/VP user can join the conference by depressing the COL key:

C

- o An station user in the Add On Conference places the Conference on hold. (See Section 2.3.C.11.3 Conference Hold.)
- o Either station user performs Privacy Release in a two-party conference. (See Section 2.3.P.5 Privacy)

- **Operating Guide**

(Off-hook or SPKR on) [COL]

(On-hook and SPKR off) [COL] + [ ]↑

[COL] + [SPKR]

2.3.C.11.1.1.4 Add On Conference by Executive (KT/VP)

An Executive KT/VP user can connect itself to a busy COL or a COL engaged in an Add On Conference by depressing the COL key. (See Section 2.3.O.6.3 Executive Override.)

- **Conditions**
  - o The above operation is invalid while outgoing COL call is to be originating.
  - o It is invalid if three stations are connected to a COL.
  - o If the COL is busy in the Privacy mode (other than Privacy Release and Conference Hold), no Add On Tone is sent.

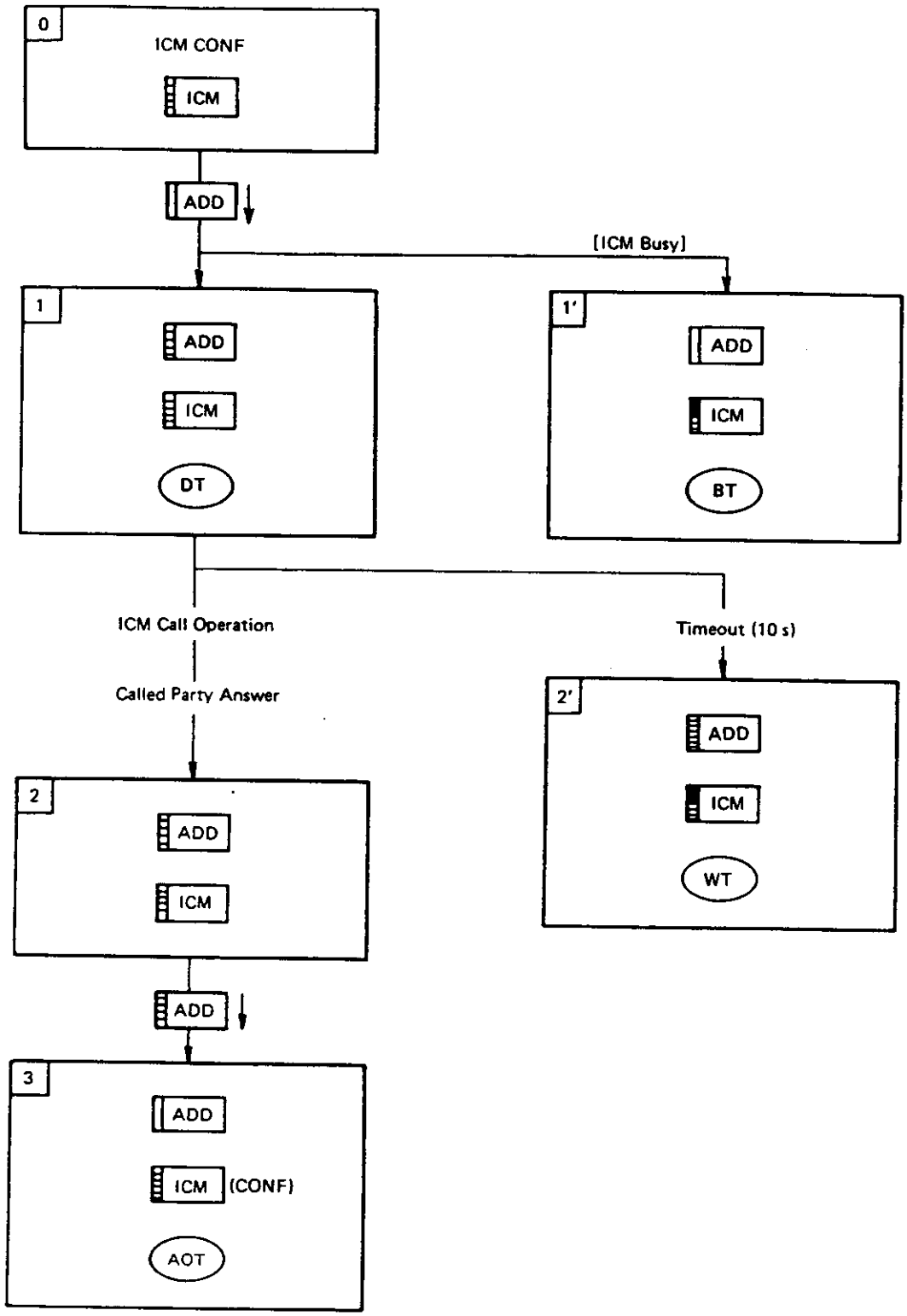
- **Operation Guide**

(Off-hook or SPKR on) [COL]

(On-hook and SPKR off) [COL] + [ ]↑

[COL] + [SPKR]

- Operation Flow



2.3.C.11.1.2.3 Add On Conference From ICM Conversation (SLT)

While in conversing on an internal call, a SLT user can initiate an ICM Add On Conference.

C

- **Conditions**
  - o The ICM line is placed on Consultation Hold during the operation.
  - o The operation is terminated if Consultation Hold Recall begins.
- **Operation Guide**

  (ICM Conversation) ↓↑ + ICM Call Operation + Called Party Answer + ↓↑

2.3.C.11.1.2.4 Add On Conference From ICM Conference (SLT)

In a three party internal conference, another station can participate in the conference.

- **Conditions**
  - o The ICM line is placed on Conference Hold during the operation.
- **Operation Guide**

  (ICM CONF) ↓↑ + ICM Call Operation + Called Party Answer + ↓↑

2.3.C.11.3.4 ICM Conference Hold Pickup

A station user can pick up ICM Conference Hold.

C

- **Conditions**

  o Only the station user who initiated the hold can pick up the ICM Conference Hold.

2.3.C.11.3.4.1 Key Telephone/Versa Phone

- **Operation Guide**

  (Off-hook or SPKR on) [ICM]

  (On-hook and SPKR off) [ICM] + [ ] ↑ ([SPKR])

2.3.C.11.3.4.2 Single Line Telephone

- **Operation Guide**

  (Off-hook) ↑↓

2.3.C.11.4 Multi Line Conference

Two COLs can be seized by a station simultaneously.

- **Conditions**

  - o CONF-ME board is necessary for this feature. The operation is ignored if this board is not installed or busy.
  - o The key lamps for the two CO lines which are in conference on the KT/VP indicate I-USE indication.
  - o Both COLs are disconnected if the station user disconnects the call.
  - o The station user initiating a Multi Line Conference can switch the two COL lines into a Trunk to Trunk Conference. (See Section 2.3.C.11.5 Trunk to Trunk Conference.)

2.3.C.11.4.1 Key Telephone/Versa Phone

- **Operation Guide**

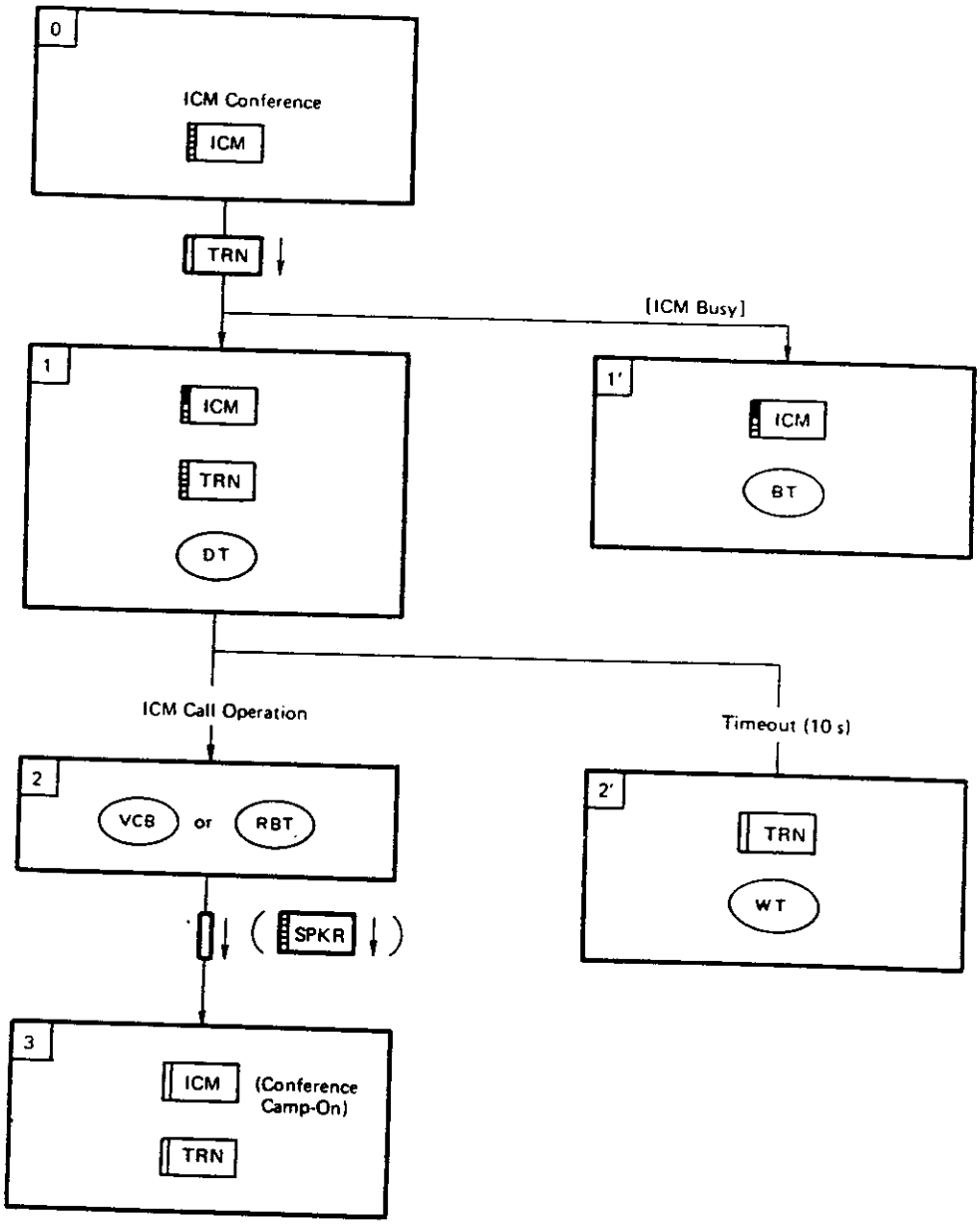
  (COL Conversation with COL hold) [ADD]

2.3.C.11.4.2 Single Line Telephone

- **Operation Guide**

  (COL Conversation with COL Hold) ↓↑ +[1]+[1]

- Operation Flow



2.3.C.11.6.2 Single Line Telephone

A SLT user engaged in an ICM conference can initiate Conference Camp On after flashing the switch-hook.

- Operation Guide

(ICM Conference) ↓↑ + ICM Call Operation + [ ]↓

2.3.D.1 Direct Call Pickup

A station user can pick up calls ringing on another station within the same tenant as the station by dialing special number and called station number.

- **Conditions**

  - o The following calls can be picked up.

    i) COL Recall
    ii) COL RGT
    iii) ICM Hold Recall
    iv) ICM Voice/Tone Call (Including Master Group Hunt Call)

  - o A station user can not pick up calls on a Pickup Restricted COL.

2.3.D.3 Disconnect

2.3.D.3.1 COL

A COL call is disconnected with disconnect signal of the COL, disconnect operation by station, or forced disconnect by ATTND.

D

2.3.D.3.1.1 Disconnect Signal

When a disconnect signal from a COL is detected, the COL is disconnected and the conversing or holding stations on the COL are released.

- **Conditions**

  - o Disconnect signal is valid only with those COLs which are programmed as disconnect signal enable.
  - o When a disconnect signal is detected during COL conversing, COL holding, COL Hold Recall, or COL Camp On, the COL is disconnected.
  - o When originating a COL outgoing call, a disconnect signal is ignored.

- **Programming**

  Line Specification Item 9, Disconnect Signal (COL No.)
  0: No Reception
  1: With Disconnect Signal
  Default value is 1 with Disconnect Signal

- **Setting**

  Threshold value of Disconnect Signal is set with DIP switch on CTRK-ME. (See Section 3.6.2.4.2.2 CTRK-ME.)

2.3.M.5.3 Special Dial Exceptions

Special dials are provided to perform processes different from normal Toll Restriction.

2.3.M.5.3.1 Override Office Code

When an override official code is entered subsequent to an area code, no restriction is imposed on the area code and office code.

2.3.M.5.4 Deny Mode

Toll Restriction in deny mode takes place when the input dial matches certain dials in system Toll Restriction data, and then the COL is disconnected and a WT connection is made to the station.

- **Programming**

  Toll Restriction Item 1: Toll Plan No.
  (Group: COL Toll Group No., Class: EXT Toll Dial Class No.)
  0: No Function
  1 to 15: Toll Plan No.

2.3.M.5.4.1 PBX/E&M Tie Line Condition

Toll restriction is imposed on the entry of a PBX Outgoing Specific Code preprogrammed by the system data on a PBX/E&M Tie Line COL.

- **Condition**

  o Toll restriction is not imposed on the entry of a code other than the PBX Outgoing Specific Code by preprogrammed of the system data on a PBX/E&M Tie Line COL. Therefore, this condition is imposed on only those dials registered with the PBX Outgoing Specific Code.

- **Programming**

  TII Restriction Item 2: Toll Plan Table
  (Plan: Toll Plan No., Condition: 1=PBX/E&M)
  0–ll–mm–nn–pp–qq–rr: deny mode
  ll, mm, nn, pp, qq, rr: dial table no. (00, 01 to 50)

  Toll Restriction Item 3: Toll Restriction Dial Table (dial table no.)

dddd–ss–tt	dddd:	dial
	ss, tt:	dial table no. (00, 01 to 50)

2.3.M.5.5.2 Area Code Condition

An area code that does not match system toll restriction data is restricted. Note that as there is special override office code, restriction is performed when override office code condition is not satisfied. (See Section 2.3.m.5.3.1 Override Office Code.)

- **Programming**

Toll Restriction Item 2: Toll Restriction Plan and Condition
(Plan: Toll Plan No., Condition: 3=area code
5=prefix area code)
1—ll—mm—nn—pp—qq—rr: allow mode
ll, mm, nn, pp, qq, rr: dial table no. (00, 01 to 50)

Toll Restriction Item 3: Toll Restriction Dial Tabie (dial table no.)
dddd—ss—tt { dddd: dial
ss, tt: dial table no. (00, 01 to 50)

Toll Restriction Override Office Code Item 8
(Tenant A/B x Office Group Table No. 1 to 4)
Override Office Code 3 digits

2.3.M.5.5.3 Office/Subscriber Code Condition

The Office/subscriber codes that do not correspond to the dial sequence preprogrammed by system data and special codes (N11, 1N) can be restricted.

M

- **Programming**

Toll Restriction Item 2: Toll Restriction Plan and Condition
(Plan: Toll Plan No., Condition: 4=office/subscriber code
6=prefix office/subscriber)
1—ll—mm—nn—pp—qq—rr: allow mode
ll, mm, nn, pp, qq, rr: dial table no. (00, 01 to 50)

The Restriction Item 3: Toll Restriction Dial Table (dial table no.)
dddd—ss—tt { dddd: dial
ss, tt: dial table no. (00, 01 to 50)

2.3.N.1.4 Universal Night Assign

When a Universal Night Assign (UNA) attribution is assigned to a COL various services are provided for an incoming call during Night Mode.

- **Conditions**

  - o Valid for tenant A only.
  - o If a COL incoming call is received during Day Mode and the mode changes to Night Mode during the call, the call does not use UNA facility.
  - o If a COL incoming call is received during Night Mode and the mode changes to Day Mode during the call, the call continues to use the UNA facility.

- **Programming**

Line Specification Item 2 Tenant Group (COL No.)
0: Tenant A
Item 3 Universal Night Assign (COL No.)
1: with attribute

2.3.N.1.4.1 UNA Relay

While there is an incoming call on a COL with UNA attribute during Night Mode, the UNA Relay operates in a 1-second-on/3-seconds-off pattern.

2.3.N.1.4.2 Paging

While there is an incoming call on a COL with UNA attribute during Night Mode, CORGT is sent from the Paging Speakers.

N

- **Conditons**

  - o CO RGT is mixed at the paging speakers while paging call goes on.

2.3.N.1.5 Universal Night Assignment Pick Up

An Incoming calls on a COL with UNA attribute during Night Mode can be picked up with an SLT, KT and VP.

- **Conditions**
  - o A BT is accessed when no COL can be picked up.
  - o If multiple COLs can be picked up, they are answered in the order of first-come, first-served.
- **Operation Guide**

i) KT/VP

(off hook or SPKR or [FEAT] + [4] + [9] + [9])

ii) SLT

(DT) [9] + [9]

N

2.3.O.3.1 SHHD/SNHD

The Station Hard of Hearing Handset (SHHD) or Station Noise Canceling Handset (SNHD) can be connected to a KT/VP. (See Section 3.10.4.4(2) Optional Unit installation (d), (e).)

2.3.O.3.2 Headset Adaptor

An optional Headset Adaptor can be connected to a KT/VP. (See Section 3.10.3.4 Optional Features.)

2.3.O.3.3 External Station Loud Ringer

An External Station Loud Ringer Relay can be connected to a KT/VP. (See Section 3.10.3.4 Optional Features.)

- **Conditions**
  - o The External Station Loud Ringer Relay operates in a 1-second -on, 3-seconds-off pattern at the KT/VP with an incoming COLRGT or COL Camp-on.
  - o The ringer operates even when there is a call with higher priority.
  - o The ringer does not operate on other COL incoming calls (Recall, Callback).

2.3.O.3.4 External Alarm Signal (Loud Ringer)

A Loud Ringer Relay can be connected on each COL and used for an incoming call. (See Section 3.4.6.6 Loud Ringer Installation.)

- **Conditions**
  - o When there is an incoming call on the COL, the Loud Ringer operates in a 1-second-on, 3-seconds-off pattern.
  - o The Loud Ringer does not operate on other COL calls (Camp On, Recall, and Callback).

O

2.3.O.4 Outgoing Address Signal

The system can send a dial signal (Outgoing Address Signal) to a COL.

- **Conditions**

  o Dial transmission is executed in the following cases:

  i) Dialing from a KT/VP.

  ii) Dialing from a SLT on a DP COL.

  iii) Dialing from a DP SLT on a DTMF COL.

  iv) Automatic dialing (Speed Dialing, Redialing, Callback Queuing/Timed Trunk Queuing) from a DTMF SLT on a DTMF COL.

O

2.3.O.6.2 Do-Not-Disturb Override

When the attendant accesses BT while calling a KT/VP in Do-Not-Disturb mode, forced ICM calling is available.

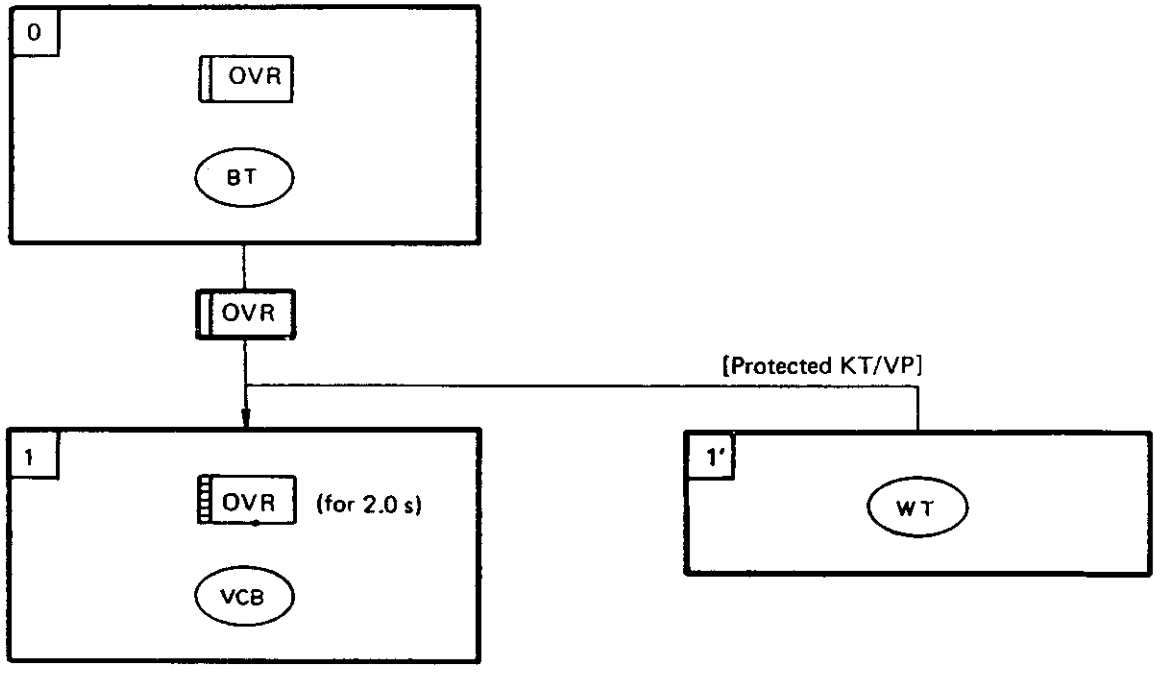
- **Conditions**

  o If the called KT/VP is protected, the call is invalid and B Γ is accessed.

- **Operation Guide**

  (ATTND BT) OVR

- **Operation Flow**



2.3.O.6.3 Executive Override

The KT/VP with Executive attribute can have access to various special functions.

- **Conditions**

  o Even though the attendant KT Aos the Executive attribute, the Executive feature is not available and operates only as an attendant station on ICM calls.

  o An SLT with Executive Attribute can not use functions other than those relating to ICM calls.

- **Programming**

Station Class-of-Service Item 4, Executive Attribute

Corresponding EXT:	Executive Attribution (blink)	
Each EXT	Flashing	ON
	Steady on	OFF

2.3.O.6.3.1 DND/Busy Override

An Executive KT/VP can have access to the KT/VP that is set for DND or Off-hook Signal Deny on an ICM call.

2.3.O.6.3.2 ICM Call Priority

When an ICM call originating from an Executive KT/VP arrives at a KT/VP that is being called from an ordinary station (not ATTND or Executive), the preceding call is blocked and accessed to BT, and Interrupt Tone is sounded instead of bust tone and ICM Voice Call is heard at the called KT/VP.

2.3.O.6.3.3 Executive Automatic Add-On

O

When an ICM call is originated from an Executive KT/VP to a busy SLT, Add-On Conference is established following the Add-On Tone. (See Section 2.3.C.11.1 Add-On Conference.)

- **Conditions**

  o When the called SLT is originating a COL/ICM call or engaged in a COL/ICM Conference to full capacity, override is disabled and BT is accessed at the calling KT/VP.

2.3.P.1.1 All Call with Meet-Me

After seizing an ICM line, artivate All Call with Meet-Me facility by pressing the ALL or PAGE key or dialing a specified number.
(The Meet-Me facility is not available by only pressing Page key.)

- **Conditions**

  - o All Call is available only at the KT/VP where the following conditions are entirely satisfied.

    i) Assigned to the same tenant as the calling station.

    ii) No other call is in progress.

    iii) Station Class-of-Service 'All Call Deny' is set to allow (lit).

    iv) Station Class-of-Service 'Off-hook All Call Deny' is set to allow (lit) or on-hook and speaker off where denied (flashing).

  - o Zone speakers 1 to 3 are also eligible.

  - o BT is accessed when another station of the same stenant is performing All Call, All Group Call, or Group Call. (See Section 2.3.A.1.1 Attendant Call Priority.)

  - o All Call terminates after a specified programmable time and is held in Meet-Me status.

  - o All call is not available when no idle ICM line exists.

  - o BT is accessed when no idle called KT/VP exists.

  - o The Page Key is a Press-to-Talk Key, and paging is possible only while the key is pressed.

- **Programming**

P

Station Class-of-Service Item 17, Paging Call Access Deny

Each station	Steady on:	allow
	Flashing:	deny

- **Operation Guide**

(DT) [8] + [8] + [0]

or

(Off-hook or SPKR on) [ALL] or [PAGE] (Press-to-Talk)

2.3.P.1.4 Zone Call with Meet-Me

After seizing an ICM line, activate Zone Call with Meet-Me facility by pressing the ZONEn key or dialing a specified number.

- **Conditions**

  - o BT is accessed when another station in the same tenant is performing ALL Call, All Zone Call, or Zone Call. (See Section 2.3.A.1.1 Attendant Call Priority.)
  - o Zone Call terminates after a specified time (programmable) and is held in Meet-Me status.
  - o Zone Call is not possible when no idle ICM line exists.
  - o This feature is not available unless a ZPAD-ME is installed.

- **Programming**

  Station Class-off-Service Item 17: Paging Call Access Deny

Each Station	Steady on:	allow
	Flashing:	deny

  System Constant Item 14 External Ringing Speakers
  (Tenant A or B)

  0: No Zone Speakers
  1: 1 Zone Speaker
  2: 2 Zone Speakers
  3: 3 Zone Speakers

  Example: When Tenant A is "2" and Tenant B is "1", Zone 1 and 2 are assigned to the Tenant A, and Zone 3 is assigned to the Tenant B.

- **Operation Guide**

  (DT) [8] + [8] + [1] or (Off-hook or SPKR on) [ZONE 1] (Zone Speaker 1)

  (DT) [8] + [8] + [2] or (Off-hook or SPKR on) [ZONE 2] (Zone Speaker 2)

  (DT) [8] + [8] + [3] or (Off-hook or SPKR on) [ZONE 3] (Zone Speaker 3)

P

2.3.P.2 Pickup Restriction

This facility restricts accessable COLs from Stations

- **Conditions**

  o Pickup Restriction corresponding to each COL can be assigned per station.

  o Audible and visible indications relating to pickup restricted COL do not appear at the corresponding KT/VP.

  o A station user cannot disable to access a Pickup Restricted COL.

- **Programming**

  Station Class-of-Service Item 25: Pickup Restriction (EXT No.)

  Each COL { Restricted: Flashing
  Not restricted: Steady on

P

2.3.P.3 Preselection

A KT/VP user can preselect a COL/ICM before seizing the line.

- **Conditions**

  - o Preselection is valid for 10 seconds and a station user can seize a COL/ICM by lifting the handset or pressing the SPKR key during this interval.
  - o When the preselected COL/ICM line is busy, the line can not be seized.
  - o During preselection the COL/ICM key lamp indicates I-USE, and the lamp goes out if the line is not seized within 10 seconds.
  - o If there is an incoming call to the station during preselection and the station user lifts the handset or presses the SPKR key, the preselected line is seized even if Automatic Line Answer is assigned. (See Section 2.3.A.4 Automatic Line Answer.)

- **Operation Guide**

  (On-hook and SPKR off) [COL] or [ICM] or [FLT]

P

2.3.P.4 Prime Station

The station with the lowest number among those that can access a COL is called the prime station and has a special feature for incoming calls.

- Conditions

  o The Prime Station is not fixed and changes automatically according to the status of each station. For example, if a prime station is removed or released, the next station becomes the prime station.

2.3.P.4.1 COL Incoming Call Answering Position

When there is an incoming call on a COL and no station is assignes to individual ringing or the assigned are in Do-Not-Disturb, Station Forced Released, or not installed, the prime station rings.

- Conditions

  o Calls ring even at a prime station set to Do-Not-Disturb.

  o The prime station can be an attendant KT.

  o The incoming call is transferred when the prime station is in (Busy) Call Forward mode.

2.3.P.4.2 Automatic Recall

If an attendant KT does not exist in the same tenant or an attendant KT exists but the COL is pickup restricted, Atutomatic Recall rings at the prime station.

- Conditions

  o Ringing is the same as normal COL recall.

  o When the Prime Station is set to Call Forward, the call is transferred.

P

2.3.P.5 Privacy

Privacy is provided on COL and ICM calls.

- **Conditions**

  - o Privacy Release is possible on COL but not on ICM calls.
  - o Any COL Add-On Conference performed with three stations is always in Privacy status and Privacy Release is not possible.
  - o When a COL is placed on Conference Hold, it is automatically set to Privacy Release.

2.3.P.5.1 Privacy Release

A COL call can be placed on Privasy Release at the engaged KT/VP.

- **Conditions**

  - o When Privacy Release operation is complete, a Privacy Release Burst Tone is set to both COL and occupied station(s).
  - o The COL that is in Privacy Release mode can be entered from any KT/VP by pressing the correcor-responding COL key.
  - o The COL key lamp corresponding to the Privacy Release COL at all KT/VP, except at the engaged KT/VP, flashes in the System Hold pattern.

- **Operation Guide**

  (COL Conversation) [FEAT] + [1]

2.3.P.5.2 Privacy Released COL Pickup

COL that is in Privacy Release mode can be picked up at any KT/VP.

- **Operation Guide**

  (Off-hook or SPKR on) [COL]

  (On-hook and SPKR off) [COL] + [ ] ↑ ([SPKR])

2.3.P.5.3 Privacy Restore

A Privacy Released COL can be restored to Privacy.

- **Conditions**

  - o When a COL is restored to Privacy, the corresponding COL key lamp at all KT/VP except at the engaged KT/VP, indicates Busy.

  - o When the Privacy Restore operation is completed, a CT is sent to the operating KT/VP and COL.

- **Operation Guide**

  (COL Conversation) [FEAT] + [1]

P

2.3.P.6 Private Line

A COL private line that can be accessed only from one station is assignable.

- **Conditions**

  - o As the Private Line cannot be accessed from other stations, Add On Conference, Transfer, and Camp On are not available.

  - o Private Line incoming call rings even though the KT/VP with Private Line is set to Do-Not-Disturb Note that during Off-hook Signal Deny, incoming calls arrive but the ringing tone is not sounded.

  - o See Section 2.3.M.3.1.5 Private Line Automatic Answering.

- **Programming**

  Station Class-of-Service Item 25: Picup Restriction (all stations of same tenant)

  COL No. (Private Line No.) { Steady on: Private EXT No.
  Flashing: Other EXTs

P

2.3.P.7 Programming

This section describes the programming functions. Refer to Section 2.4 Programming Features.

- **Conditions**

  o Programming functions are classified as follows:

  1. System Programming Terminal (ATTND)
  2. Dynamic Programming (ATTND)
  3. Programming COL Lines (ATTND)
  4. Programming from KT/VP (KT/VP)
  5. Remote Programming (Personal Computer)

P

2.3.P.7.1 System Programming Terminal

The Attendant Console is used as a System Programming Terminal to set system data. (See Section 2.4 Programming Features.)

- **Conditions**

  - o If there are two attendant consoles in a system, either attendant can be used as system programming therminal, but not both at the same time.
  - o When an attendant console is used as a programming terminal, the system continues to operate usually. (See Section 2.3.P.7.2 Dynamic Programming.)
  - o Even though an attendant console is used as a programming terminal, the attached KT/VP operates as an attendant KT/VP.
  - o Programming operation is started only when the attendant KT/VP is off-hook.

- **Setting**

  DSS Programming Overlay-M1 (PROV-M1) and LCD Unit for DSS-M/N (DSLO-M) are required.

- **Operation Guide**

  (ATTND KT/VP Off-hook) [PGM] + [8] + [2] + [4]

  Number keys specified by PROV-M1 on DSS-M/DSS-N.

P

2.3.P.7.3.5 WATS

When WATS line is accommodated.

- **Programming**

Line Spec. Item 1: Line Class (COL No.)
4: outward WATS DTMF
5: inward WATS
12: outward WATS PULSE

2.3.P.7.4 Programming From KT

Clock and Calendar, and Day/Night Mode are programmed from Ext. No.20 KT.

2.3.P.7.4.1 Clock

- **Conditions**
  - o Hour and minute can be set, however second is initialized to 00.
  - o WT is accessed when invalid data is entered.
  - o CT is accessed on completion of the setting.
- **Operation Guide**

(Off-hook and Idle) [FEAT] + [8] + [1] + [H] + [H] + [M] + [M]

HH: hour 00 to 23
MM: minute 00 to 59

2.3.P.7.4.2 Calendar

- **Conditions**
  - o Enter the last two digits of the year, month, date, and day of the week.
  - o WT is accessed when invalid data are entered.
  - o CT is accessed on completion of the setting.
- **Operation Guide**

(Off-hook and Idle) [FEAT] + [8] + [2] + [Y] + [Y] + [M] + [M] + [D] + [D] + [W]

YY: Year (00 to 99)
MM: Month (01 to 12)
DD: Day (01 to 31)
W: Day of the week
1: Sunday
2: Monday
3: Tuesday
4: Wednesday
5: Thursday
6: Friday
7: Saturday

2.3.P.7.4.3 Day/Night Mode

- **Conditions**

  o The mode is switched simultaneously at both tenants A and B.

  o CT is accessed on completion of the programming.

- **Operation Guide**

  (Off-hook and Idle) [FEAT] + [8] + [*] (to Night Mode)

  (Off-hook and Idle) [FEAT] + [8] + [#] (to Day Mode)

P

- Operation Guide

1) On-hook and SPKR off [FLT]

   On-hook and SPKR off [COL]

2) On-hook and SPKR off [SPDn] (direct speed dial access key)

3) On-hook and SPKR off [DSS]

4) On-hook and SPKR off ([FEAT]) + [*] + [n1] + [n2]

5) On-hook and SPKR off ([FEAT]) + [#]

6) On-hook and SPKR off [ICM]

7) On-hook and SPKR off [PAGE]

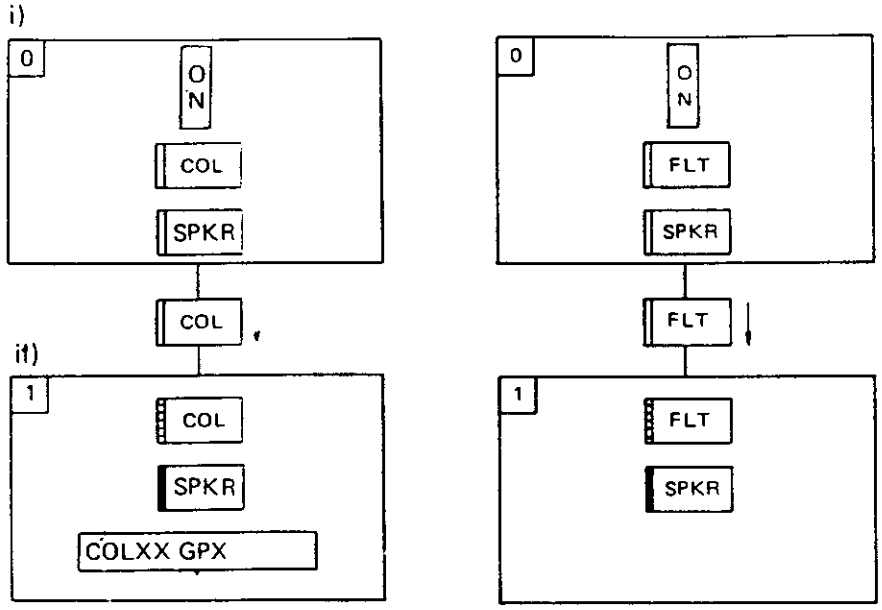
8) On-hook and SPKR off [PAGE] (direct page call key)

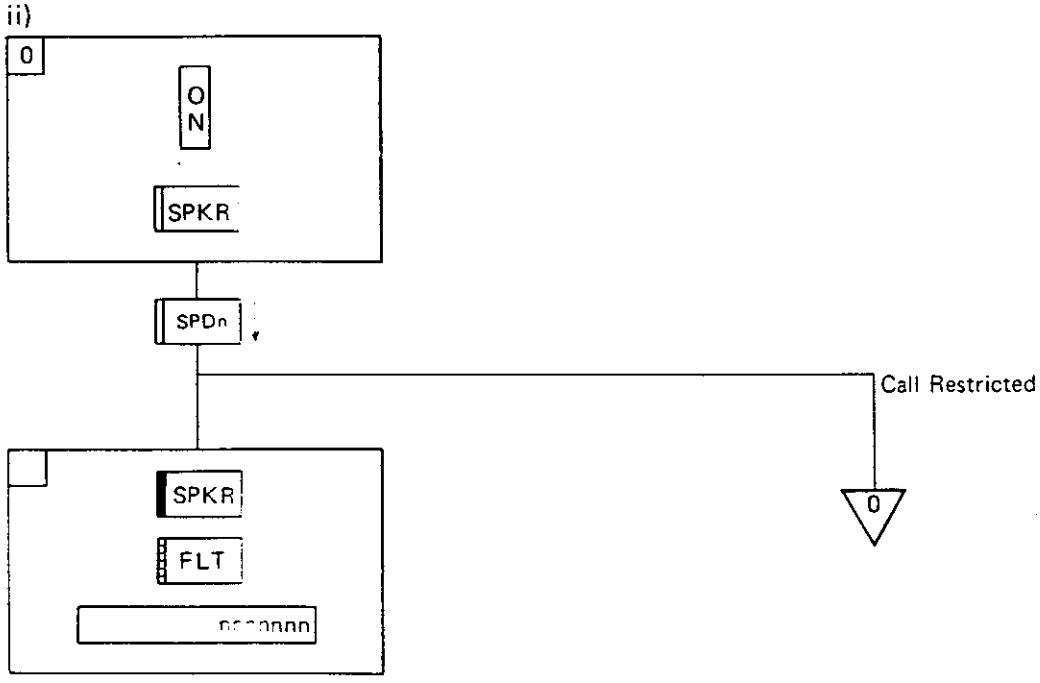
   ALL, ALL GRP, ALL ZONE
   GRP 1 to 4, ZONE 1 to 3

9) On-hook and SPKR off [HNTn] (direct master group hunt key)

Q

- Operation Flow





2.3.R.1.2 Redialing

2.3.R.1.2.1 KT/VP

A KT/VP user can redial a saved number when originating a COL.

- **Conditions**

  o When there is no saved number, the Lost Number Redialing feature is effected.

  o A station user can redial on a COL other than the COL from which the dialed number was saved. Note that when the number saved on a PBX line call is redialed on a DDD COL or vice versa, Redialing may be performed incorrectly.

  o To prevent an incorrect connection by picking up a different group when Redialing, Quick Operation automatically seizes an appropriate COL for Redialing.

- **Operation Guide**

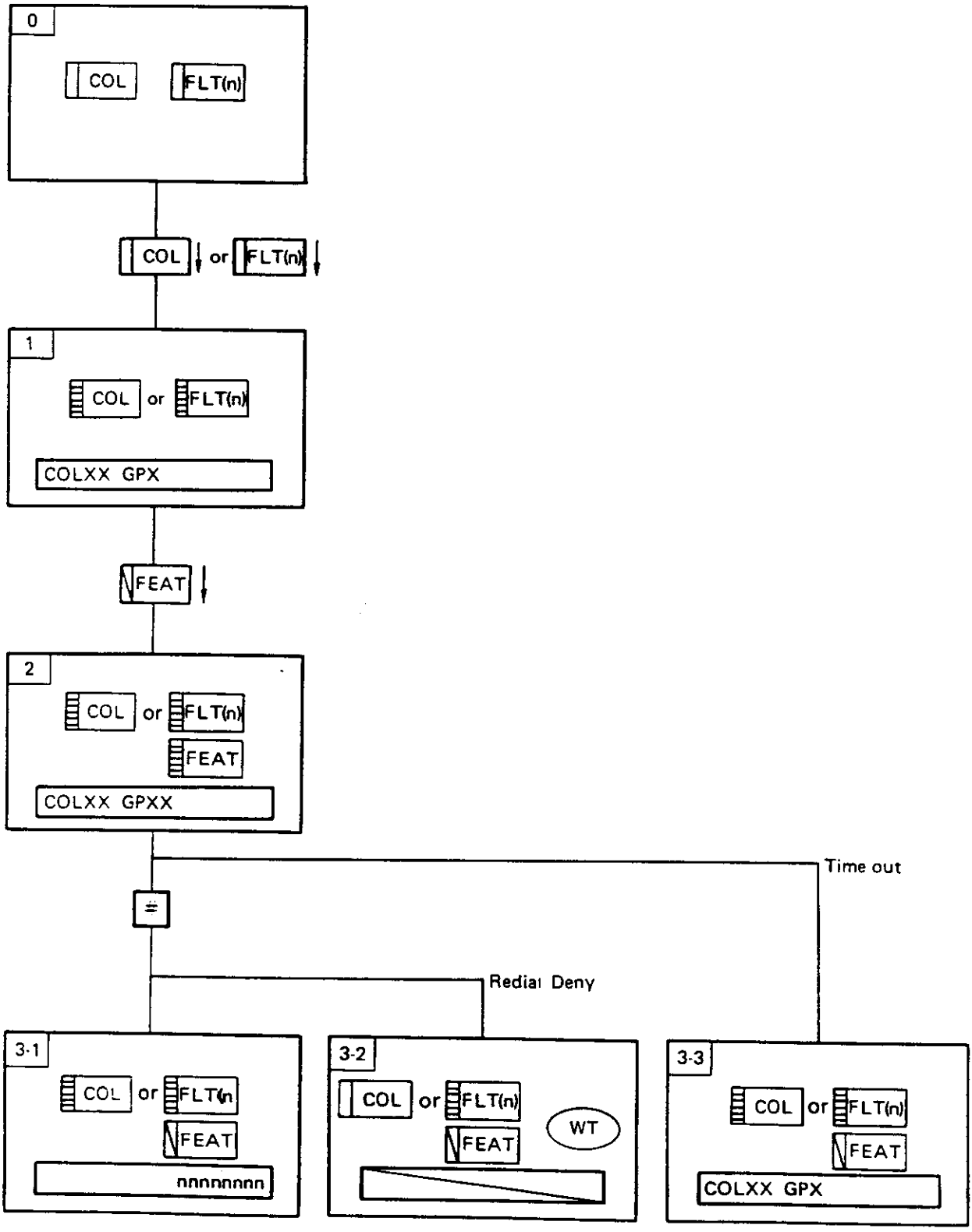
  (COL DT) ([FEAT]) + [#]

  (Off Hook or SPKR On) [≠] (Quick Operation)

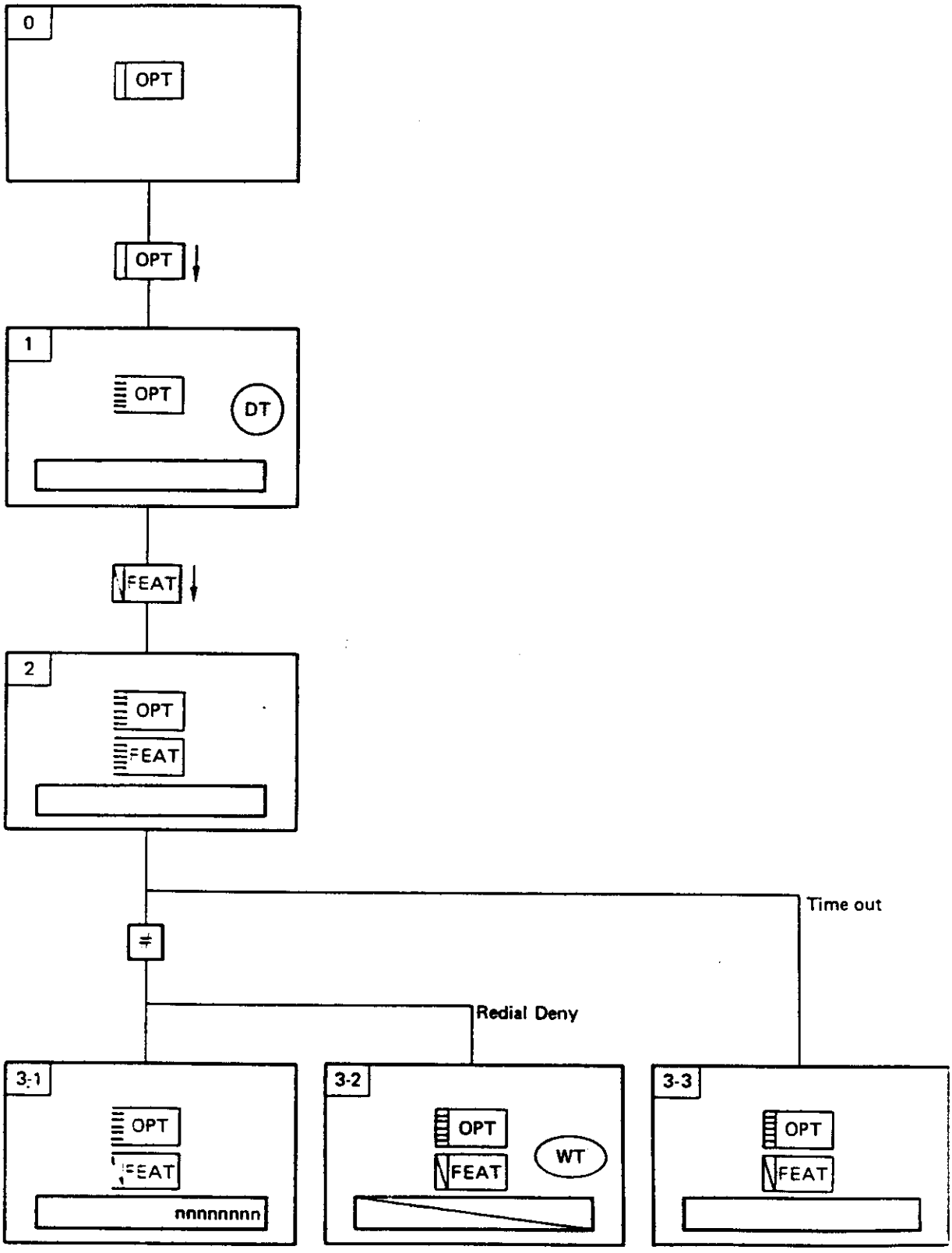
R

Redialing with COL or FLT(n) Key

i) Normal Operation (COL or FLT(n) key)

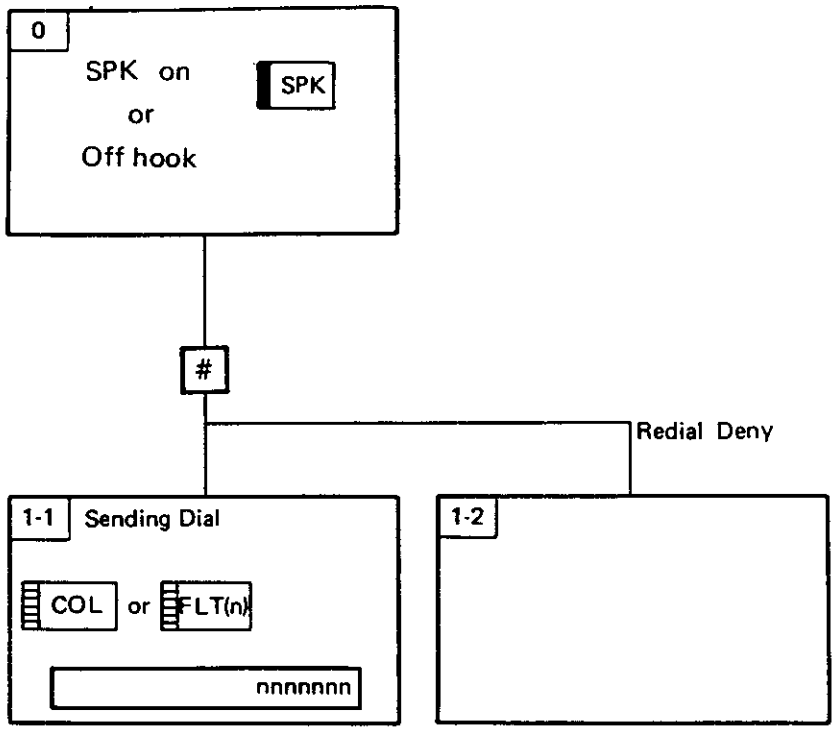


ii) Normal Operation (OPT Key)



R

iii) Quick Operation



2.3.S.1.2 Stations

Only the data corresponding to the specified station can be printed out. Note that this is not applicable to incoming calls.

- Programming

SCDR Item 2: Print Out Stations
Specify EXT for output.
Default is All EXT Output.

2.3.S.1.3 Minimum Time

Only those calls exceeding the specified time (minutes) are printed out.

- Programming

SCDR Item 3: Print Out Minimum Time
0: no limit
1 to 30 (minutes)

2.3.S.1.4 Incoming Call

Incoming calls can be specified to be printed.

- Programming

SCDR Item 4: Print Out Incoming Calls
0: Print
1: Do not print.

2.3.S.1.5 Account Code

Only outgoing calls or incoming calls bearing account, code can be printed out. (See Section 2.2.3.1.4 KT Display.)

- Programming

SCDR Item 5: Print Out Calls With Account Code
0: No Limit
1: Incoming and Outgoing Calls With Account Code Input Only
2: Outgoing and Incoming Calls With Account Code Input Only
3: Calls With Account Code Input Only

S

2.3.S.1.6 Toll Call

Outgoing calls other than Toll Calls can be assigned not to be printed out.

- Programming

SCDR Item 6: Print Out Toll Call
0: no limit
1: Toll Call/Incoming Call only.

2.3.S.1.7 Format

Figure 2.3.S.1 shows the format of the SCDR output.

```
1        10        20        30        40        50        60        70        80
-----                                                                          ----

 DATE :  6/07                                                          PAGE  001

SEQ  TRK  EXT:  EXT2  TIME    DUR   CALLED  NUMBER                ACCT  NO.        NOTE

001    8    35        7:08P   0:02  12345678901234567890123456  123456            * N
```

Figure 2.3.S.1 SCDR Output Format

2.3.S.1.8 Account Code

Account Code to be printed out with the SCDR can be entered from the KT/VP. (See Section 2.2.3.1.4 KT Display.)

- **Conditions**
  - o Account Code should not exceed six digits.
  - o Only one registration is permitted per call.
  - o Registration ends with the input of the end code *, interdigit timeout (10 s), overall timeout (20 s), or six digits.
  - o If registration is suspended by other operation, the digits already entered are registered.

2.3.S.1.8.1 Input From KT/VP

The Account Code can be entered during the COL call.

- **Operation Guide**

(During COL call) [FEAT] + [0] + [n] + --- + [n] + ([*])

Up to 6 digits

S

2.3.S.1.9 System Data Printout

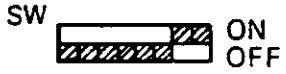
The System Data can be printed out with the SCDR when the power of the system is turned on.

- **Conditions**

  i) The system is not operational until the print out ends.
  ii) Printing is available only in Backup Mode.

- **Operations**

  [1] Set the DIP switch on the M/KCPU-ME card as follows:

  [2] Turn power to on (if power is off) or turn RESET switch to on (if power is on).

  [3] Set the DIP switch as follows after printing starts:

  [4] Set the RESET switch to on after printing ends.

S

2.3.S.2 Secretarial Hot Line Termination

An ICM Hot Line between a KT/VP with Secretary attribute (called Secretary) and a KT/VP with Executive attribute (called Boss) can be installed.

- Conditions

  - o The Secretary and Boss should be programmed with as the destination of the Automatic ICM Termination. (See Section 2.3.A.3 Automatic ICM Termination.)

  - o At least one of the ICM lines within the same tenant should be assigned as Hot Line (where more than one pair exist, lines should assigned in pairs). (See Section 2.3.1.2 ICM Path Termination.)

  - o One Secretary can attend two Bosses. In this case, the Secretary should have a sets of Automatic ICM Termination.

  - o When the Boss sets Call Forward to the Secretary, all incoming calls to Boss (except from Secretary) are transferred to Secretary. (See Section 2.3.C.4 Call Forward.)

- Programming

  See Section 2.3.A.1.3 Automatic ICM Termination.
  2.3.I.2 ICM Path Termination.
  2.3.S.6 Station Class-of-Service.

2.3.S.5.1.1 KT/VP

- Conditions

  o COL is disconnected and WT is accessed, when Speed Dial without assigned dial numbers is accessed.

- Operation Guide

  (COL DT) (FEAT) + * + n + n 1st time

  (COL Originating) FEAT + * + n + n 2nd time or more.
  (When transmitting from SPD after DT)

  nn: SPD No.

2.3.S.5.1.2 SLT

- Conditions

  o Valide only from DTM to SLT.

  o SLT can access a Speed Dial number only when originating COL outgoing calls.

  o WT is accessed when Speed Dial number without an assigned dial number is accessed.

- Operation Guide

  (DT) * + n + n + 9 + m nn: SPD No. m: 0 to 7

  COL Group No.

S

2.3.S.6 Station Class-of-Service

Attributes of the stations are specified and various functions can be restricted.

2.3.S.6.1 Attribution

KT/VP can be assigned the following five attributes.

1. Secretary Attribution
2. Protected Attribution
3. Message Attribution
4. Quick Mode Deny Attribution
5. Executive Attribution
6. Versa Phone Attribution

2.3.S.6.1.1 Secretary Attribute

Secretarial Hot Line is available.

- Programming

Station Class-of-Service Item 2: Secretary Attribute

Each EXT	With attribute	(flashing)
	Without attribute	(steady on)

2.3.S.6.1.2 Protected Attribute

Protected from Do-Not-Disturb Override.

- Programming

Station Class-of-Service Item 3: Protected Attribute

Each EXT	With attribution	(flashing)
	Without attribution	(steady on)

2.3.S.6.1.3 Message Attribution

An station on which the Message Wait feature can be registered (having a MSG key assigned) should be assigned.

- Programming

Station Class-of-Service Item 7: Message Attribute

Each station	Flashing: With attribute
	Steady on: No attribute

S

2.3.S.6.1.4 Quick Mode Deny

Quick Mode Operation is available.

- Programming

Station Class-of-Service Item 8 Quick Mode Deny

Each station	Flashing: Allow Steady on: Deny

2.3.S.6.1.5 Executive Attribute

An Executive Override and access to the Secretarial Hot Line are available.

- Programming

Station Class-of-Service Item 4: Executive Attribute

Each station	Flashing:	With attribute
	Steady on:	No attribute

2.3.S.6.1.6 Versa Phone Attribute

Assign the Versa Phone Attribute without fail when a Versa Phone in connected.

Each station	Flashing: With attribute Steady on: No attribute

S

2.3.S.6.2.7 COL Automatic Line Answer Deny

COL Automatic Line Answer can be denied.

- **Conditions**

  o Valid only for KT/VP.

- **Programming**

  Station Class-of-Service Item 15: CO Automatic Answer Deny

Each station	Steady on:	allow
	Flashing:	deny

2.3.S.6.2.8 ICM Automatic Answer Deny

ICM Automatic Answer can be denied.

- **Conditons**

  o Valid only for KT/VP.

- **Programming**

  Station Class-of-Service Ltem 16: ICM Automatic Answer Deny

Each station	Steady on:	allow
	Flashing:	deny

2.3.S.6.2.9 Paging Call Access Deny

Paging Calls (ALL Call, All Zone Call, All Group Call, Zone Call, Group Call) from an station can be denied.

- **Conditions**

  o WT is accessed when Paging Call access is made from the denied station.

  o Direct Page Access is ignored.

- **Programming**

S

  Station Class-of-Service Item 17: Paging Call Access Deny

Each station	Steady on:	allow
	Flashing:	deny

2.3.S.6.2.10 Call Forward Deny

A station can be denied executing (Busy) Call Forward.

- Conditons

  o WT is accessed when (Busy) Call Forward is executed at a denied station.

- Programming

  Stattion Class-of-Service Item 18: Call Forward Deny

Each station	Steady on:	allow
	Flashing:	deny

2.3.S.6.2.11 Do-Not-Disturb Deny

A KT/VP can be denied executing Do-Not-Disturb.

- Condition

  o Do-Not-Disturb is ignored at a denied KT/VP.

- Programming

  Station Class-of-Service Ltem 19: Do-Not-Disturb Deny

Each station	Steady on:	allow
	Flashing:	deny

2.3.S.6.2.12 Optimized Call Routing Access Deny

A station can be denied executing Optimized Call Routing Access.

- Programming

  Station Class of Service Item 20: Optimized Call Routing Access Deny

Each station	Steady on:	allow
	Flashing:	deny

2.3.S.6.2.13 Equal/SCC Access Deny

A station can be denied executing Equal/SCC Access.

S

- Programming

  Station Class of Service Item 21: Equal/SCC Access Deny

Each station	Steady on:	allow
	Flashing:	deny

2.3.S.7.2 Station Lock Out

The KT/VP is placed in a Lock Out status.

- o Conditions
- o Operation Guide
- o Operation Flow

- **Conditions**

  - o All operations at a KT/VP placed in Lock Out status are disabled, except Station Lock Out Release.
  - o Duriong Lock Out status, the FEAT key flashes and a message appears on the display.

- **Operation Guide**

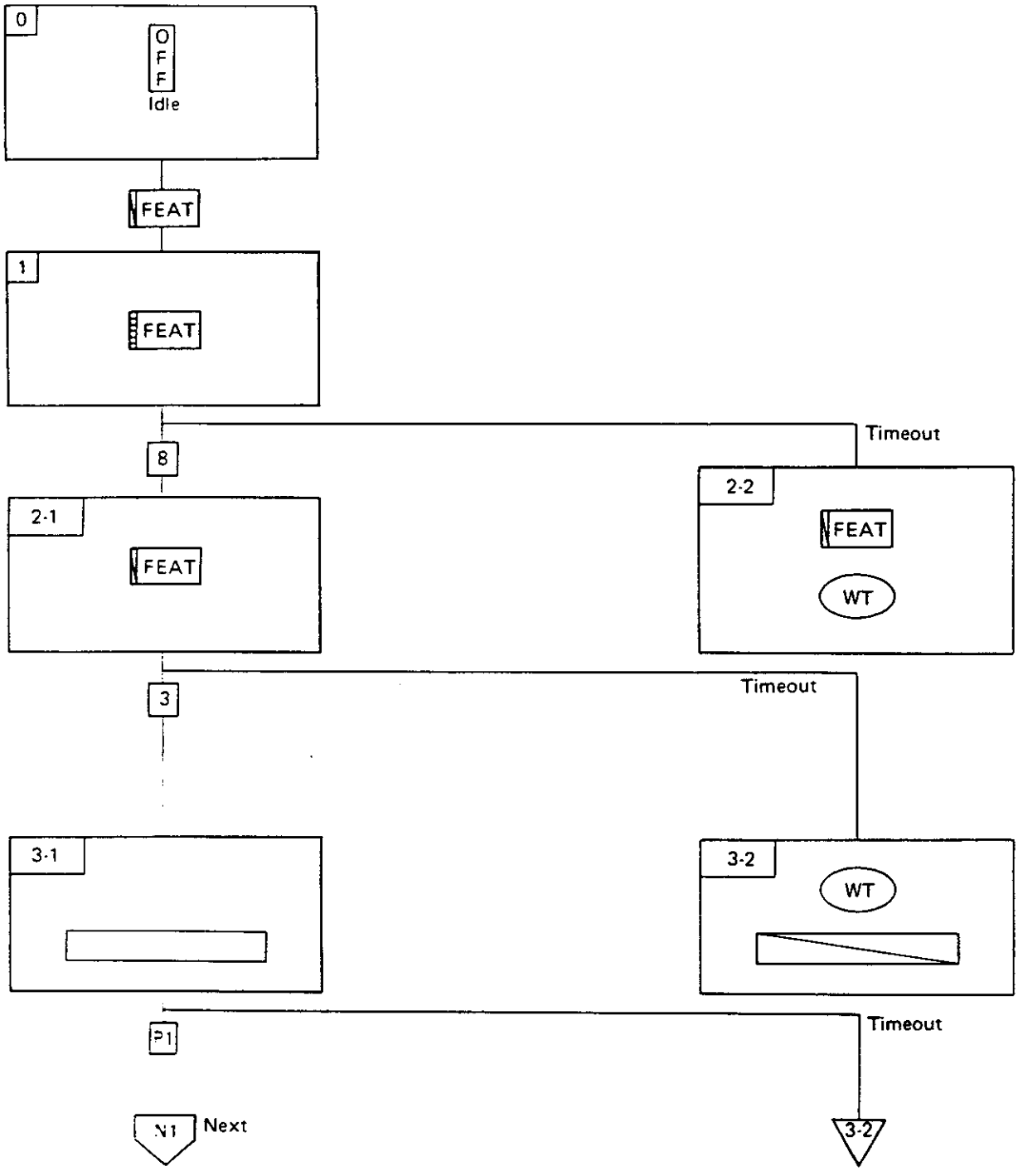
  (Off-hook and Idle)

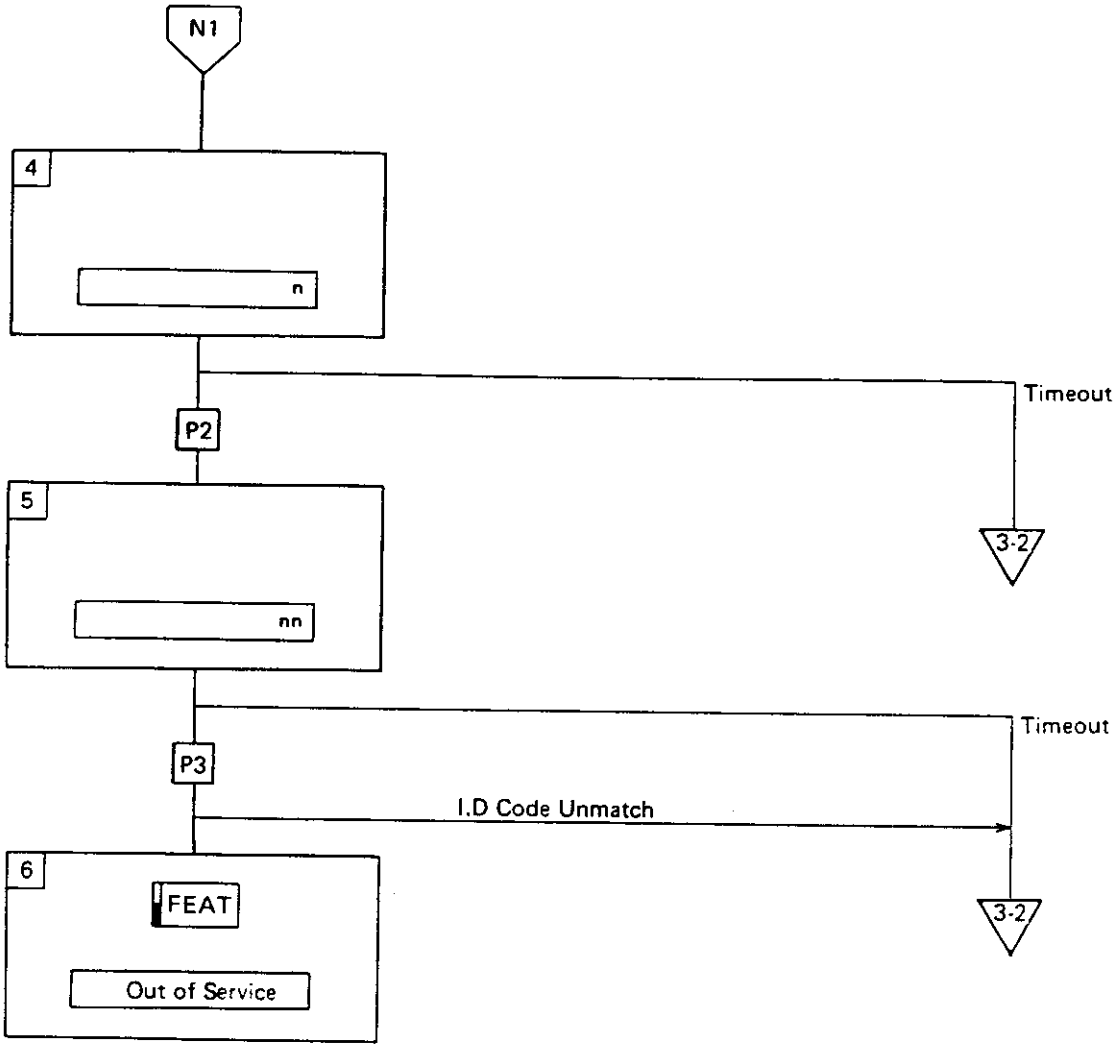
  [FEAT] + [8] - [3] + [P1] + [P2] + [P3]

  P1 P2 P3: Personal ID code
  $0 \leq Pi \leq 9$

S

- Operation Flow




N1
4
n
Timeout
P2
3-2
5
nn
Timeout
P3
I.D Code Unmatch
6
FEAT
Out of Service
3-2

S

2.3.S.7.3 Station Lock Out Release

Station Lock Out Release is executed at the KT/VP.

- Conditions

  - o The Attendant can execute Station Lock Out Release. (Refer to 2.3.A. 1.13 Station Forced Release.)
  - o The FEAT lamp and display revert to the normal state when the Station Lock Out Release is effected.

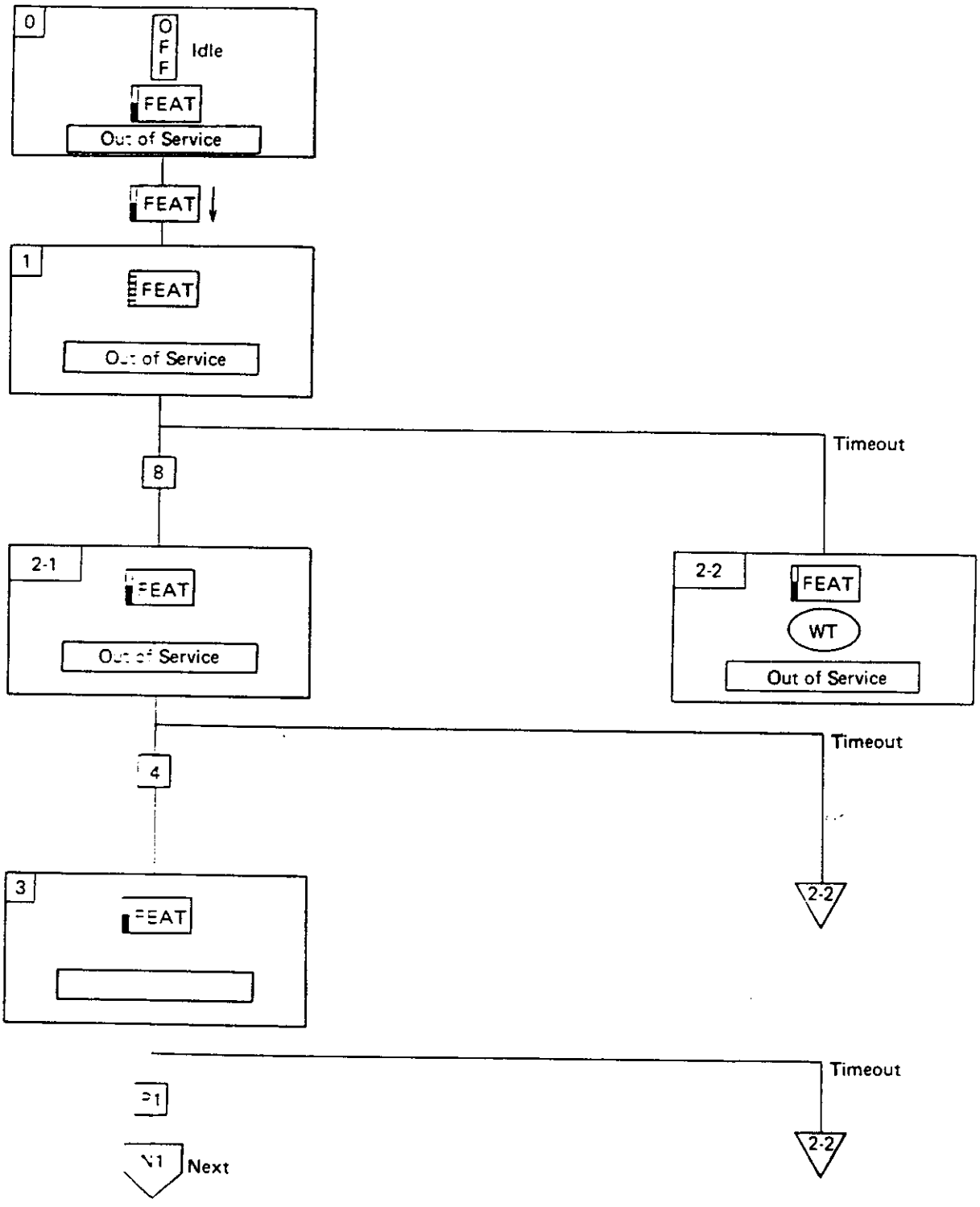
- Operation Guide

  (Off-hook and Idle)

  [FEAT] + [8] + [4] + [P1] + [P2] + [P3]

  P1 P2 P3: Personal ID code
  $0 \leq Pi \leq 9$

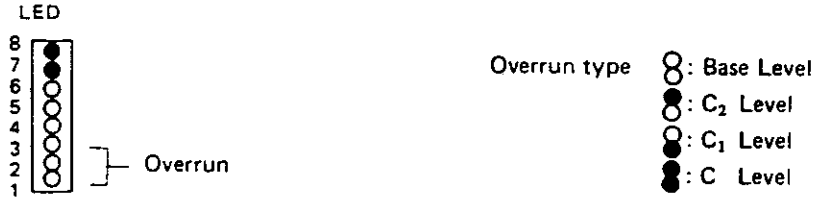
- Operation Flow



S

2.3.S.8.3 Overrun Error

If the execution of the system program does not end within a specified time, an overrun error is detected. In this case, the LEDs on M/KCPU-ME card indicate the following and the system stops operating.



S

2.3.S.9 System Initialization

The following describes the control of system data/backup data when the system power is switched on.

2.3.S.9.1 Clear Mode

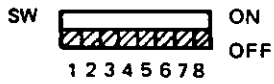
All data in the memory is cleared in this mode, and all functions of the system are set to the default values. (See Section 2.4 Programming Features.) Also, Memory Read-After-Write is executed.

- **Conditions**

  Clock and calendar should be set after initialization.

- **Setting**

  [1] Set the DIP switch on the M/KCPU-ME card as follows:



  [2] Turn on power (if power is off) or the RESET switch (if power is on).

2.3.S.9.2 Backup Mode

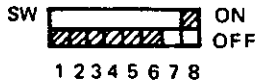
In this mode, the memory (excluding system data and backup data) is cleared. Therefore the previously set system data is saved and backup data is not destroyed.

- **Conditions**

If system data is not set (default values are used), backup data is not saved unless set to this mode.

- Setting

  [1] Set the DIP switch on the M/KCPU-ME card as follows:



  [2] Turn on power (if power is off) or turn the RESET switch twice to on. (if power is on).

2.3.T.2 Timed Trunk Queuing

When reservation is made at a KT/VP while calling or engaged on a COL, a Call-back from the COL can be received after elapse of the specified time (1 to 20 minutes).

- Conditions

  - o Only one reservation, including Call-back Queuing, is possible per KT/VP.
  - o When the COL is engaged at the specified time (1 to 20 minutes), the status becomes the same as Call-back Queuing. (See 2.3.C.3.1 Callback Queuing.)
  - o After the Call-back is activated, the status becomes Call-back Queuing.
  - o When the Call-back is picked up, the reserved dialed number is automatically sent.
  - o The Call-back time (common to the system) can be assigned from 1 to 20 minutes.

Programming System Constants Item 7: Timed Trunk Queuing Interval 0: No Function
1 to 20 minutes
Default 10 minutes

2.3.T.2.1 Registration

- Conditions

  - o On finishing registeration, the COL is disconnected and CT is accessed.
  - o When the call is by Through Dialing from a KT/VP with Outgoing Restriction, the operation is ignored.

- Operation Guide

(COL engaged) FEAT + 9

2.3.T.2.2 Cancellation

- Conditions

  - o Same as cancellation of Call-back Queuing. (See Section 2.3.C.3 Call Back Queuing.)
  - o CT is accessed on finishing the operation if Callback/Timed Trunk Queuing is registered; otherwise WT is accessed.

- Operation Guide

(Off-hook and Idle) FEAT + 0 + 9

2.3.T.3 Transfer (Screened Transfer)

An engaged COL/ICM call can be placed on hold at the station and transferred to the desired station.

- Conditions
  - o Upon transfer, a Transfer Tone is sent to the COL or ICM line.
  - o COL Transfer to a station with Pick Up Restriction is invalid and immediately reverts to Hold Recall.
  - o A COL on Hold Recall cannot be transferred.

2.3.T.3.1 KT/VP

A COL/ICM placed on-hold can be transferred by pressing the TRN key or pressing the DSS key while engaged in a COL call.

- Conditions
  - o Valid only for the latest line if multiple COL/ICMs are placed on hold with the TRN key.
  - o When the TRN key is pressed while engaged on a COL call, the COL is automatically placed on hold and an idle ICM line is seized. When no idle ICM line exists, the operation is ignored.
  - o COL in conference can be transferred.
  - o When the TRN key is pressed while engaged in ICM call, the ICM call is placed on Consultation Hold and an ICM call can be made using the same ICM line.
  - o When the TRN key is pressed during ICM Conference, the ICM line is placed on Conference Hold and an idle ICM is seized. When no idle ICM line exists, BT is accessed and the operation terminates.
- Operation Guide

(COL/ICM engaged) [TRN] + ICM Call Operation + Called Party Answer → [ ]. ([SPKR]: when speaker on)
or

(COL/ICM engaged) [DSS] + ICM Call Operation + Called Party Answer → [ ]. ([SPKR]: when speaker on)

T

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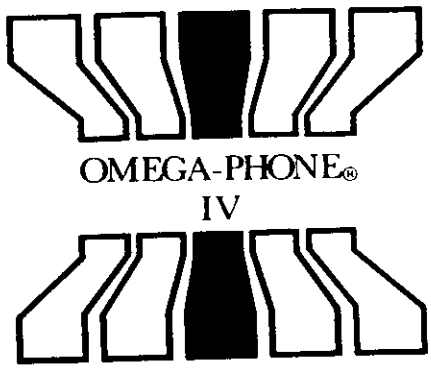

2.4 PROGRAMMING FEATURES

2.4.1 Programming Mode

System data can be entered during system operation if the following conditions are satisfied:

- An Attendant is included in the system.
- PROV-M1 is set.

When the above conditions are satisfied, depress the keys on the Attendant Console as follows while the Attendant KT is off-hook:

Depress [PGM] key + [8] (Ten-key (Note)) + [2] + [4]

System data can then be entered.
This status is called programming mode, and the status before this operation is called ordinary mode. To change from programming mode to ordinary mode, enter the following:

Depress [PGM] key + [4] (Ten-key) + [2] + [8]

Only one Attendant Console can be in programming mode even if there are two Attendant Consoles in a system.
An Attendant cannot go into the Programming Mode when the system is performing Remote Programming.
An Attendant Console in programming mode is called a System Programming Terminal.
In programming mode, the keys on the System Programming Terminal are classified into two types. The Keys shown in Figure 2.4.1.1 are called Input Data Keys, and the Keys shown in Figure 2.4.1.2 are called Function keys.

Note: Ten-Key: Because there are no ten-keys on the Attendant Console, a part of the Input Data keys are assigned to numbers 0 to 9 and characters ∗ and ♯ and are referred to as Ten-Key.

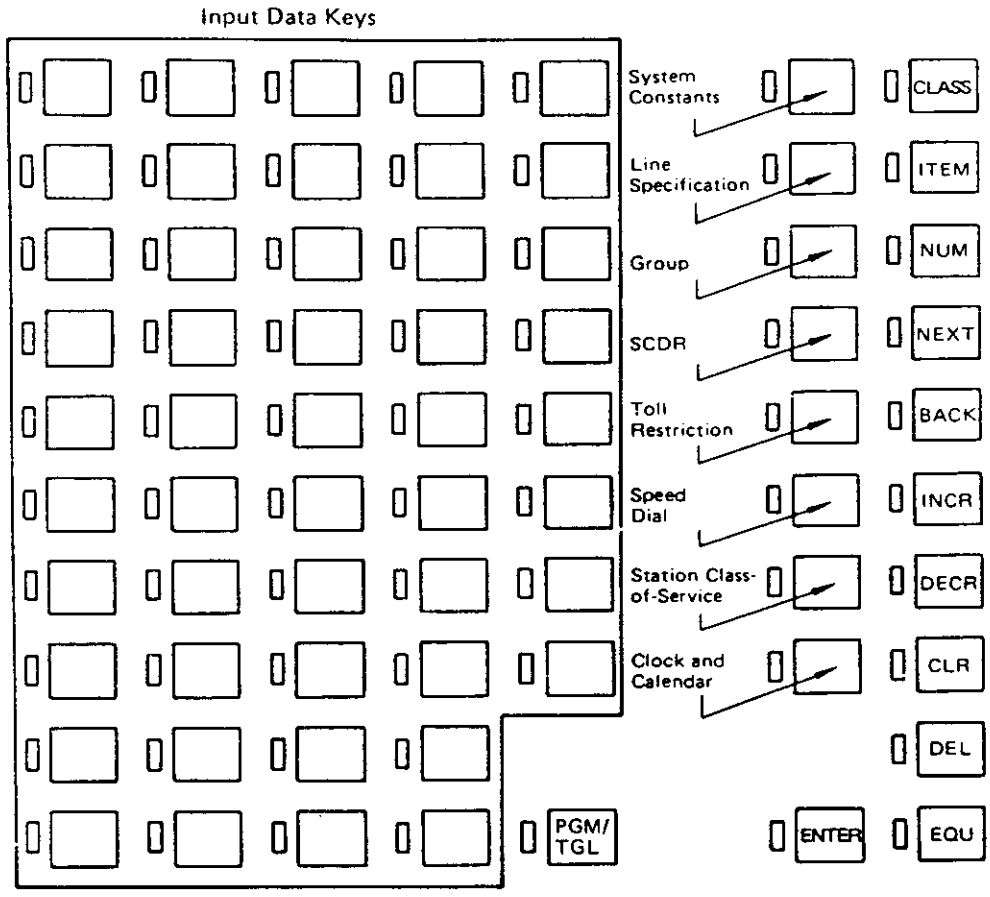

Figure 2.4.1.1 Input Data Keys

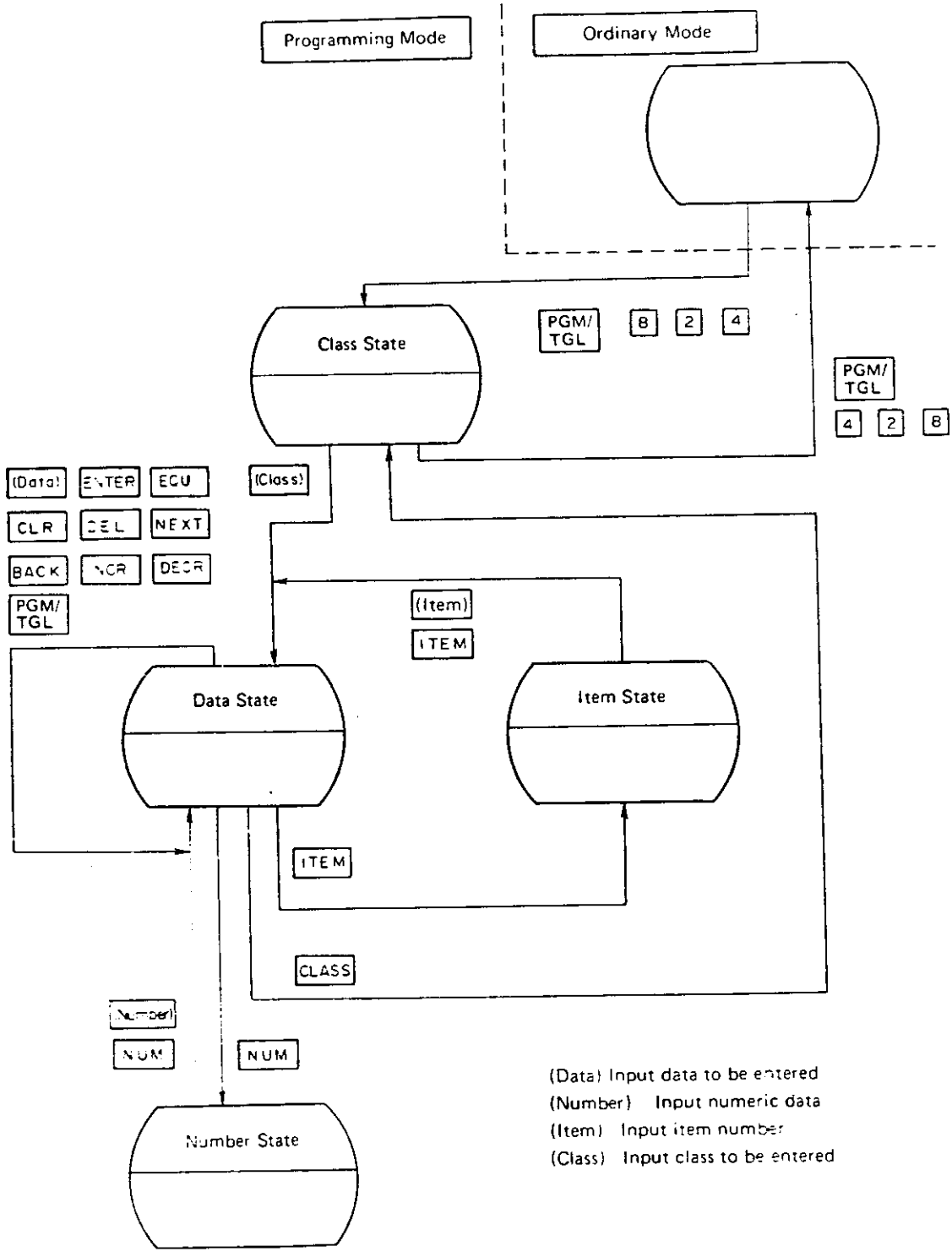

Figure 2.4.2.1 Programming Mode

2.4.2.1 Class State

The following classes can be entered in Class State:

- System Constants
- Line Specification
- Group
- SCDR
- Toll Restriction
- Speed Dial
- Station Class-of-Service
- Clock and Calendar

When class is entered, the status changes to Data State. The [PGM/TGL] key can be used to switch to ordinary mode.

2.4.2.2 Item State

In Item State, input data keys are used to enter an item number. When an item number is entered, the status changes to Data State. If function key [ITEM] is depressed before ending item number input, the item number immediately before changing to Item State is automatically entered and the status changes to Data State.

2.4.2.3 Number State

In Number State, a specified number can be input using the Input Data Keys and [PGM/TGL] key. The normal-side and reverse-side mode of the Input Data keys by depressing the [PGM/TRL] key. When a number is entered, the status changes to Data State. If function key [NUM] is depressed before ending number input, the number immediately before changing to Number State is automatically entered and the status changes to Data State. If the number consists of two number however, and the [NUM] key is depressed after entering the first number, the number before changing to Number State is automatically entered as the second number, the manually keyed number is entered as the first number, and the status changes to Data State. The following is an example.

Toll Exception Table Number: 03
Exception Number: 04

```
<Exception 3- 4> Toll 12 4-12-22
```

Figure 2.4.2.3.1

Change to Number State and enter [0] and [4].

```
<Exception 4- > Toll - -
```

Figure 2.4.2.3.2

When the [NUM] key is depressed in this status to change to Data State, the numbers become:

Toll Exception Table Number: 04
Exception Number: 04

<Exception 4-4> Toll -00-00

Only the first number changes. The second number remains unchanged.

2.4.2.4 Data State

[redacted]

2.4.3.4 NUM Key

Status changes to Number State. Status returns to Data State if pressed in Number State.

2.4.3.5 NEXT/BACK Key

The NEXT and BACK keys can be used to change items within a class. When NEXT is depressed the data for the next item is displayed. When DECR is depressed, the data for the previous item is displayed. For items that have numbers, if there is a same number in the item after depressing NEXT or BACK, the number of the previous item is retained and does not change.
If the same number does not exist, however, the first number in the item is entered. This is true also when switching from an item without numbers to an item with numbers.

2.4.3.6 INCR/DECR Key

The INCR and DECR keys can be used to change Number within item. When INCR is depressed, the data display changes to the next number.
If DECR is entered, the previous number is displayed.

2.4.3.7 EQU Key

The data for the previous number is entered.

2.4.3.8 CLR Key

All the setting data on the Display and Input Data Keys are made invalid. All the display and lamp indications are cleared.

2.4.3.9 DEL Key

Invalidates the last digit of the data and clears the display of that digit.

2.4.3.10 ENTER Key

Registers input data. Data may be registered only when the input data is within the range of data for the item. If there is an error, the status before data entry is restored.

2.4.3.11 PGM/TGL Key

The PGM/TGL key functions as a PGM key in the class state. When the password 4 2 8 is entered after depressing the PGM/TGL key in the class state, ordinary mode appears. If the PGM key is depressed during password entry, the status changes to Class State.

The PGM/TGM key functions as a TGL key in the data state and number state. When the PGM/TGM key is depressed in these states, normal- and reverse-side mode of the Input Data Keys can be switched over.
When the input data is an item to specify an extension, setting on extensions 68 to 83 can be made by setting the Input Data Keys to the reverse-side mode by depressing the PGM/TGL key.
When the Input Data Keys are in the reverse-side mode, the PGM/TGL lamp blinks in the I-USE pattern. In the case of the normal-side mode, it indicates Busy indication.

2.4.4 Select Class of Data

Any class can be specified. Class is specified by depressing one of the following class set keys in Class State:

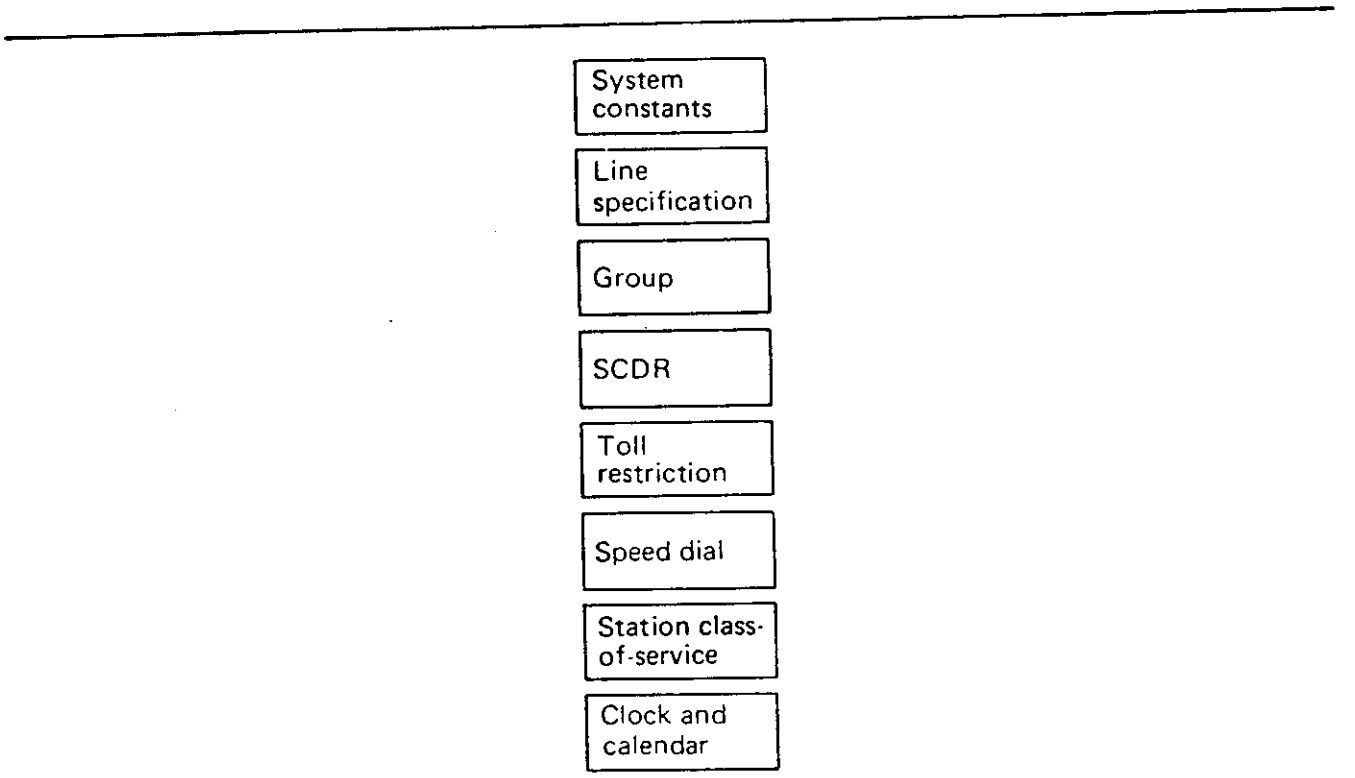

Figure 2.4.4.1 Class Keys

Status changes to data State when one of the above keys is depressed.

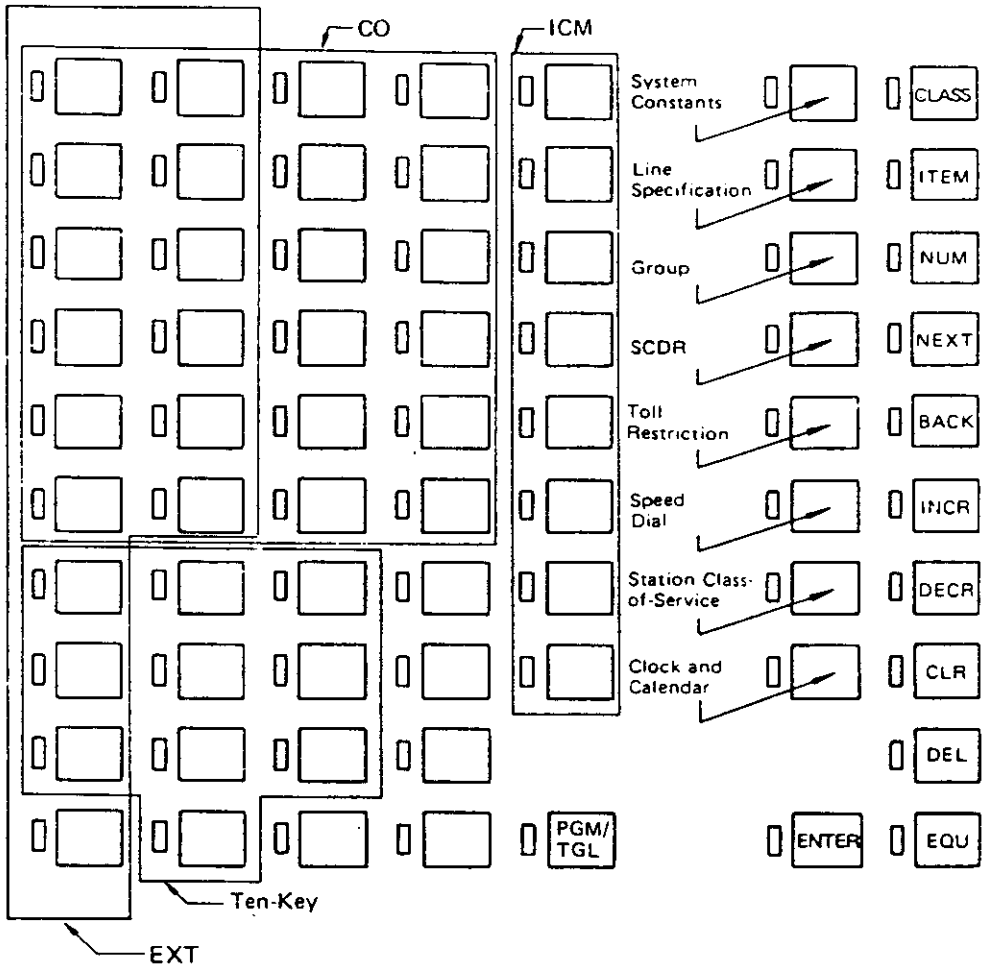

Figure 2.4.6.1.b Data State for Number State (Reverse-side mode)

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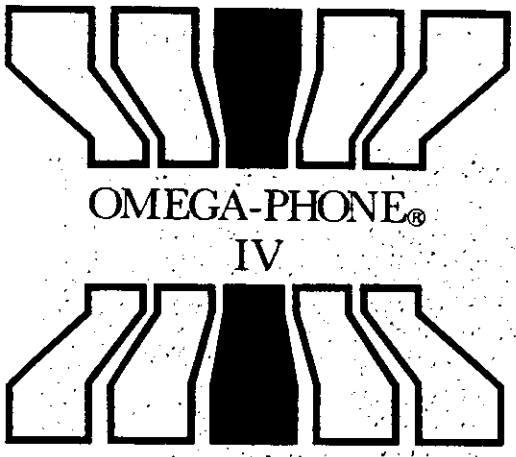

PART 4
PROGRAMMING

CONTENTS

4.1 SYSTEM PLANNING
4.2 GENERAL DESCRIPTION OF PROGRAMMING
4.3 PROGRAMMING OPERATION

Errata (1)

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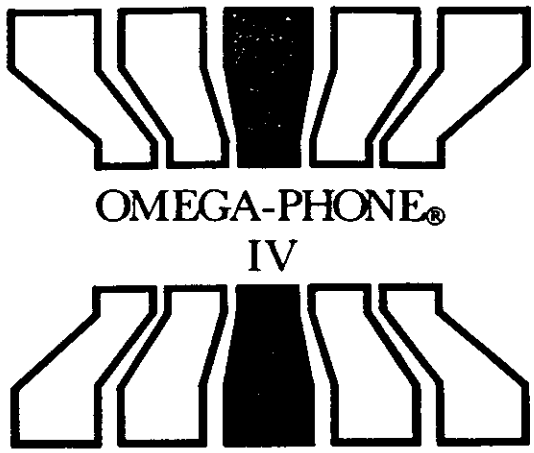

PART 4

Section 4.1

M: Major correction
m: Minor correction

Page	Line	Original	Correction	Re-marks
4.1-3	Table 4.1.2.2 (Default column) 8 from top	No Function	0: Not Assigned	M
	Table 4.1.2.2 (Default column) 2 from bottom	All EXTs Assigned	0: Not Assigned	M
4.1-5	Table 4.1.2.5 (Number column) 5 from top	Exception Table No. x Table No.	Dial Table No. x Table No.	m
	Table 4.1.2.5 (Number column) 19 to 20 from top	Tenant x Time Zone A/B 0 to 2 x Route Table No. 1 to 8	Tenant x Route Table A/B 1 to 8 No. x Time Zone 0 to 2	M
	Table 4.1.2.5 (Data column) 3 from top	Exception Table	Dial Table	m
	Table 4.1.2.5 (Boundary column) 3 from top	Allow/Deny + Exception Table *6	Deny/Allow + Dial Table *6	m
	Table 4.1.2.5 (Boundary column) 5 from top	Dial + Exception Table No. *2	Dial + Dial Table No. *2	m
4.1-7	Table 4.1.2.7 (Data column) 7 from top	Mail Class Attribution	Message Attribution	m

Errata (3)

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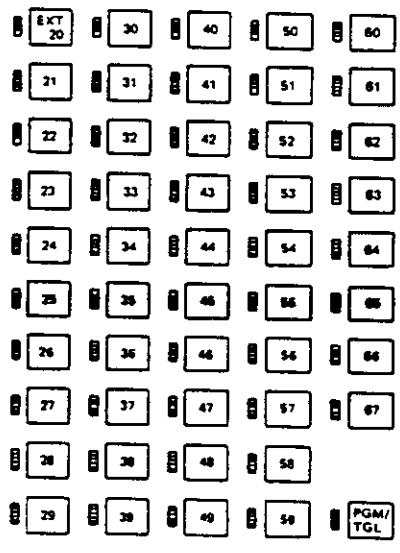
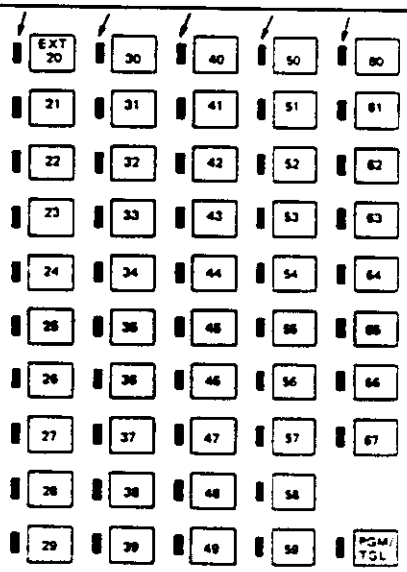
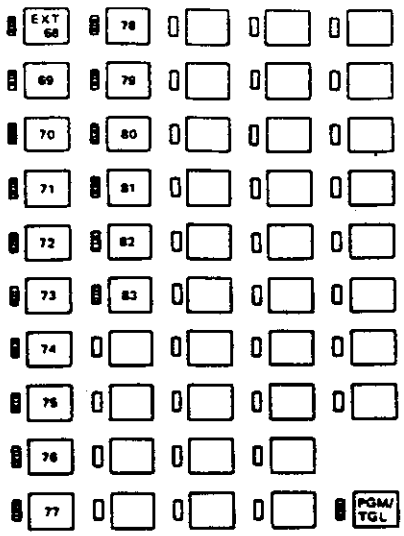
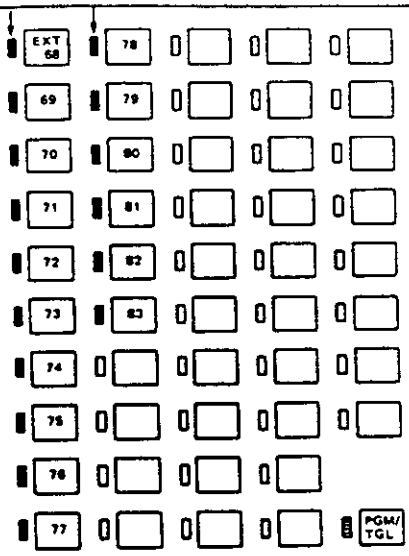
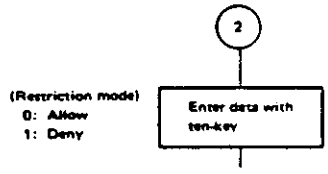
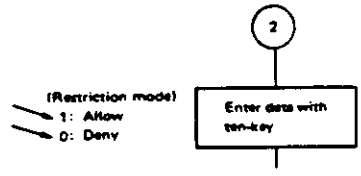
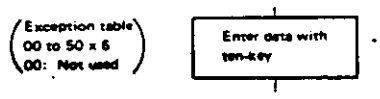
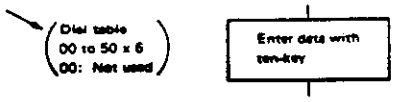
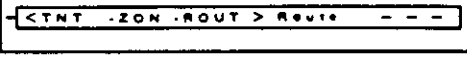
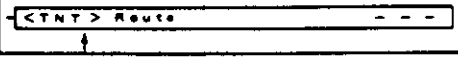
PART 4
Section 4.3

M: Major correction
m: Minor correction

Page	Line	Original	Correction	Remarks
A cover	(Left column) 11 from top	Exception 1 able (Item 3)	Dial Table 1 able (Item 3)	m
	(Right column) 4 from top	Mail Class Attribution	Message Attribution	m
4.3-101	6 from top	5: WATS (MF) inward	5: WATS inward	m
4.3-150	Figure 4.3.4.11.1.a			M

M: Major correction
m: Minor correction

Page	Line	Original	Correction	Remarks
4.3-151	Figure 4.3.4.11.1.b			M
4.3-194	6 from top	Exception Table	Dial Table	m
4.3-204	(Left column) Flowchart			m
	(Left column) Flowchart			m
4.3-209	1 from top	Exception Table (Item 3)	Dial Table (Item 3)	m
	2 from top	Setting content (dial and continuing table number) of exception table	Setting content (dial and continuing table number) of dial table	m
	(Right column) Flowchart			m
4.3-252	(Right column) Flowchart			m
4.3-253	(Right column) Flowchart			m

Page: 4.3-256
Line: Figure 4.3.7.10.2 (Display)
Remarks: m

Original

```
<TNT A-ZON0-ROUT1> Route 0-0-0-0
```

Correction

```
<TNT A-ROUT1-ZON0> Route 0-0-0-0
```

Page: 4.3-257
Line: Figure 4.3.7.10.3 (Display)
Remarks: m

Original

```
<TNT  -ZON -ROUT > Route  - - -
```

Correction

```
<TNT  -ROUT -ZON > Route  - - -
```

Page: 4.3-258
Line: Figure 4.3.7.10.4
Remarks: M

Original

Display

```
<TNT A-ZCN -ROUT > Route  - - -
```

Key Lamp

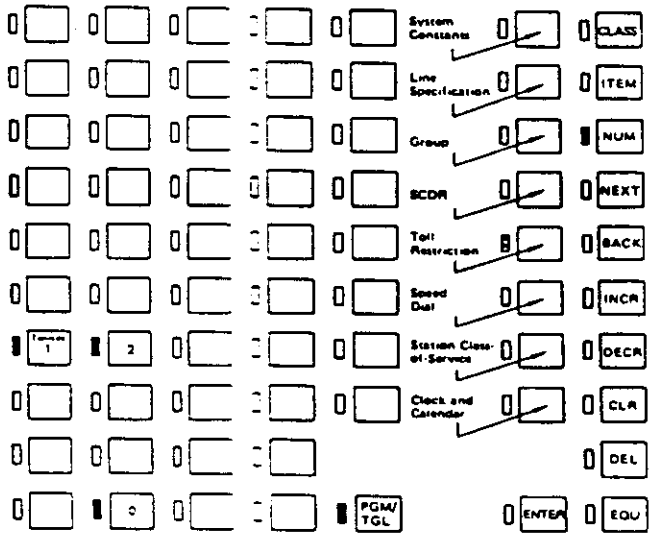


Figure 4.3.7.10.4

Correction

Display

```
<TNT A-ROUT -ZON > Route  - - -
```

Key Lamp

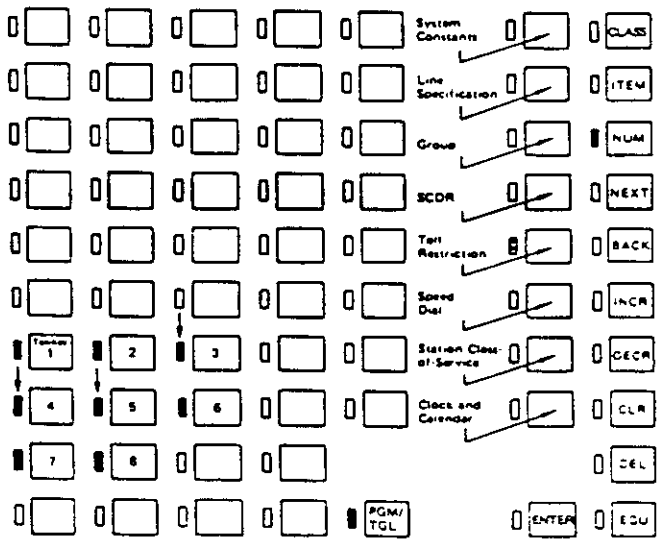


Figure 4.3.7.10.4

Page: 4.3-259
Line: Figure 4.3.7.10.5
Remarks: M

Original

Display

<TNT A-ZON1-ROUT > Route - - -

Key Lamp

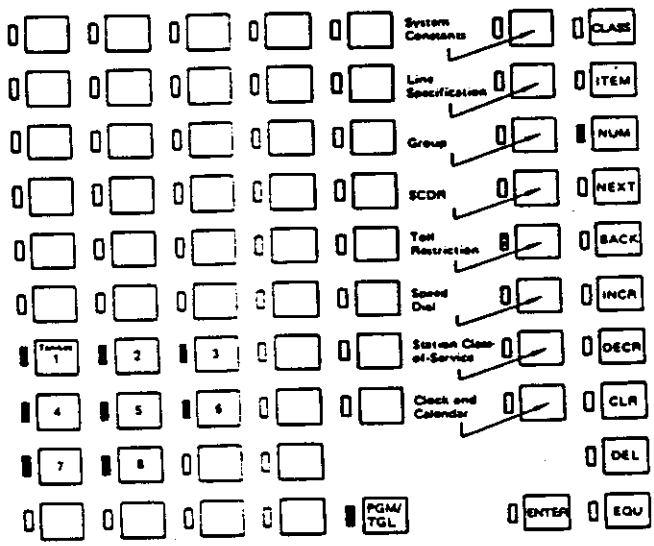


Figure 4.3.7.10.5

Correction

Display

<TNT A-ROUT1-ZON > Route - - -

Key Lamp

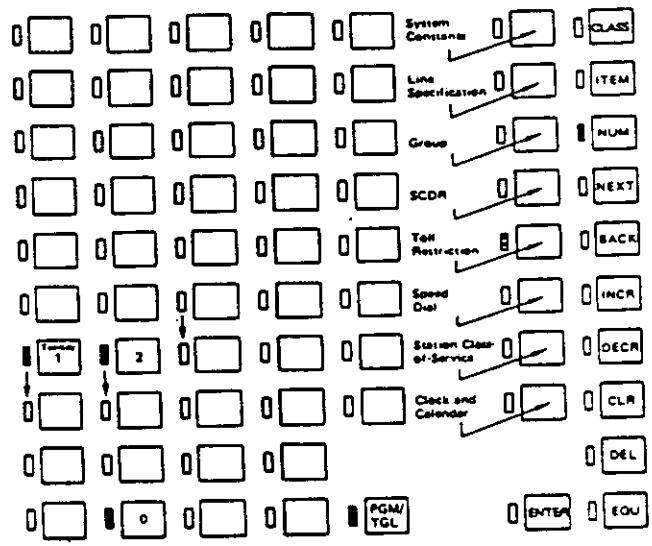


Figure 4.3.7.10.5

Errata (4)

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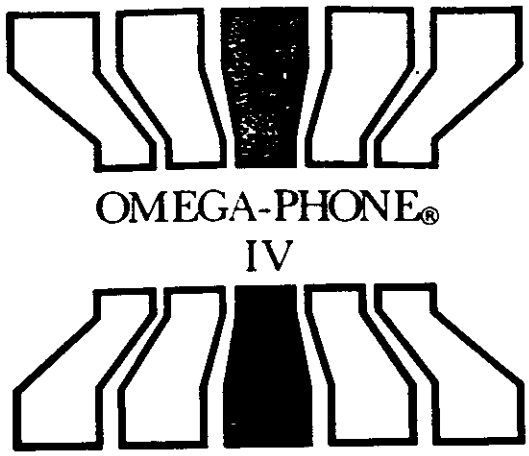
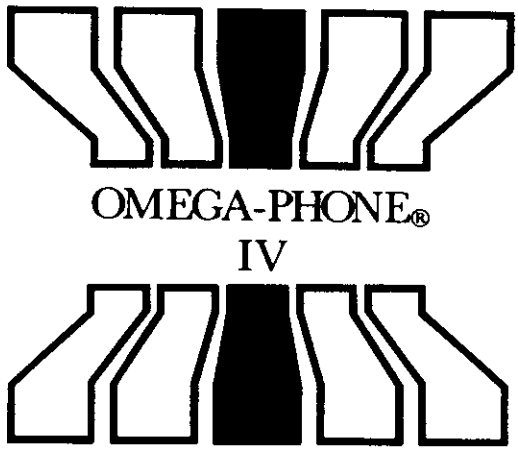


PART 2

Section 2.1

M: Major correction
m: Minor correction

Page	Line	Original	Correction	Re-marks
2.1-5	Table 2.1.2.2 (Meaning column) 10 from top	DSS Programming Overlay-Sheet	DSS Programming Overlay-Sheet-M1	m



4.1 SYSTEM PLANNING

CONTENTS

4.1.1 System Data 4.1-1
4.1.2 Default Values of System Data 4.1-2

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4.1 SYSTEM PLANNING

4.1.1 System Data

In this system, system data are data which define the system functions.

System data are classified into eight classes:

- System Constants
- Line Specification
- Group
- SCDR
- Toll Restriction
- Speed Dial
- Station Class-of-Service
- Clock and Calendar

Default data are set automatically for system data when the system is installed. However, data is saved for reactivation after system halt (power off or resetting of CCPU-ME switch) in backup mode.
System data is entered from the System Programming Terminal in the Programming Mode.
Only one Attendant can be switched even if there are two Attendants to a system.

4.1.2 Default Values of System Data

The following tables show the default data for each setting.

Table 4.1.2.1 System Constants

Item	Number	Data	Boundary	Default
1		Hold Timeout	1 to 255 Seconds 0 : No Function	30 Seconds
2		Sender Timeout	10 to 255 Seconds	20 Seconds

Table 4.1.2.2 Line Specification

Item	Number	Data	Boundary	Default
1	CO 1 to 24 ICM 1 to 8	Line Class	0 : DDD (MF) 1 : FX (MF) 2 : PBX (MF) 3 : E&M (MF) 4 : WATS (MF) outward 5 : WATS inward 8 : DDD (DP) 9 : FX (DP) 10 : PBX (DP) 11 : E&M (SF) 12 : WATS (DP) outward 16 : ICM (Ordinary) 17 : ICM (ATT Dedicated) 18 : ICM (Hot Line)	CO 0 : DDD (MF) ICM 16 : ICM (Ordinary)
2	CO 1 to 24 ICM 1 to 8	Tenant Group	0 : Tenant A 1 : Tenant B 2 : Tenant A & B (Only ICM)	0 : Tenant A
3	CO 1 to 24	Universal Night Assignment	0 : Not Assigned 1 : Assigned	1 : Assigned
4	CO 1 to 24	Automatic Night Assignment	Each EXT	0 : Not Assigned
5	CO 1 to 24	Outgoing Level	0 to 4 level	0 Level
6	CO 1 to 24	Toll-Restriction Group	0 : No Toll Restriction 1 to 4 group	0 : No Toll Restriction
7	CO 1 to 24	Flash Signal Interval	1 to 20 * 100 ms	700 ms
8	CO 1 to 24	Prefix Dial	0 : Not Assigned 1 : Assigned	1 : Assigned
9	CO 1 to 24	Disconnect Signal	0 : No Reception 1 : With Disconnect Signal	1 : With Disconnect Signal
10	CO 1 to 24	COL Attendant Intercept	0 : Not Assigned 1 : Assigned	0 : Not Assigned
11	CO 1 to 24	Individual Incoming Extension	Each EXT	0 : Not Assigned
12	CO 1 to 24	CO Outgoing Group	0 : Not Assigned 1 to 7 group	Co Group 1

Table 4.1.2.3 Group Data

Item	Number	Data	Boundary	Default
1	Master Group X Priority 1 to 4 1 to 64	ICM Master Hunt Group	One EXT with priority	No Function
2	Call Group 1 to 4	ICM Group Call	Each EXT	All EXTs Assigned
3	Pickup Group 1 to 4	Pickup Group	Each EXT	All EXTs Assigned

Table 4.1.2.4 SCDR

Item	Number	Data	Boundary	Default
1		Print Out CO	Specify CO to be output	All COs Output
2		Print Out Extensions	Specify EXT to be output	All EXTs Outpu
3		Print Out Minimum Time	0 : No restrictions 1 to 30	0 : No restrictions
4		Print Out Incoming	0 : Output 1 : No Output	0 : Output
5		Print Out Calls with Account Code	0 : No restrictions 1 : Outgoing calls with account code input and all incoming calls 2 : Incoming calls with account code input and all outgoing calls 3 : Only calls with account code	0 : No restriction
6		Print Out Toll Calls	0 : Output 1 : Toll calls only (outgoing calls)	0 : Output

Table 4.1.2.5 Toll Restriction

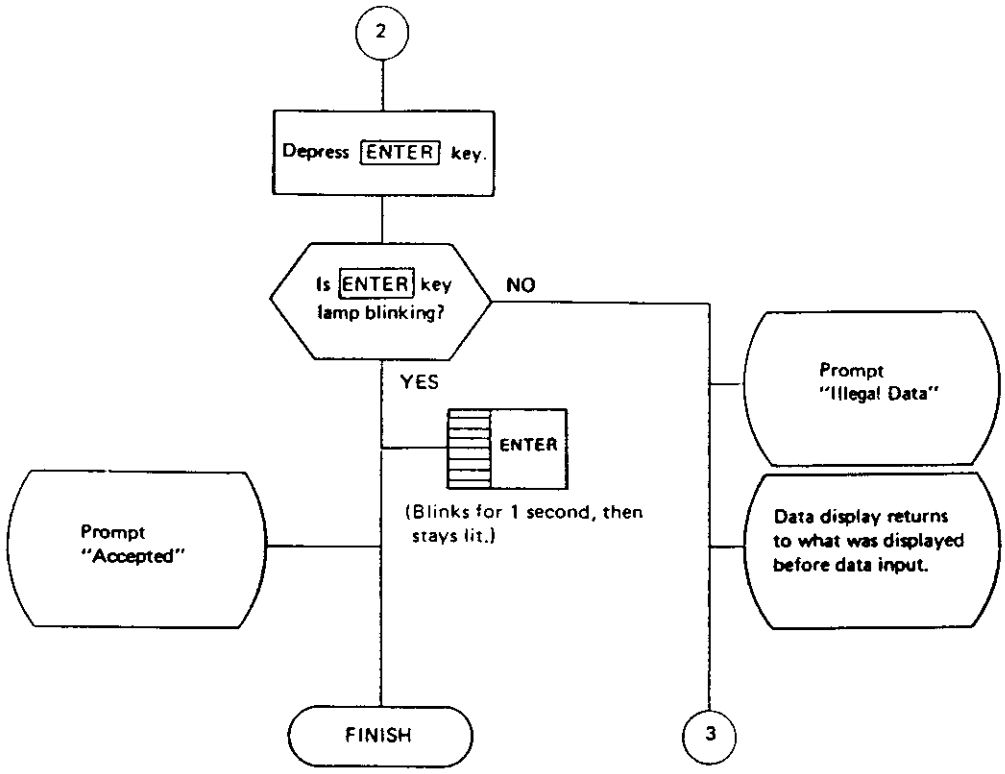
Item	Number	Data	Boundary	Default
1	Toll Restriction GRP X EXT Toll Class 1 to 8 1 to 4	Toll Plan NO	Toll Plan NO 0 to 15	0 : No Function
2	Toll Plan No. X Condition 1 to 15 1 to 6	Toll Plan Table	Deny/Allow + Dial Table *6 0/1 0 to 50	0 : Deny (Mode) 00 * 6 : No Function
3	Dial Table NO X Table NO 1 to 50 1 to 10	Dial Table	Dial + Dial Table NO * 2 4 Digits 1 to 50	0 : No Function
4	Tenant X Area Code A/B	E&M Area Code Table	Office Group NO 0 to 4	0 : No Function
5	Tenant X Office GRP NO X Office Code A/B 1 to 4	E&M Office Group Table	Route Table NO 0 to 8	0 : No Function
	Tenant X Area Code		Route Table NO	

Table 4.1.2.6 Speed Dial

Item	Number	Data	Boundary	Default
1	Tenant X System Speed Dial NO A/B 0 to 89	System Speed Dial	Dial 16 digits or less	No Function
2	Tenant X System Speed Dial NO A/B 0 to 89	System Speed Dial Invisible	0 : No Attributes 1 : With Attributes	0 : No Attributior
3	EXT X Station Speed Dial NO 1 to 64 1 to 10	Station Speed Dial	Dial 16 digits or less	No Function

Table 4.1.2.7 Station Class-of-Services

Item	Number	Data	Boundary	Default
1		Tenant Group B	Each EXT	Tenant A
2		Secretary Attribution	Each EXT	No Attribution
3		Protected Attribution	Each EXT	No Attribution
4		Executive Attribution	Each EXT	No Attribution
5		Versaphone Attribution	Each EXT	No Attribution
6		Busy Call Forward	Each EXT	Call Forward
7		Message Attribution	Each EXT	Attribution
8		Quick Mode Deny	Each EXT	Allow
9		Off-Hook Signal Deny	Each EXT	Allow
10		Off-Hook All Call Deny	Each EXT	Allow
11		All Call Deny	Each EXT	Allow
12		Hold Recall Deny	Each EXT	Allow
13		Speed Dial Access Deny	Each EXT	Allow
14		Toll Speed Dial Access Deny	Each EXT	Allow
15		CO Automatic Answer Deny	Each EXT	Allow
16		ICM Automatic Answer Deny	Each EXT	Allow
17		Paging Call Access Deny	Each EXT	Allow
18		Call Forward Deny	Each EXT	Allow
19		Do Not Disturb Deny	Each EXT	Allow
20		Optimized Call Routing Access Deny	Each EXT	Allow
21		Equal/SCC Access Deny	Each EXT	Allow
22	EXT 20 to 83	Toll Dial Class of Restriction	0 : No Function 1 to 4 class	0 : No Function
23	EXT 20 to 83	CO Outgoing Level	0 to 4 level	0 level
24	EXT 20 to 83	Route Advance Step	0 to 3 step	0 step
25	EXT 20 to 83	Pickup Restriction	Each CO	No Function
26	EXT × Key NO 20 to 83 1 to 23	KT Key Assignment	Refer to 4.2.2.5	Refer to 4.2.2.5
27	EXT 20 to 83	Personal ID Code	0 to 9 : 3 digits	000


2
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display

Sender Timeout (seconds)	20

Key Lamp

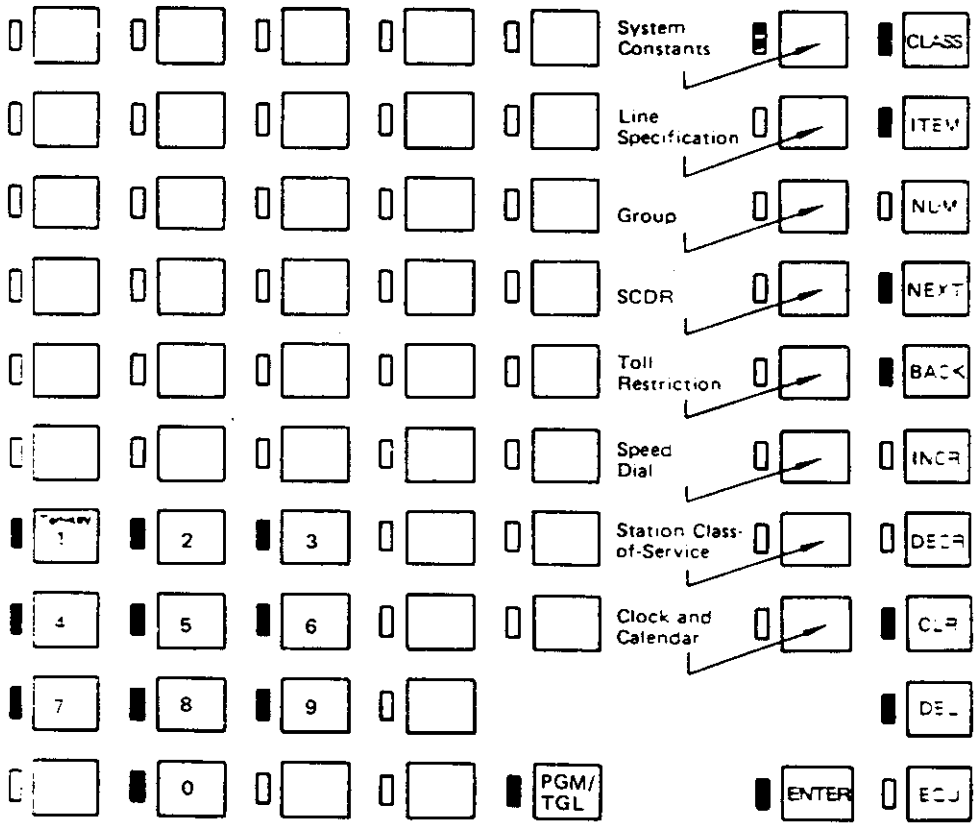
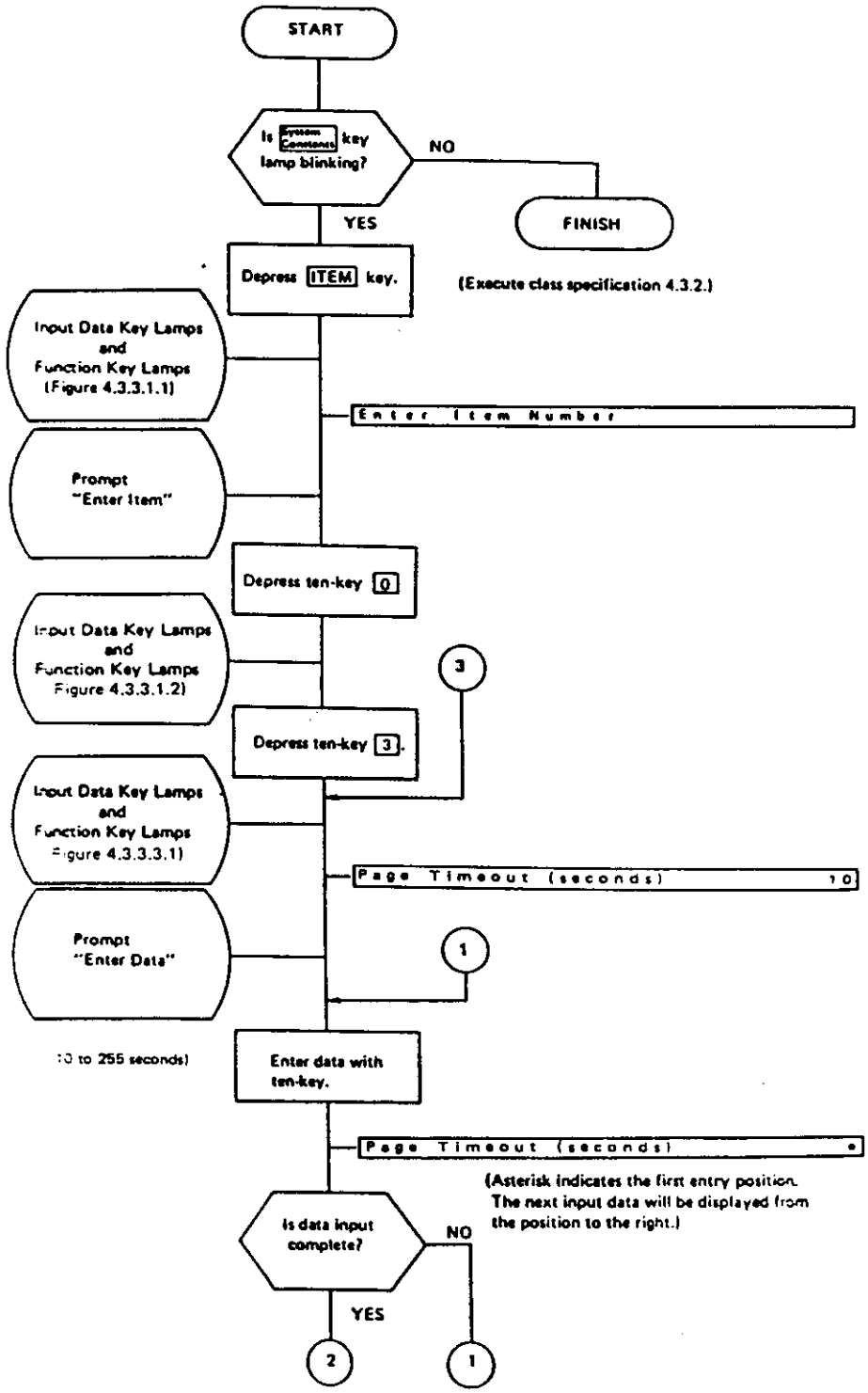
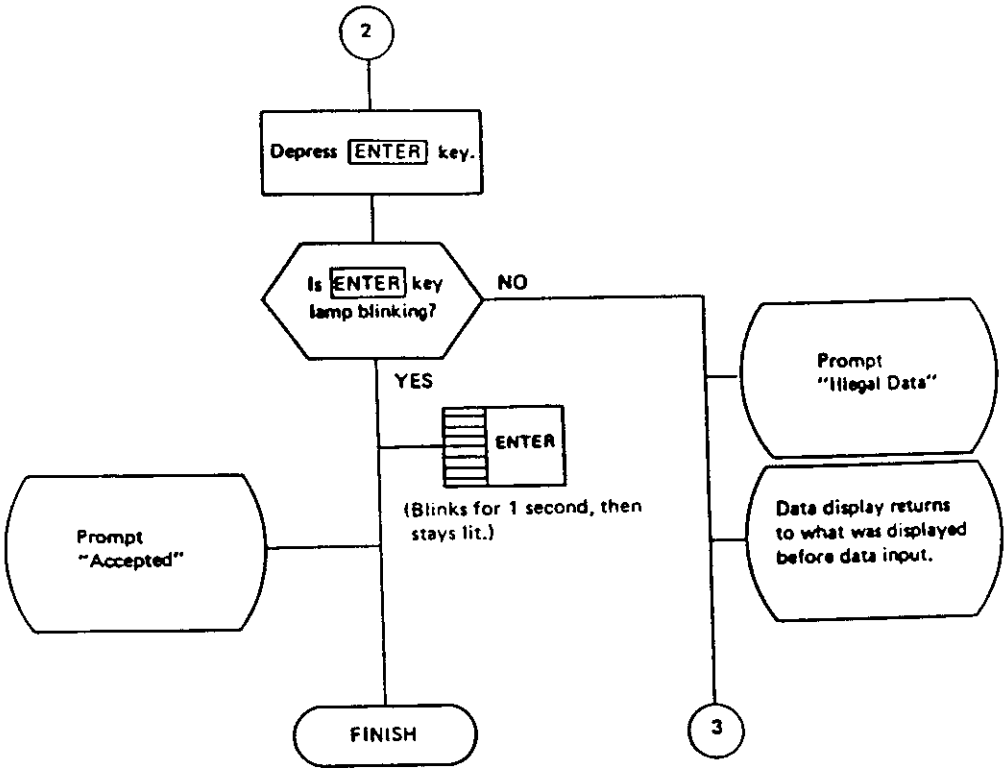


Figure 4.3.3.2.1

4.3.3.3 Page Timeout (Item 3)

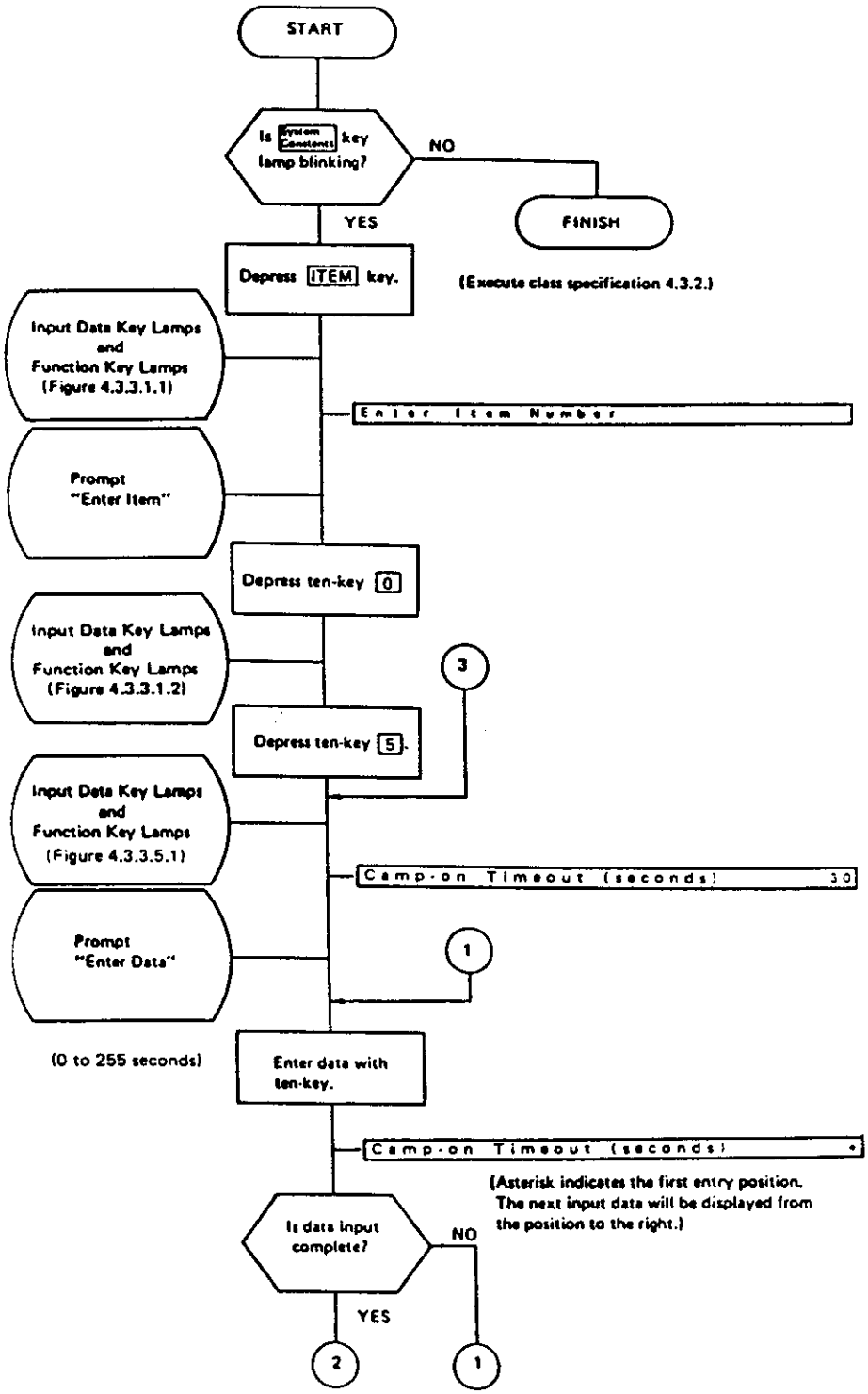
Feature: Setting Page Timeout time

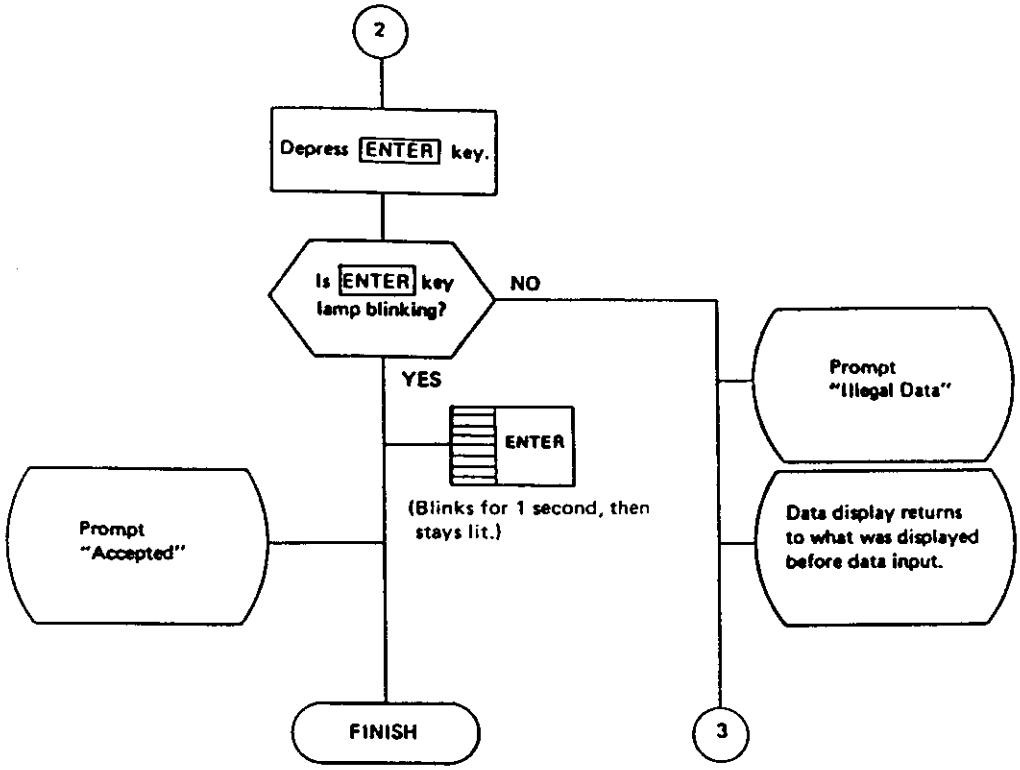


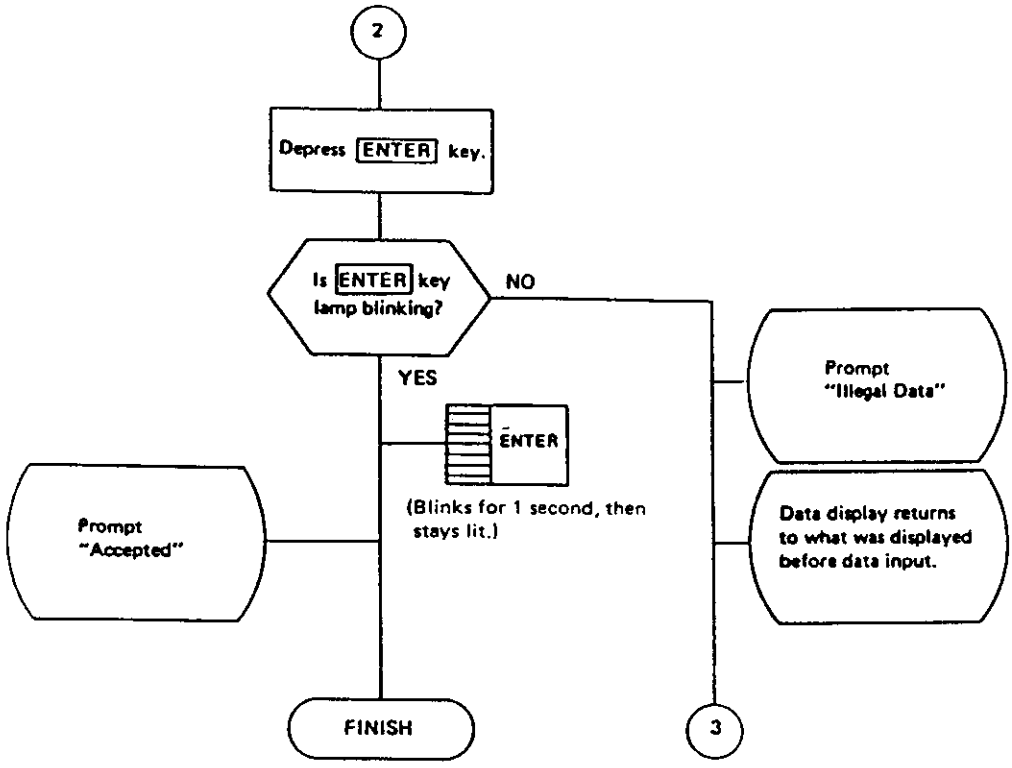

2
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Data display returns to what was displayed before data input.
Prompt "Accepted"
FINISH
3

4.3.3.5 Camp on Timeout (Item 5)

Feature: Setting camp on timeout time




2
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3


2
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display

```
Callback Timeout (seconds)    20
```

Key Lamp

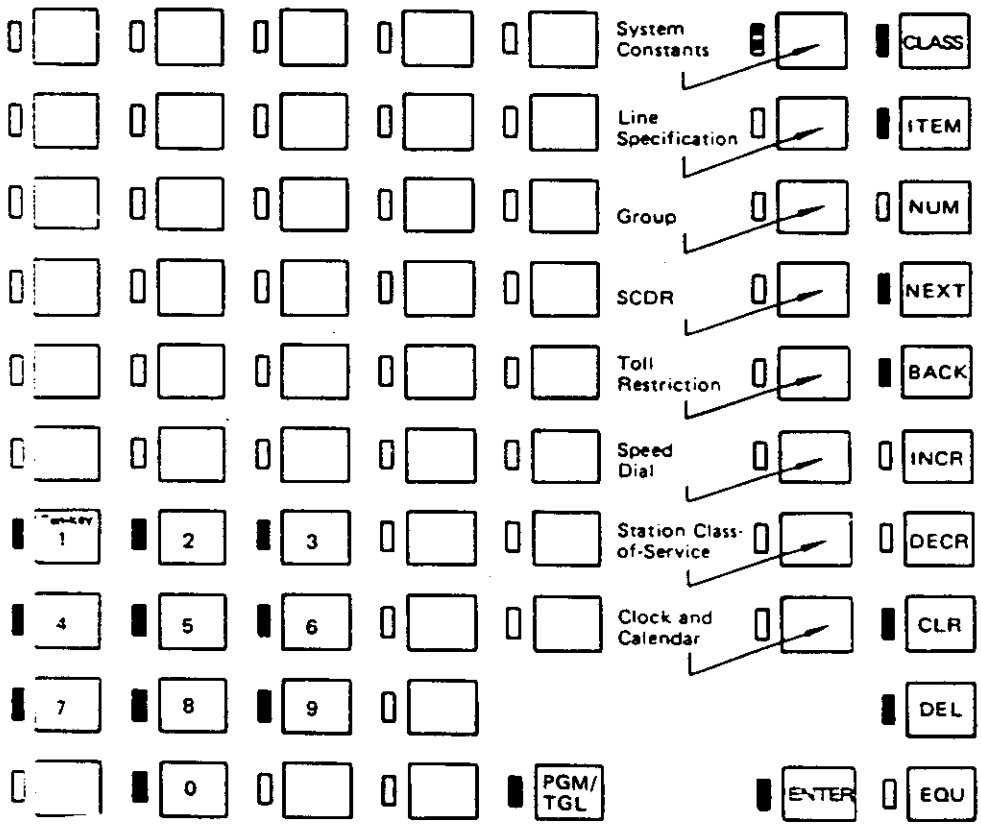
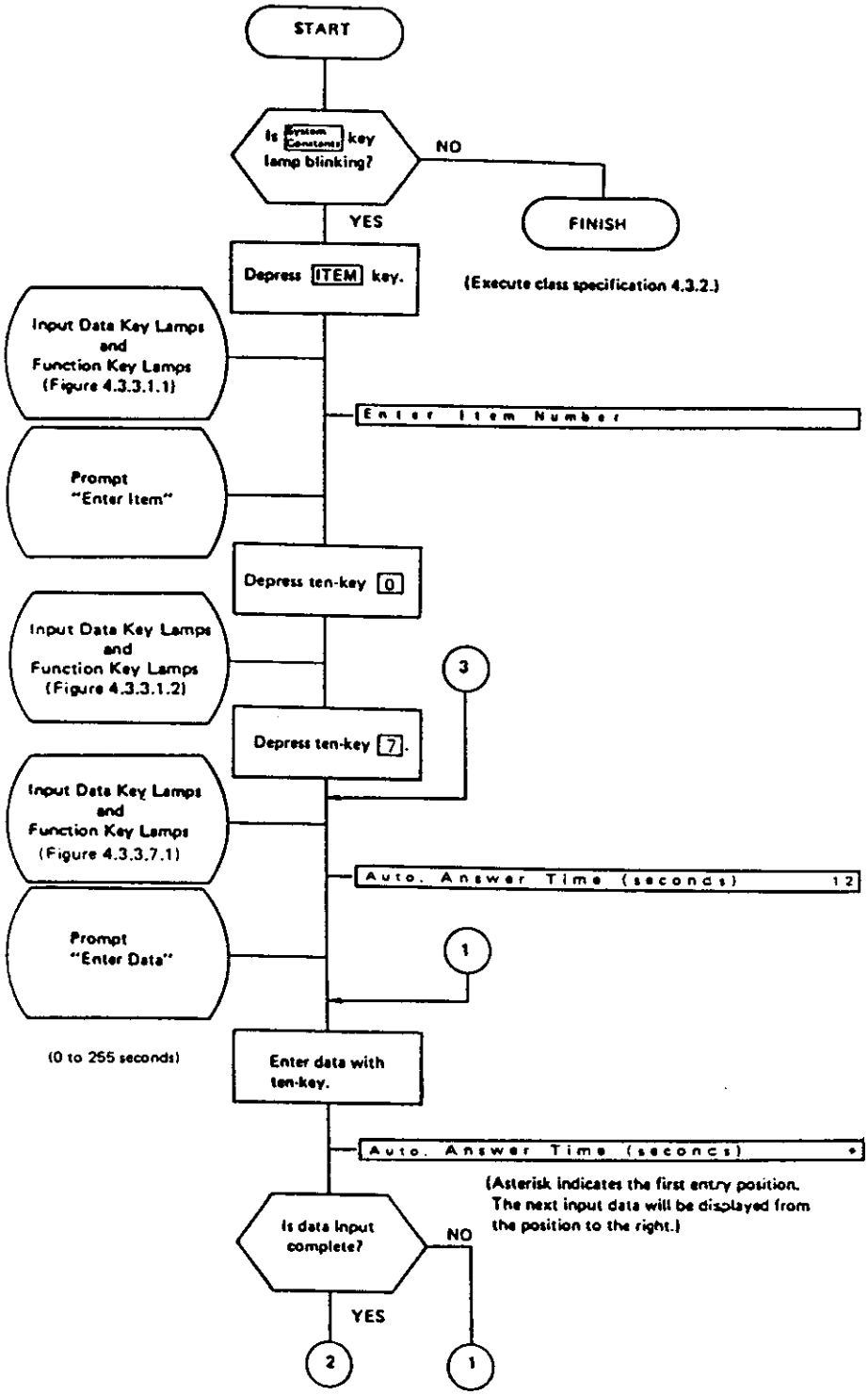


Figure 4.3.3.6.1

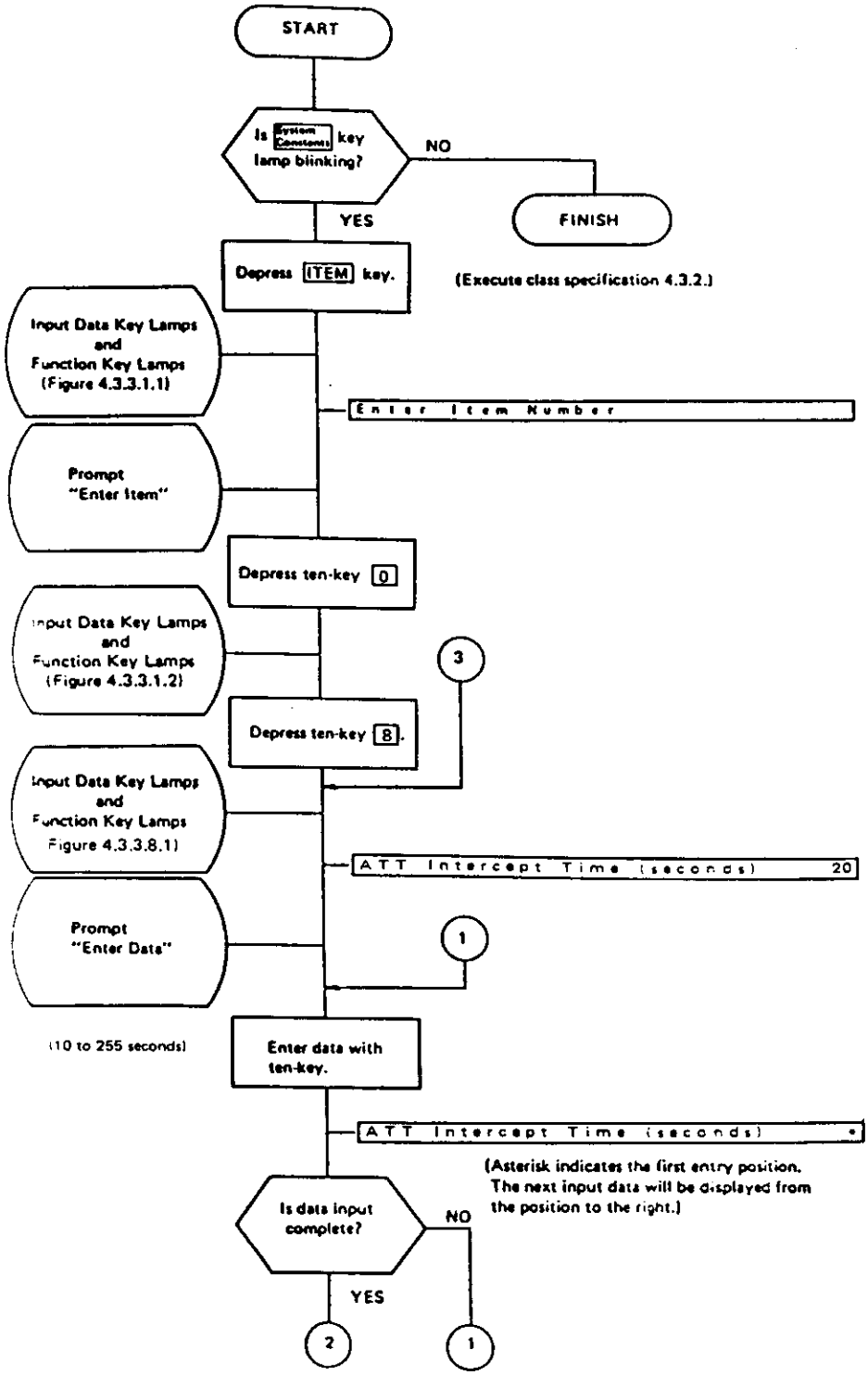
4.3.3.7 Automatic Answer Time (Item 7)

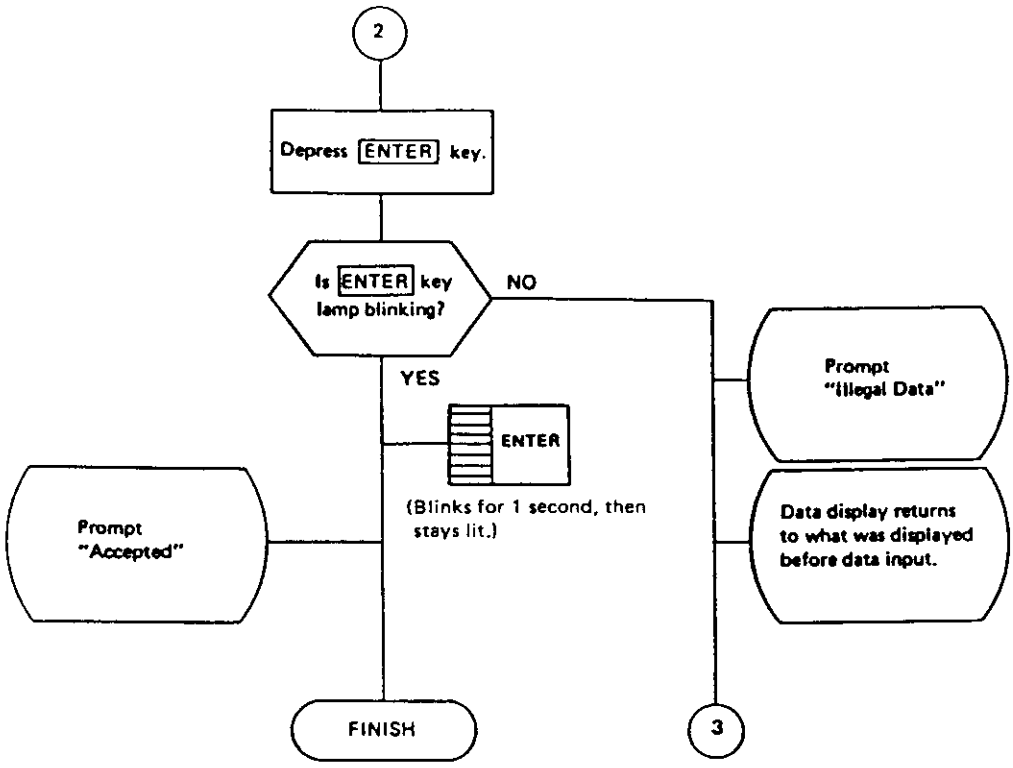
Feature: Setting Automatic Answer time



4.3.3.8 Attendant Intercept (Item 8)

Feature: Setting Attendant Intercept time




2
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display

```
ATT Intercept Time (seconds) 20
```

Key Lamp

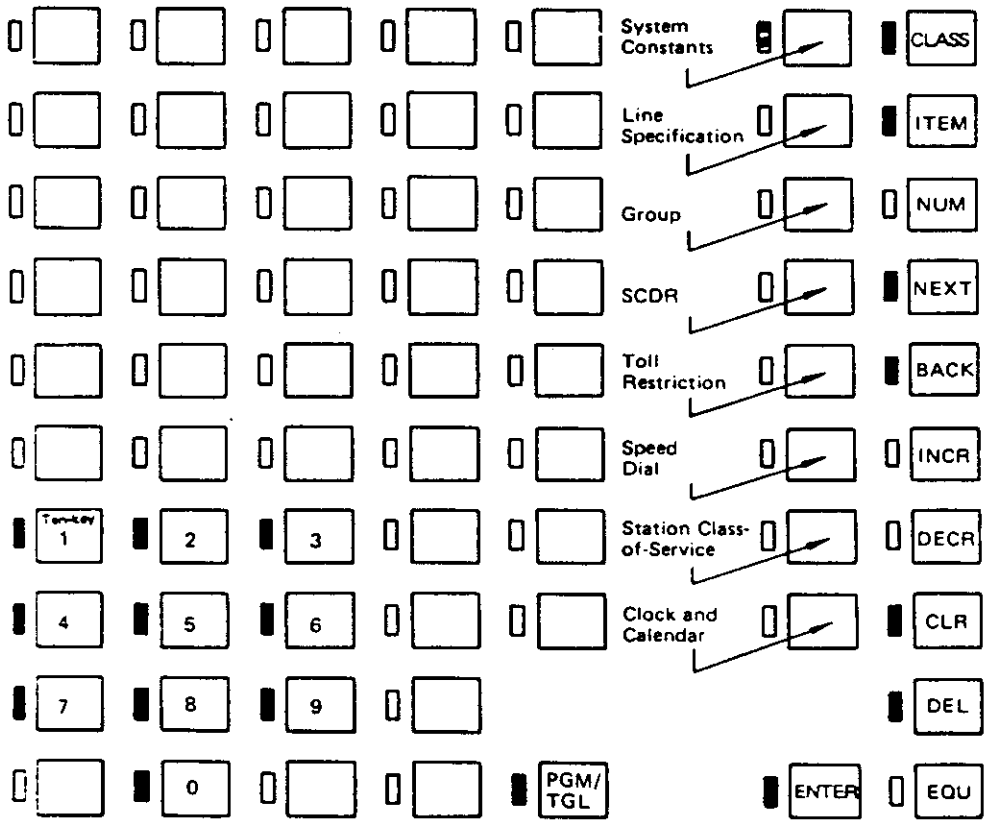
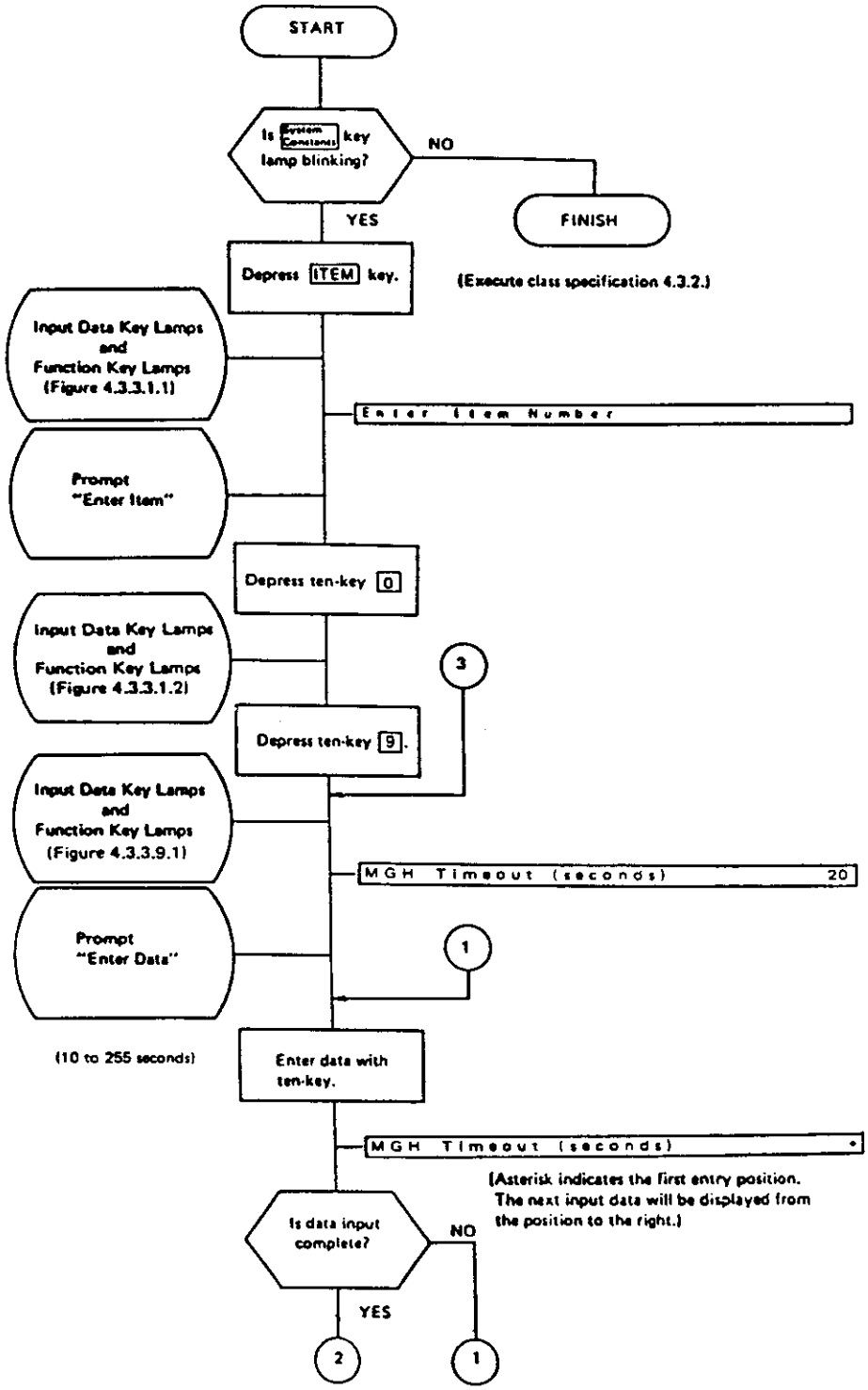


Figure 4.3.3.8.1

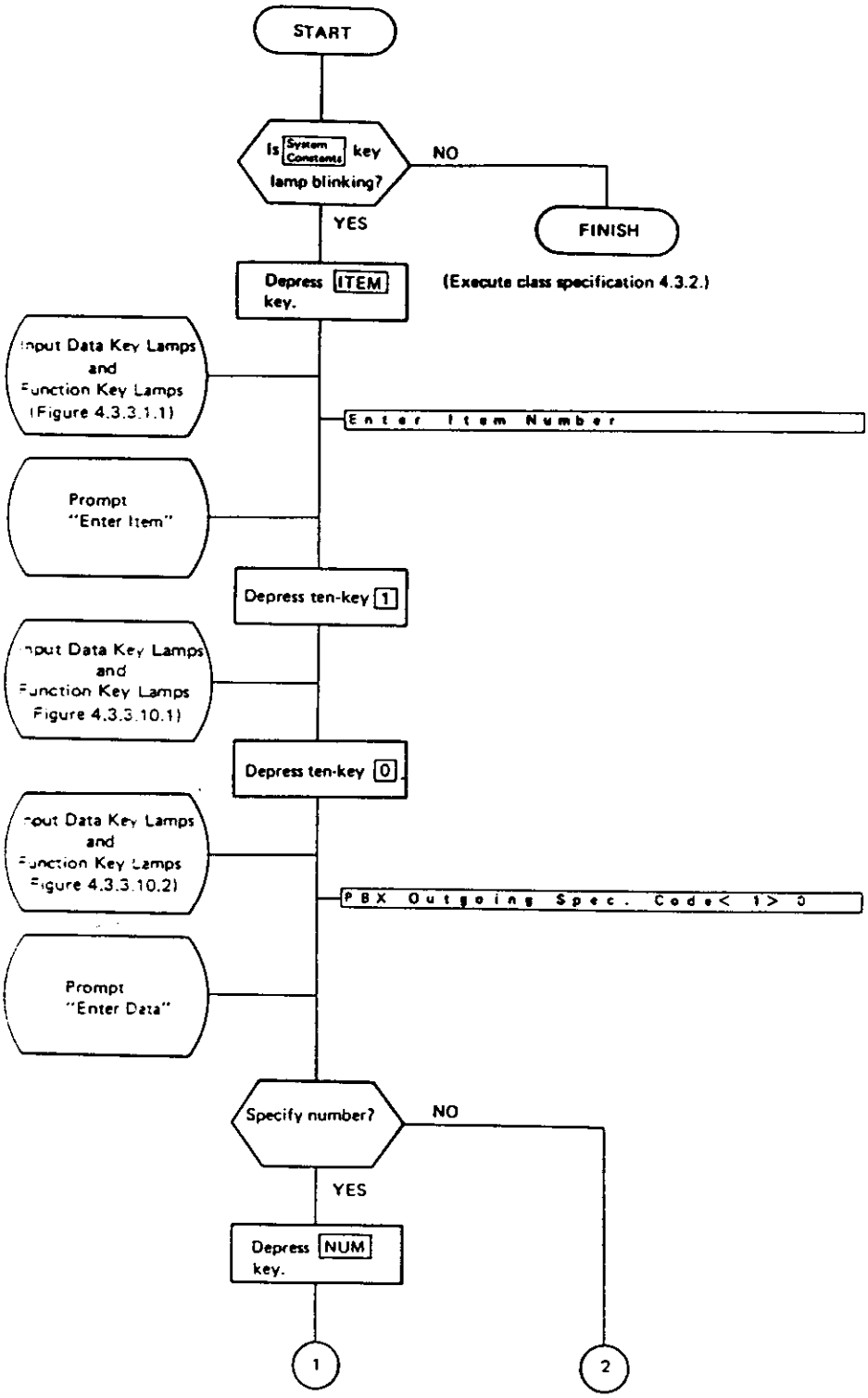
4.3.3.9 Master Group Hunt Timeout (Item 9)

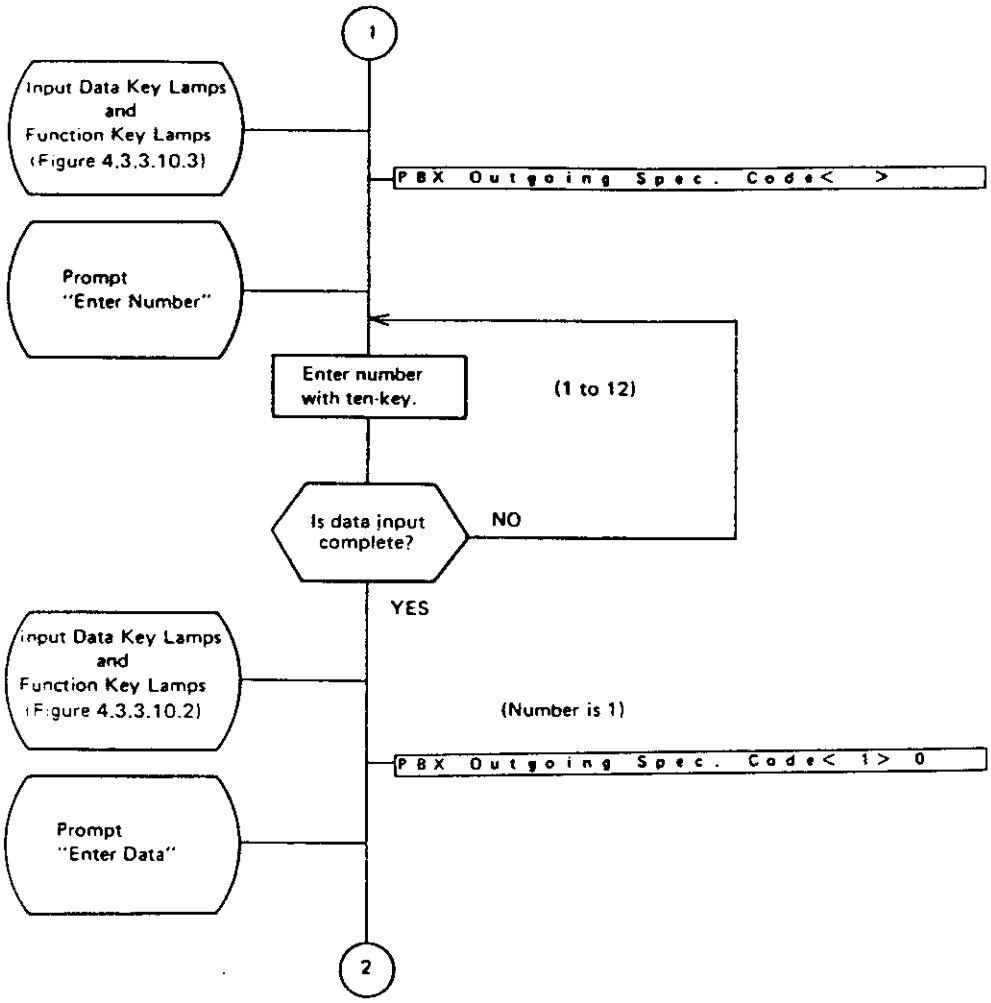
Feature: Setting Master Group Hunt Timeout time

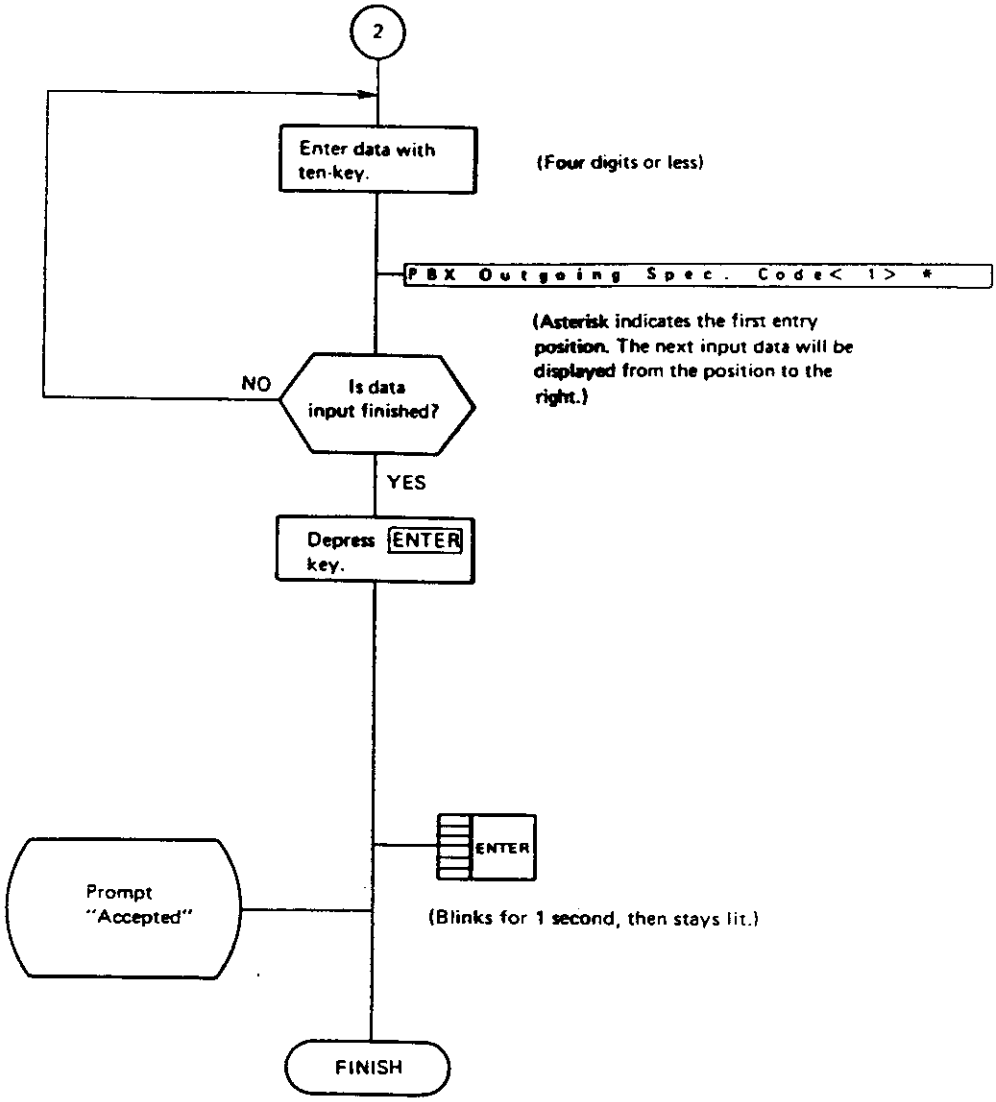


4.3.3.10 PBX Outgoing Specific Code (Item 10)

Feature: Setting PBX Outgoing Specific Code




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.3.10.3)
PBX Outgoing Spec. Code< >
Prompt "Enter Number"
Enter number with ten-key.
(1 to 12)
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.3.10.2)
(Number is 1)
PBX Outgoing Spec. Code< 1> 0
Prompt "Enter Data"
2


2
Enter data with ten-key.
(Four digits or less)
PBX Outgoing Spec. Code< 1> *
(Asterisk indicates the first entry position. The next input data will be displayed from the position to the right.)
NO
Is data input finished?
YES
Depress ENTER key.
ENTER
Prompt "Accepted"
(Blinks for 1 second, then stays lit.)
FINISH

Display

Key Lamp

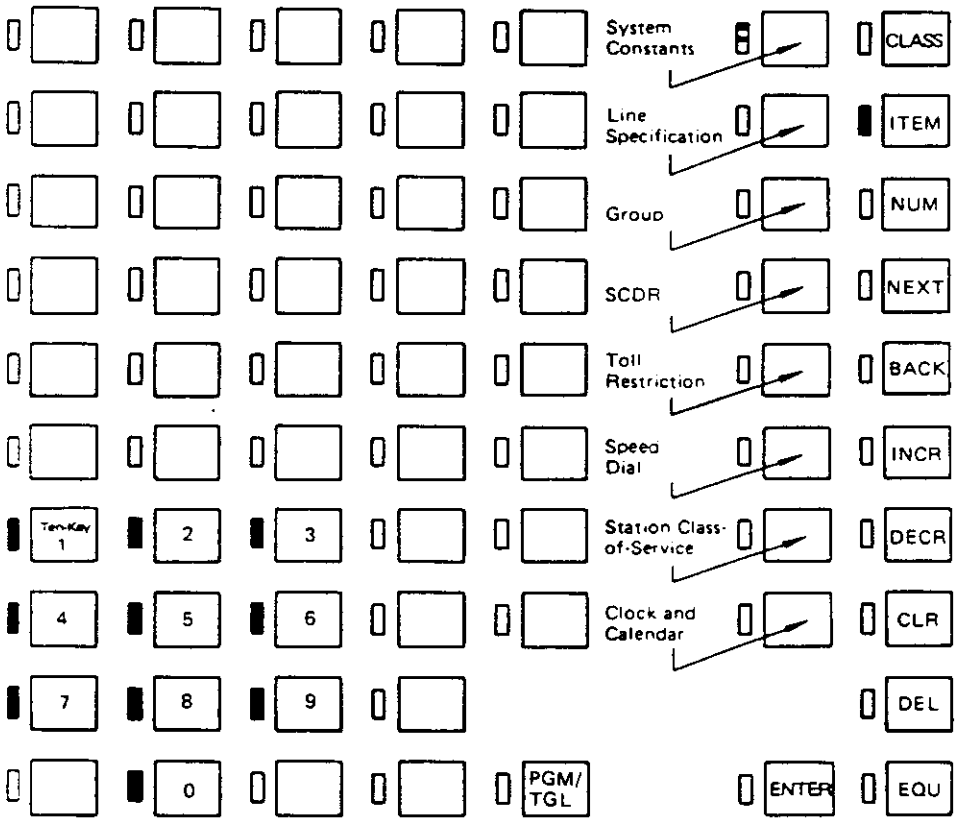
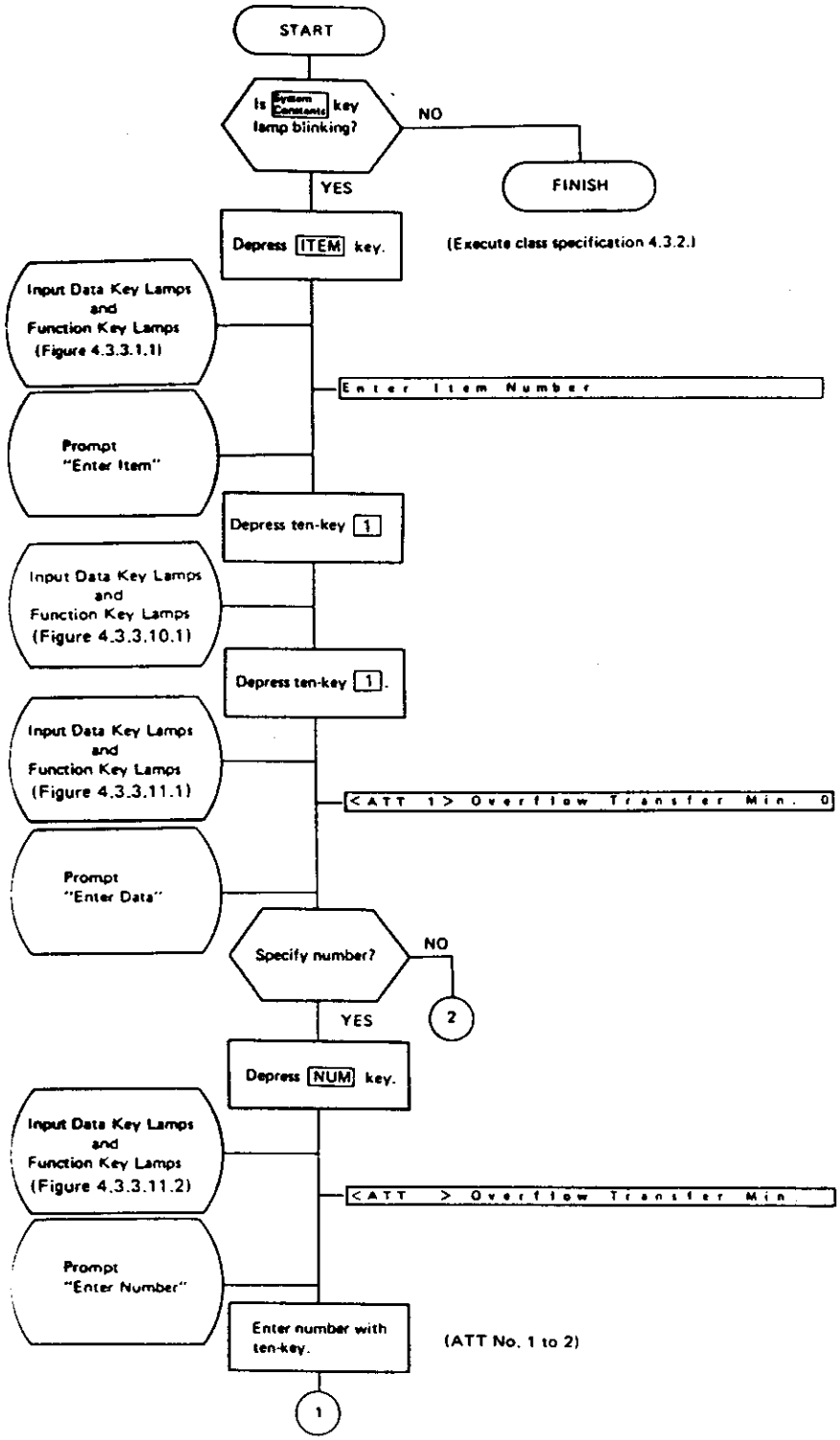
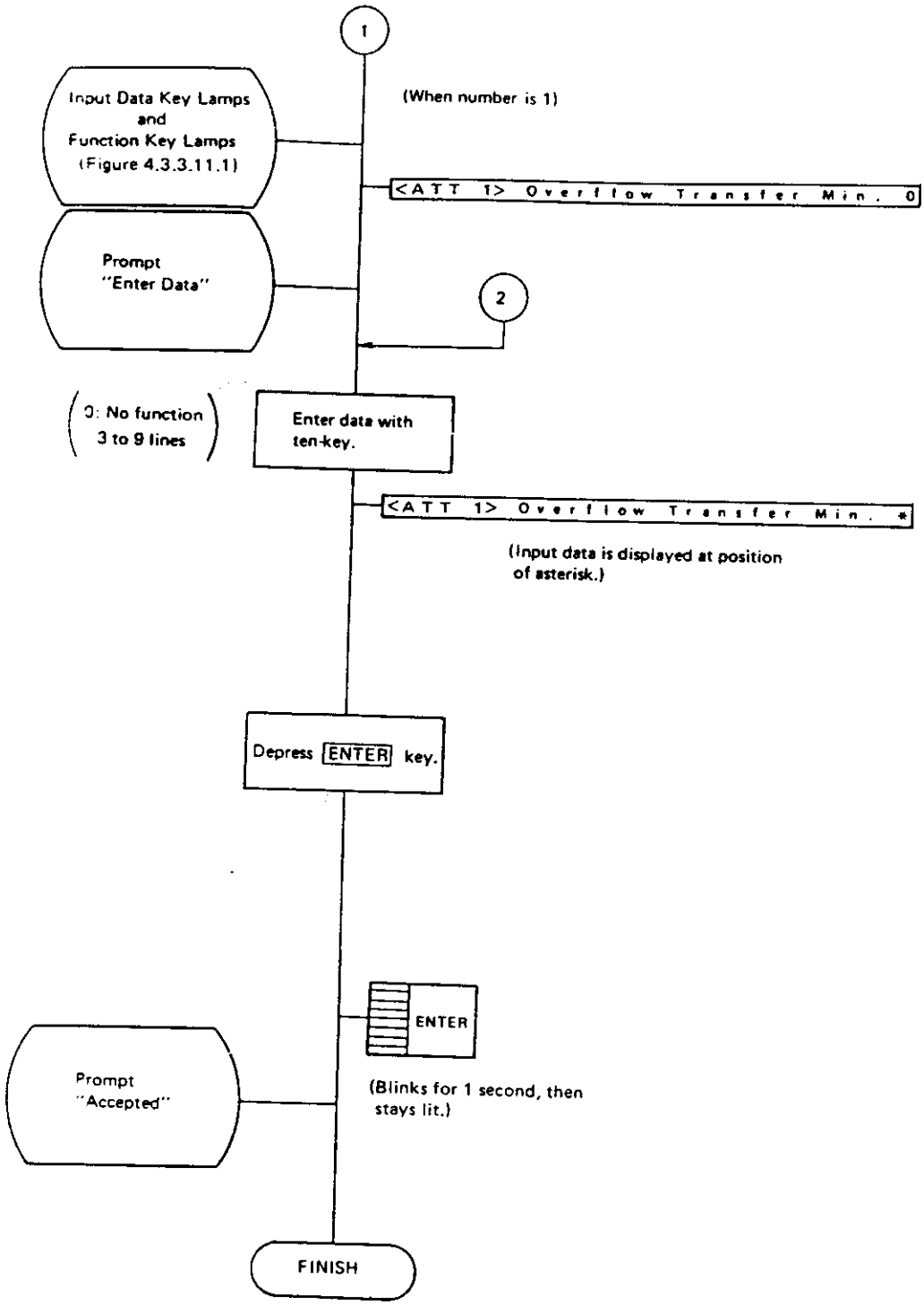


Figure 4.3.3.10.1

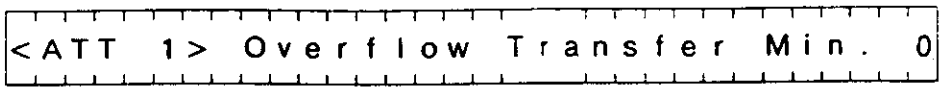
4.3.3.11 Over Transfer Minimum (Item 11)

Feature: Setting minimum line number for Over Transfer




1
Input Data Key Lamps
and
Function Key Lamps
(Figure 4.3.3.11.1)
(When number is 1)
<ATT 1> Overflow Transfer Min. 0
Prompt
"Enter Data"
2
0: No function
3 to 9 lines
Enter data with
ten-key.
<ATT 1> Overflow Transfer Min. *
(Input data is displayed at position
of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then
stays lit.)
Prompt
"Accepted"
FINISH

Display



Key Lamp

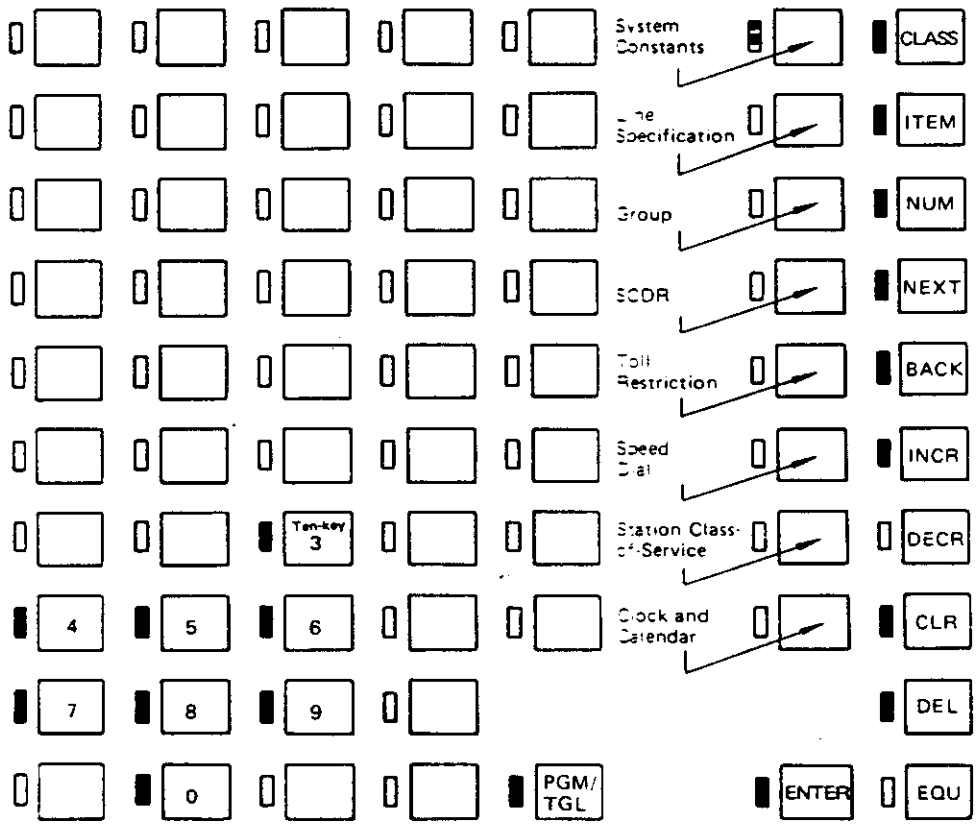
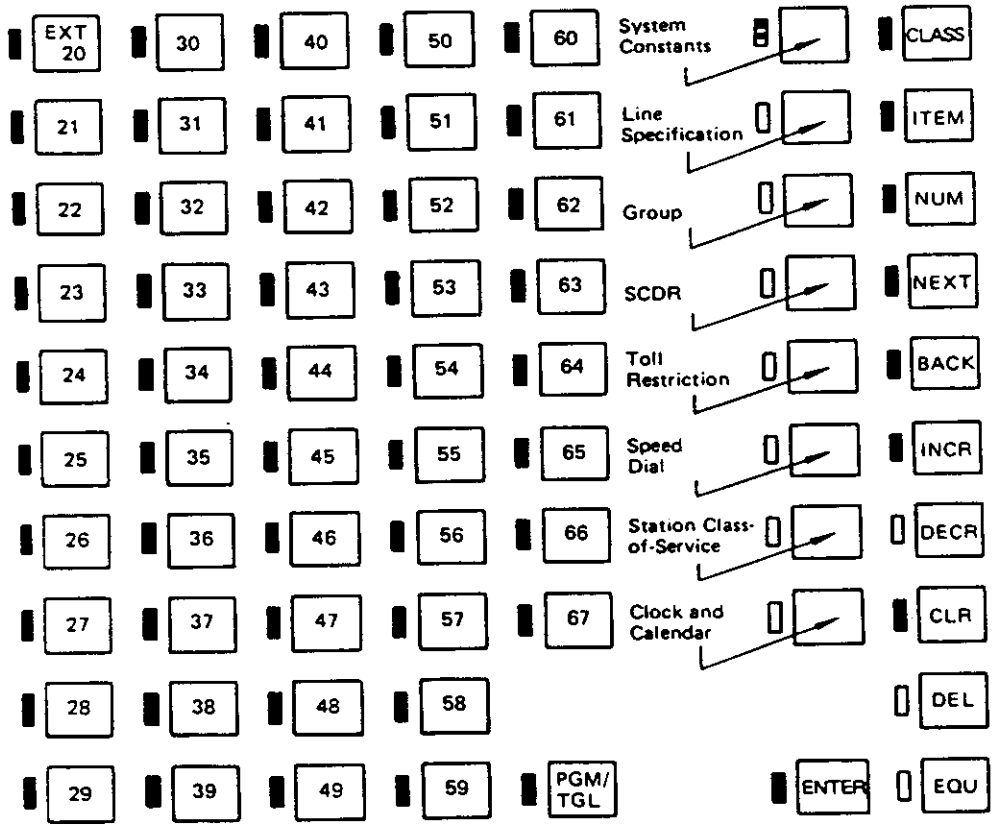


Figure 4.3.3.11.1

Display

<ATT 1> Overflow Transfer EXT #

Key Lamp

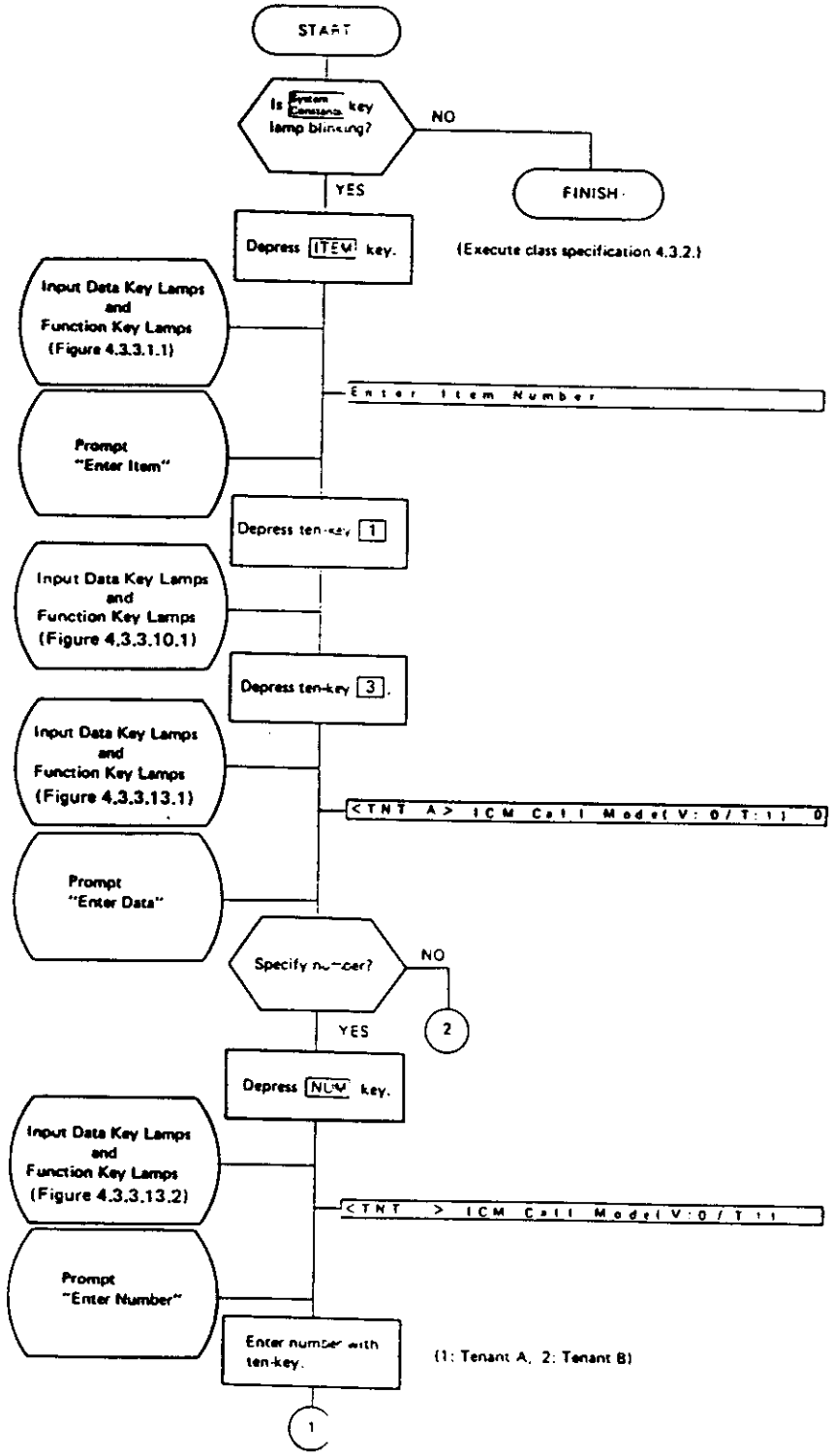


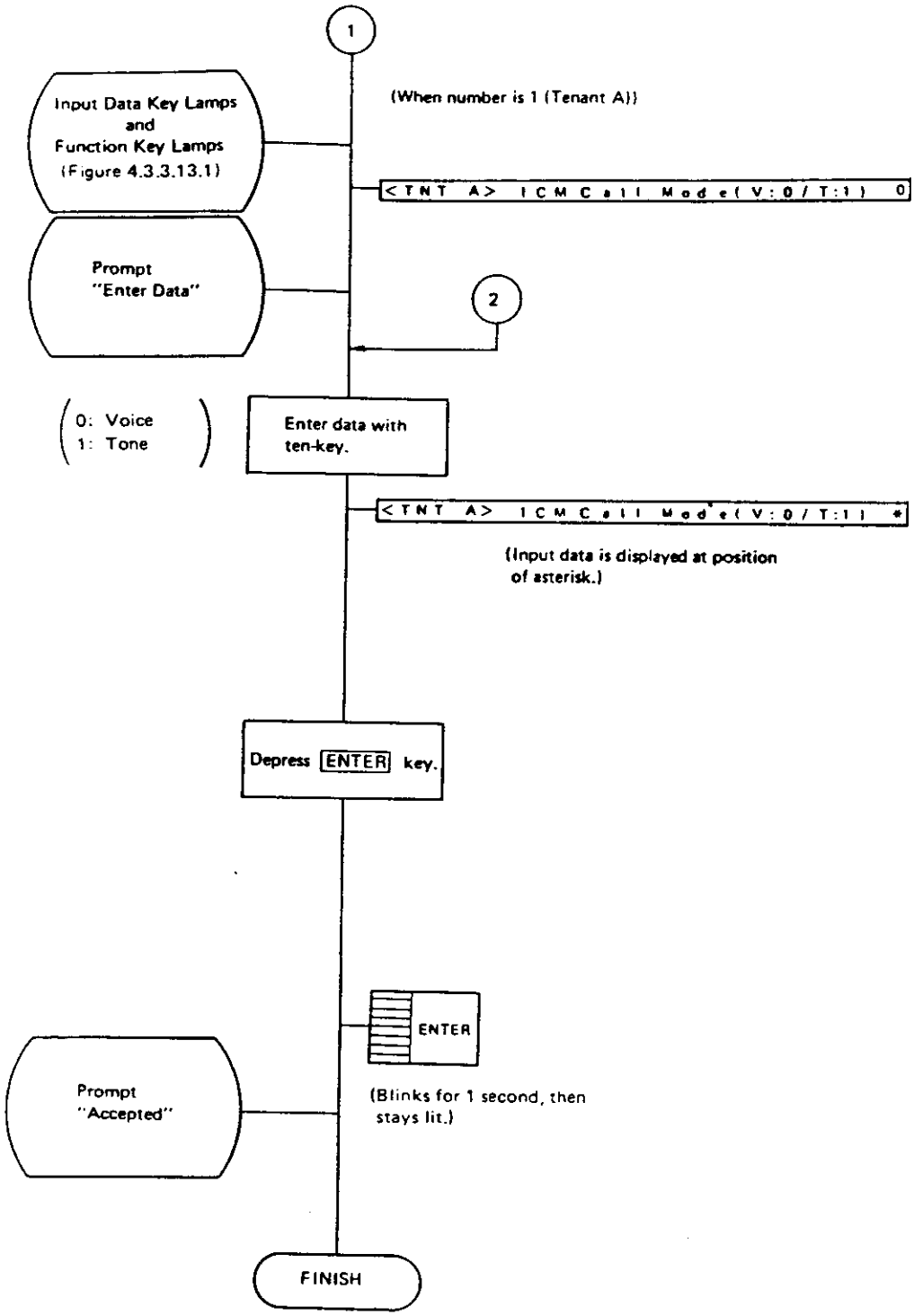
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.3.12.1.a

4.3.3.13 ICM Call Mode (Item 13)

Feature: Setting ICM Call Mode




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.3.13.1)
(When number is 1 (Tenant A))
<TNT A> ICM Call Mode(V:0/T:1) 0
Prompt "Enter Data"
2
(0: Voice
1: Tone)
Enter data with ten-key.
<TNT A> ICM Call Mode(V:0/T:1) *
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

Key Lamp

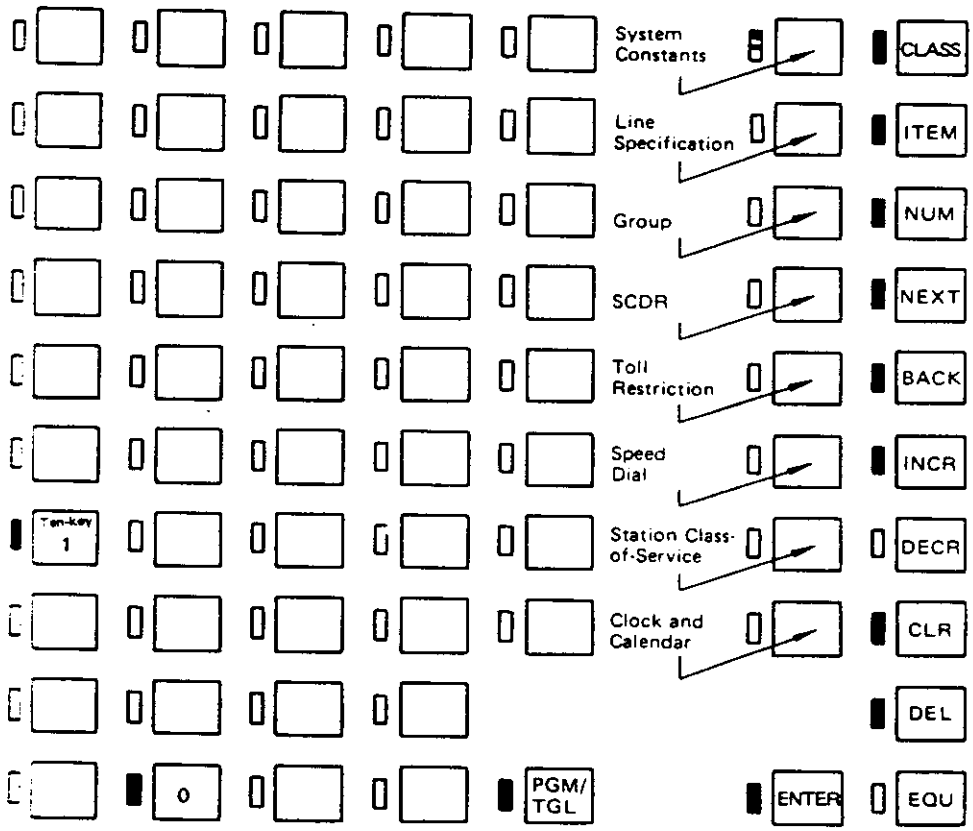
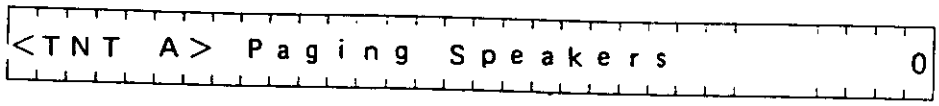


Figure 4.3.3.13.1

Display



Key Lamp

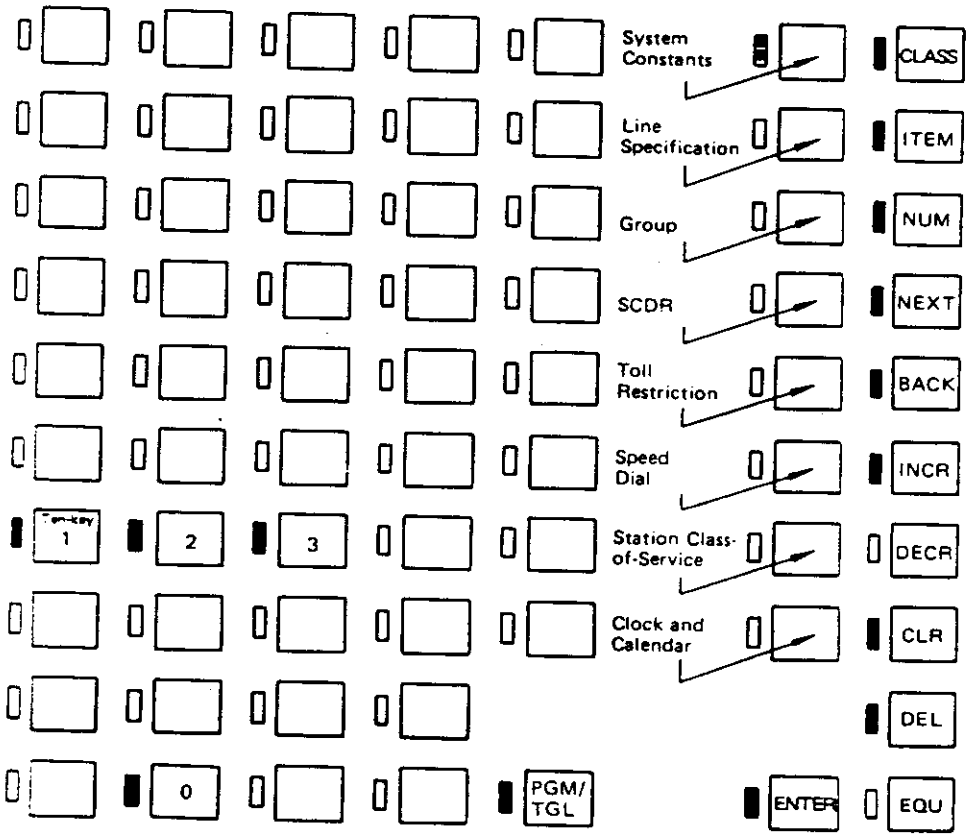


Figure 4.3.3.14.1

Display

<TNT > Paging Speakers

Key Lamp

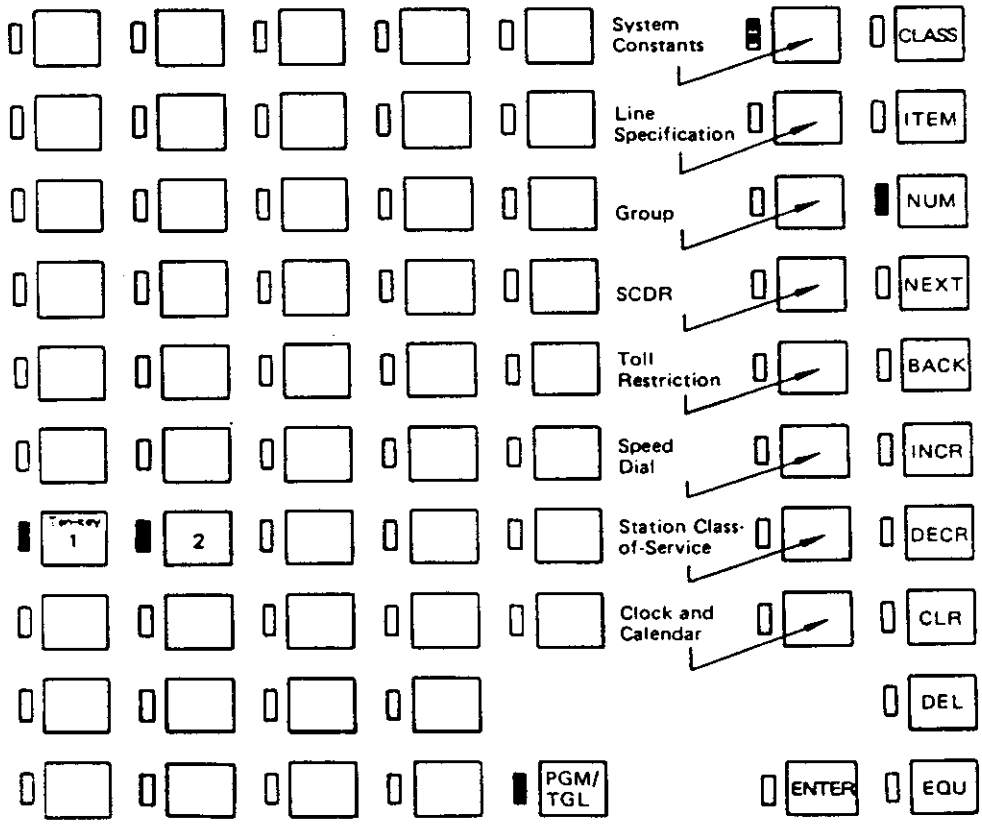
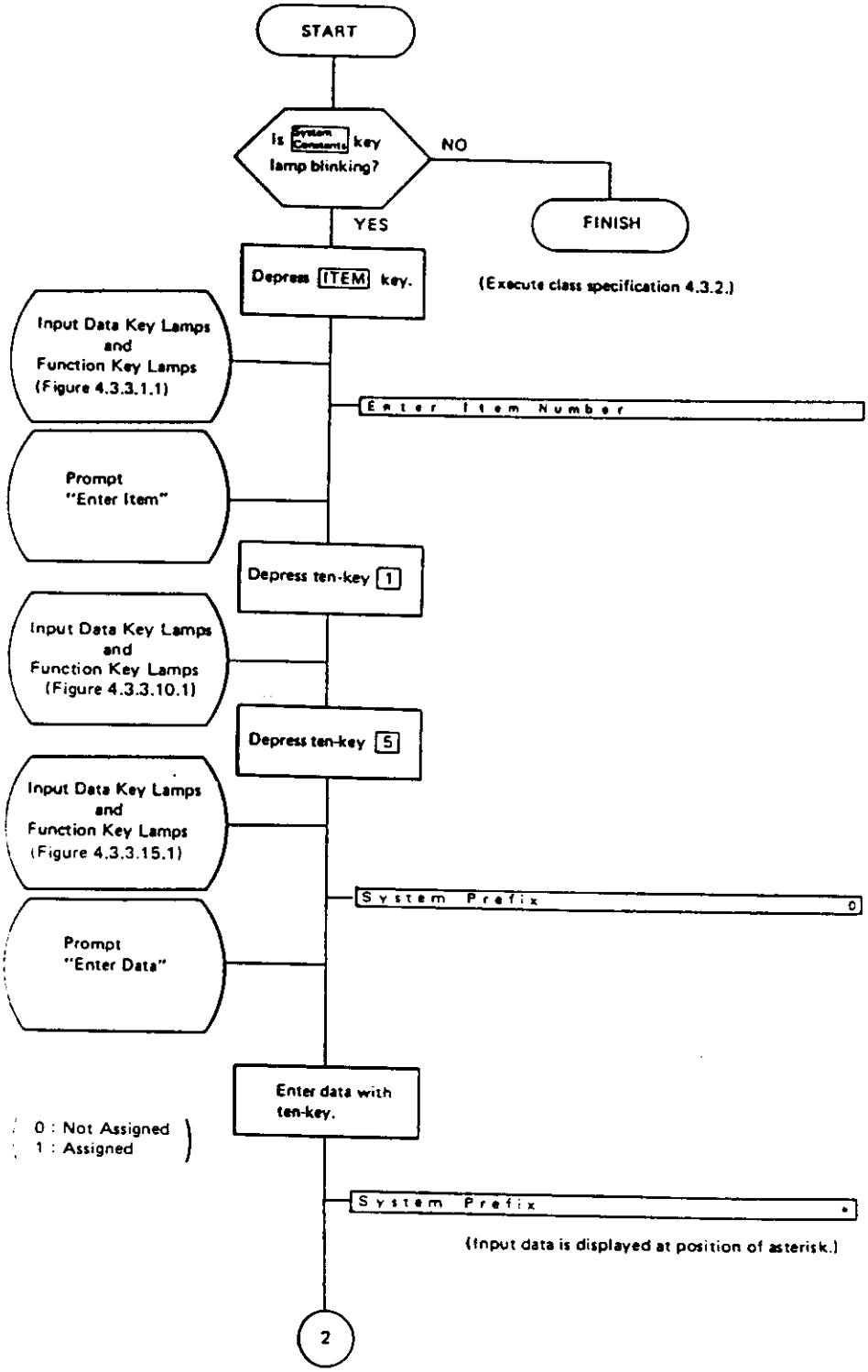


Figure 4.3.3.14.2

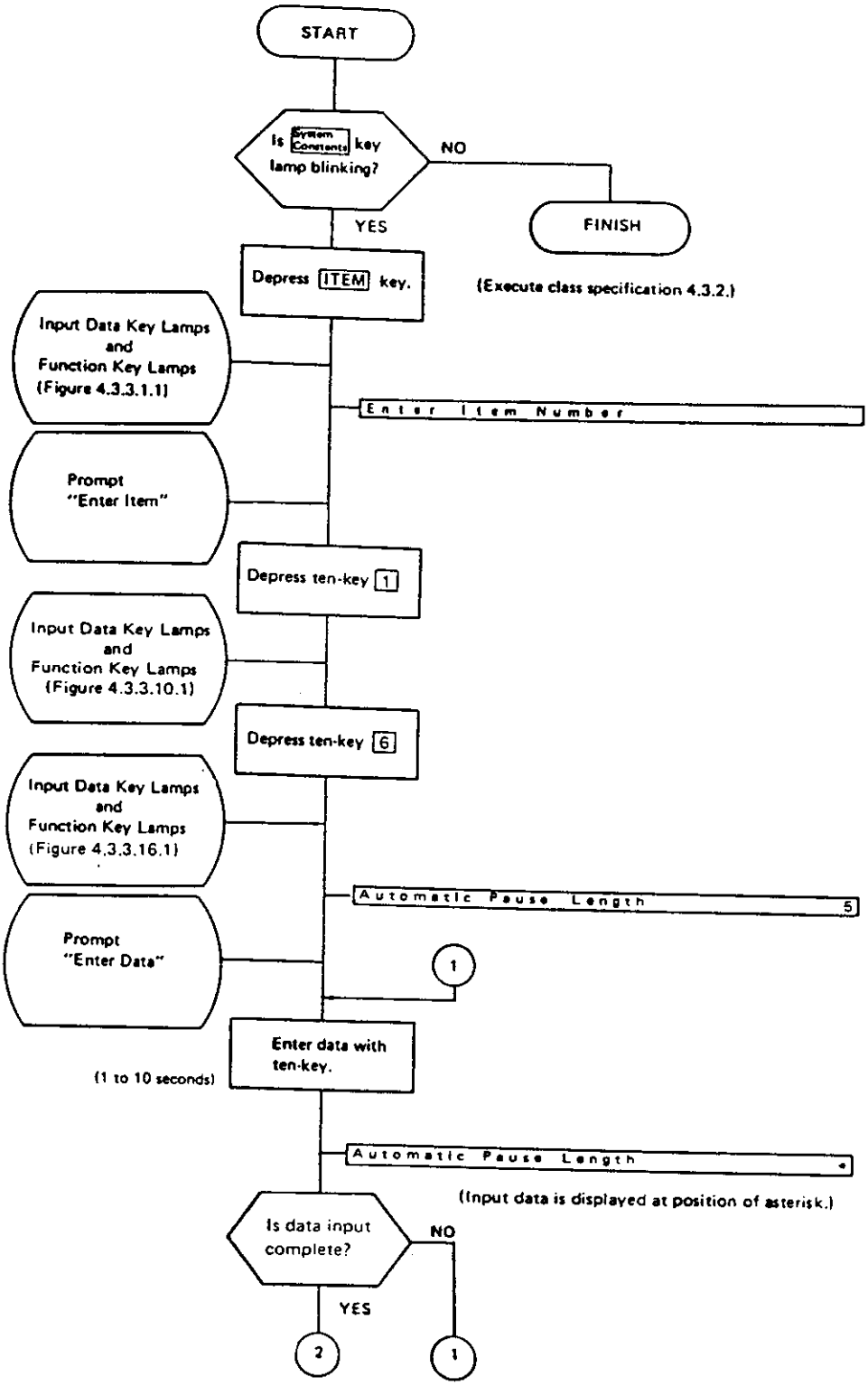
4.3.3.15 System Prefix (Item 15)

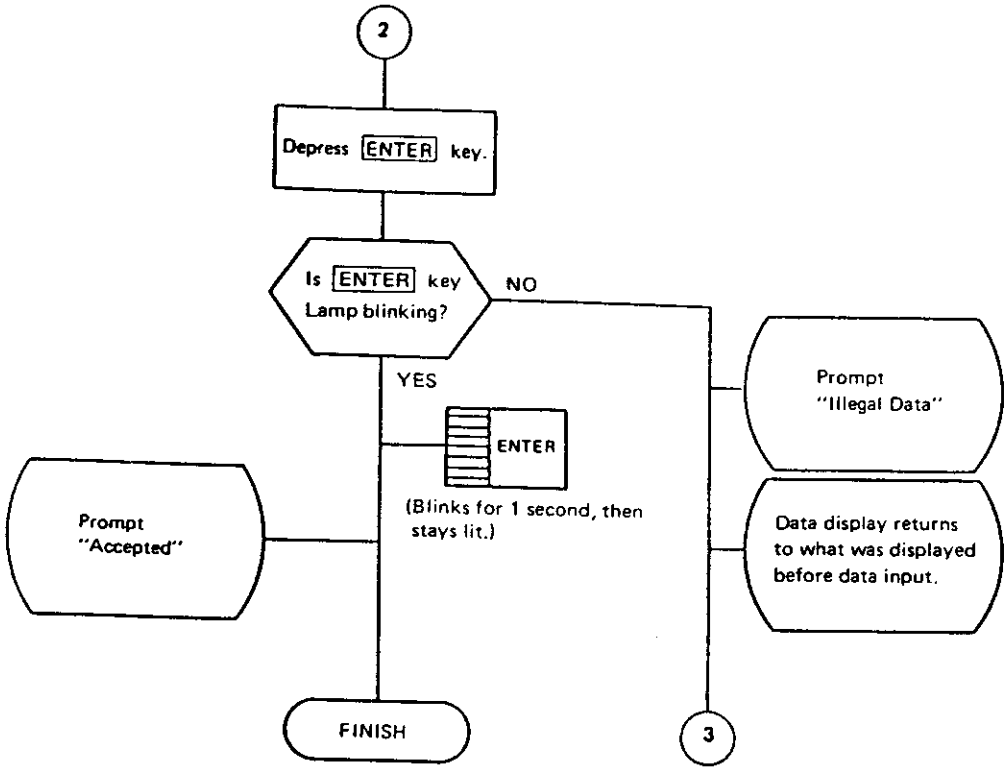
Feature: Set whether System Prefix is required.



4.3.3.16 Automatic Pause-Length (Item 16)

Feature: Setting Automatic Pause Length




2
Depress ENTER key.
Is ENTER key Lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display

Key Lamp

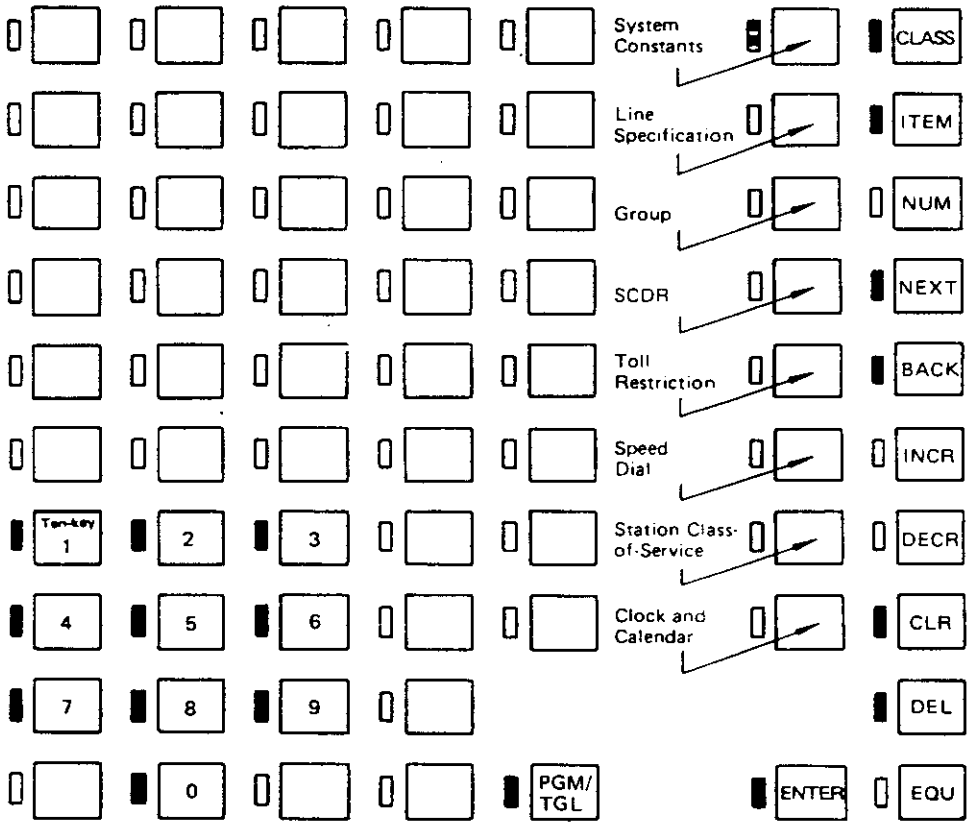
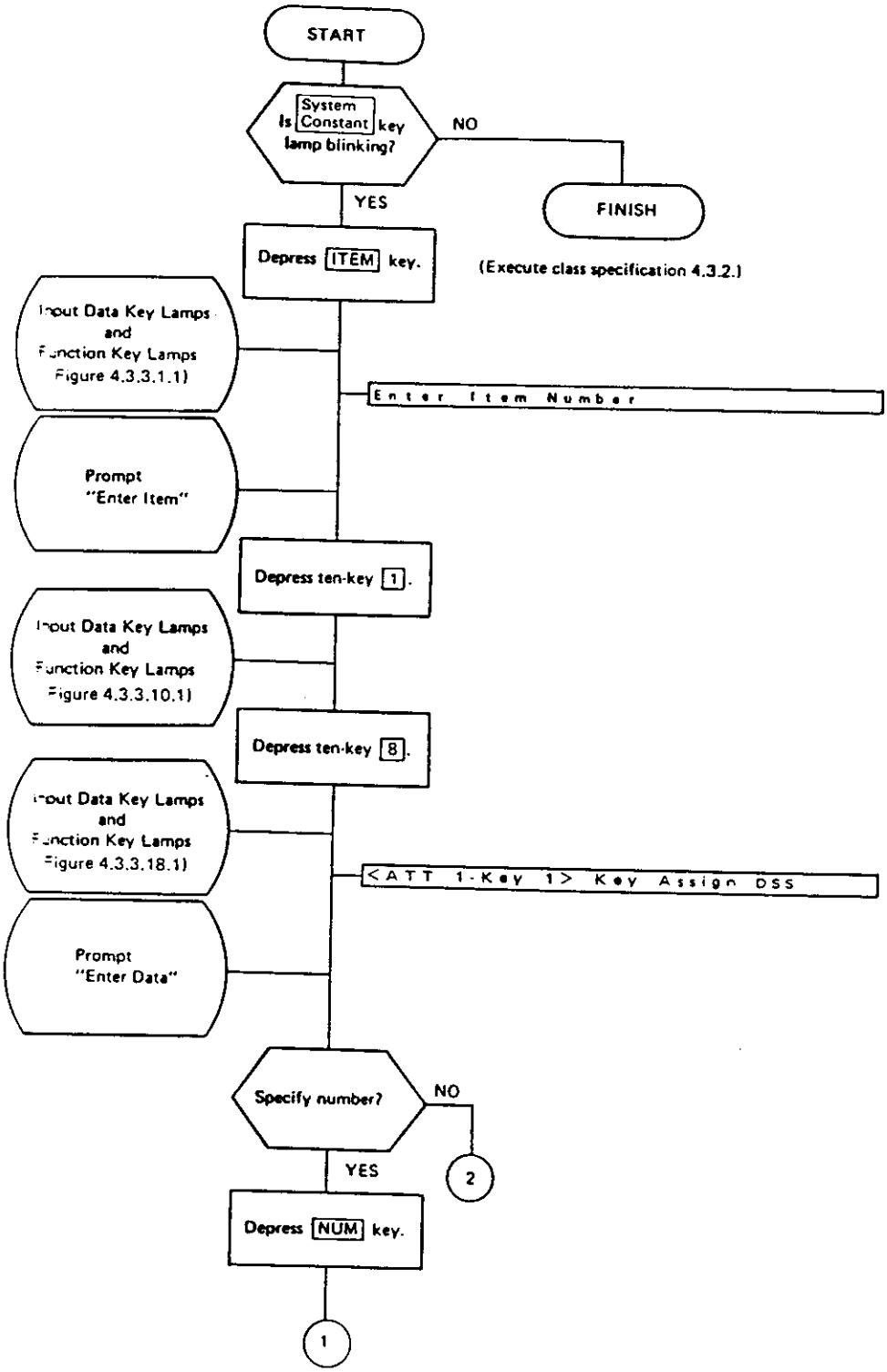
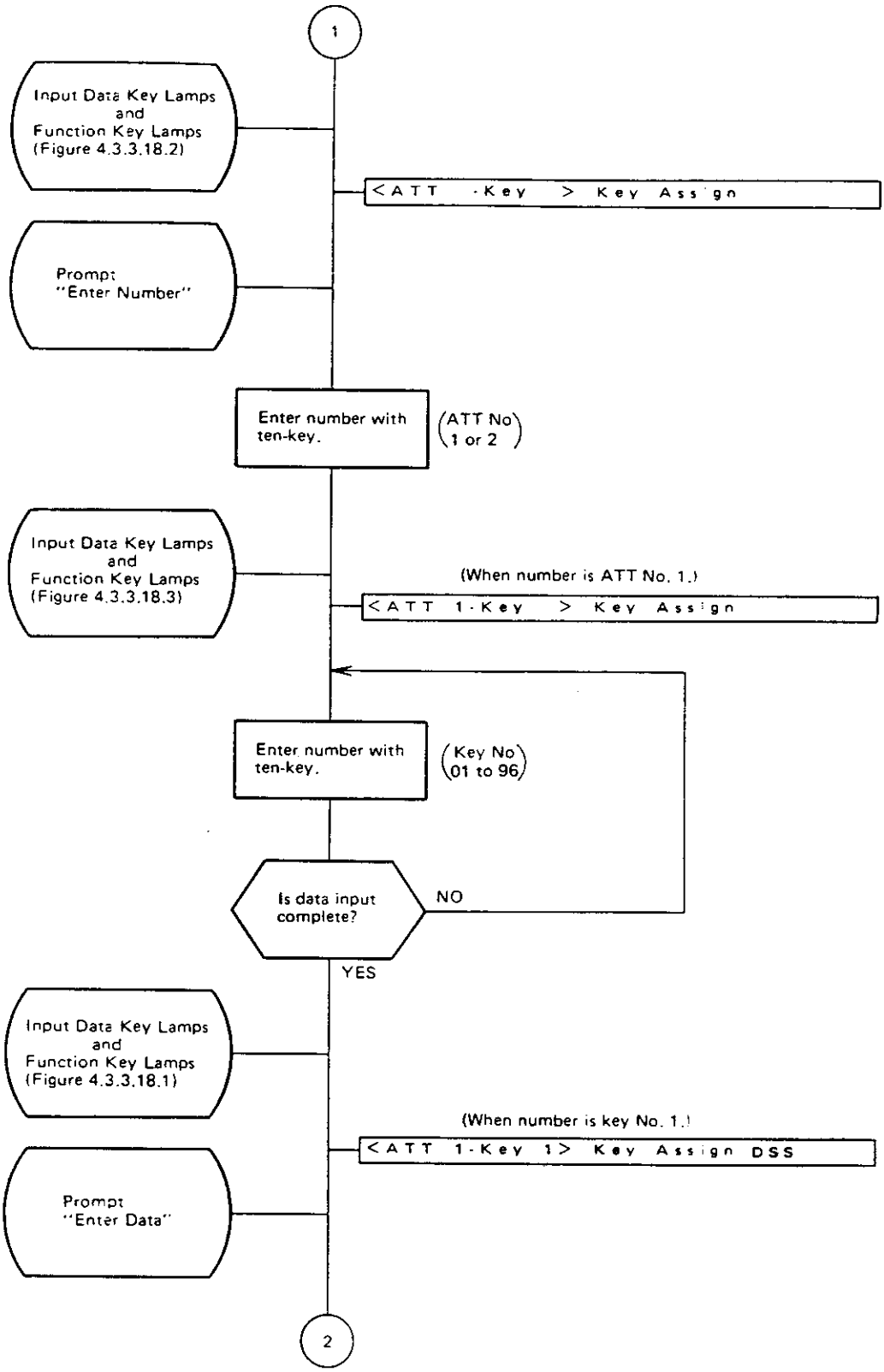


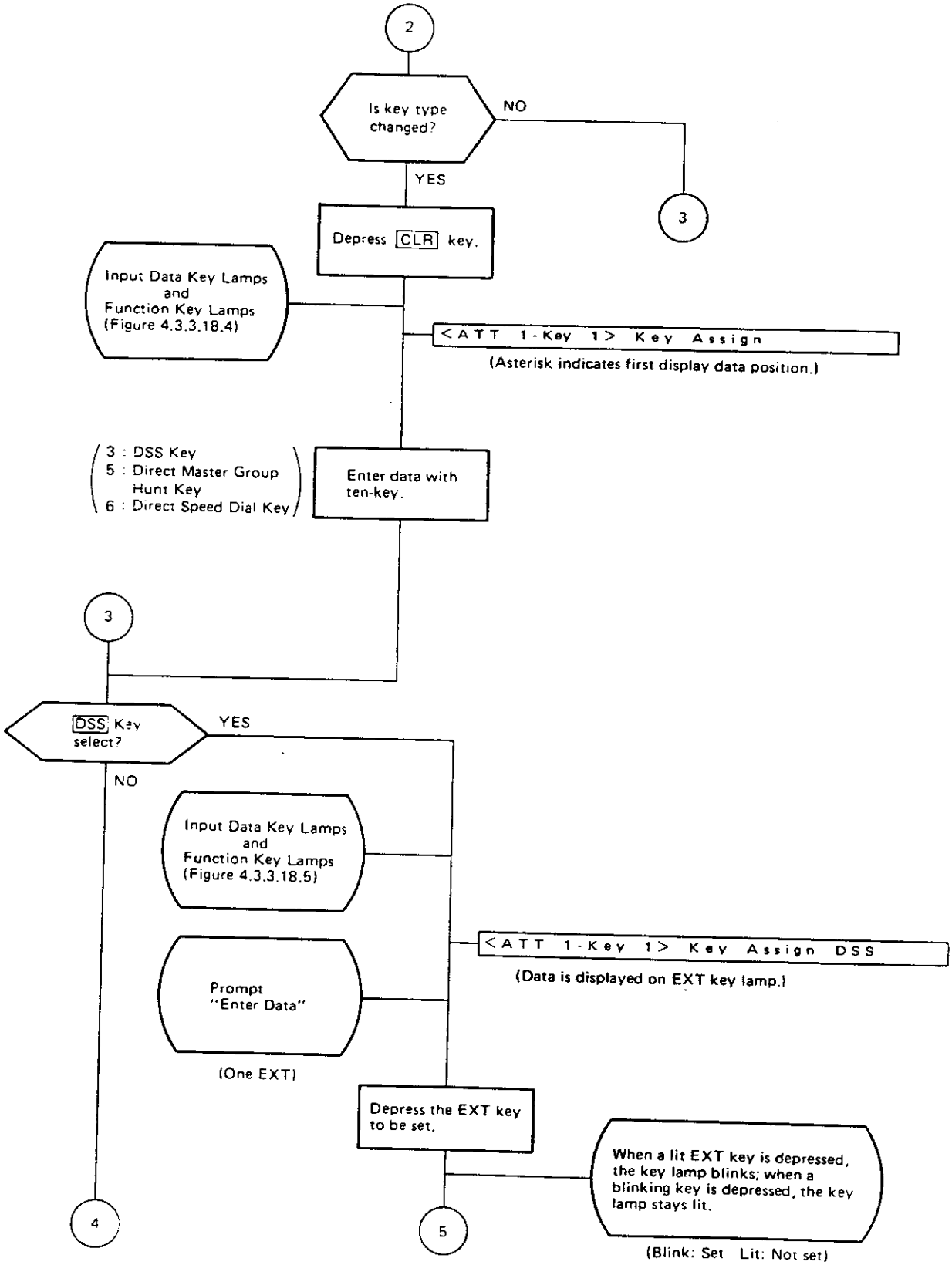
Figure 4.3.3.16.1

4.3.3.18 Attendant Key Assignment (Item 18)

Feature: Setting Attendant Key Assignment



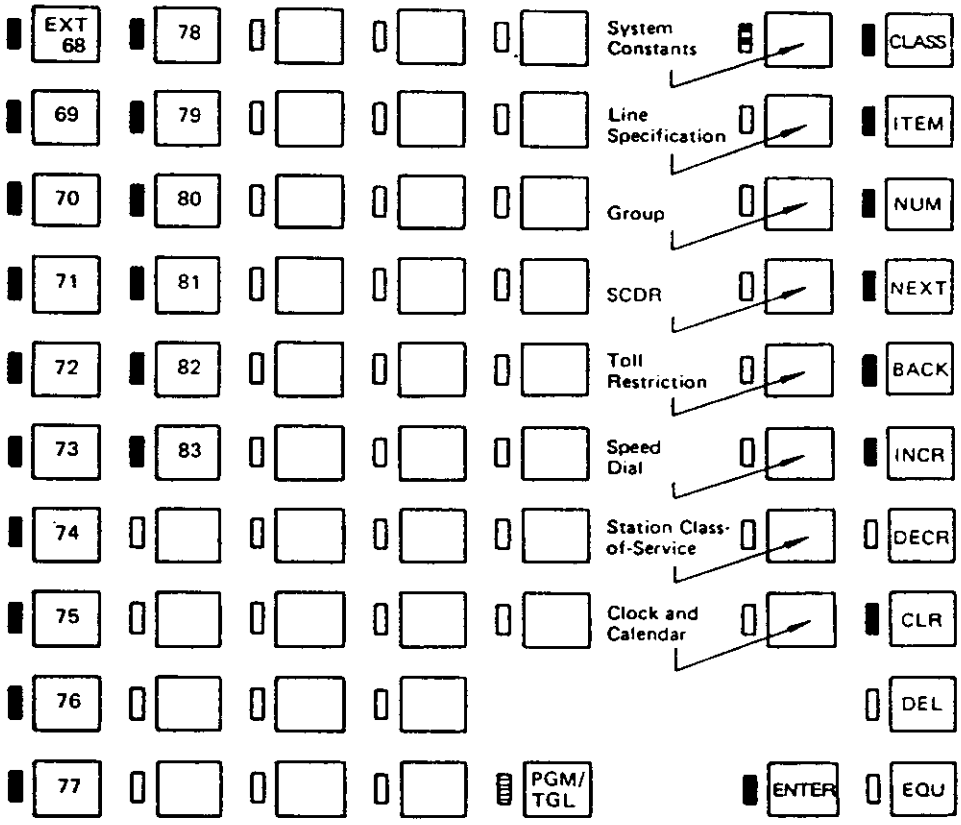

1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.3.18.2)
<ATT -Key > Key Assign
Prompt "Enter Number"
Enter number with ten-key.
(ATT No 1 or 2)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.3.18.3)
(When number is ATT No. 1.)
<ATT 1-Key > Key Assign
Enter number with ten-key.
(Key No 01 to 96)
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.3.18.1)
(When number is key No. 1.)
<ATT 1-Key 1> Key Assign DSS
Prompt "Enter Data"
2


2
Is key type changed?
NO
YES
3
Depress [CLR] key.
Input Data Key Lamps and Function Key Lamps (Figure 4.3.3.18.4)
<ATT 1-Key 1> Key Assign
(Asterisk indicates first display data position.)
3 : DSS Key
5 : Direct Master Group Hunt Key
6 : Direct Speed Dial Key
Enter data with ten-key.
3
[DSS] Key select?
YES
NO
Input Data Key Lamps and Function Key Lamps (Figure 4.3.3.18.5)
<ATT 1-Key 1> Key Assign DSS
(Data is displayed on EXT key lamp.)
Prompt "Enter Data"
(One EXT)
Depress the EXT key to be set.
When a lit EXT key is depressed, the key lamp blinks; when a blinking key is depressed, the key lamp stays lit.
(Blink: Set Lit: Not set)
4
5

Display

<A T T 1 - K e y 1 > K e y A s s i g n D S S

Key Lamp



Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

Figure 4.3.3.18.1.b

Display

<ATT -Key > Key Assign

Key Lamp

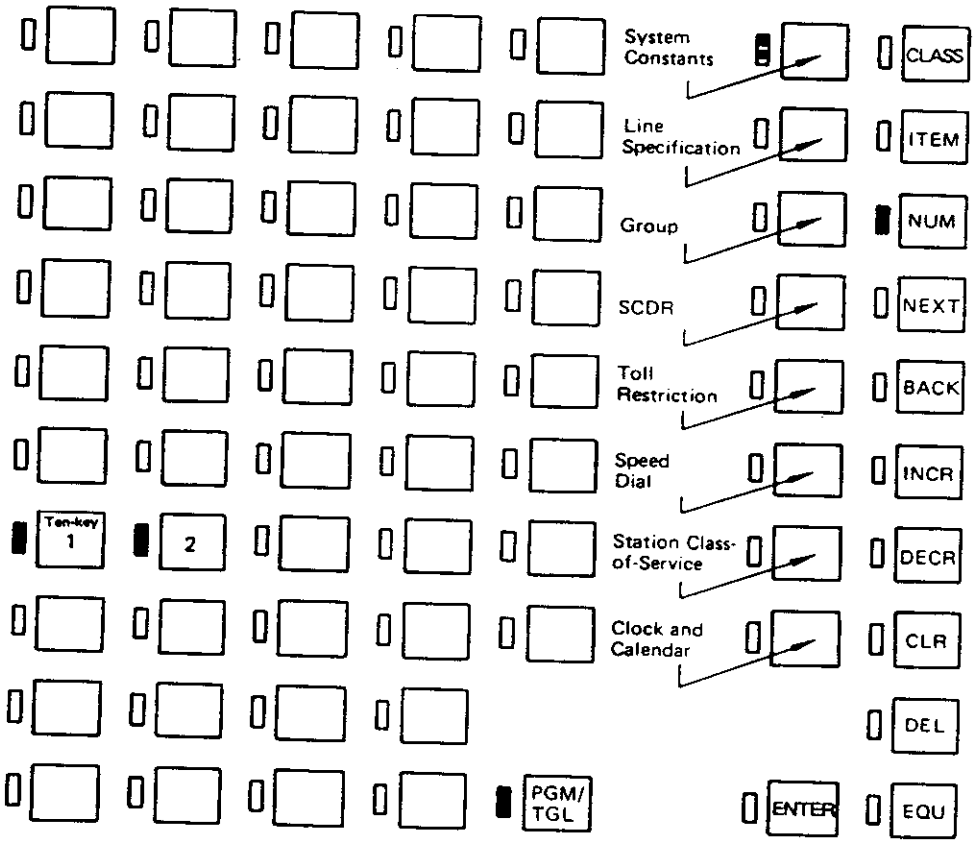
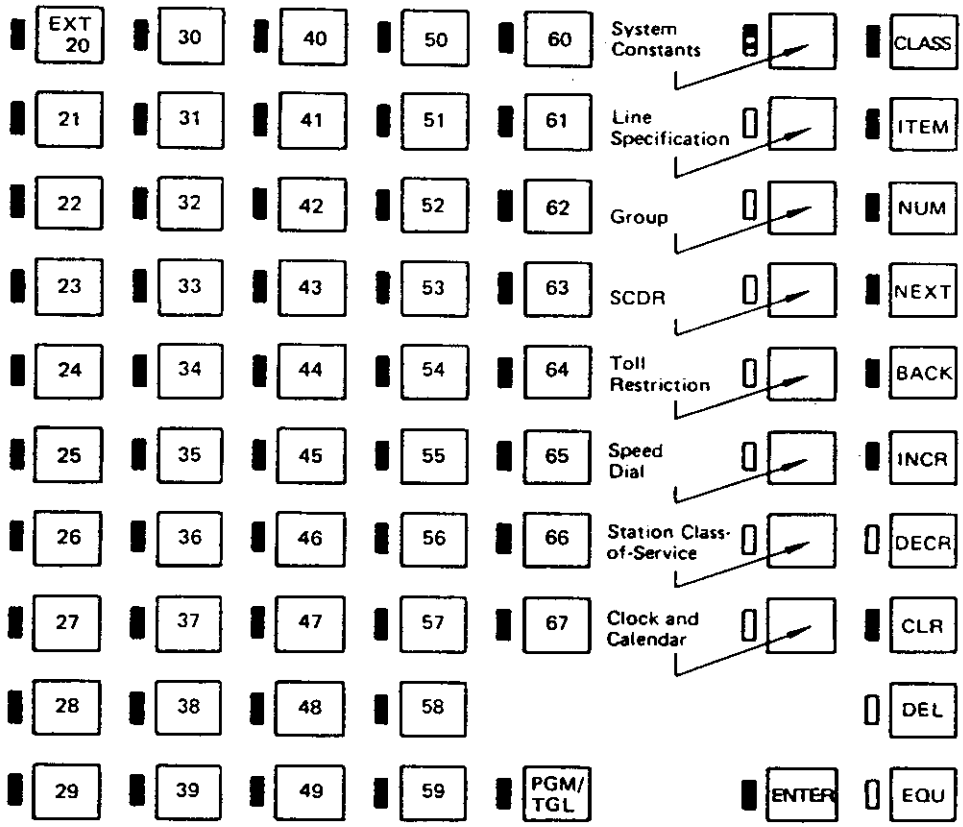


Figure 4.3.3.18.2

Display

<ATT1-Key 1> Key Assign DSS

Key Lamp



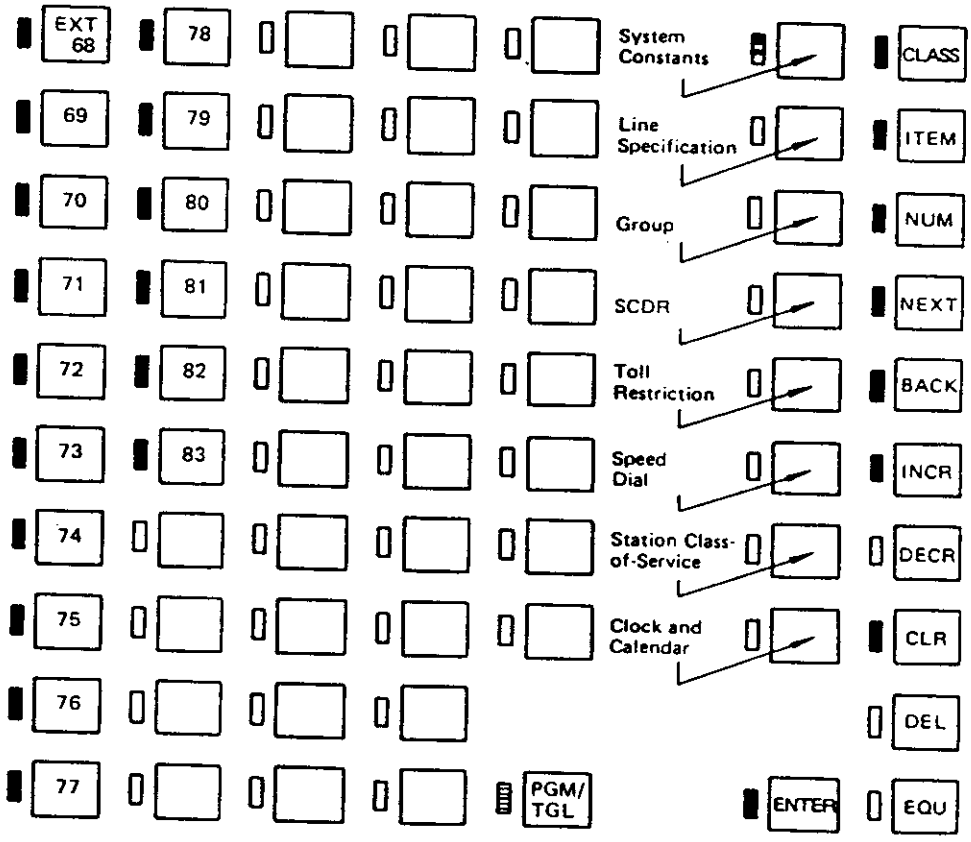
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.3.18.5.a

Display

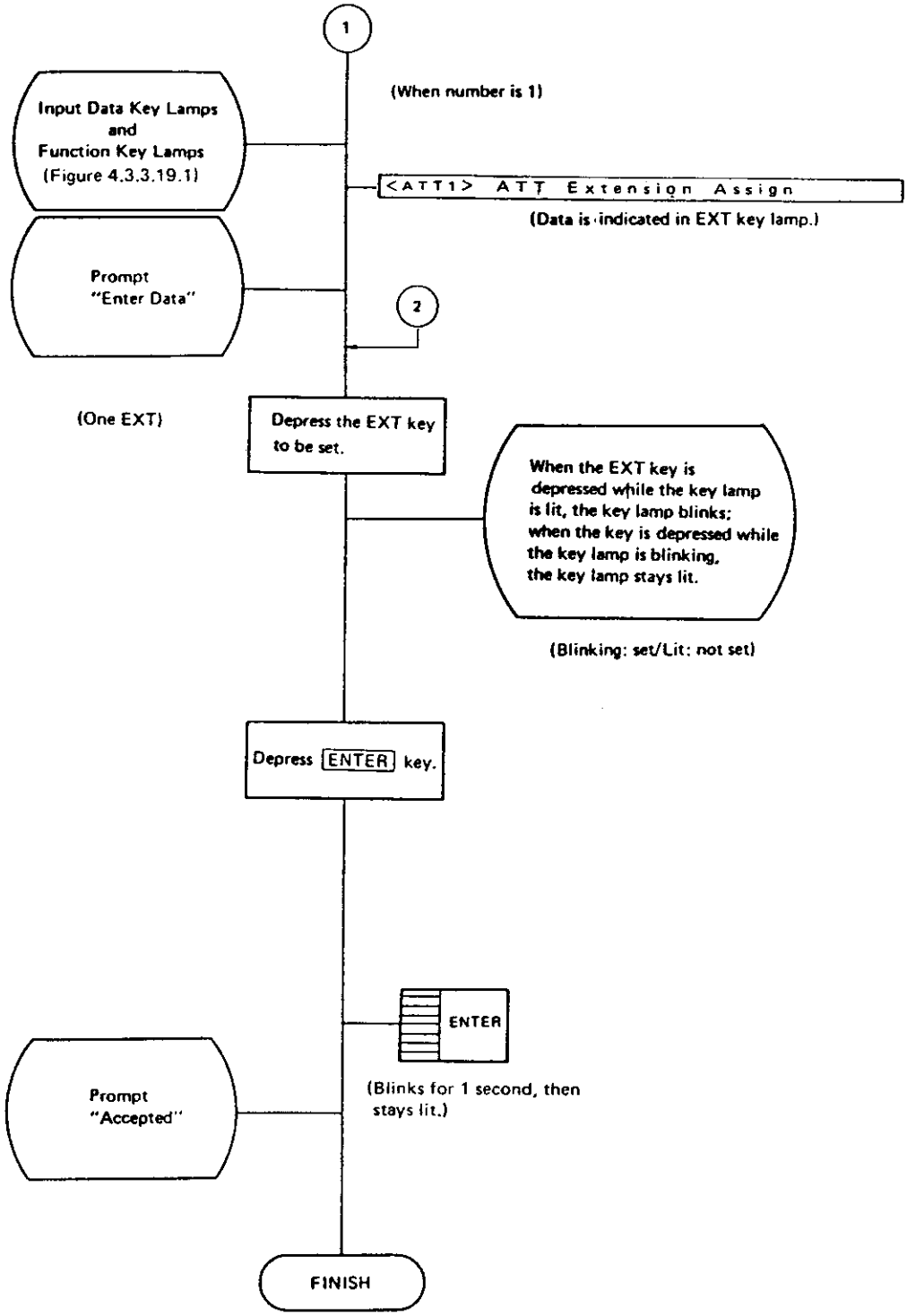
<A T T 1 - K e y 1 > K e y A s s i g n D S S

Key Lamp



Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

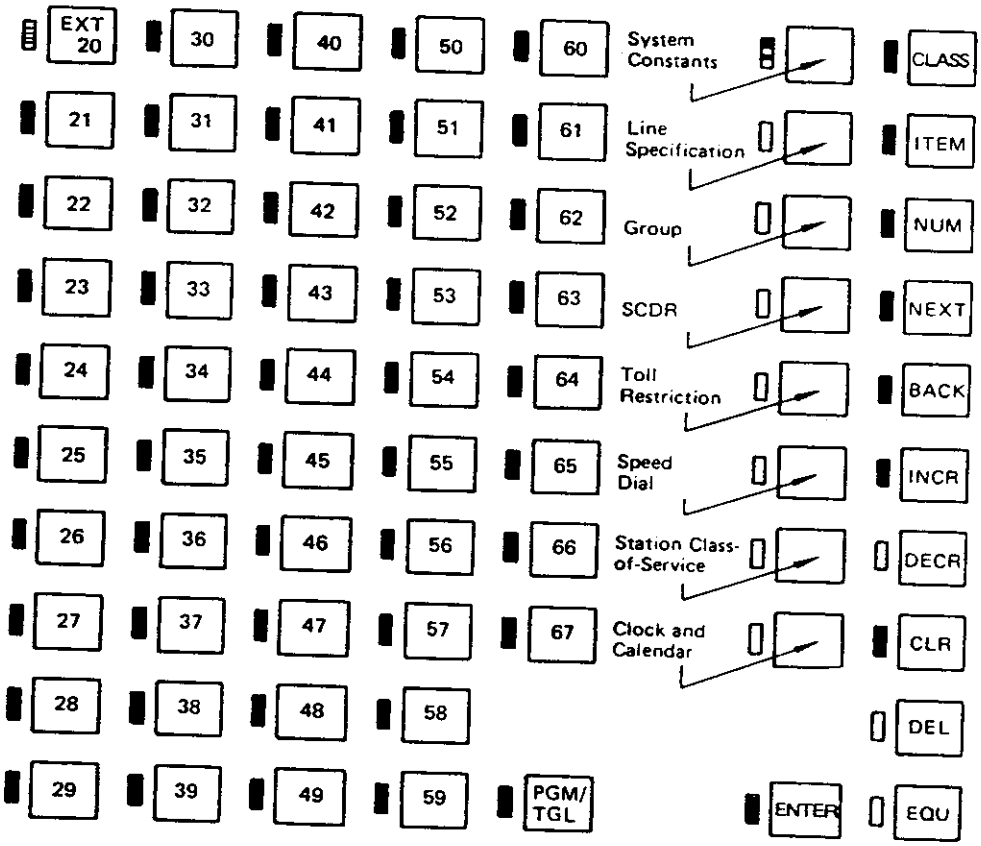
Figure 4.3.3.18.5.b


1
(When number is 1)
Input Data Key Lamps
and
Function Key Lamps
(Figure 4.3.3.19.1)
<ATT1> ATT Extension Assign
(Data is indicated in EXT key lamp.)
Prompt
"Enter Data"
2
(One EXT)
Depress the EXT key
to be set.
When the EXT key is
depressed while the key lamp
is lit, the key lamp blinks;
when the key is depressed while
the key lamp is blinking,
the key lamp stays lit.
(Blinking: set/Lit: not set)
Depress ENTER key.
ENTER
(Blinks for 1 second, then
stays lit.)
Prompt
"Accepted"
FINISH

Display

<ATT 1> ATT Extension Assign

Key Lamp



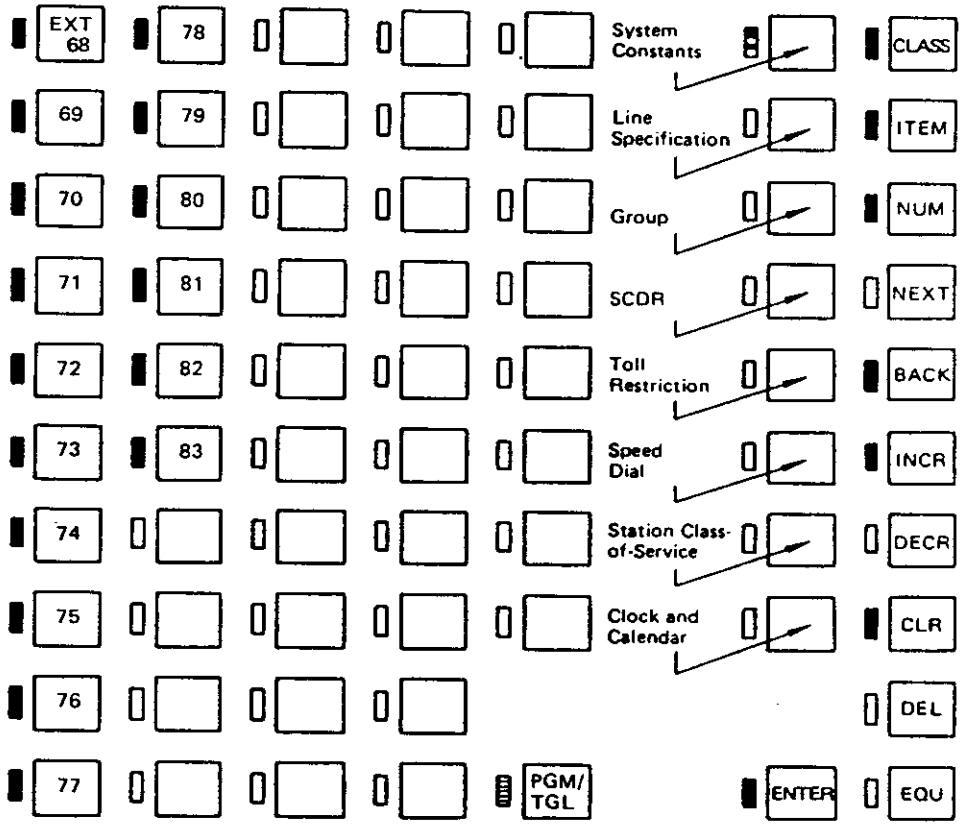
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.3.19.1.a

Display

<ATT 1> ATT Extension Assign

Key Lamp

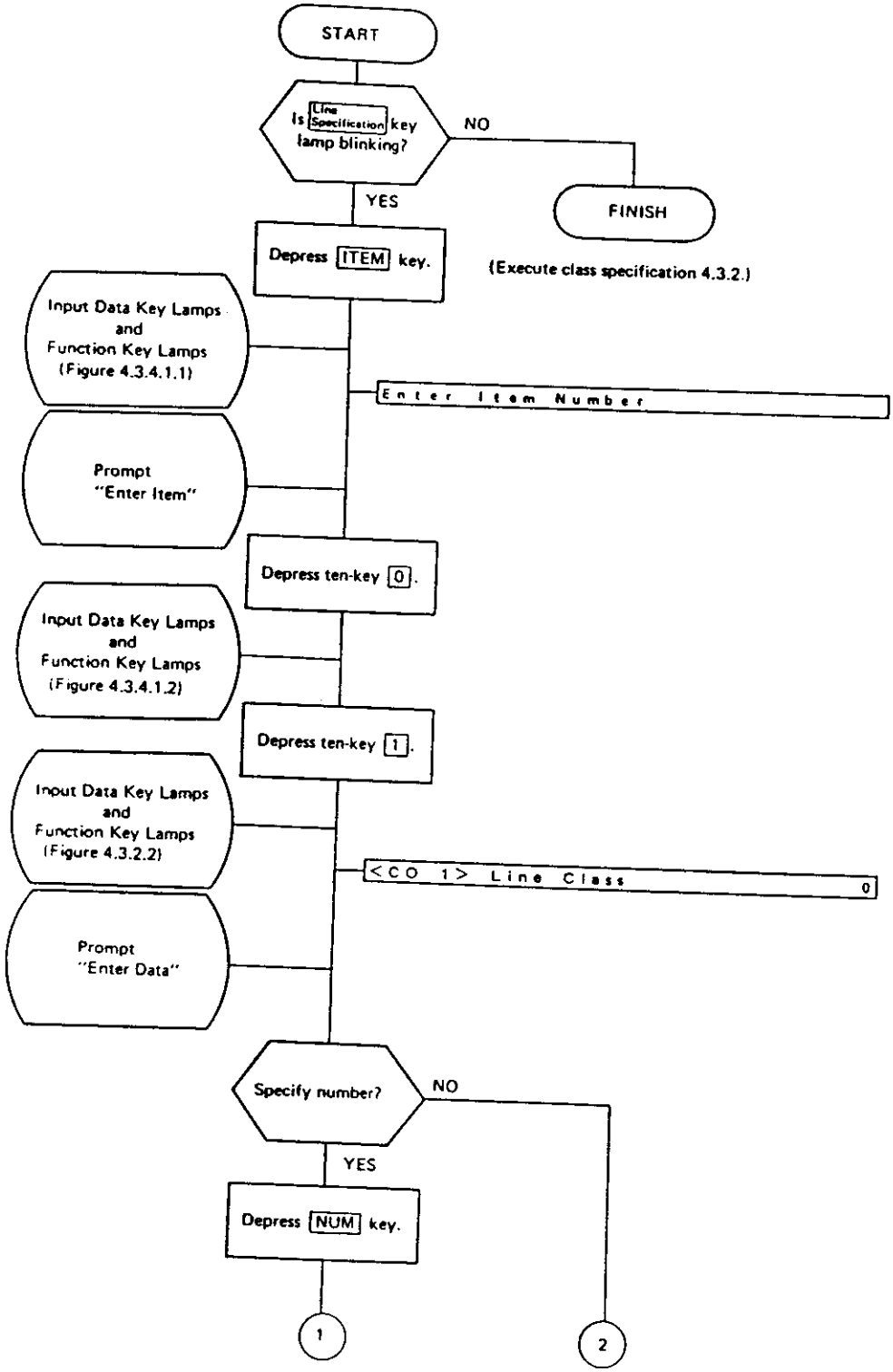


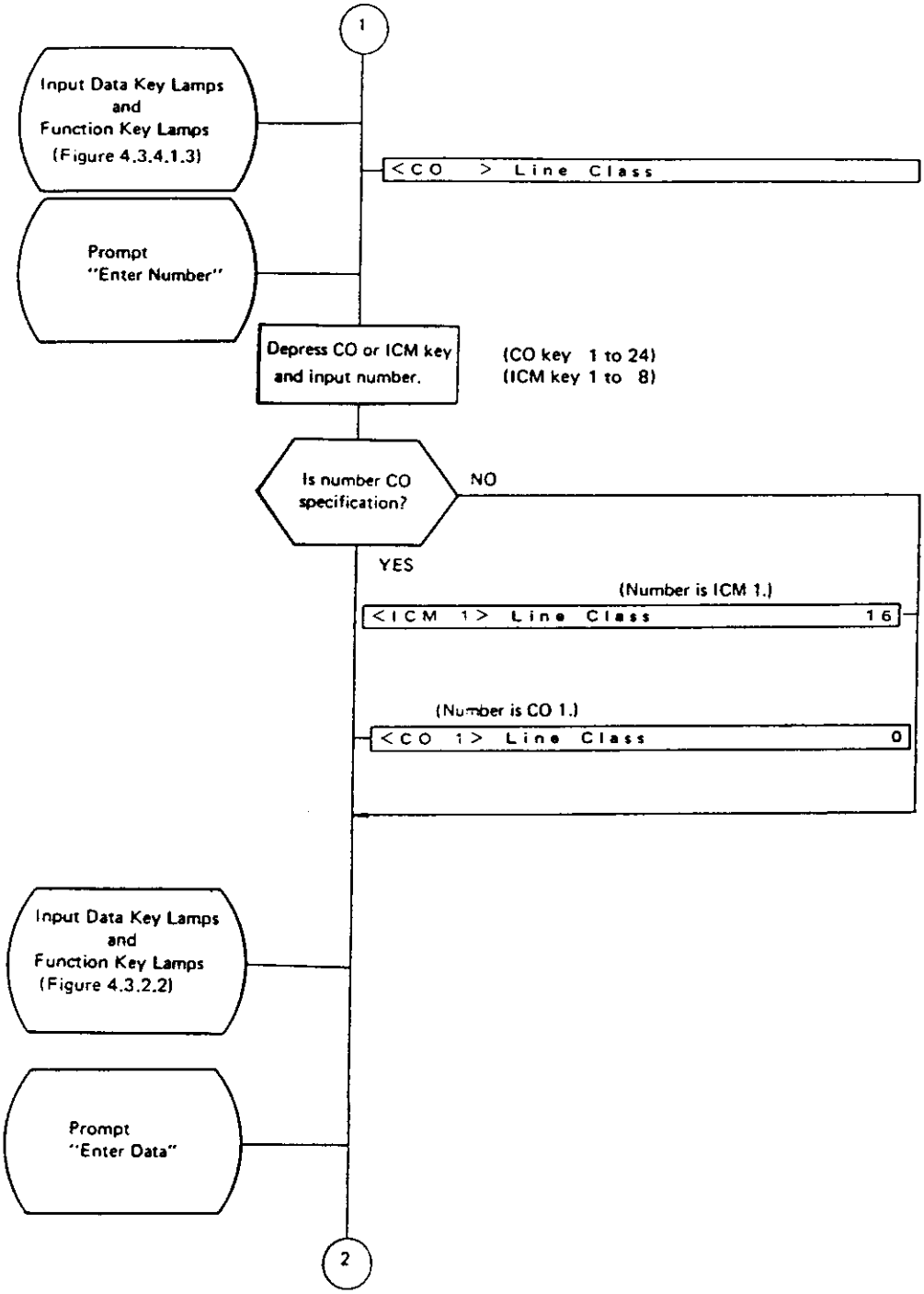
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

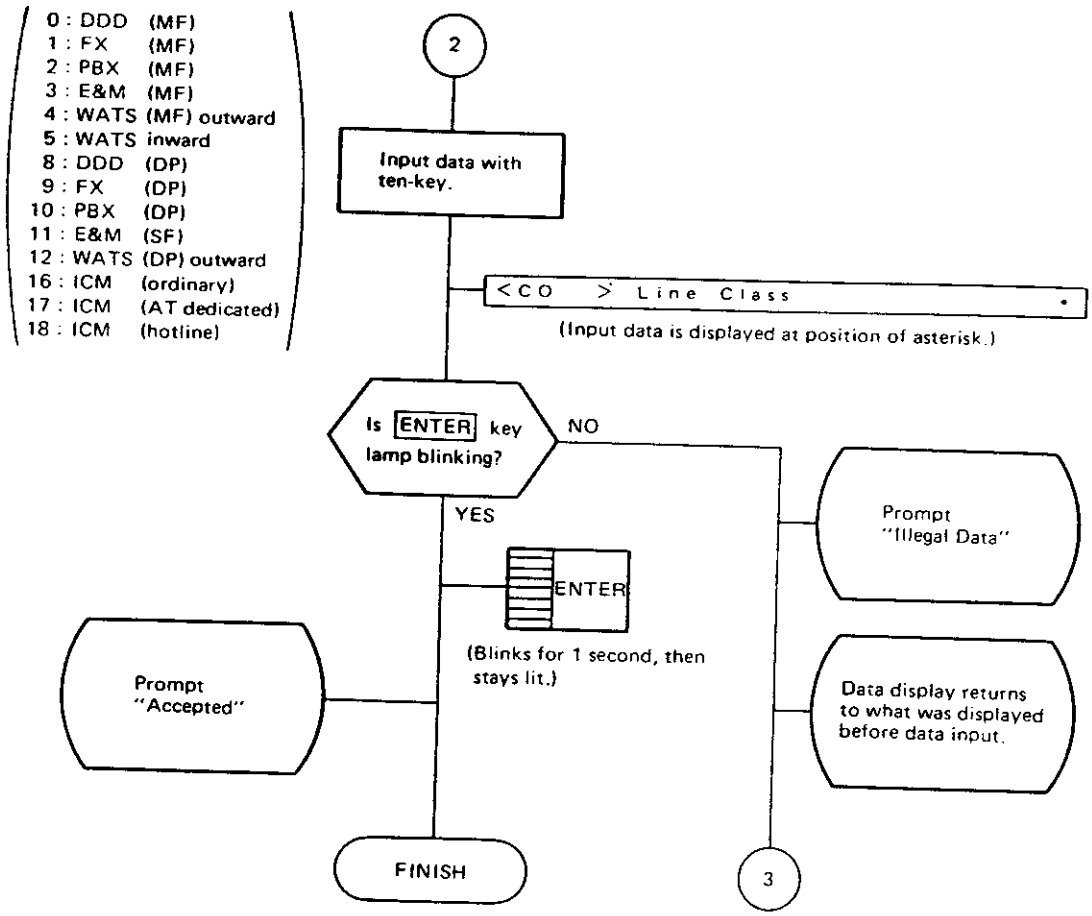
Figure 4.3.3.19.1.b

4.3.4.1 Line Class (Item 1)

Feature: Setting Line Class Code

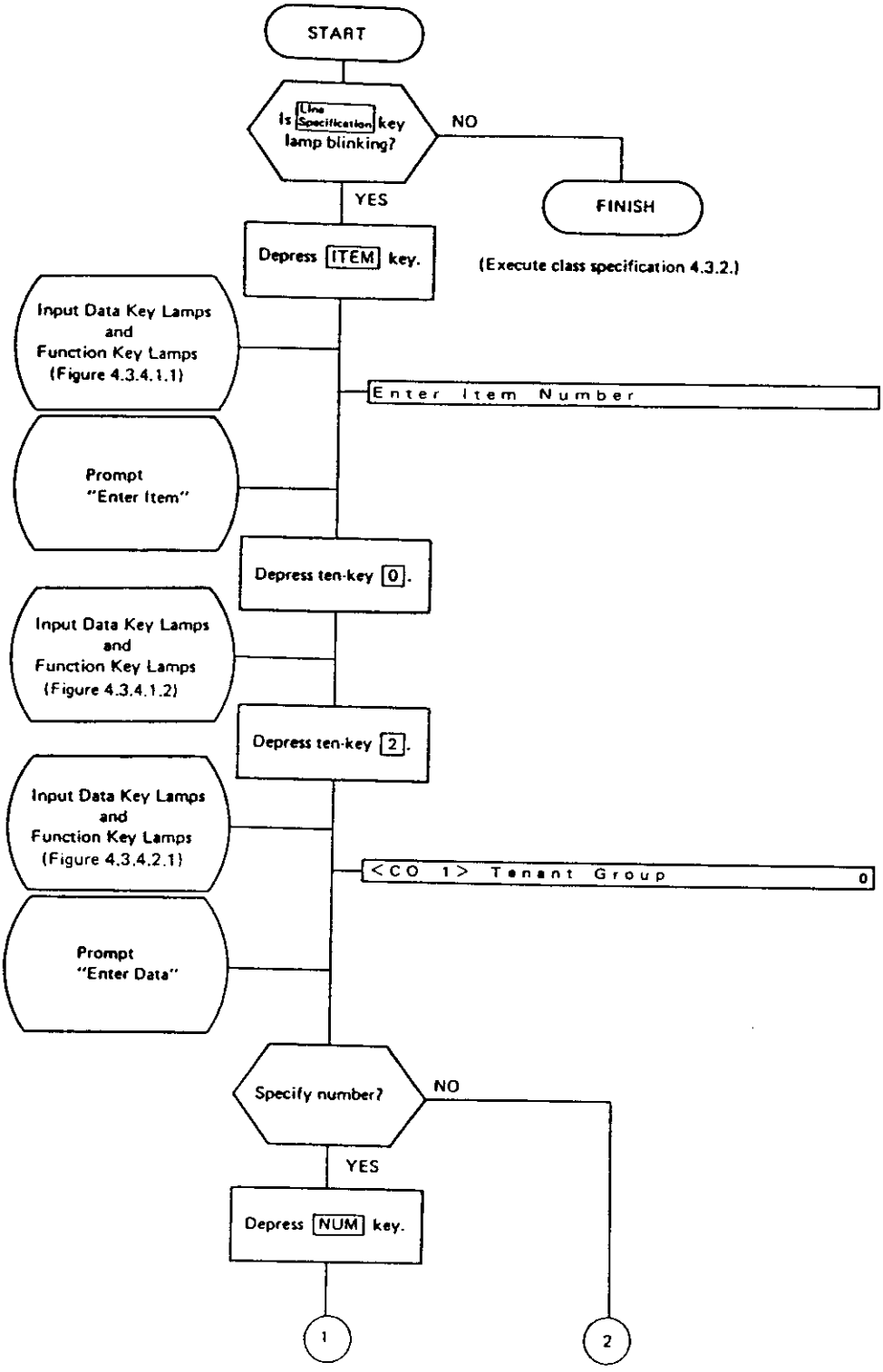


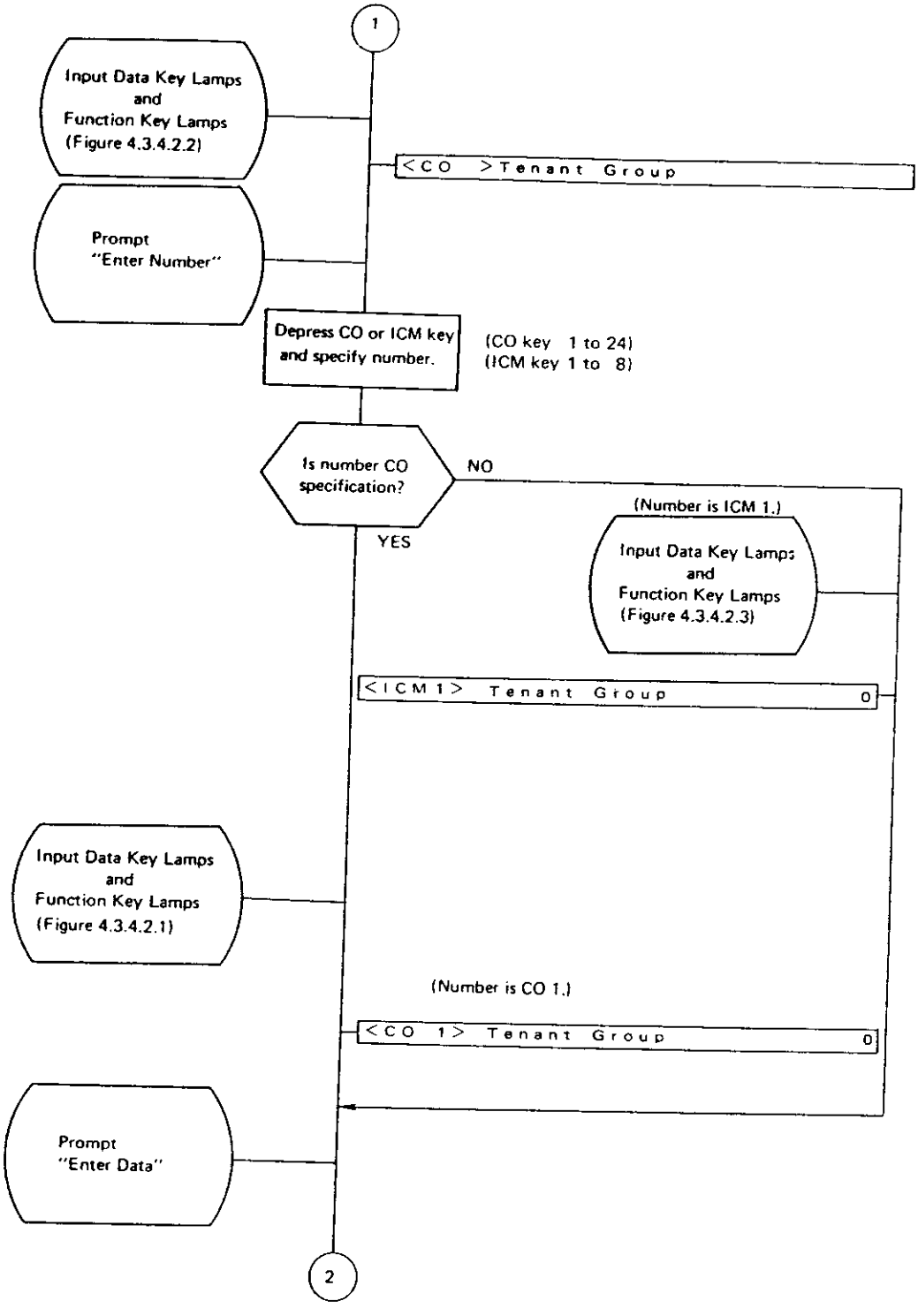

1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.1.3)
<CO > Line Class
Prompt "Enter Number"
Depress CO or ICM key and input number.
(CO key 1 to 24)
(ICM key 1 to 8)
Is number CO specification?
NO
YES
(Number is ICM 1.)
<ICM 1> Line Class 16
(Number is CO 1.)
<CO 1> Line Class 0
Input Data Key Lamps and Function Key Lamps (Figure 4.3.2.2)
Prompt "Enter Data"
2


0 : DDD (MF)
1 : FX (MF)
2 : PBX (MF)
3 : E&M (MF)
4 : WATS (MF) outward
5 : WATS inward
8 : DDD (DP)
9 : FX (DP)
10 : PBX (DP)
11 : E&M (SF)
12 : WATS (DP) outward
16 : ICM (ordinary)
17 : ICM (AT dedicated)
18 : ICM (hotline)
2
Input data with ten-key.
< CO > Line Class *
(Input data is displayed at position of asterisk.)
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

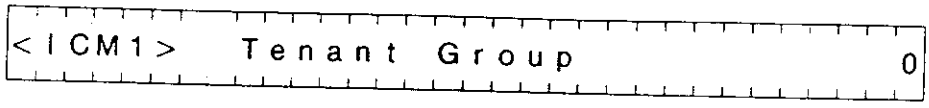
4.3.4.2 Tenant Group (Item 2)

Feature: Setting Tenant Group




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.2.2)
<CO >Tenant Group
Prompt "Enter Number"
Depress CO or ICM key and specify number.
(CO key 1 to 24)
(ICM key 1 to 8)
Is number CO specification?
NO
YES
(Number is ICM 1.)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.2.3)
<ICM 1> Tenant Group 0
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.2.1)
(Number is CO 1.)
<CO 1> Tenant Group 0
Prompt "Enter Data"
2

Display



Key Lamp

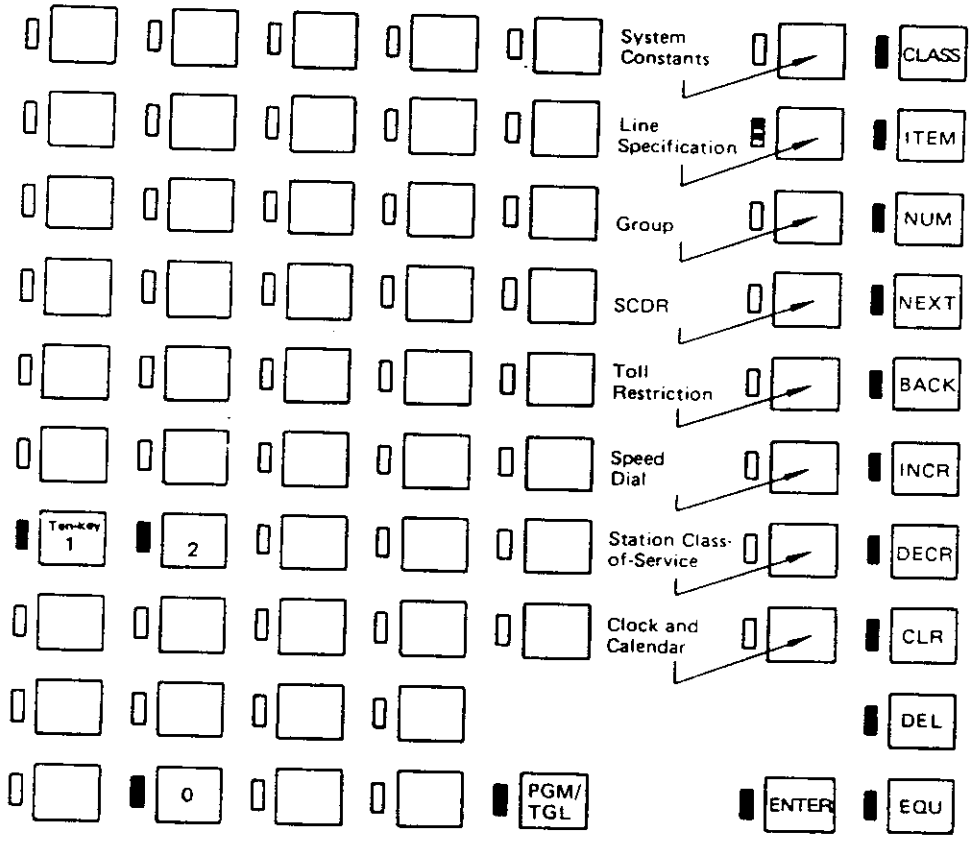
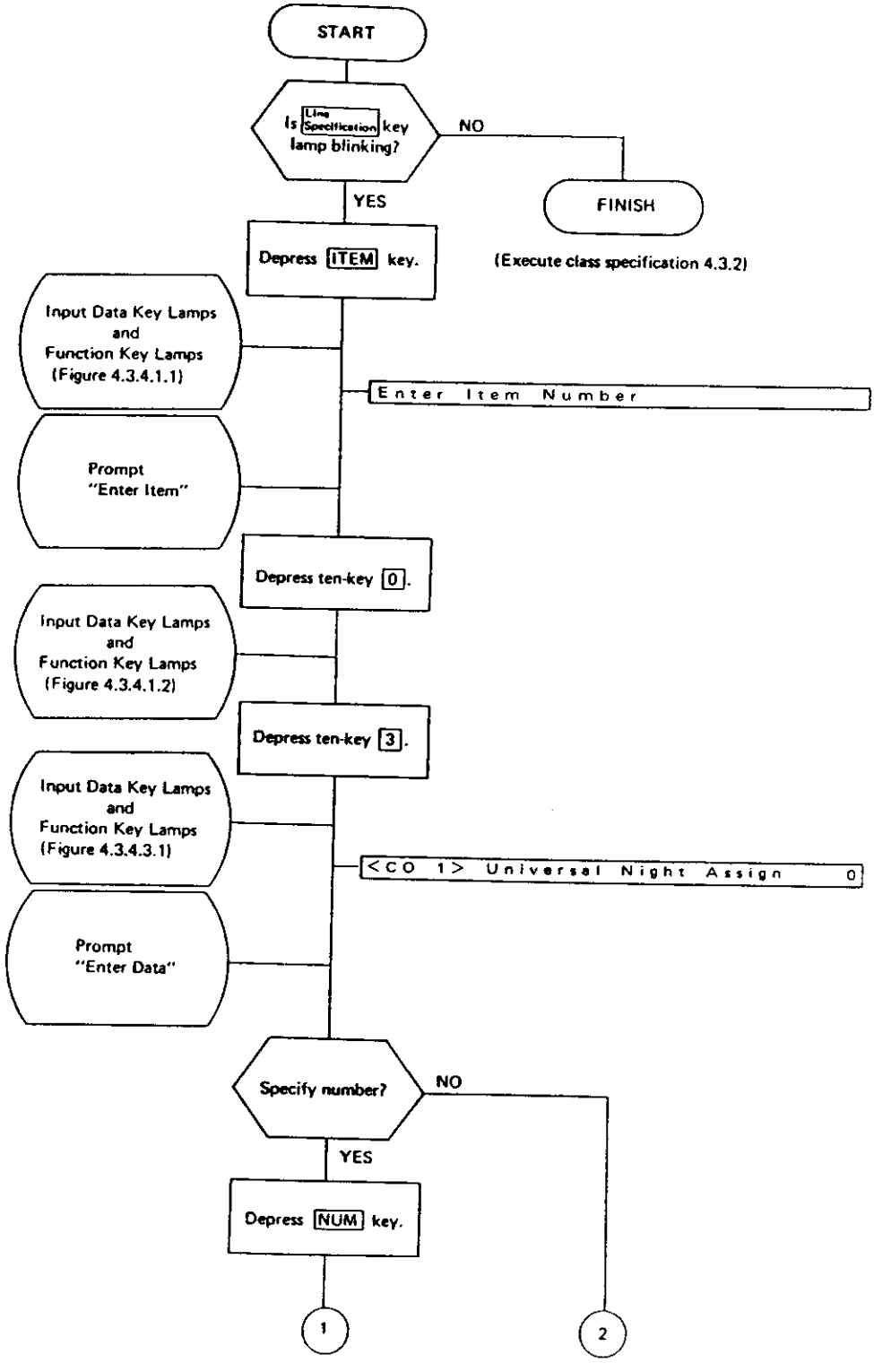


Figure 4.3.4.2.3

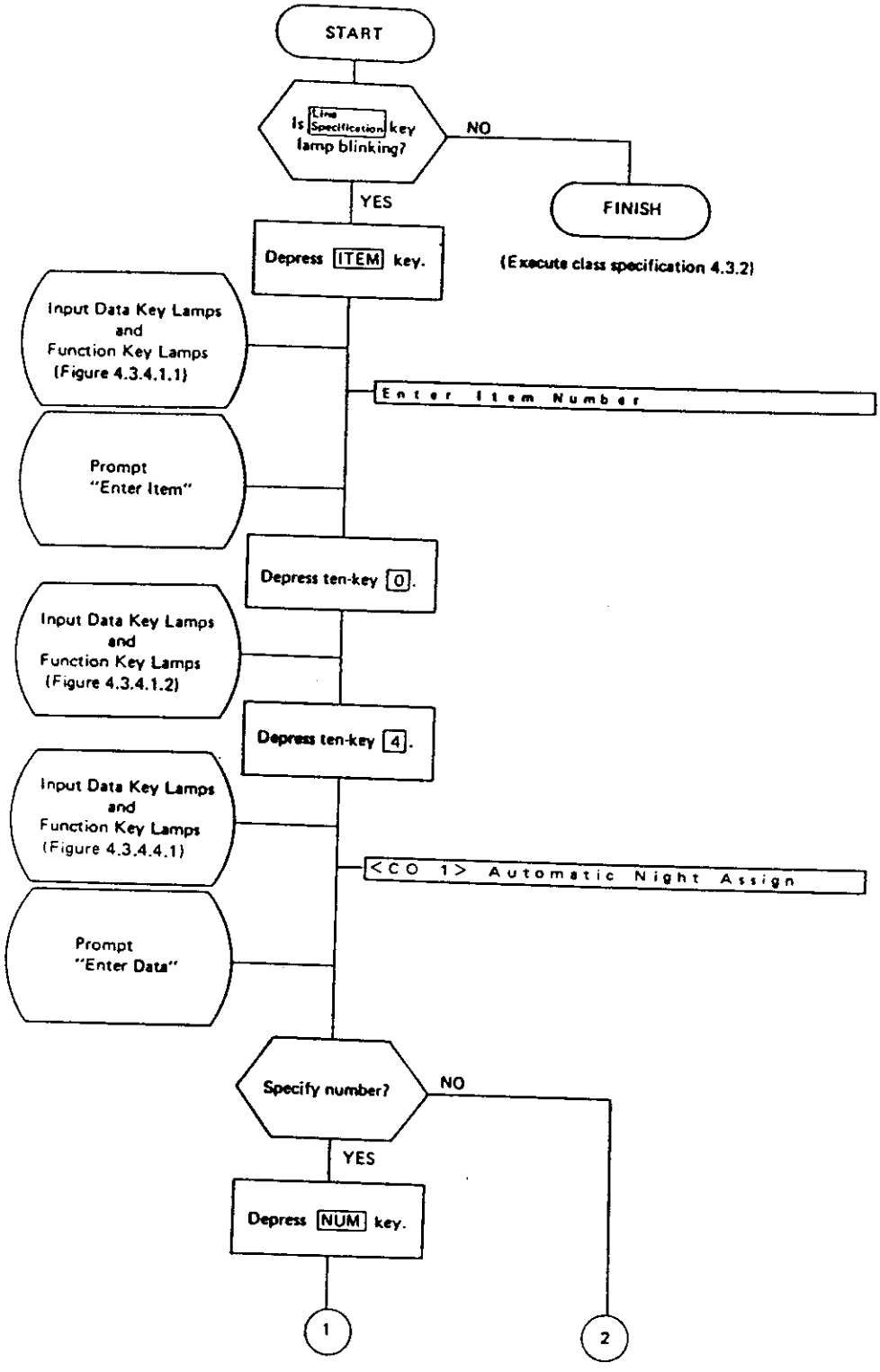
4.3.4.3 Universal Night Assignment (Item 3)

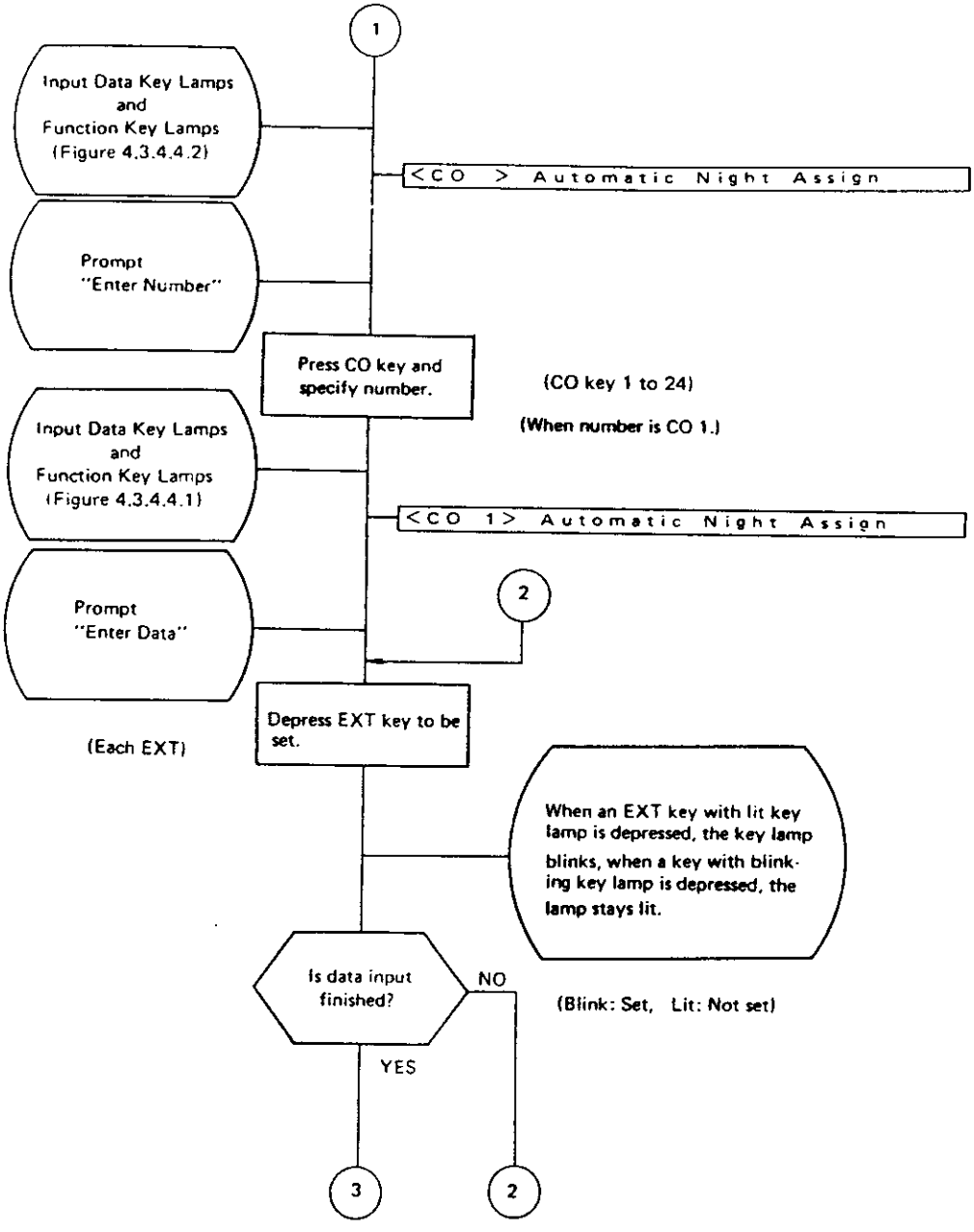
Feature: Setting UNA



4.3.4.4 Automatic Night Assignment (Item 4)

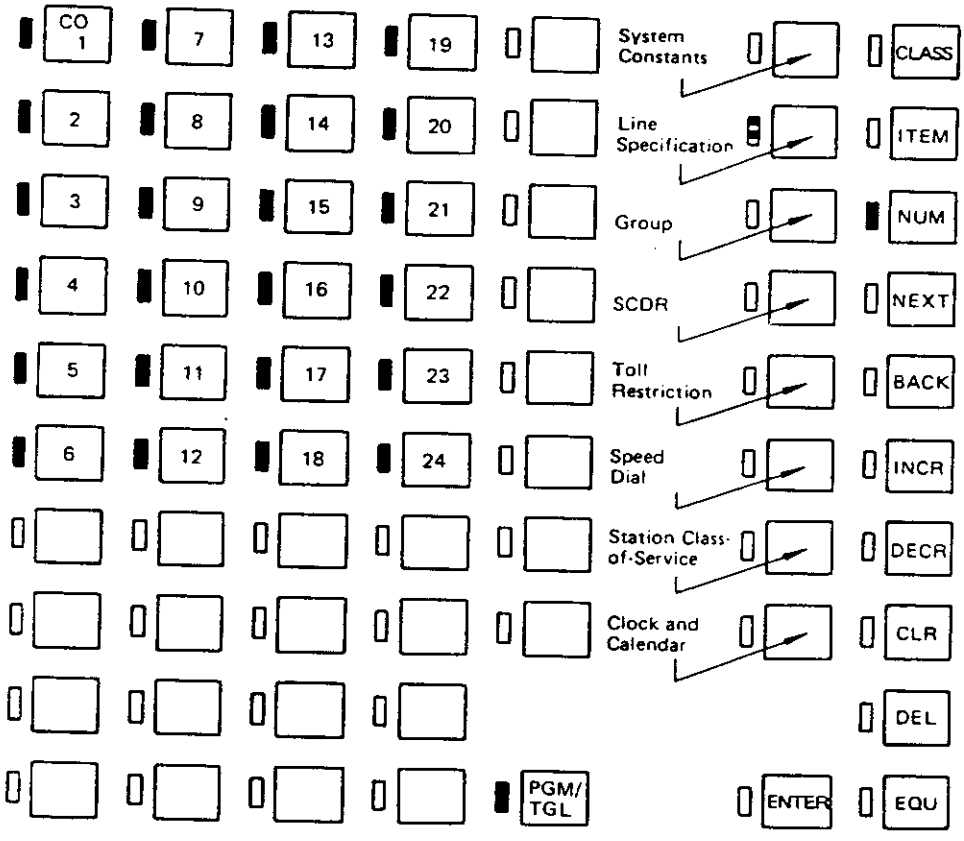
Feature: Setting ANA




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.4.2)
<CO > Automatic Night Assign
Prompt "Enter Number"
Press CO key and specify number.
(CO key 1 to 24)
(When number is CO 1.)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.4.1)
<CO 1> Automatic Night Assign
2
Prompt "Enter Data"
Depress EXT key to be set.
(Each EXT)
When an EXT key with lit key lamp is depressed, the key lamp blinks, when a key with blinking key lamp is depressed, the lamp stays lit.
Is data input finished?
NO
(Blink: Set, Lit: Not set)
YES
3
2

Display

Key Lamp

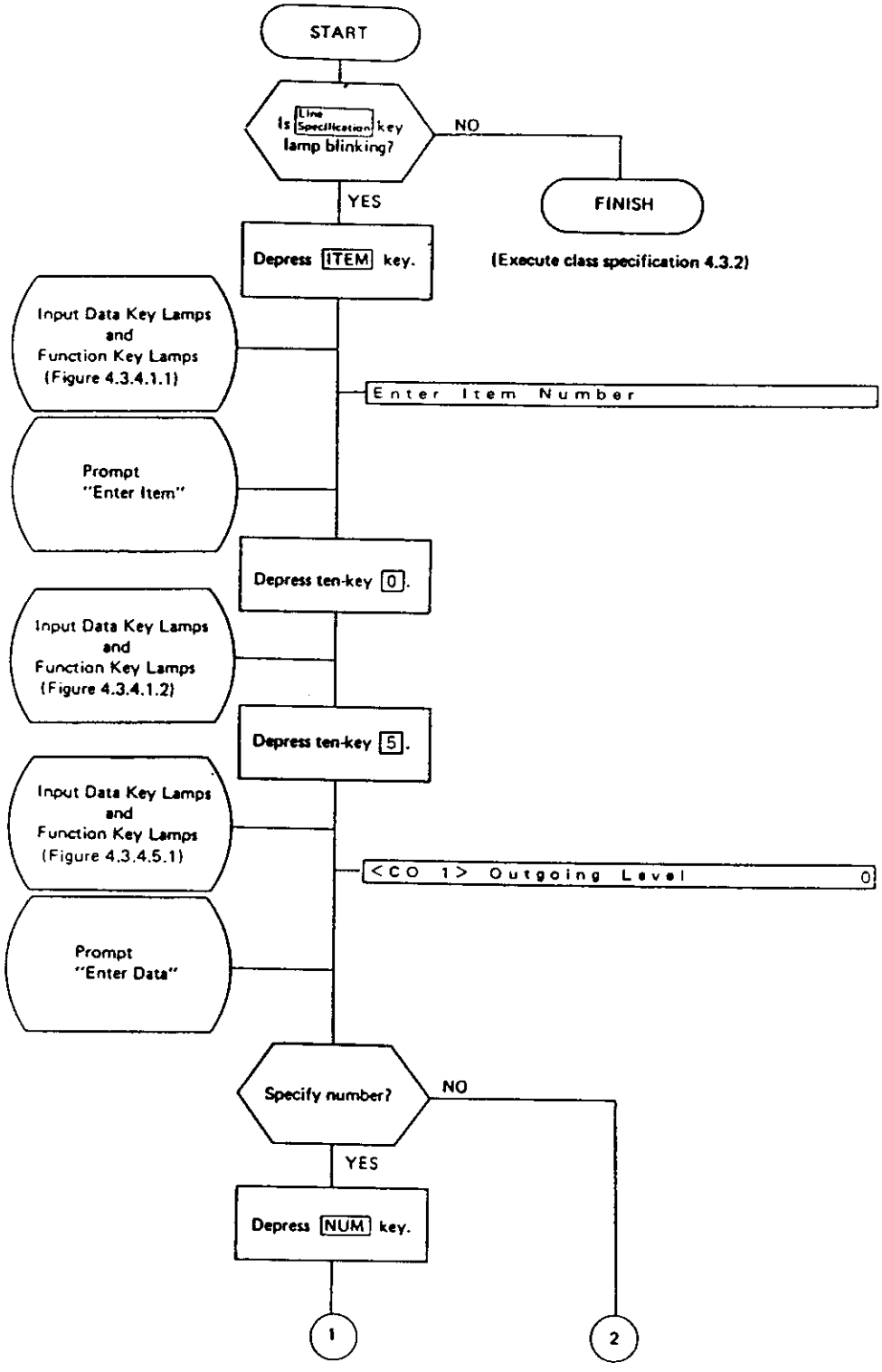


Note: Data is indicated on the key lamp assigned to CO key of input data keys.

Figure 4.3.4.4.2

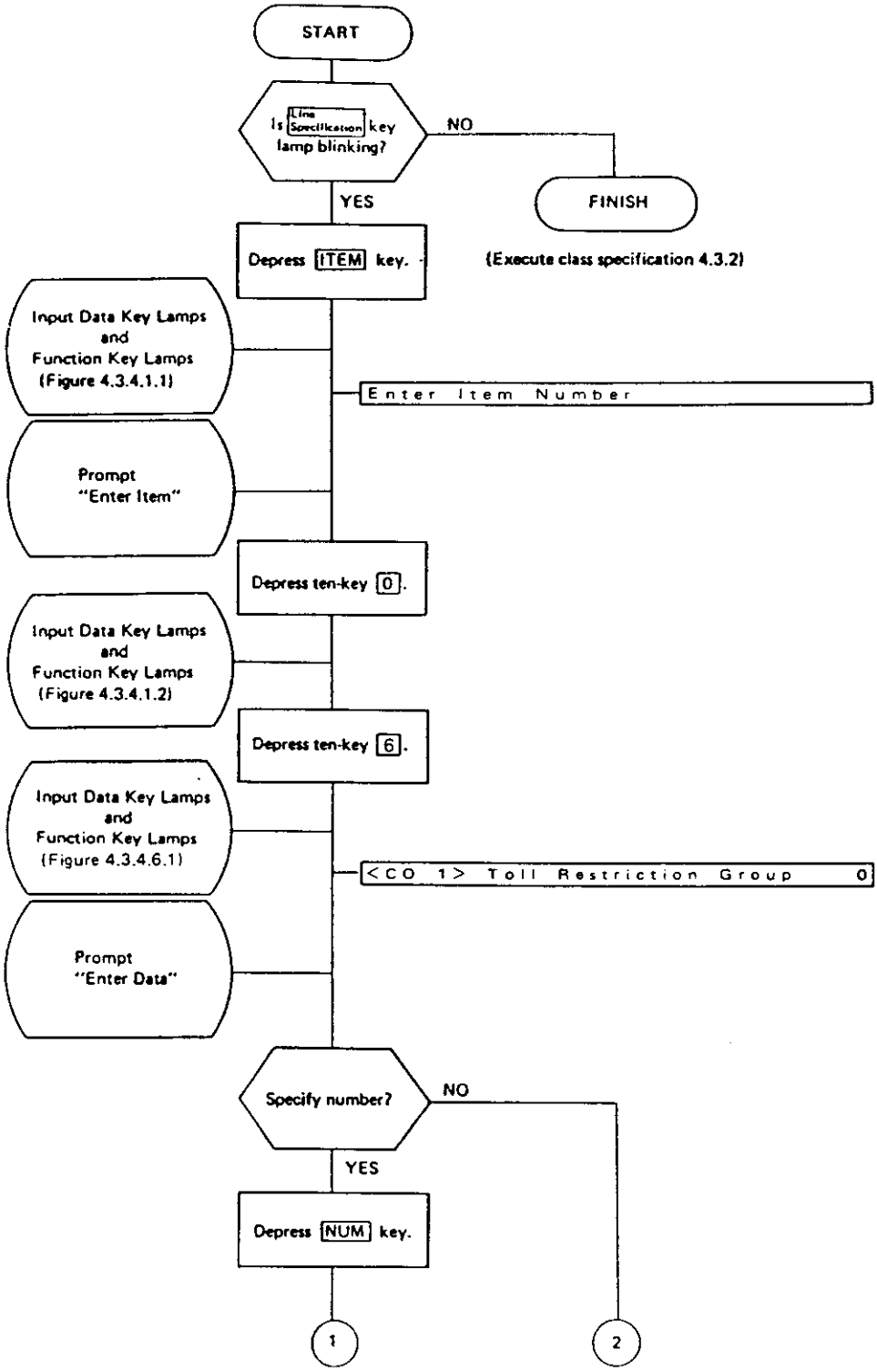
4.3.4.5 Outgoing Level (Item 5)

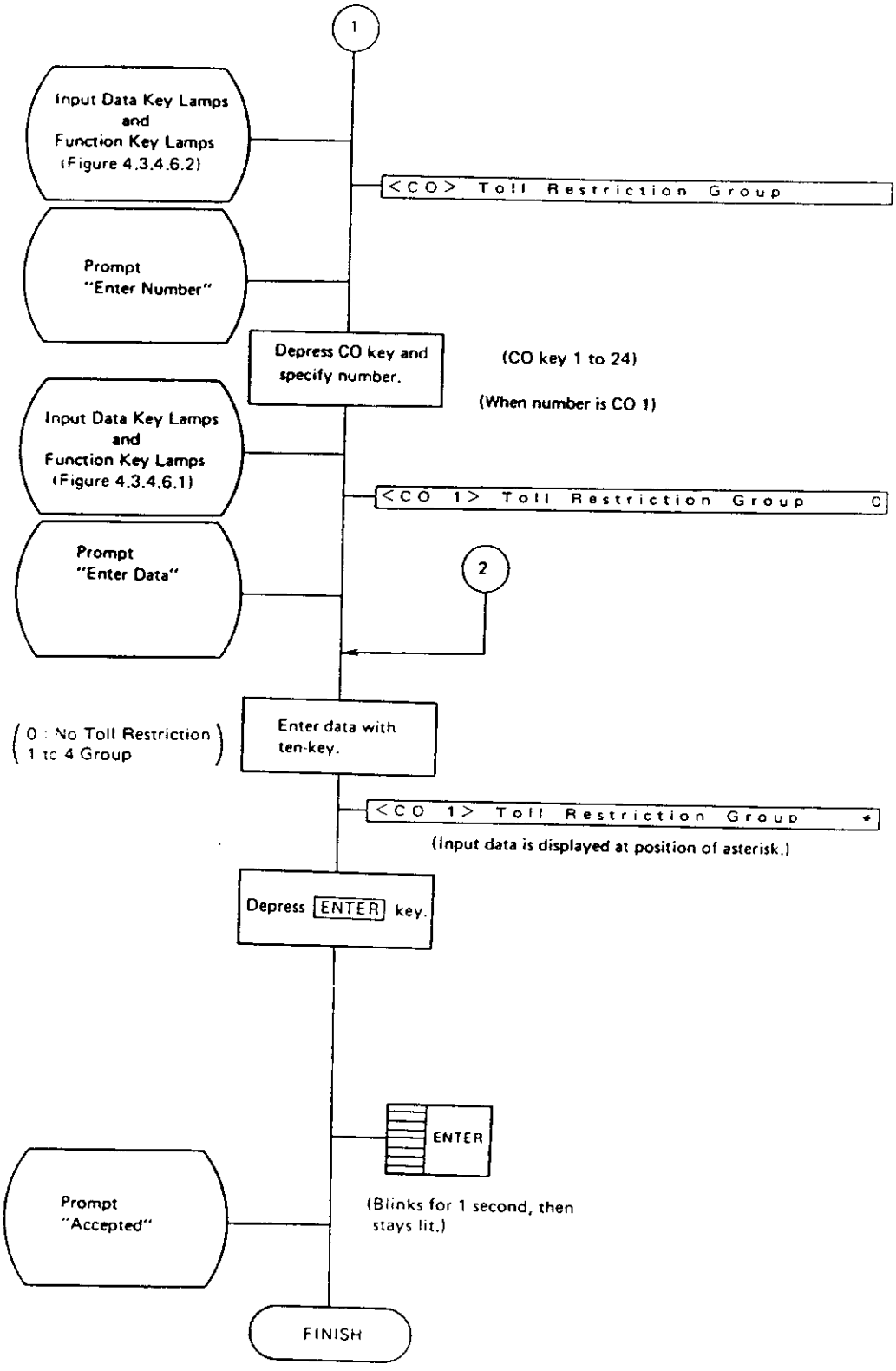
Feature: Setting Outgoing Level



4.3.4.6 Toll-Restriction Group (Item 6)

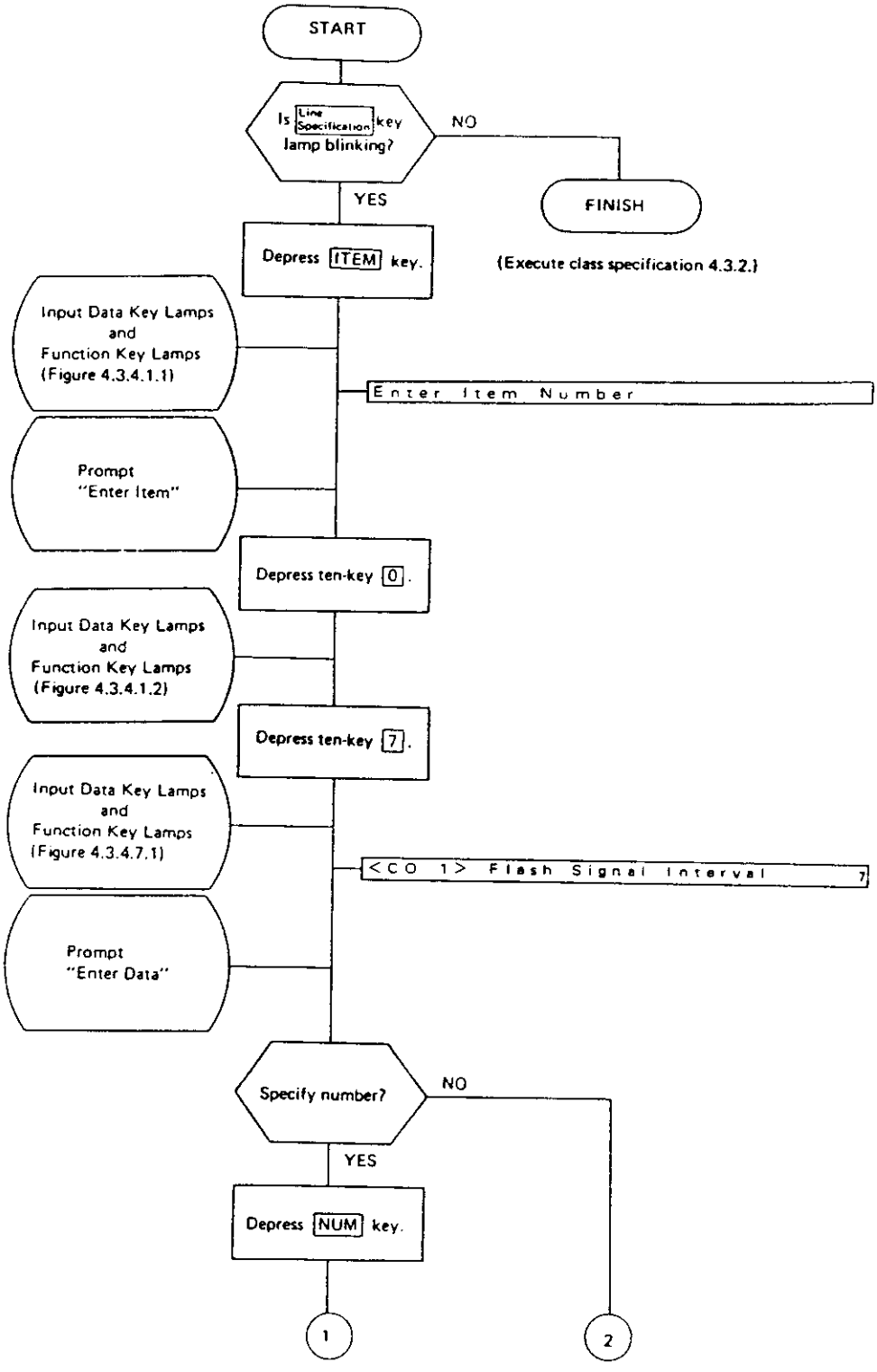
Feature: Setting Toll-Restriction Group

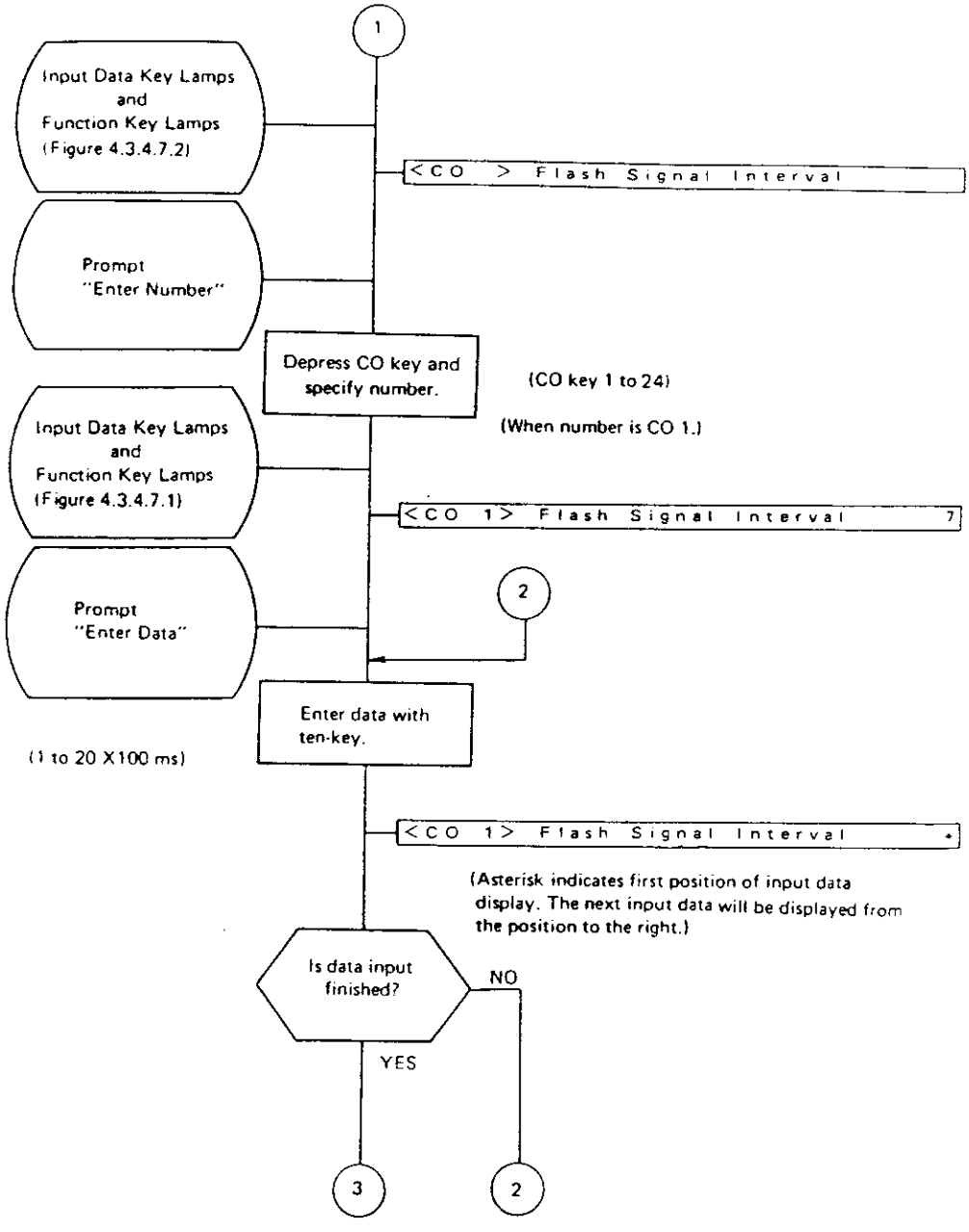


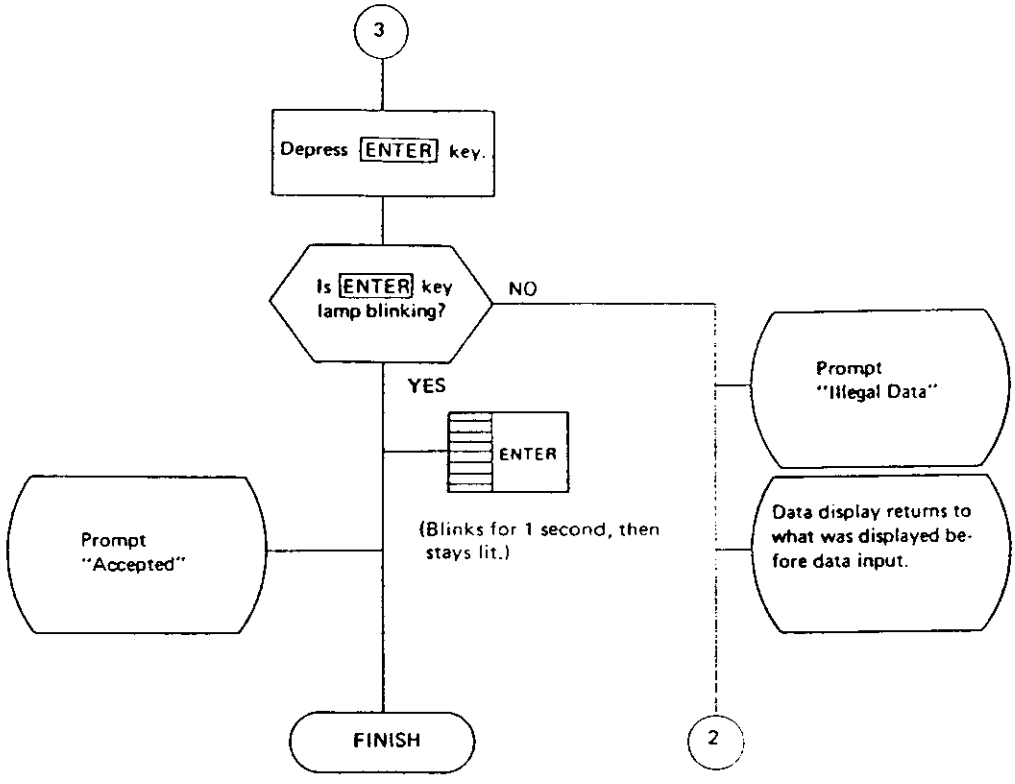

1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.6.2)
<CO> Toll Restriction Group
Prompt "Enter Number"
Depress CO key and specify number.
(CO key 1 to 24)
(When number is CO 1)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.6.1)
<CO 1> Toll Restriction Group C
Prompt "Enter Data"
2
(0 : No Toll Restriction
1 to 4 Group)
Enter data with ten-key.
<CO 1> Toll Restriction Group *
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

4.3.4.7 Flash Signal Interval (Item 7)

Feature: Setting Flash Signal Interval

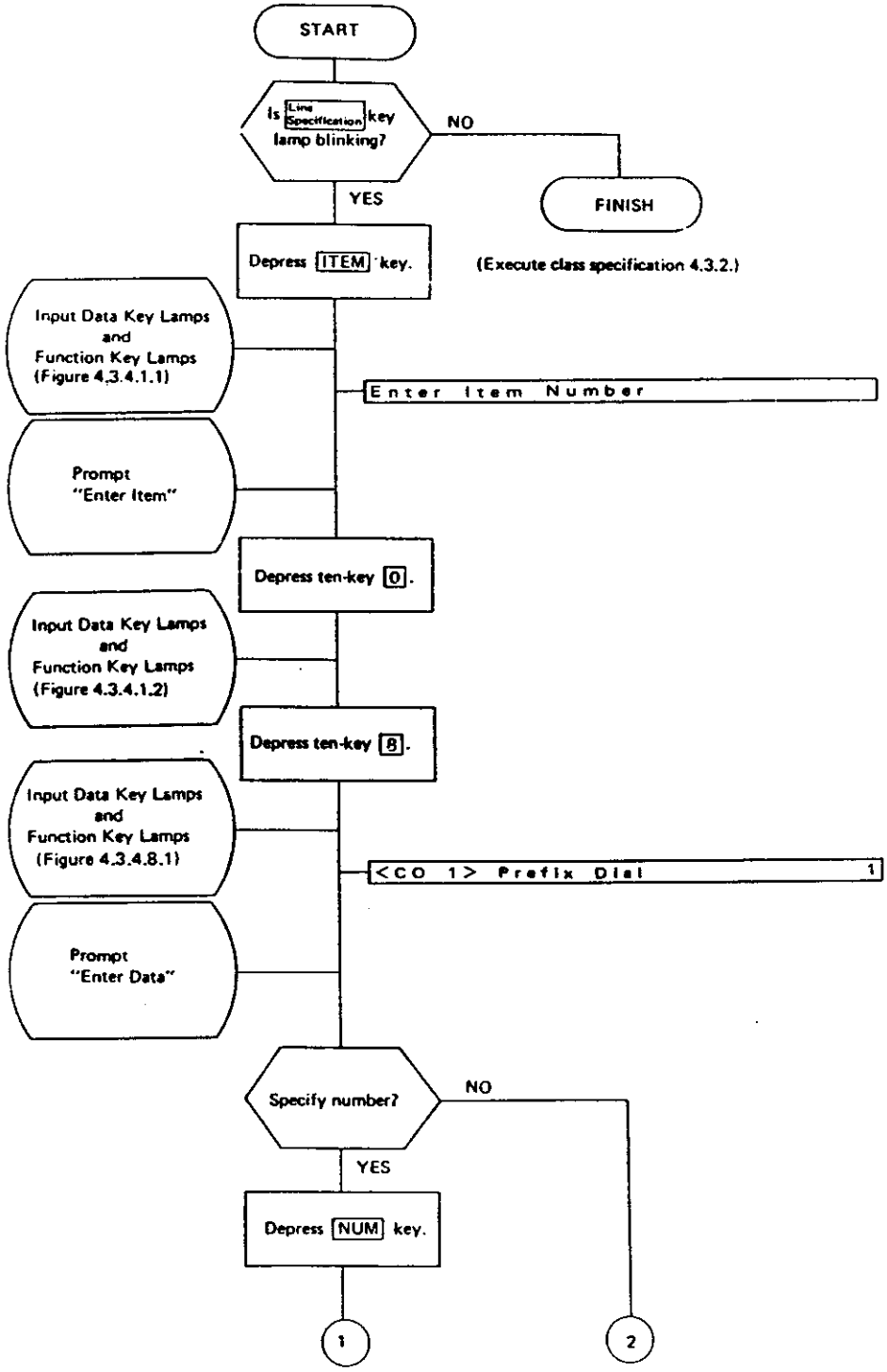


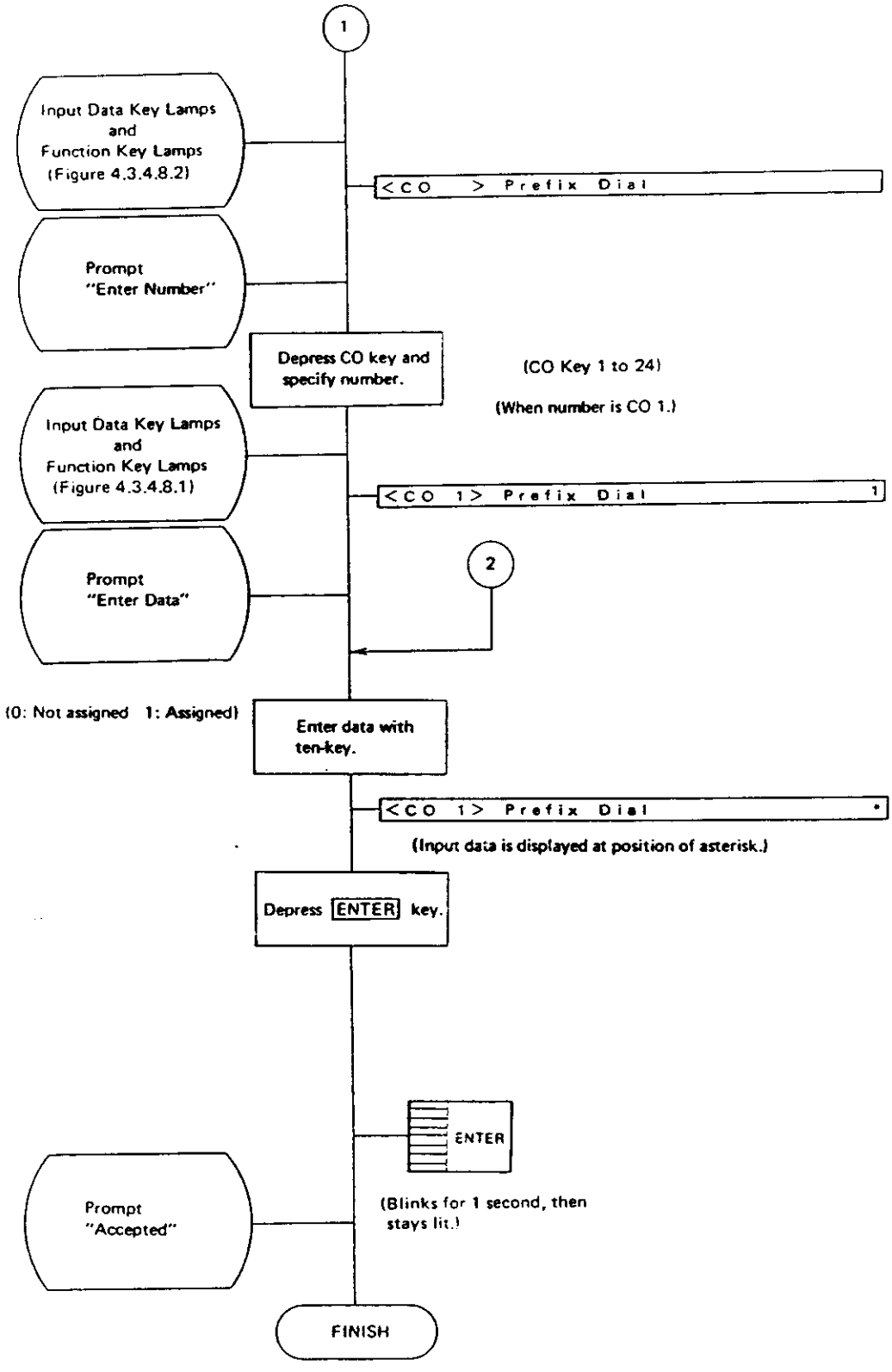

1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.7.2)
<CO > Flash Signal Interval
Prompt "Enter Number"
Depress CO key and specify number.
(CO key 1 to 24)
(When number is CO 1.)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.7.1)
<CO 1> Flash Signal Interval 7
2
Prompt "Enter Data"
Enter data with ten-key.
(1 to 20 X100 ms)
<CO 1> Flash Signal Interval *
(Asterisk indicates first position of input data display. The next input data will be displayed from the position to the right.)
Is data input finished?
NO
YES
3
2


3
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
2

4.3.4.8 Prefix Dial (Item 8)

Feature: Set whether prefix dial is required for CO outgoing




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.8.2)
<CO > Prefix Dial
Prompt "Enter Number"
Depress CO key and specify number.
(CO Key 1 to 24)
(When number is CO 1.)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.4.8.1)
<CO 1> Prefix Dial 1
Prompt "Enter Data"
2
(0: Not assigned 1: Assigned)
Enter data with ten-key.
<CO 1> Prefix Dial *
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

Key Lamp

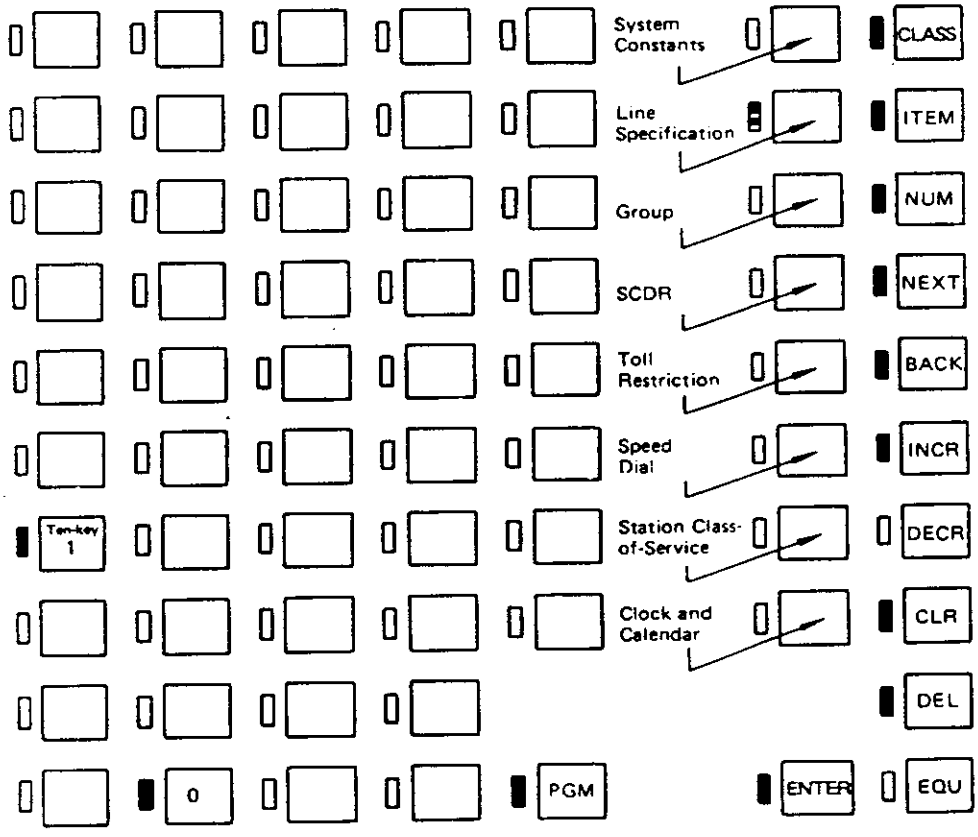
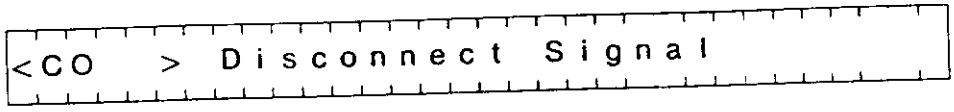
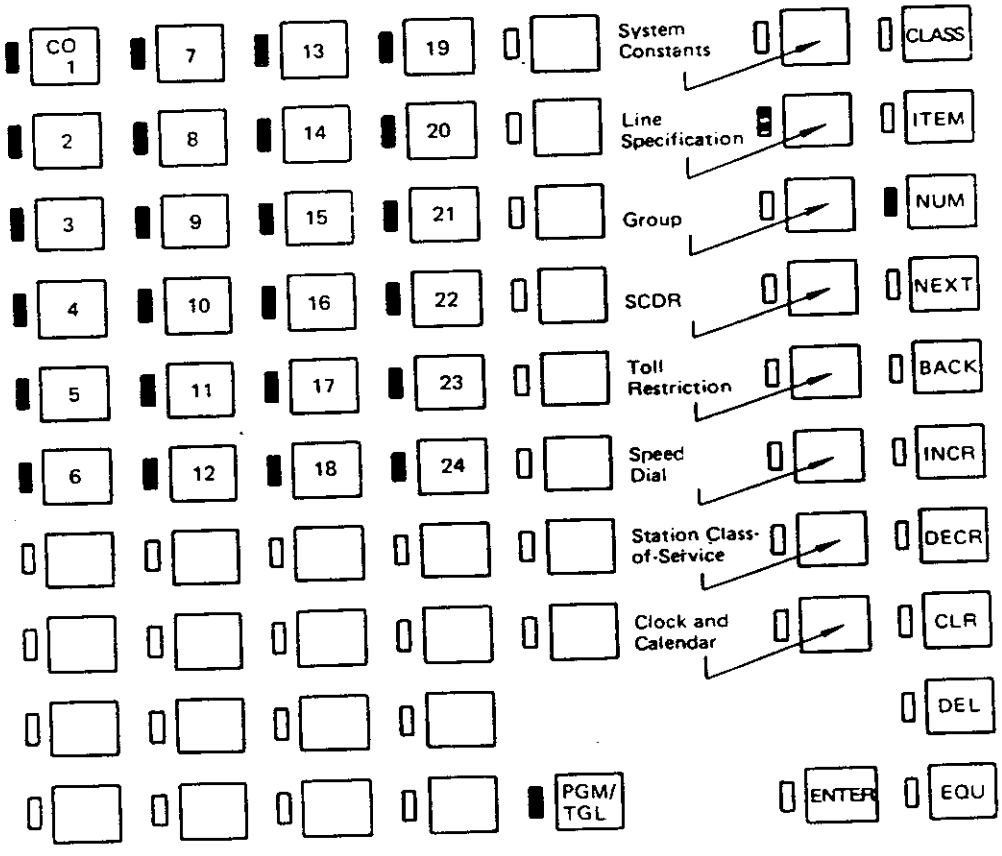


Figure 4.3.4.8.1

Display



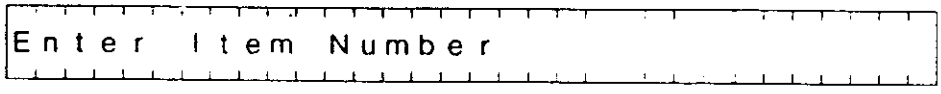
Key Lamp



Note: Data is indicated on the key lamp assigned to CO key of input data keys.

Figure 4.3.4.9.2

Display



Key Lamp

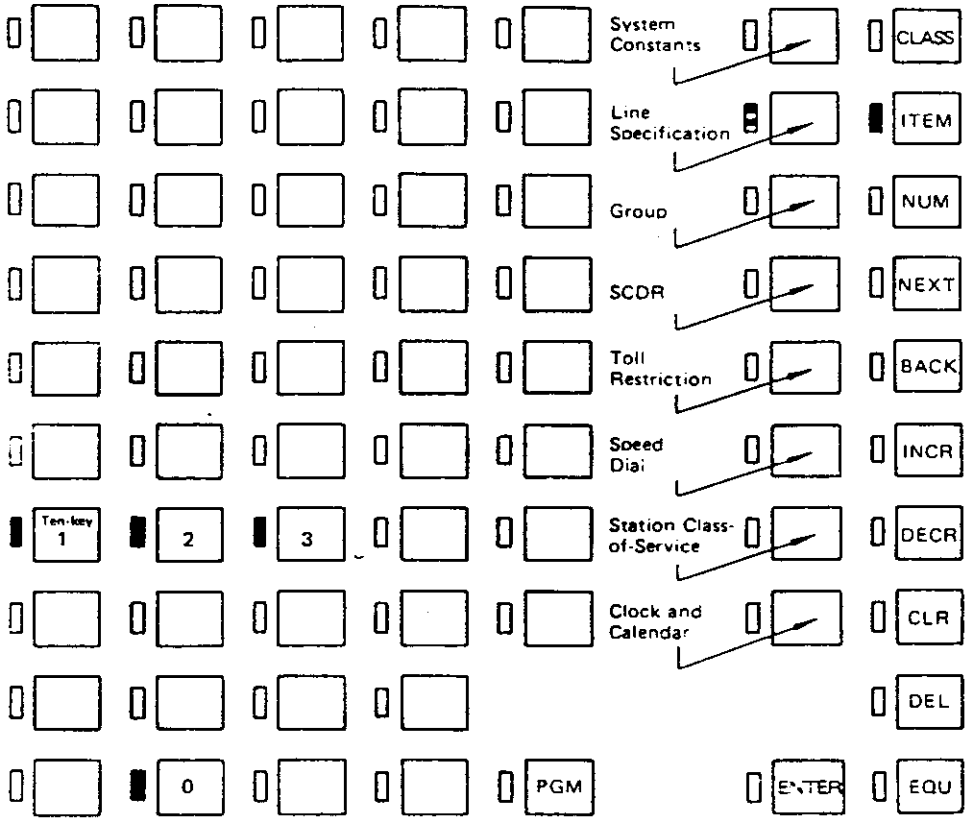
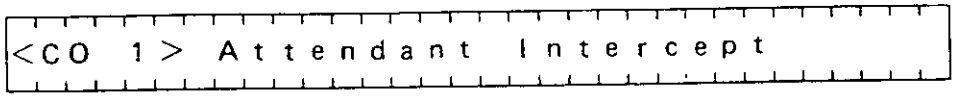


Figure 4.3.4.10.1

Display



Key Lamp

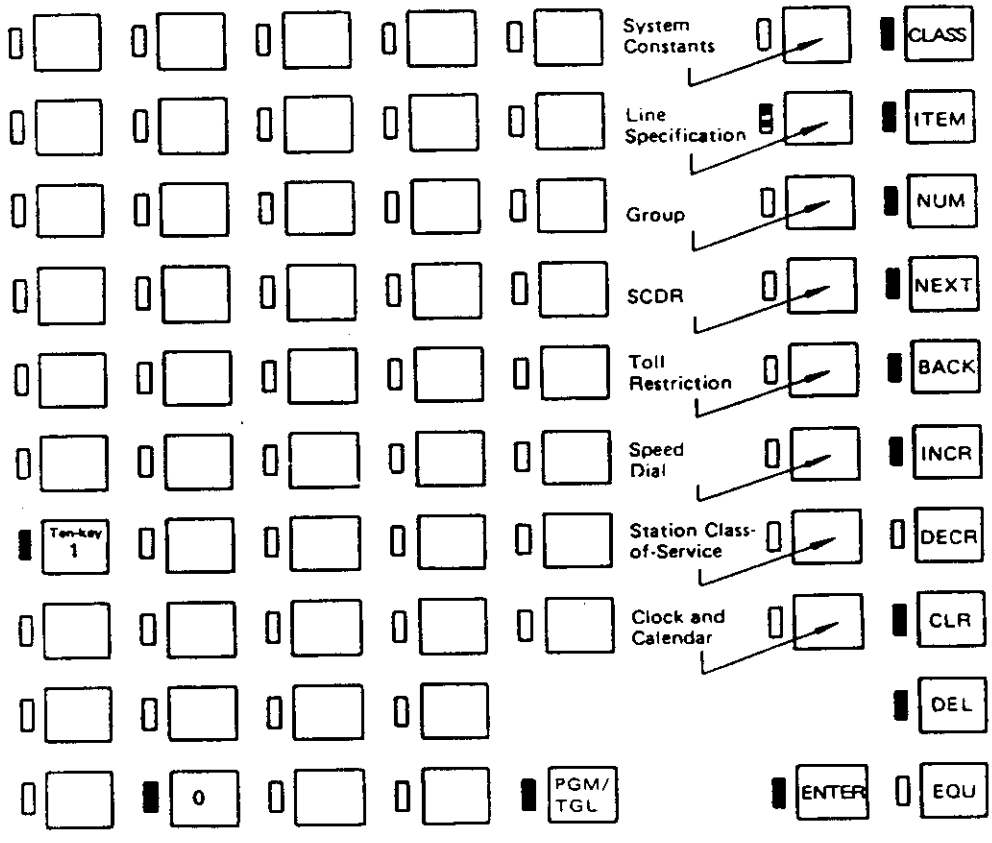
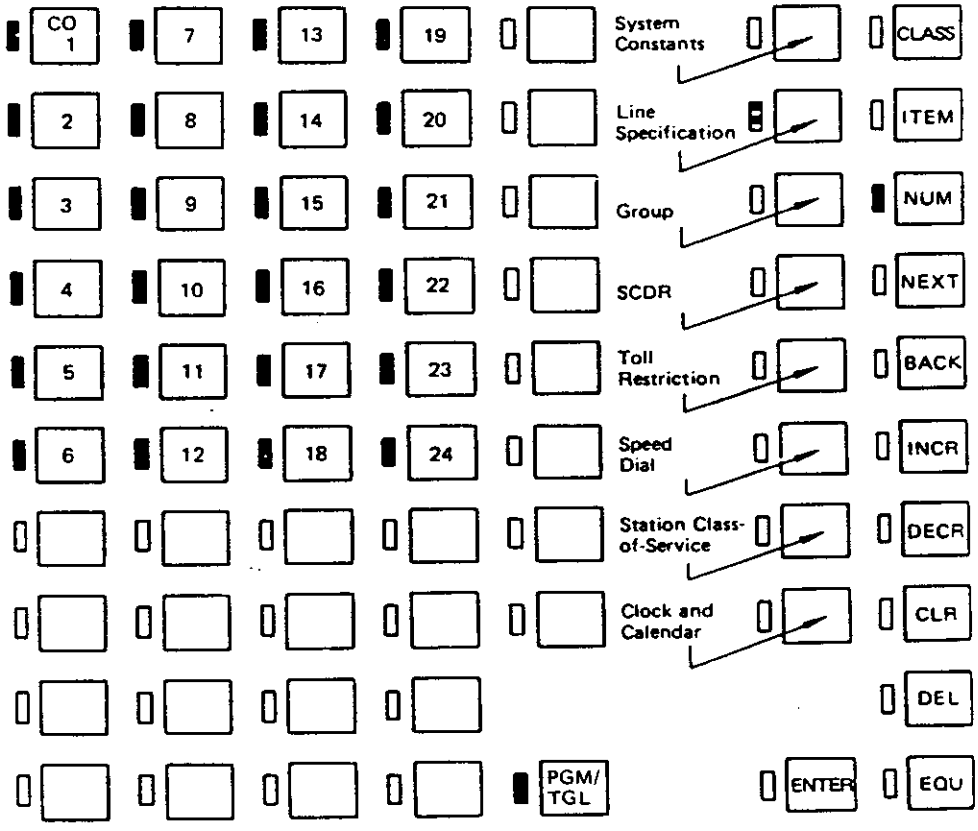


Figure 4.3.4.10.2

Display

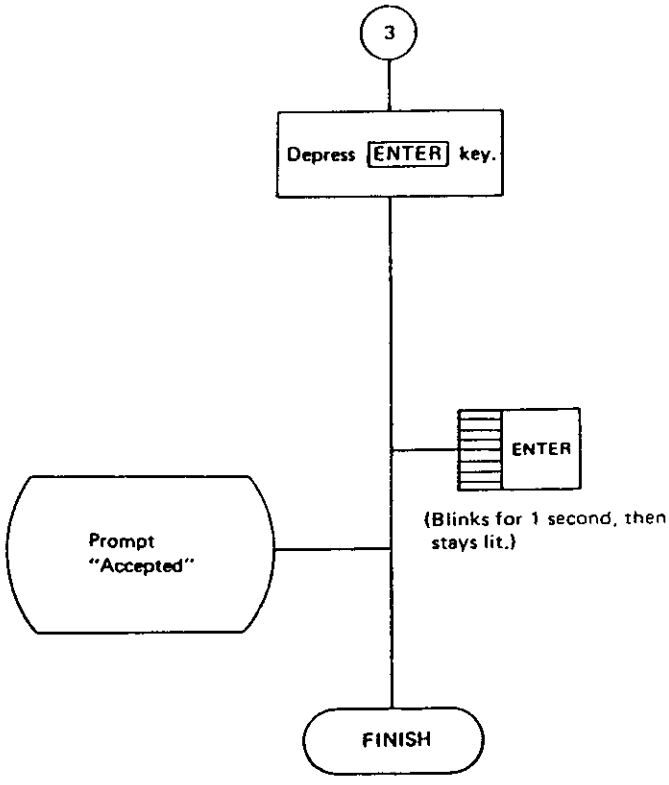
<CO > Attendant Intercept

Key Lamp



Note: Data is indicated on the key lamp assigned to CO key of input data keys.

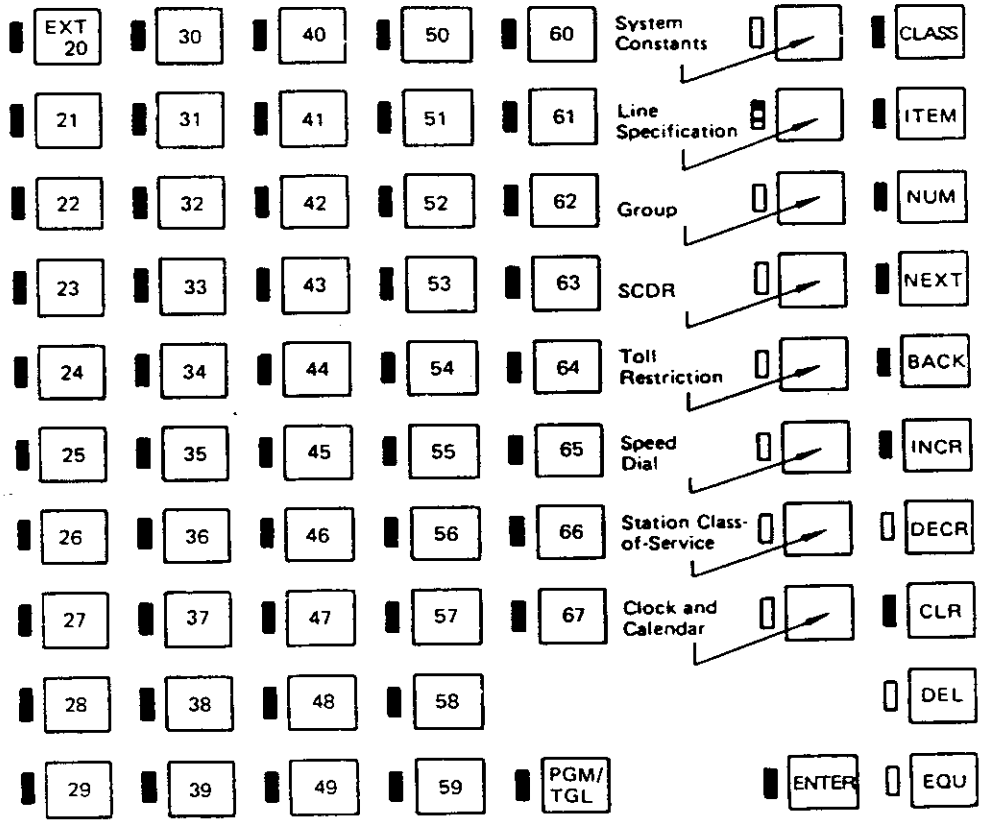
Figure 4.3.4.10.3


3
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

<CO 1> Individual Incoming EXT

Key Lamp



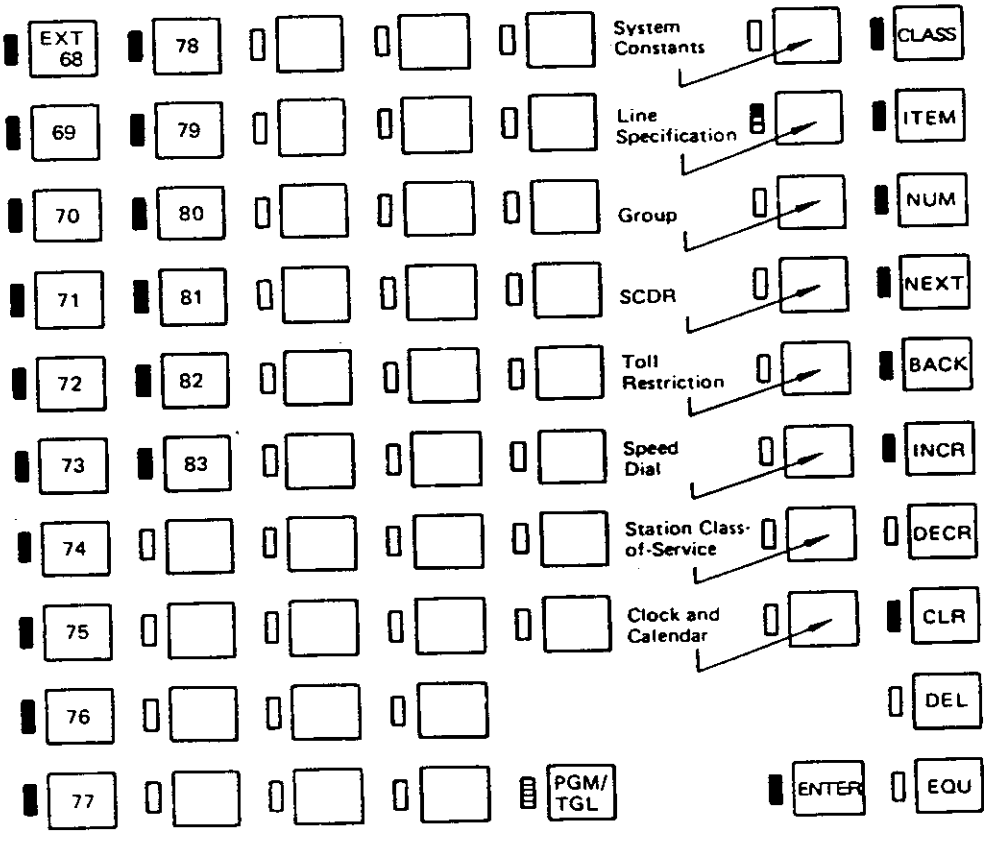
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.4.11.1.a

Display

<CO 1> Individual Incoming EXT

Key Lamp



Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

Figure 4.3.4.11.1.b

Display

<CO 1> Outgoing Group 1

Key Lamp

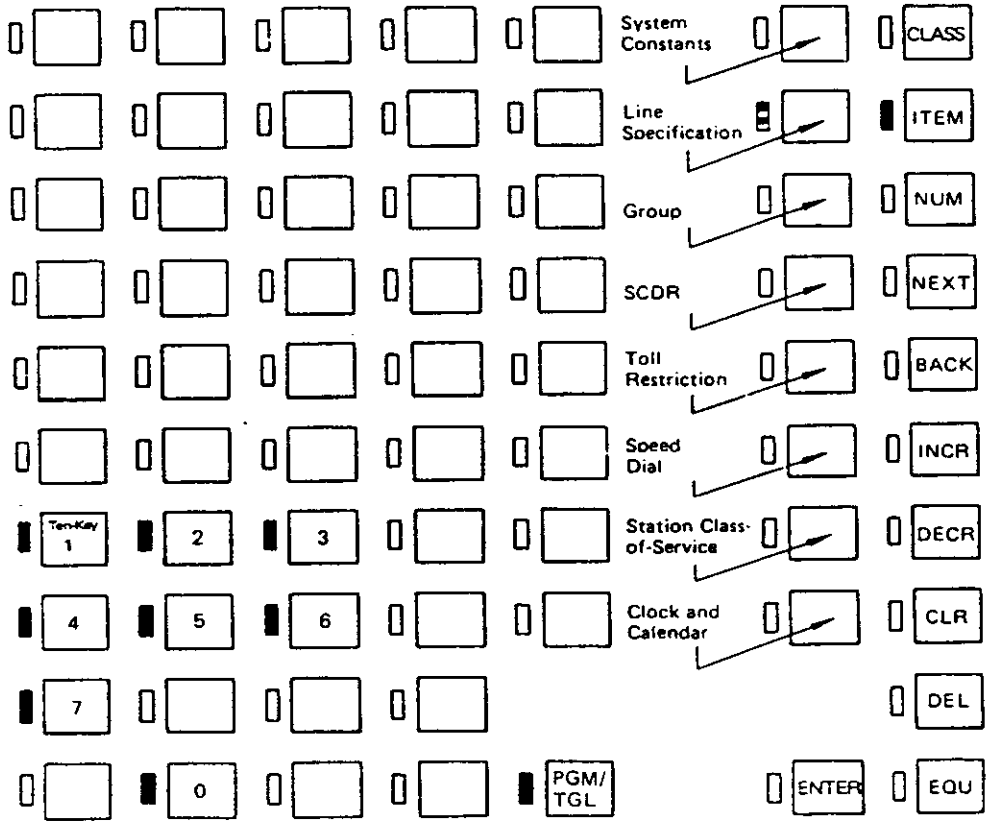
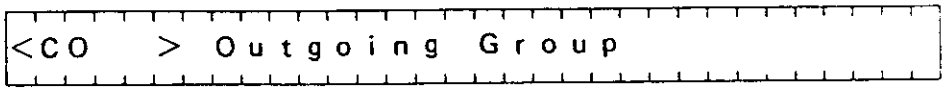
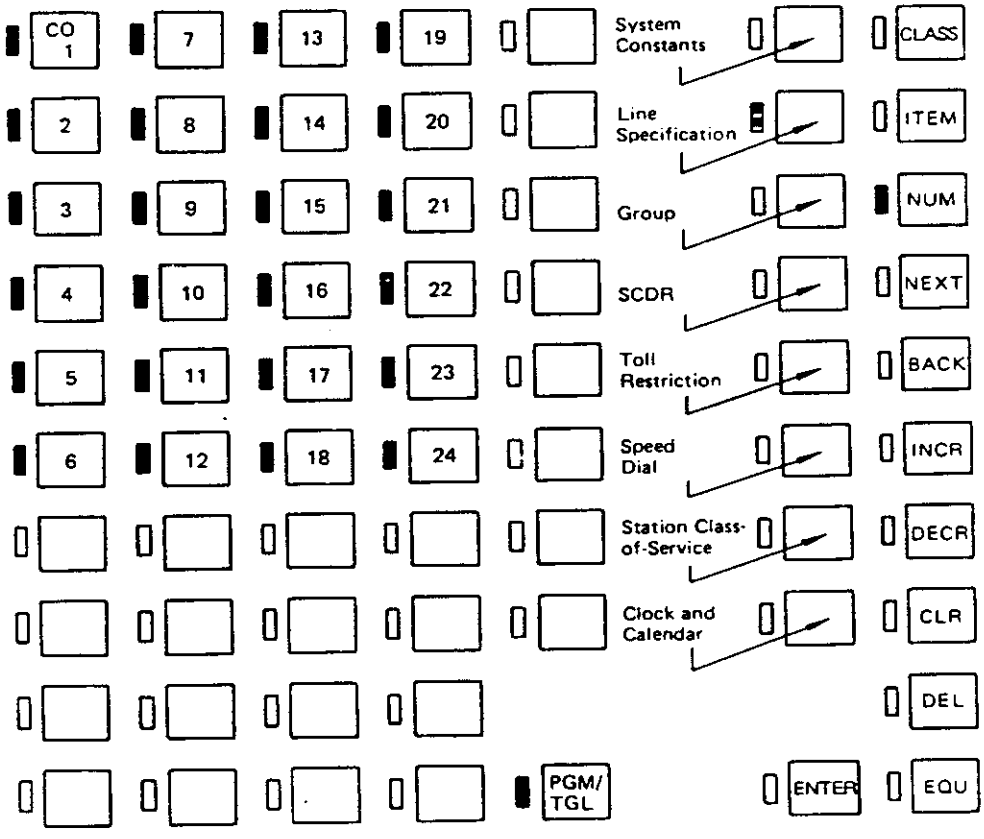


Figure 4.3.4.12.1

Display



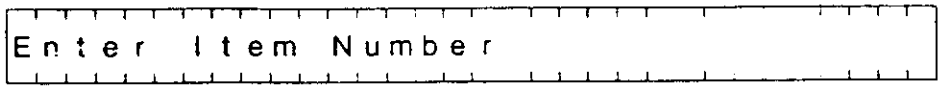
Key Lamp



Note: Data is indicated on the key lamp assigned to CO key of input data keys.

Figure 4.3.4.12.2

Display



Key Lamp

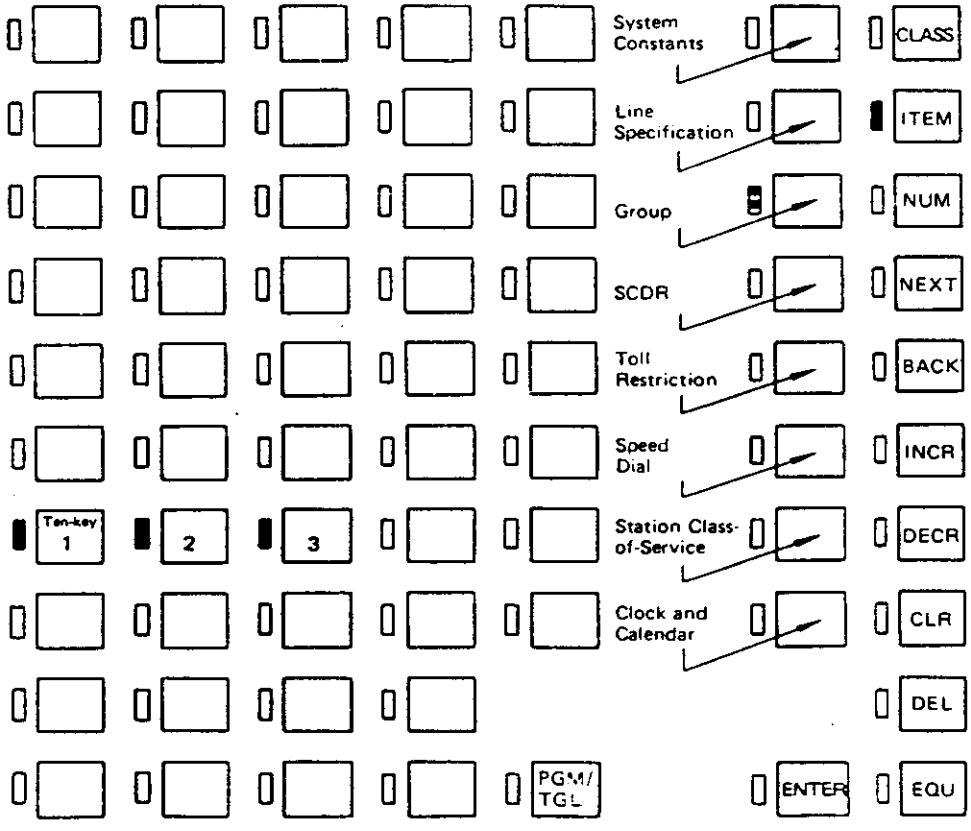


Figure 4.3.5.1.1

Display

<Group - > ICM Master Group

Key Lamp

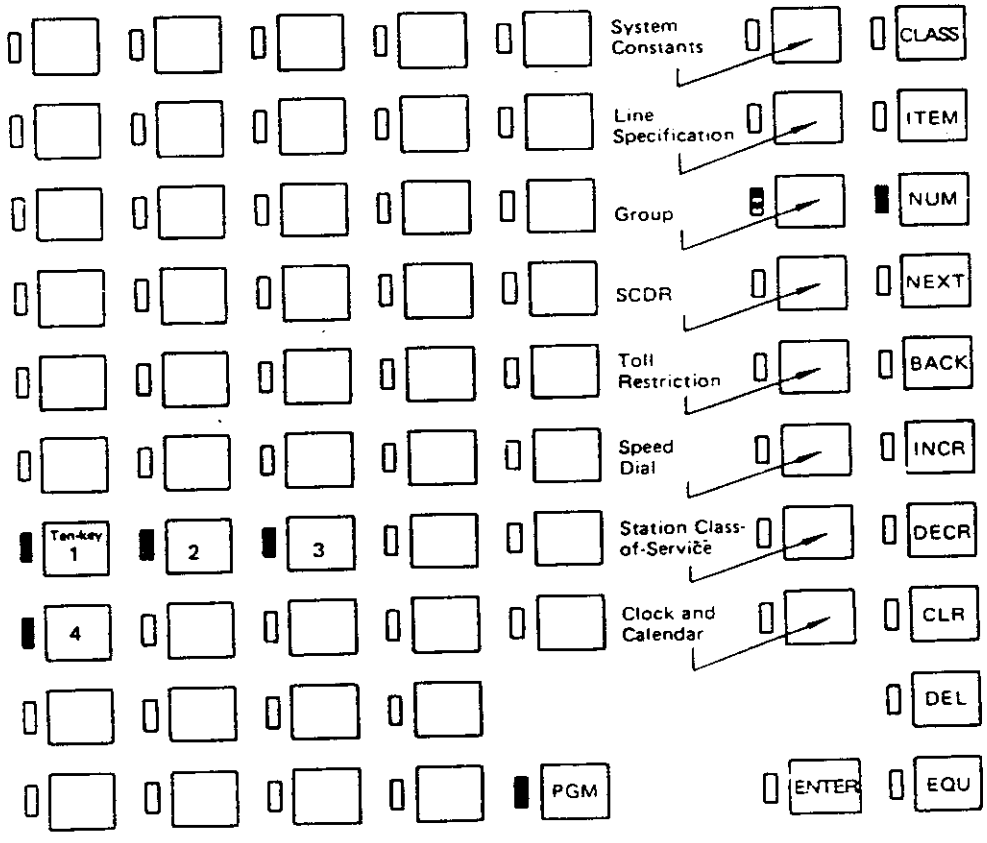
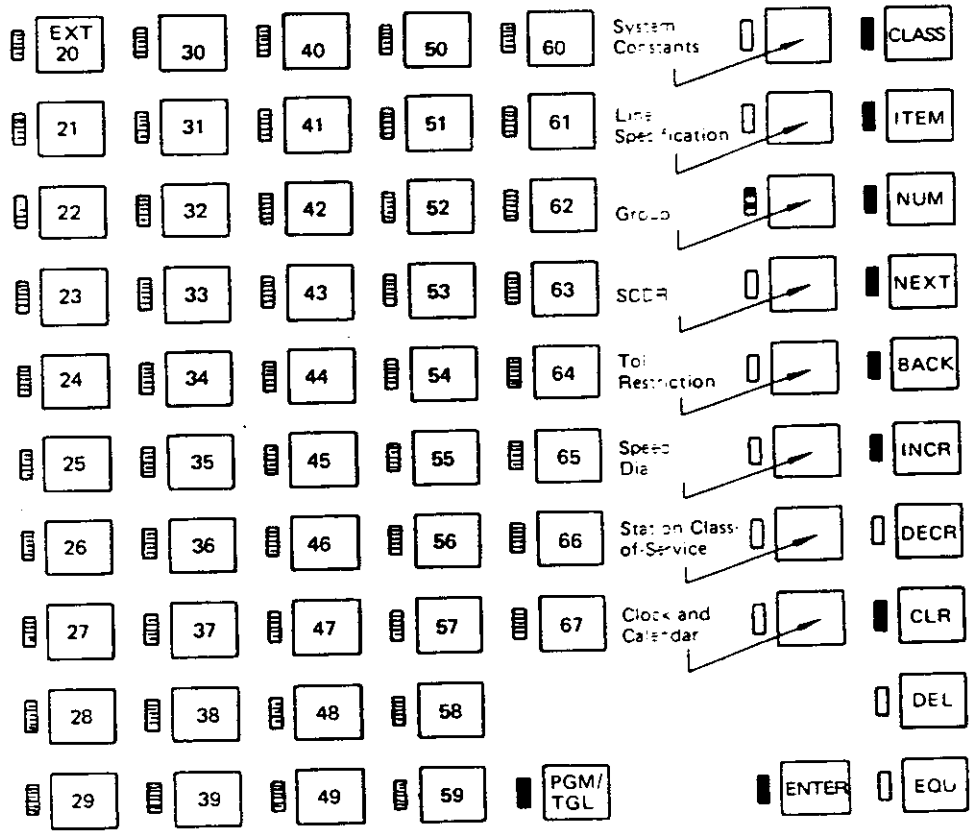


Figure 4.3.5.1.2

Display

<Group 1> ICM Group Call

Key Lamp

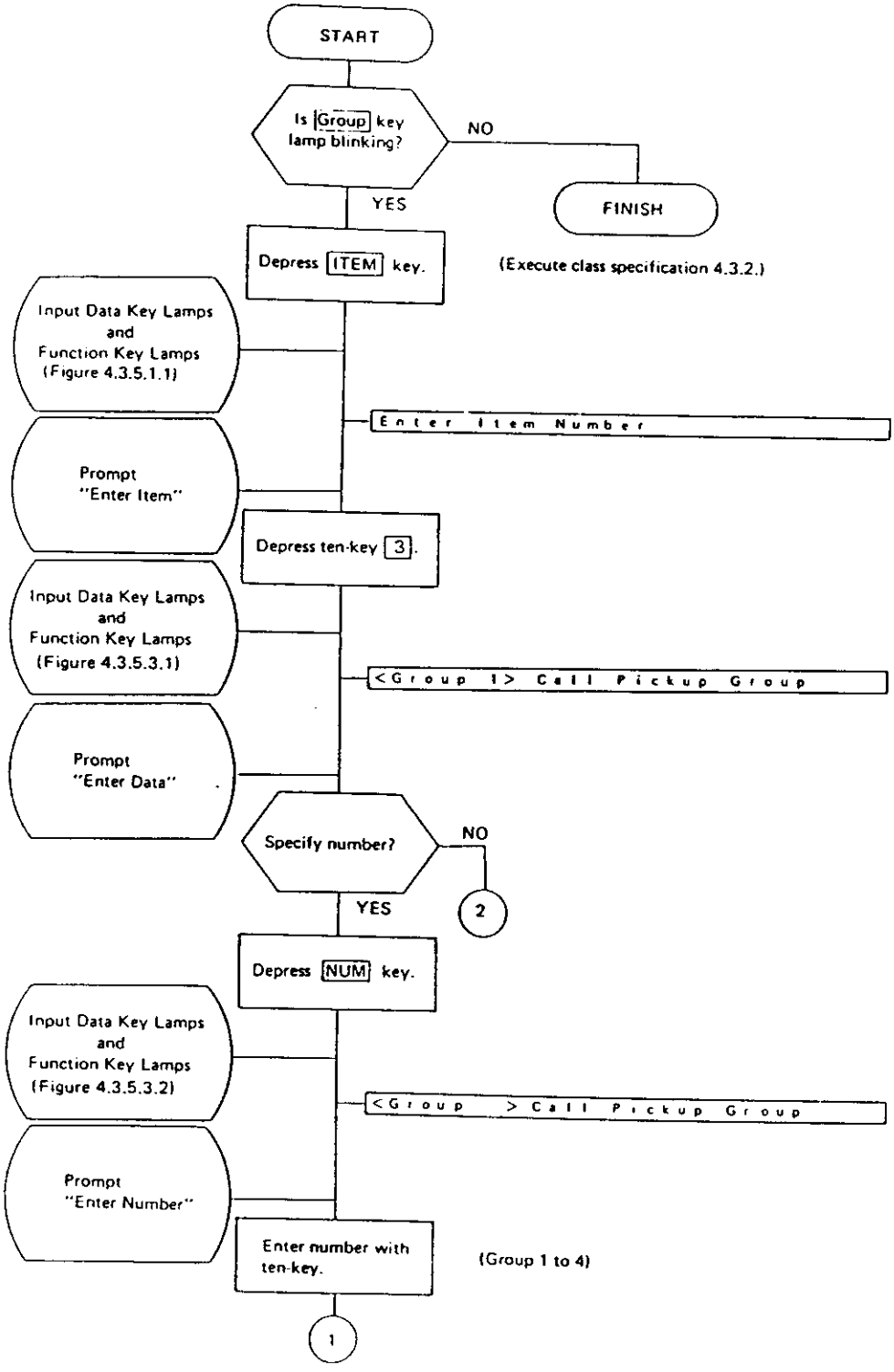


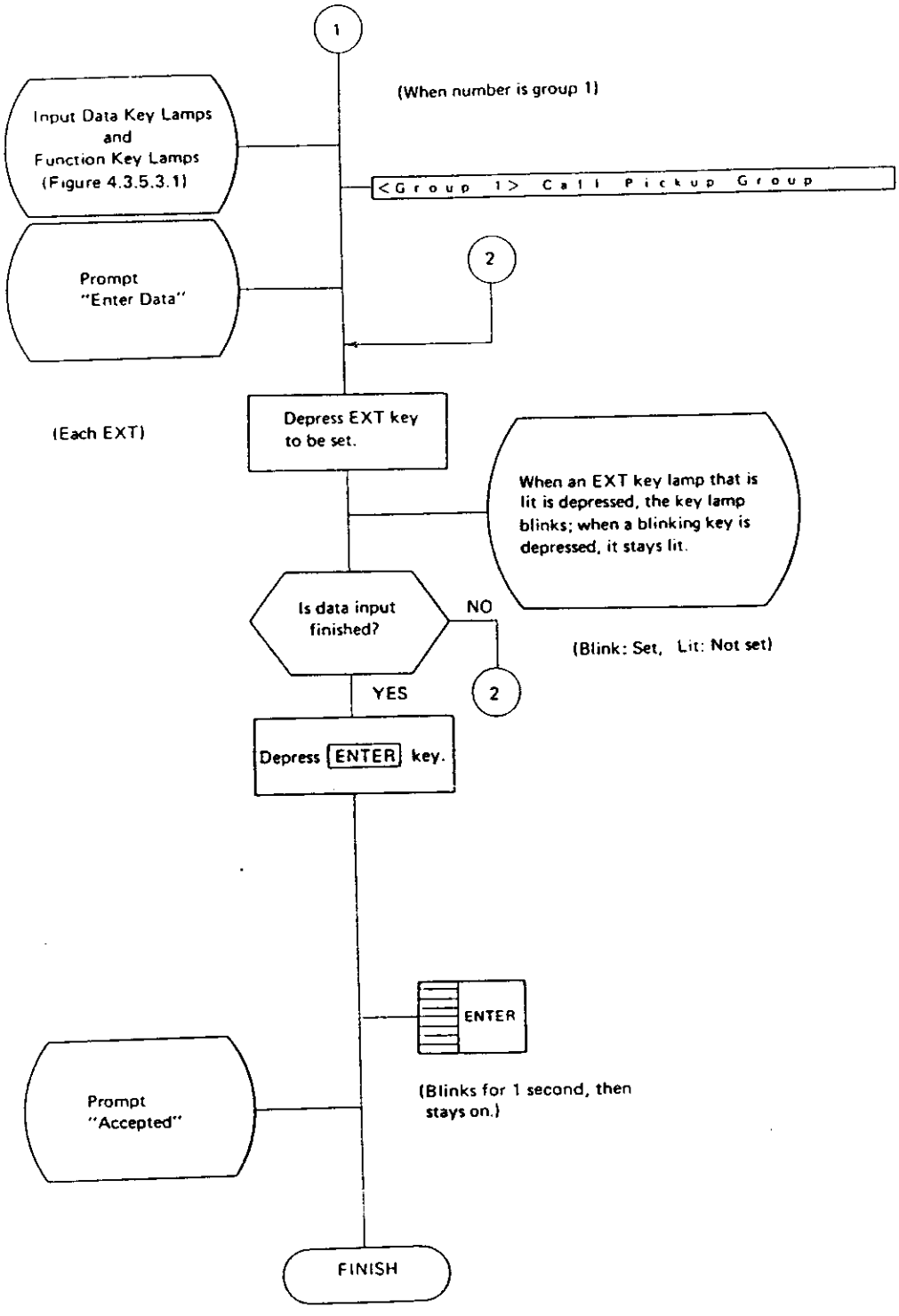
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.5.2.1.a

4.3.5.3 Call Pickup Group (Item 3)

Feature: Setting Pickup Group EXT

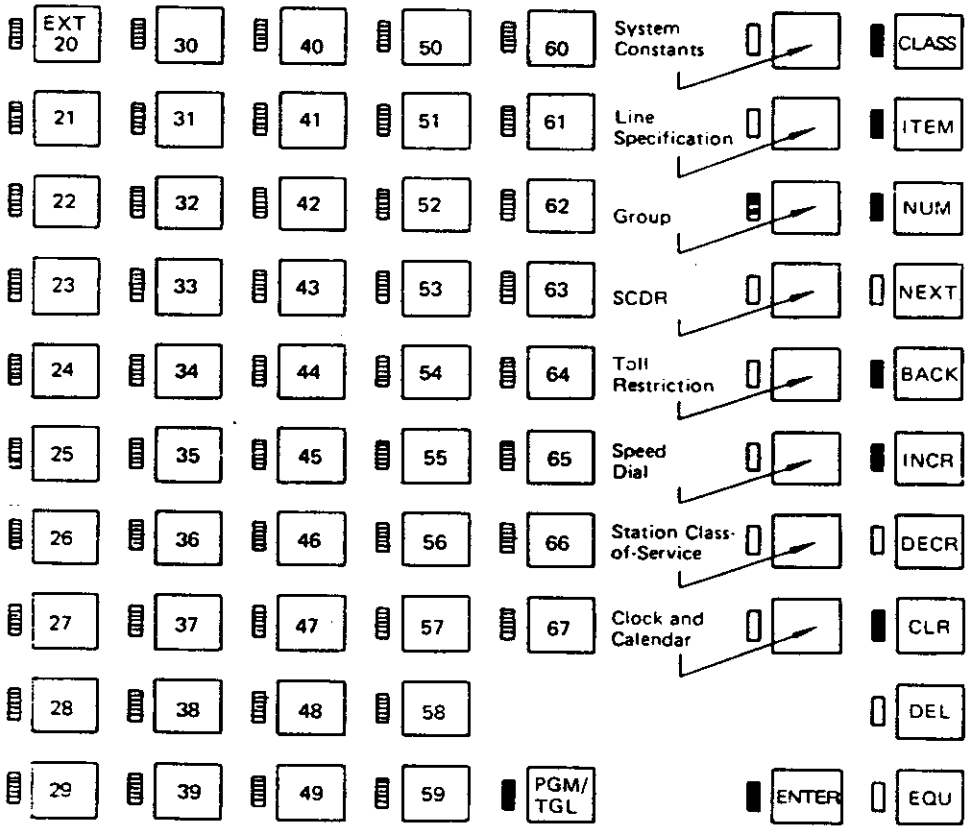



1
(When number is group 1)
Input Data Key Lamps
and
Function Key Lamps
(Figure 4.3.5.3.1)
<Group 1> Call Pickup Group
Prompt
"Enter Data"
2
(Each EXT)
Depress EXT key
to be set.
When an EXT key lamp that is lit is depressed, the key lamp blinks; when a blinking key is depressed, it stays lit.
Is data input
finished?
NO
(Blink: Set, Lit: Not set)
YES
2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays on.)
Prompt
"Accepted"
FINISH

Display

<Group 1> Call Pickup Group

Key Lamp

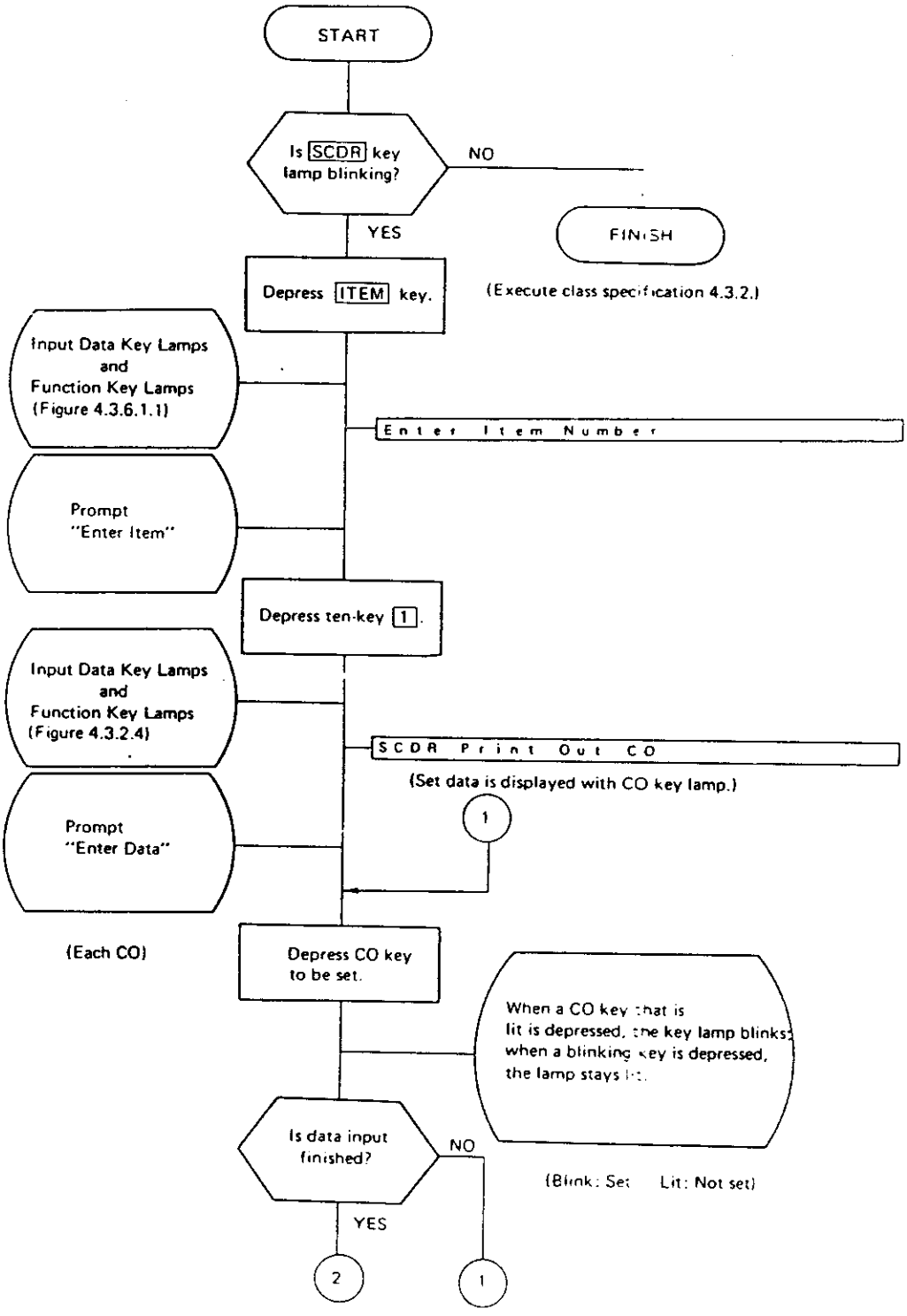


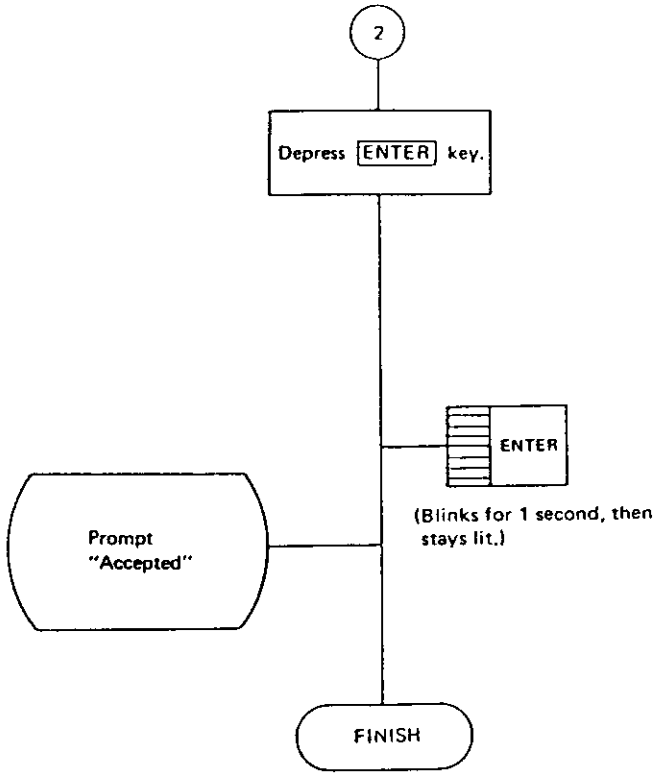
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.5.3.1.a

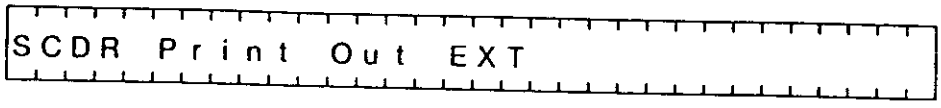
4.3.6.1 Print Out CO (Item 1)

Feature: Setting CO to print outgoing calls

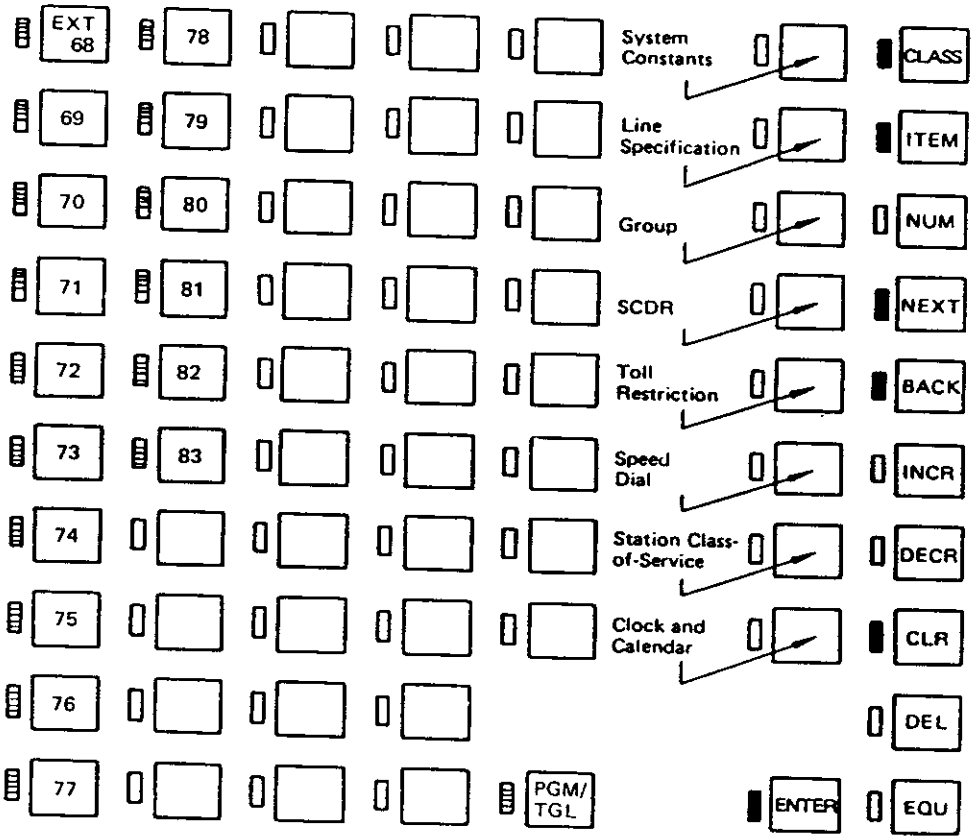



2
Depress [ENTER] key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

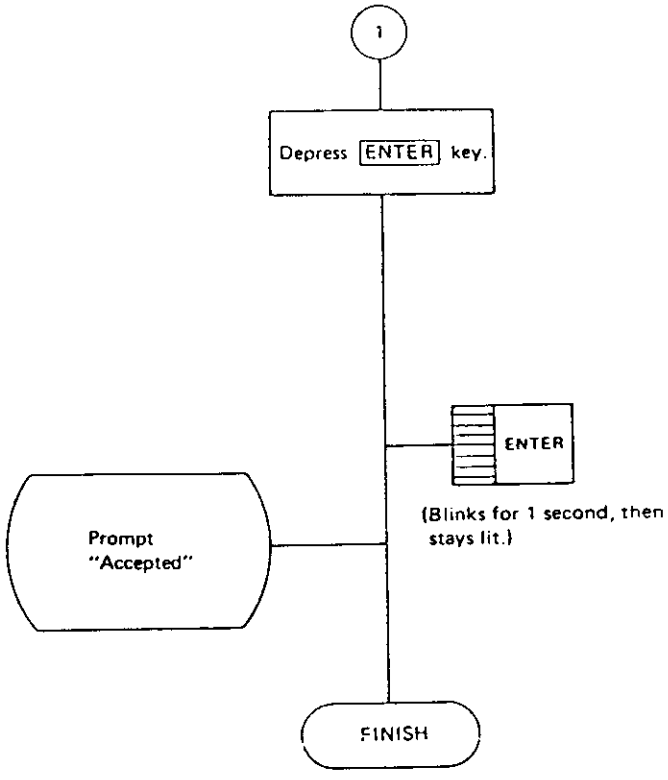


Key Lamp

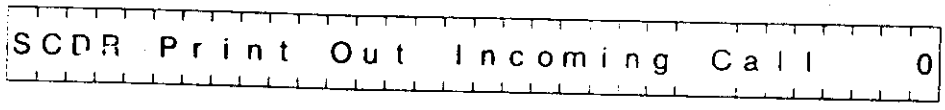


Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

Figure 4.3.6.2.1.b


1
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display



Key Lamp

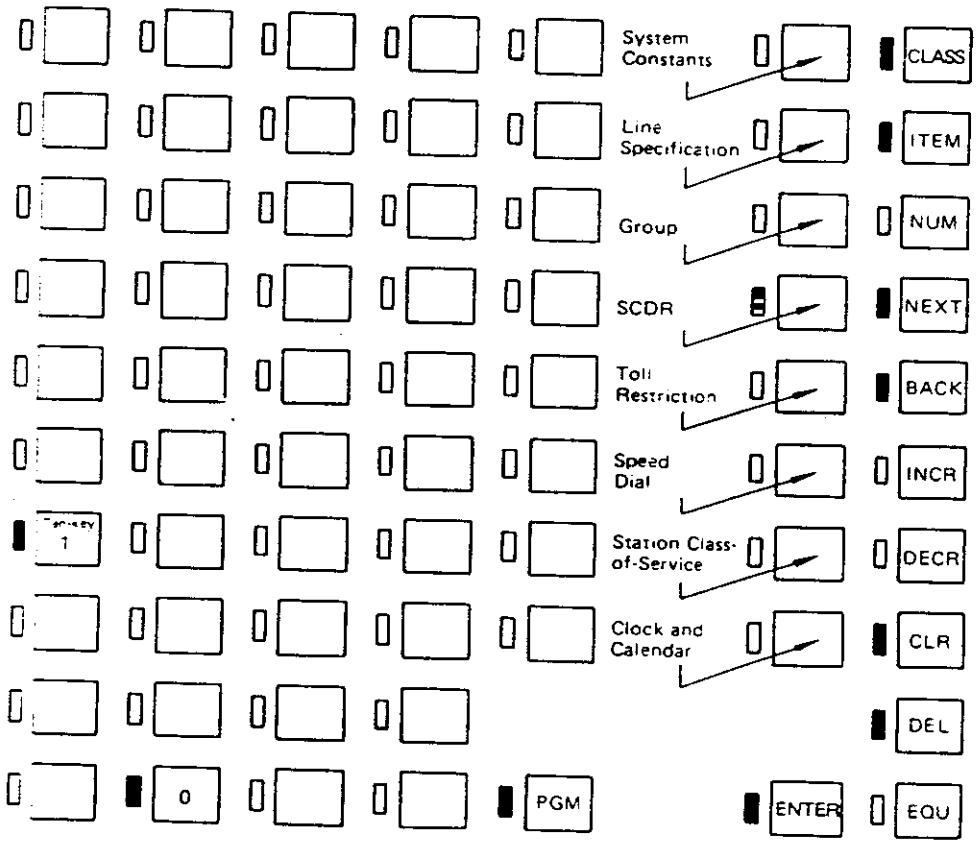
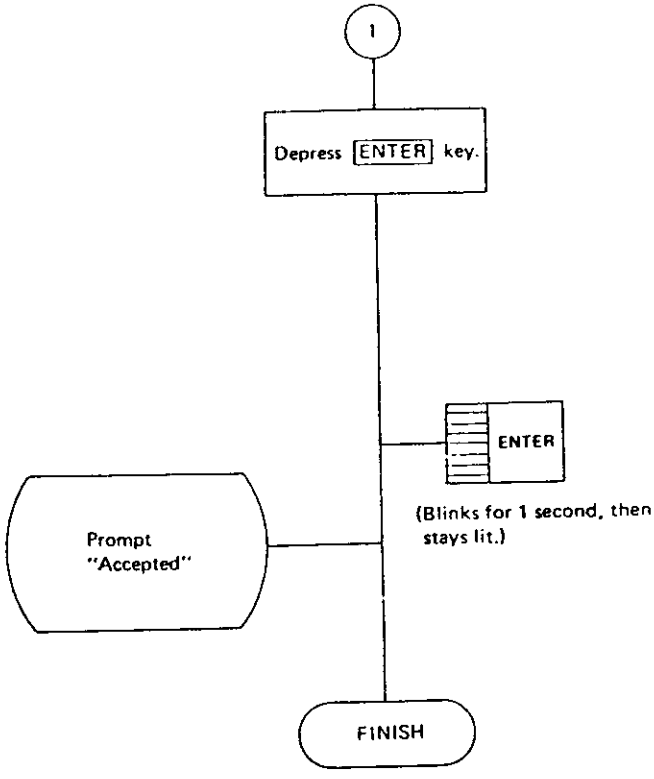


Figure 4.3.6.4.1


1
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

SCDR Print Out Toll Call 0

Key Lamp

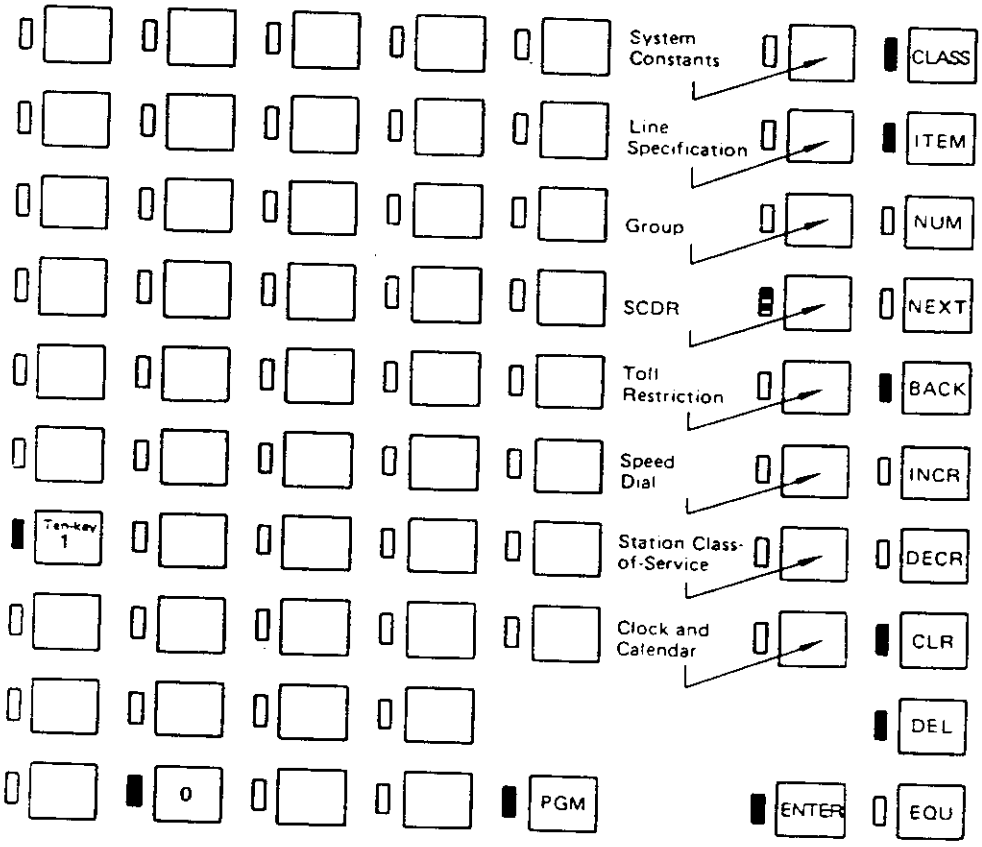
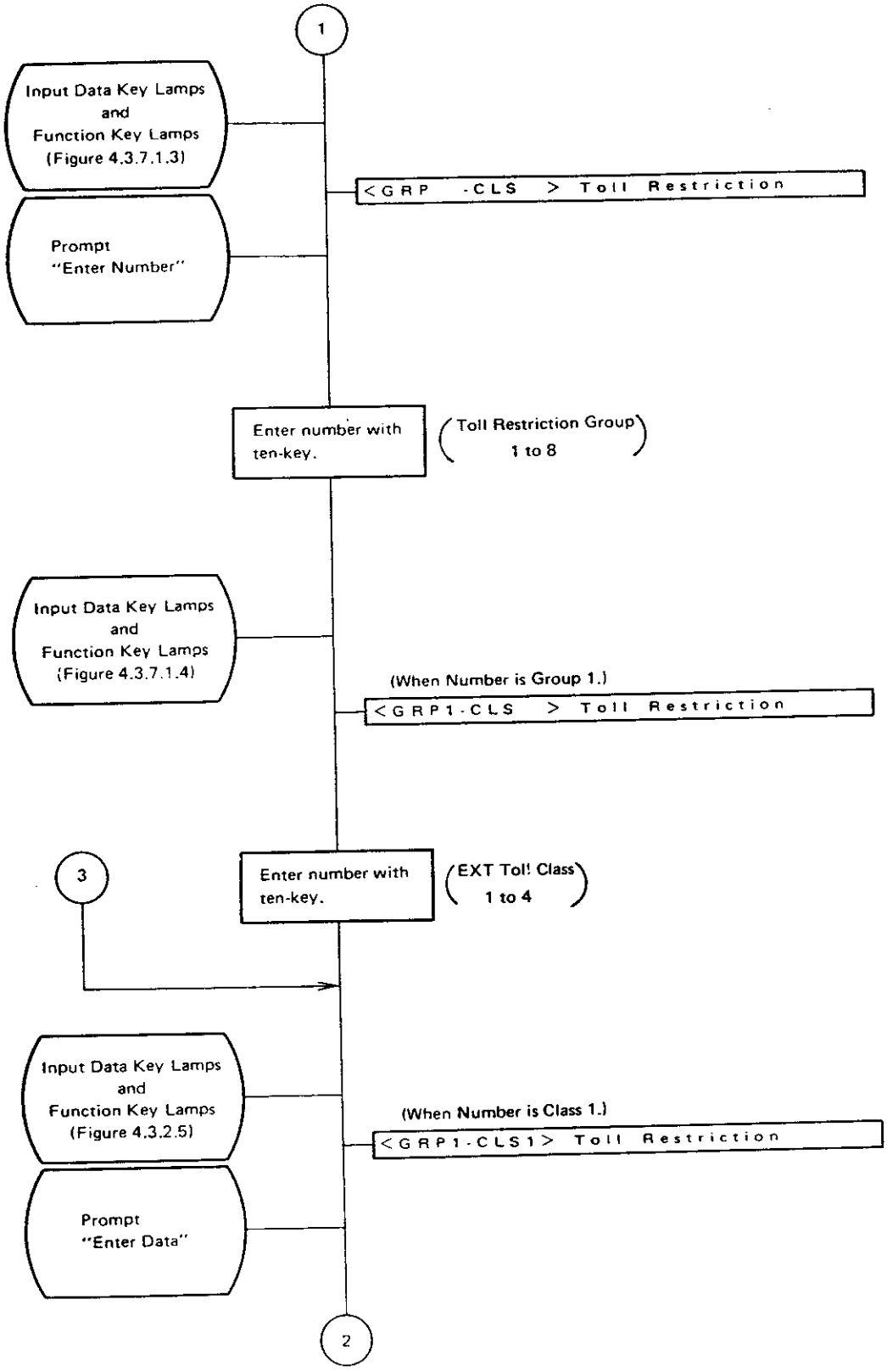
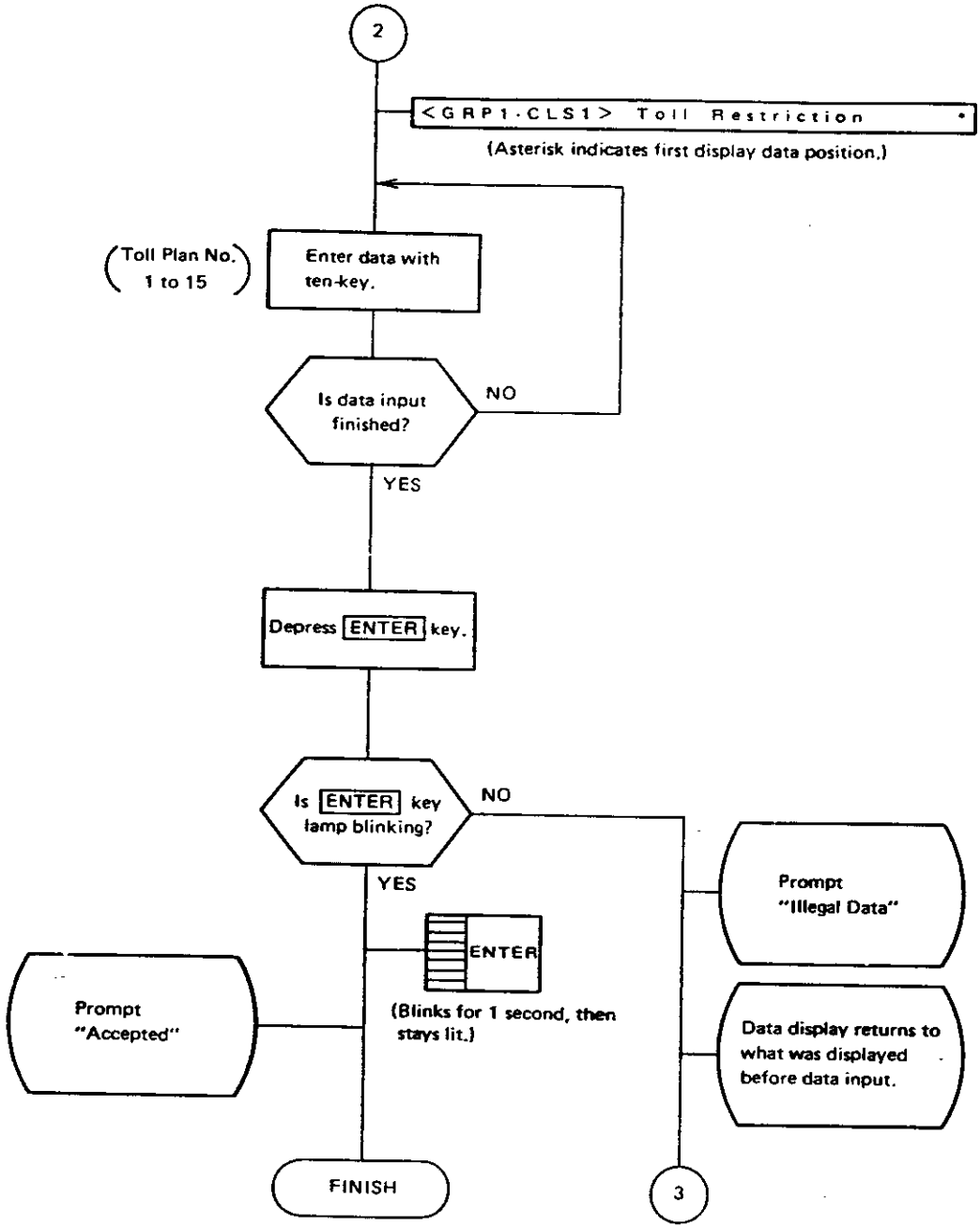


Figure 4.3.6.6.1


1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.1.3)
<GRP -CLS > Toll Restriction
Prompt "Enter Number"
Enter number with ten-key.
(Toll Restriction Group 1 to 8)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.1.4)
(When Number is Group 1.)
<GRP1-CLS > Toll Restriction
3
Enter number with ten-key.
(EXT Toll Class 1 to 4)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.2.5)
(When Number is Class 1.)
<GRP1-CLS1> Toll Restriction
Prompt "Enter Data"
2


2
<GRP1-CLS1> Toll Restriction *
(Asterisk indicates first display data position.)
(Toll Plan No. 1 to 15)
Enter data with ten-key.
Is data input finished?
NO
YES
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display

Enter Item Number

Key Lamp

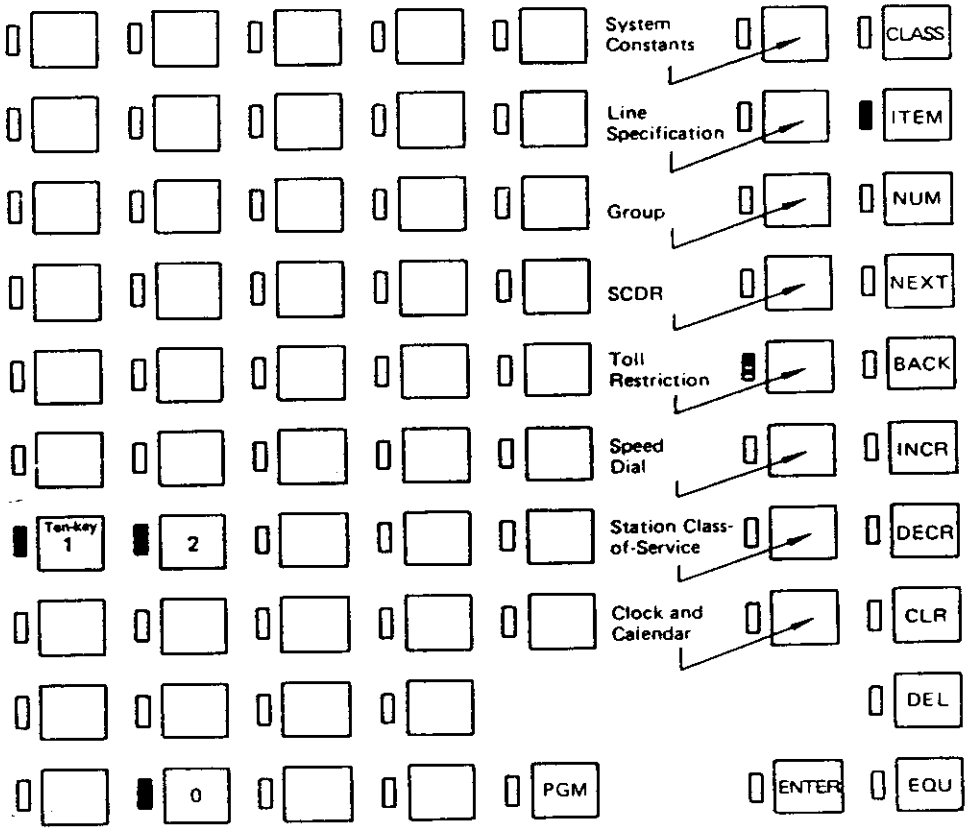
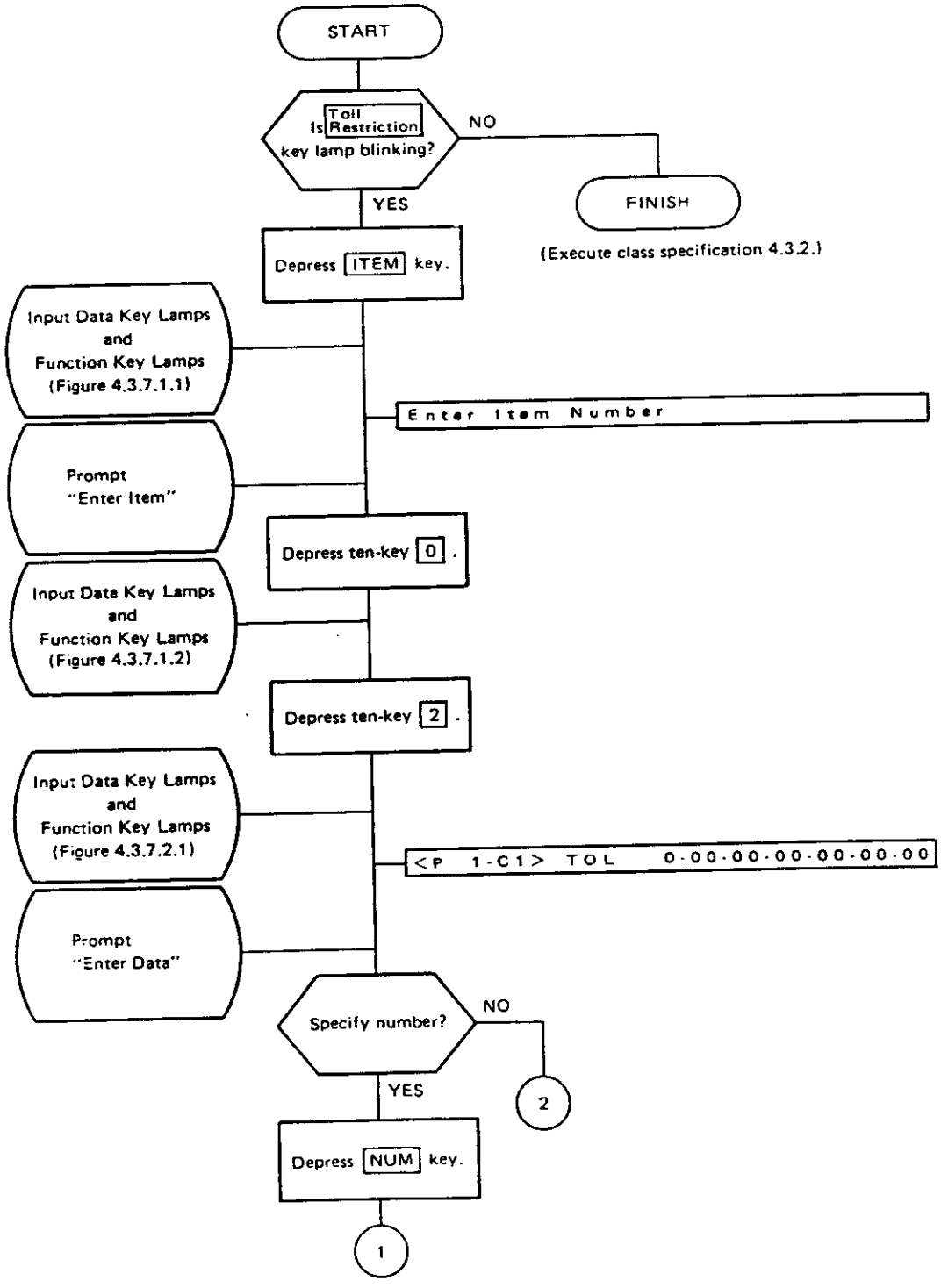


Figure 4.3.7.1.1

4.3.7.2 Toll Plan Table (Item 2)

Feature: Setting restriction mode and exception table number according to restriction plan and dial condition



Display

<P 1-C > TOL - - - - - -

Key Lamp

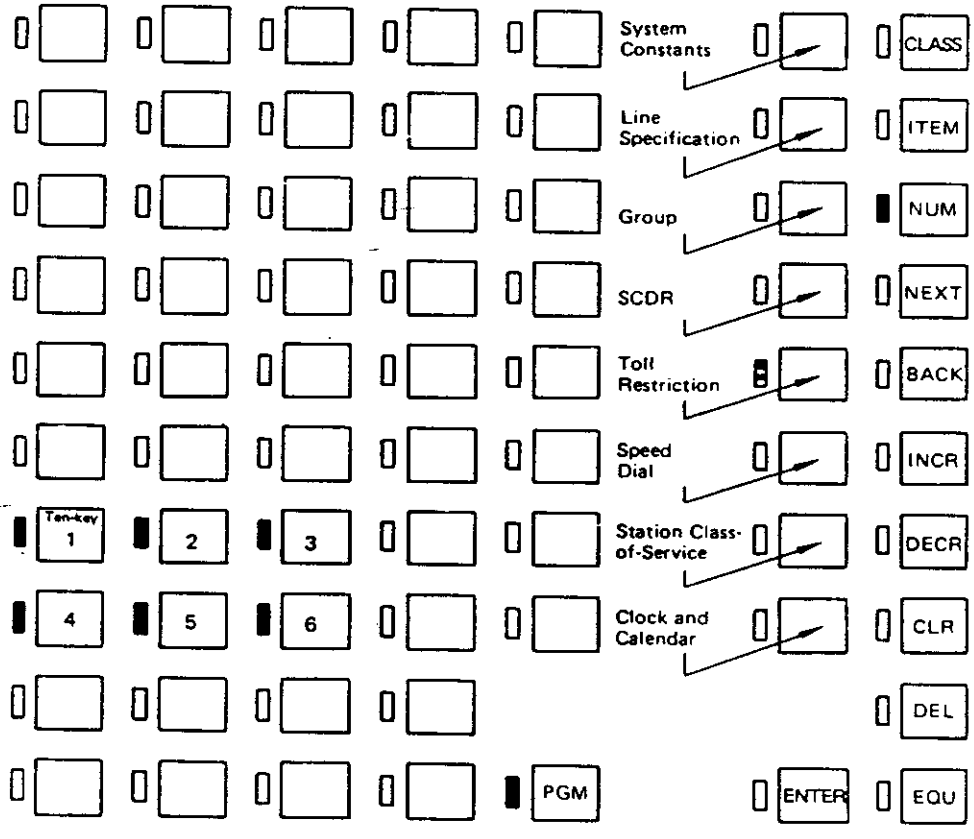
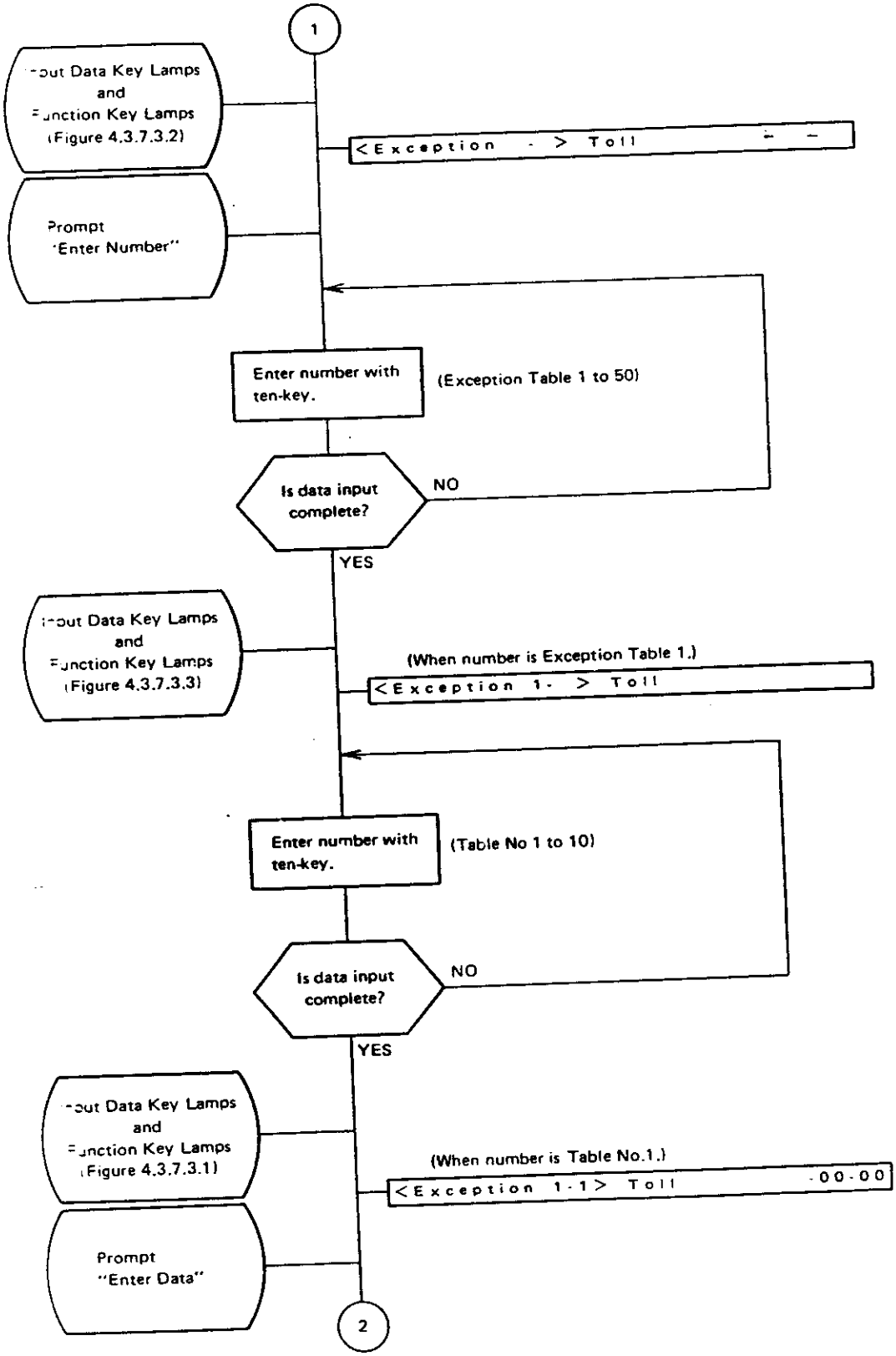
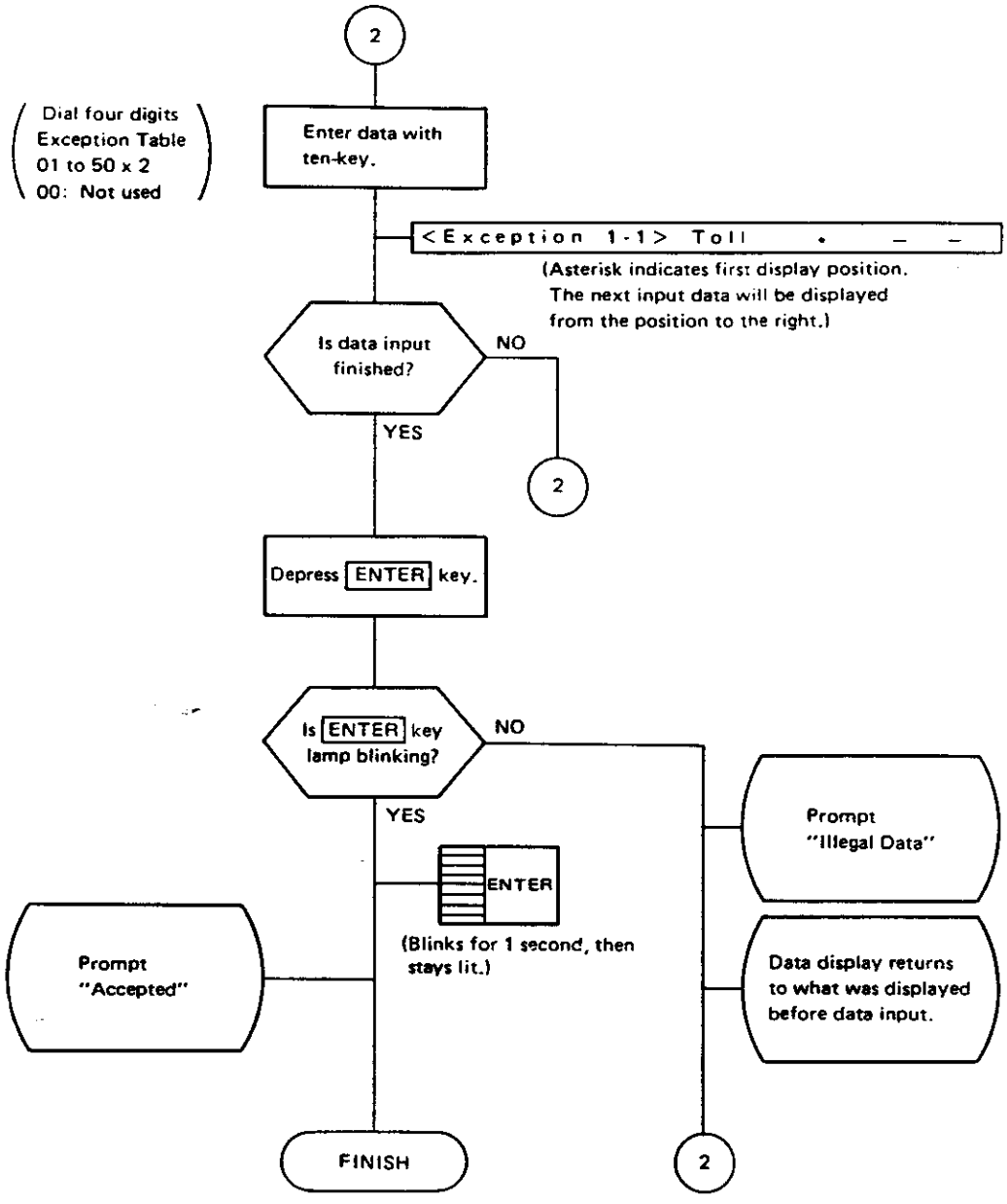
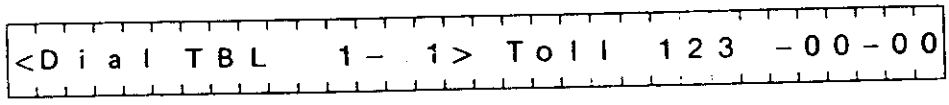


Figure 4.3.7.2.3


1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.3.2)
<Exception - > Toll
Prompt "Enter Number"
Enter number with ten-key.
(Exception Table 1 to 50)
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.3.3)
(When number is Exception Table 1.)
<Exception 1- > Toll
Enter number with ten-key.
(Table No 1 to 10)
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.3.1)
(When number is Table No.1.)
<Exception 1-1> Toll
-00-00
Prompt "Enter Data"
2


2
Dial four digits
Exception Table
01 to 50 x 2
00: Not used
Enter data with ten-key.
<Exception 1-1> Toll . _ _
(Asterisk indicates first display position. The next input data will be displayed from the position to the right.)
Is data input finished?
NO
YES
2
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
2

Display



Key Lamp

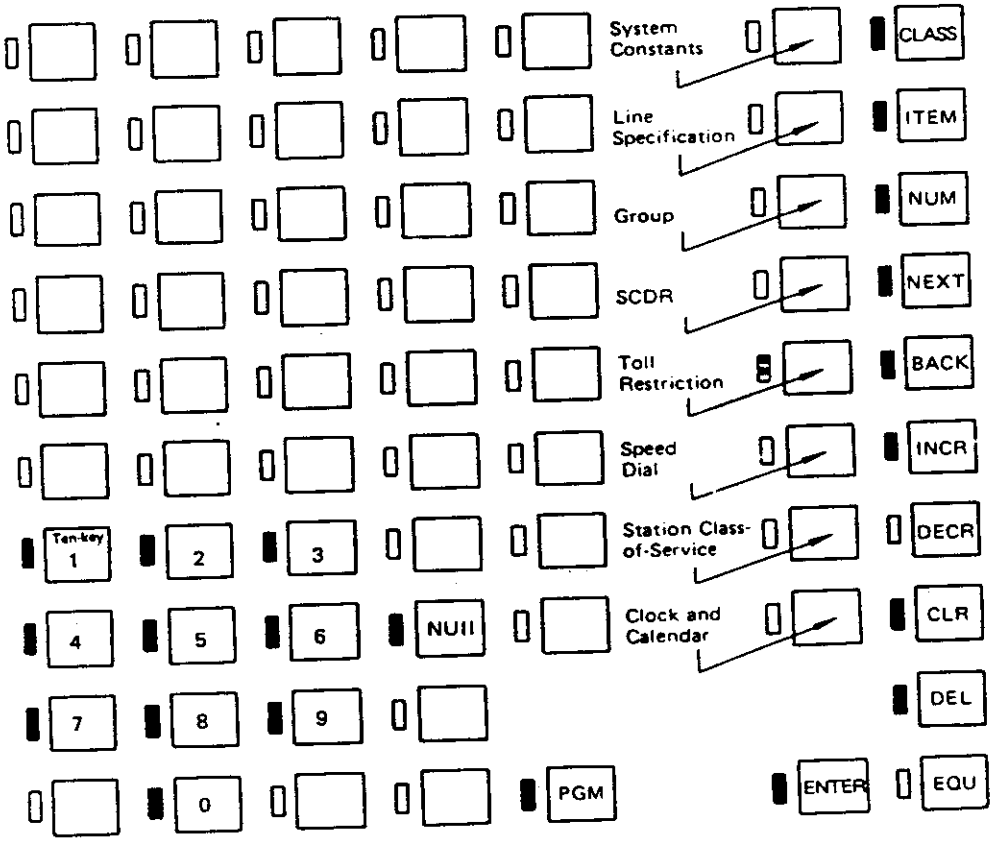
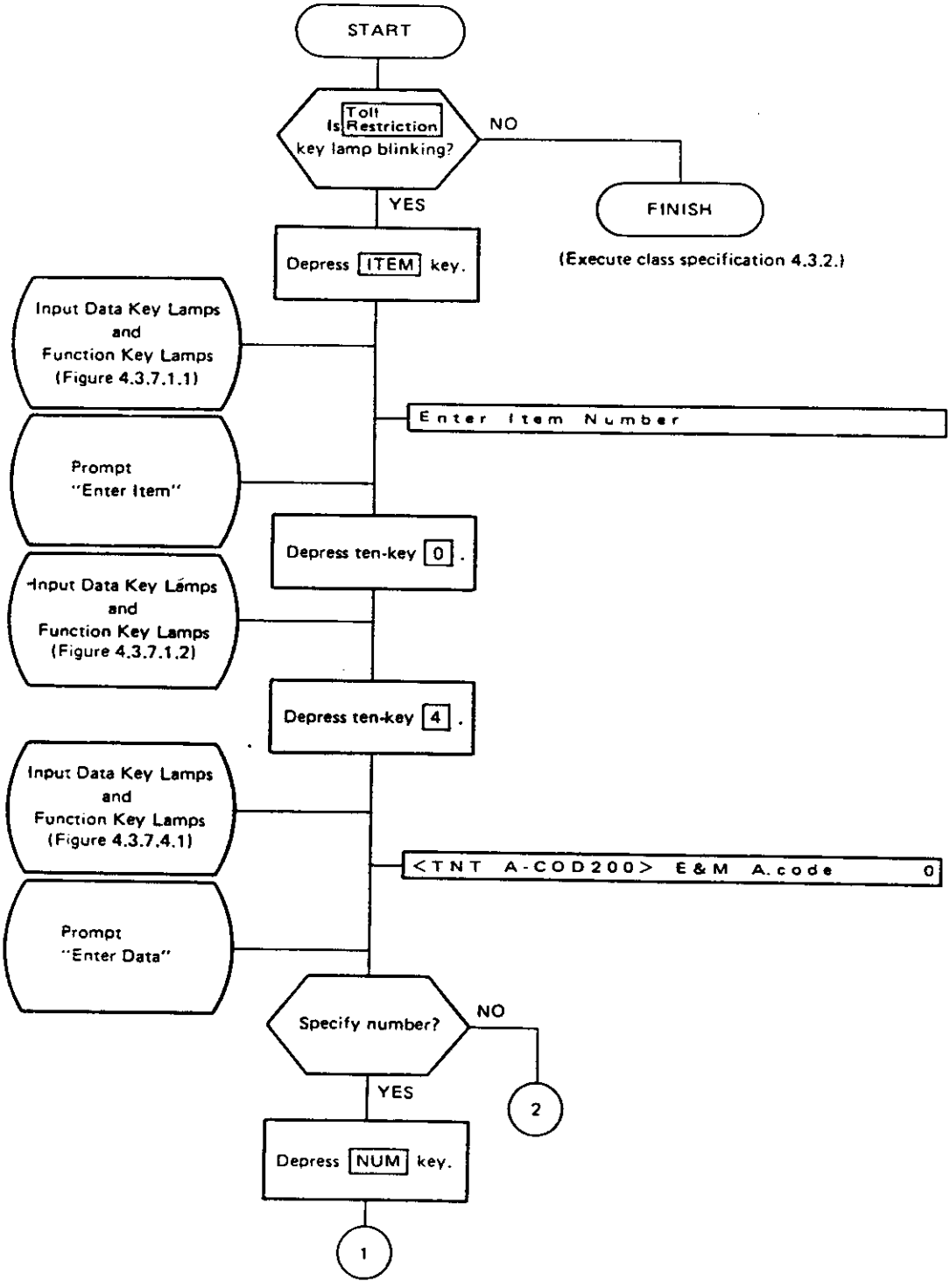
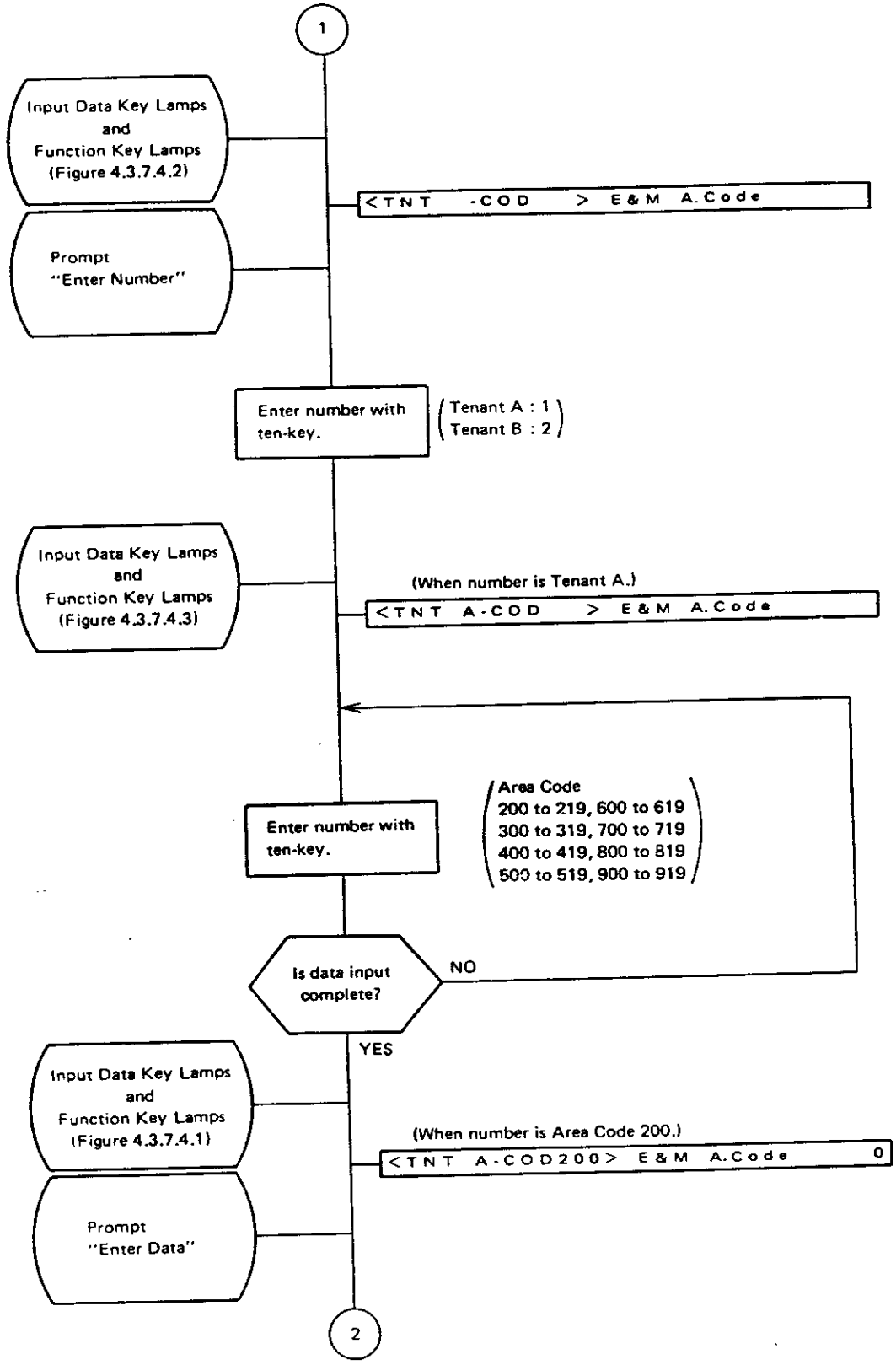


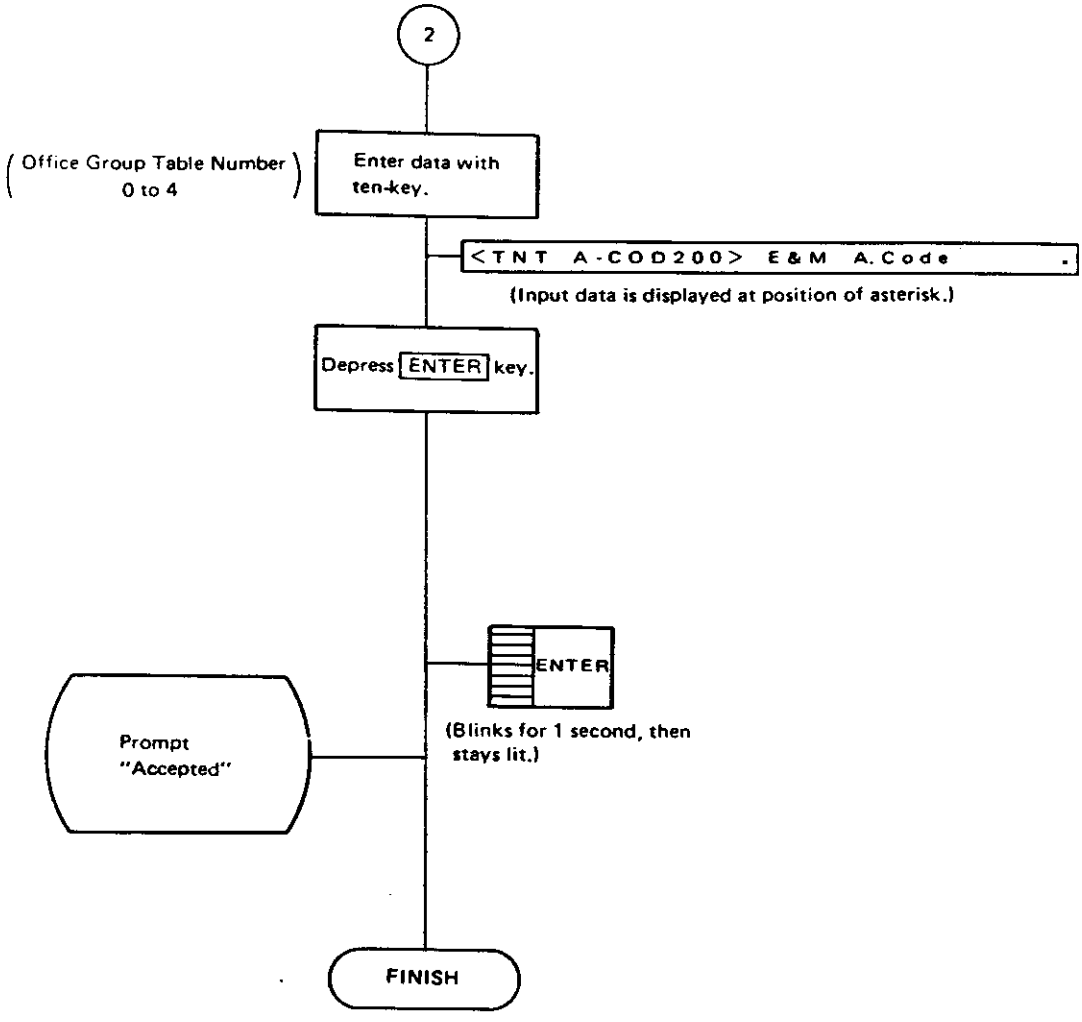
Figure 4.3.7.3.1

4.3.7.4 E&M Area Code Table (Item 4)

Feature: Office Group Table No. according to Tenant A/B and Area Code

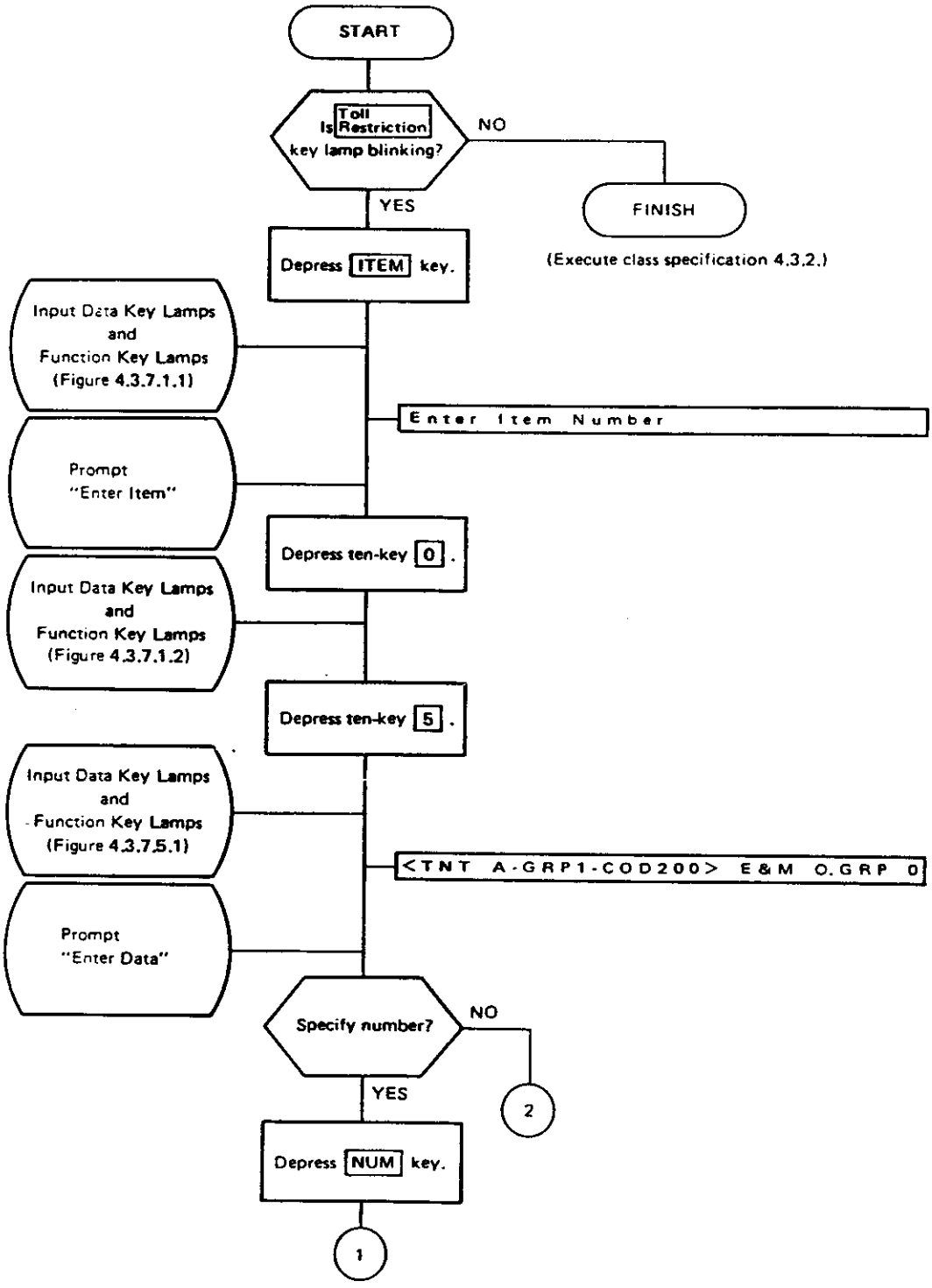


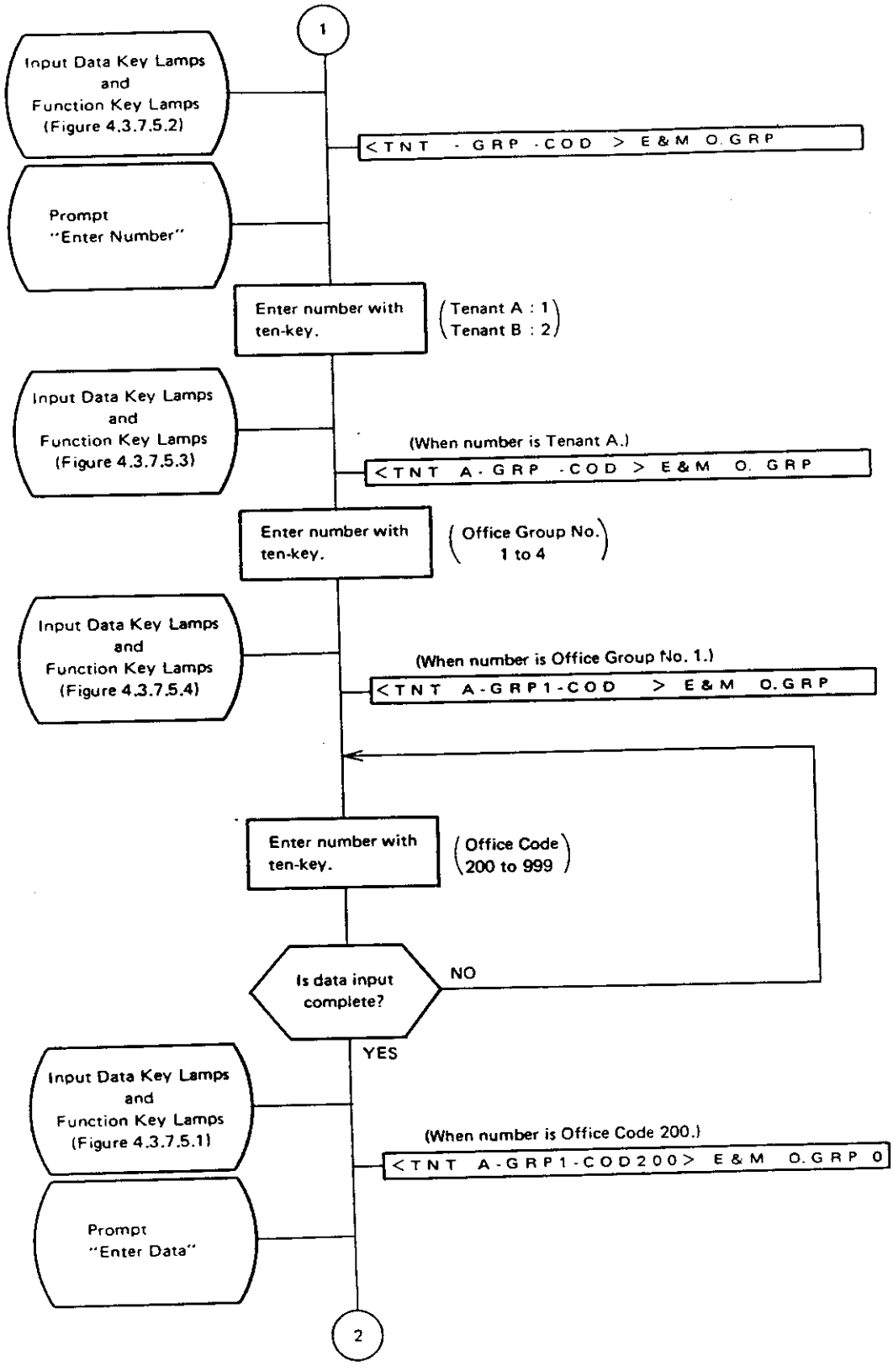

1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.4.2)
<TNT -COD > E&M A.Code
Prompt "Enter Number"
Enter number with ten-key.
Tenant A : 1
Tenant B : 2
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.4.3)
(When number is Tenant A.)
<TNT A-COD > E&M A.Code
Enter number with ten-key.
Area Code
200 to 219, 600 to 619
300 to 319, 700 to 719
400 to 419, 800 to 819
500 to 519, 900 to 919
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.4.1)
(When number is Area Code 200.)
<TNT A-COD200> E&M A.Code 0
Prompt "Enter Data"
2


2
(Office Group Table Number 0 to 4)
Enter data with ten-key.
<TNT A-COD200> E&M A.Code .
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

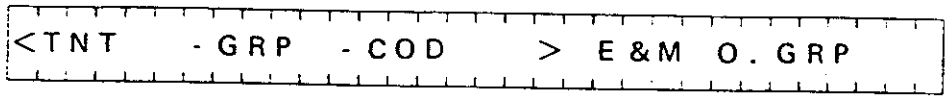
4.3.7.5 E&M Office Group Table (Item 5)

Feature: Setting Route Table No. according to Tenant A/B, Office Group No. and Office Code




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.5.2)
<TNT - GRP -COD > E&M O.GRP
Prompt "Enter Number"
Enter number with ten-key.
(Tenant A : 1 Tenant B : 2)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.5.3)
(When number is Tenant A.)
<TNT A-GRP -COD > E&M O. GRP
Enter number with ten-key.
(Office Group No. 1 to 4)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.5.4)
(When number is Office Group No. 1.)
<TNT A-GRP1-COD > E&M O.GRP
Enter number with ten-key.
(Office Code 200 to 999)
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.5.1)
(When number is Office Code 200.)
<TNT A-GRP1-COD200> E&M O.GRP 0
Prompt "Enter Data"
2

Display



Key Lamp

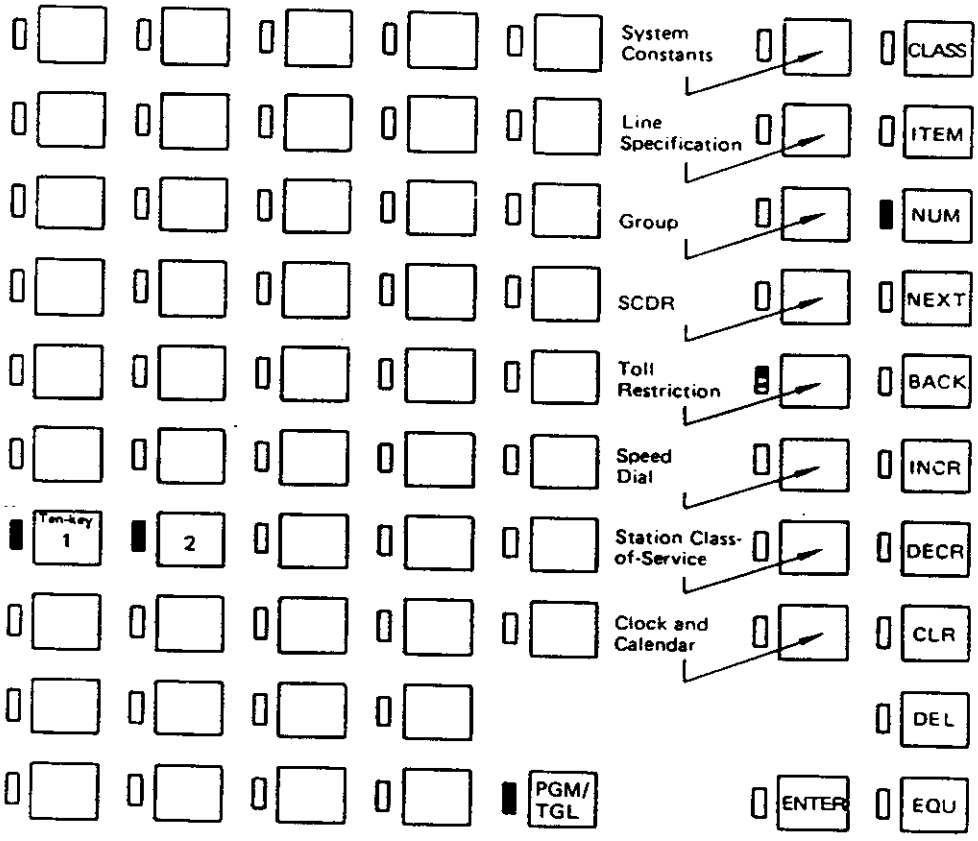
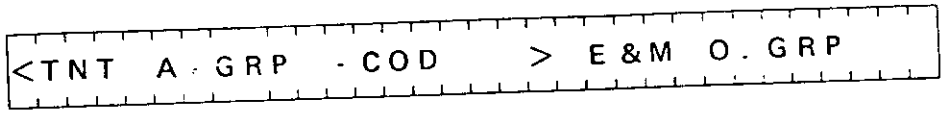


Figure 4.3.7.5.2

Display



Key Lamp

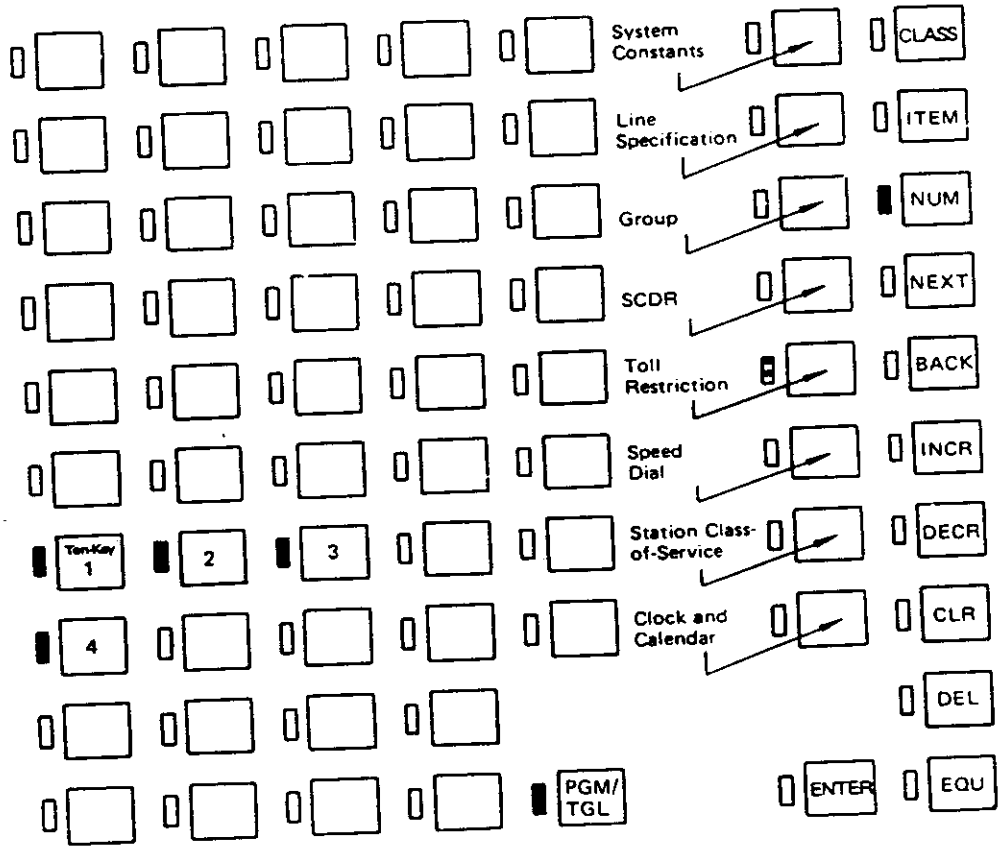
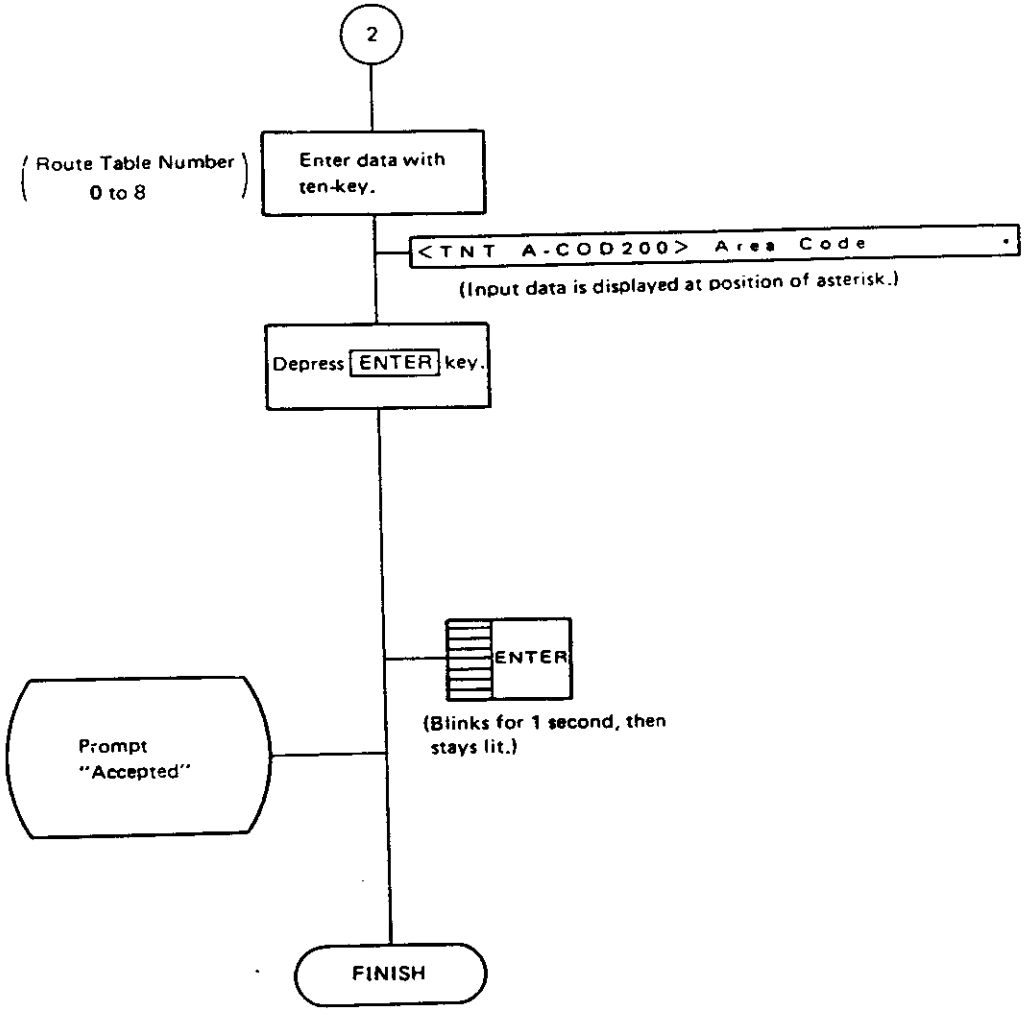


Figure 4.3.7.5.3


2
Route Table Number
0 to 8
Enter data with ten-key.
<TNT A-COD200> Area Code
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

Key Lamp

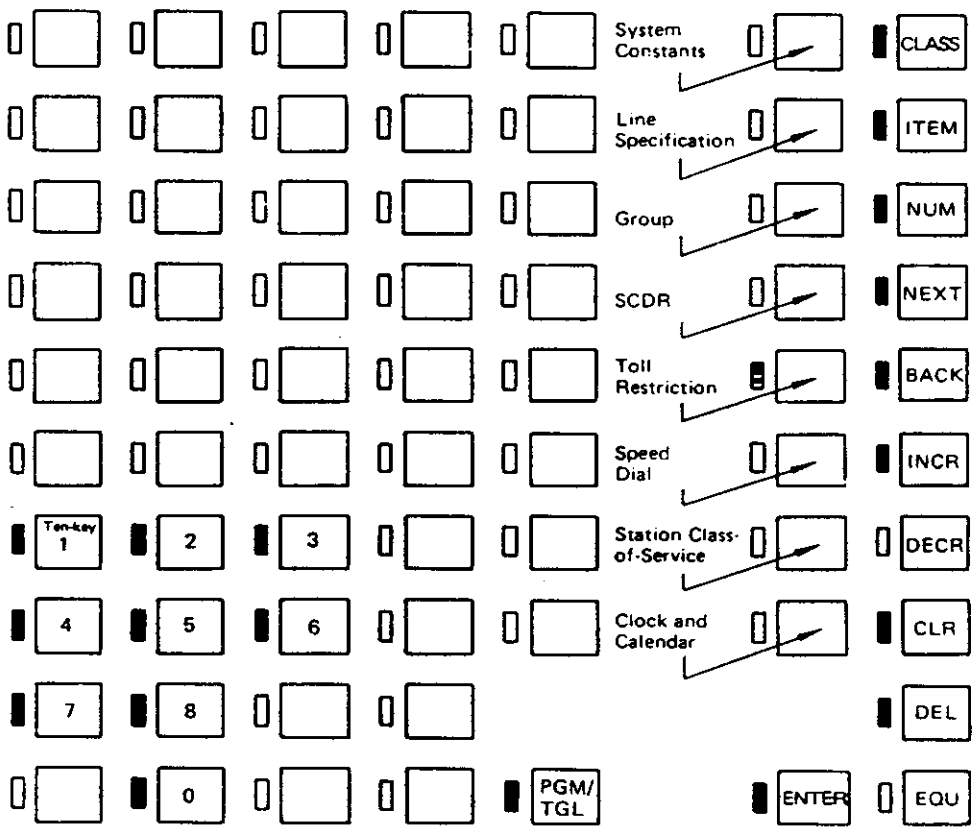


Figure 4.3.7.6.1

Display

Key Lamp

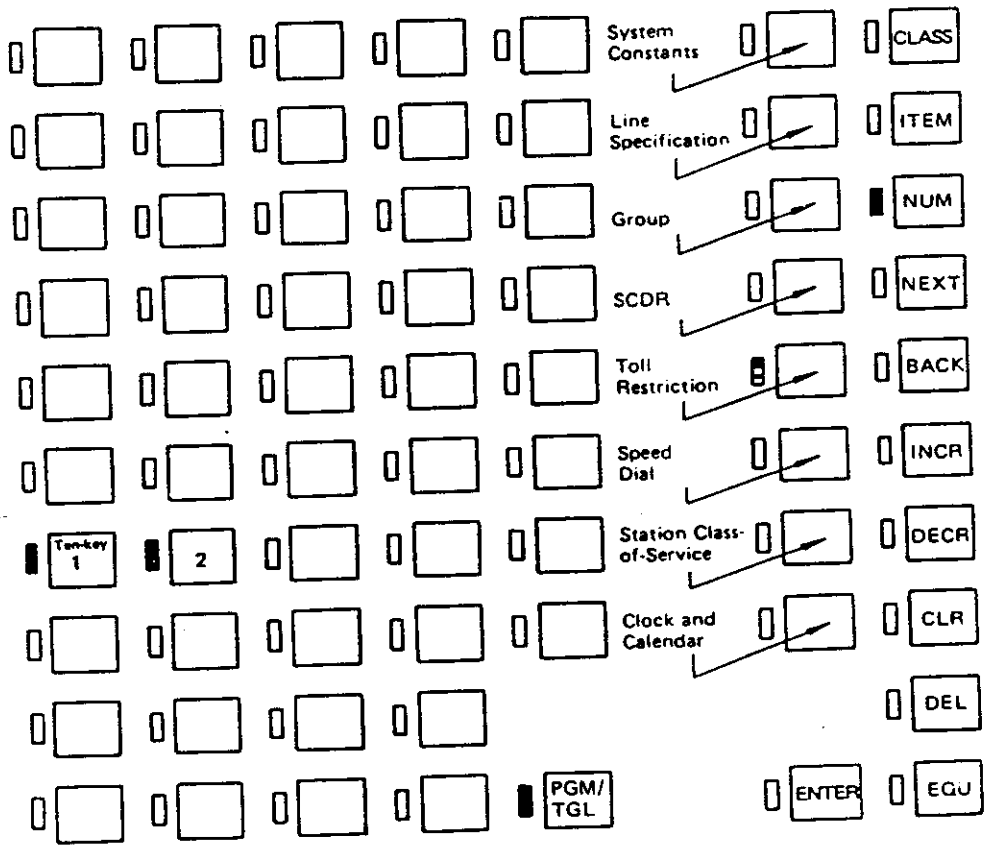


Figure 4.3.7.6.2

Display

<TNT A-COD > Area Code

Key Lamp

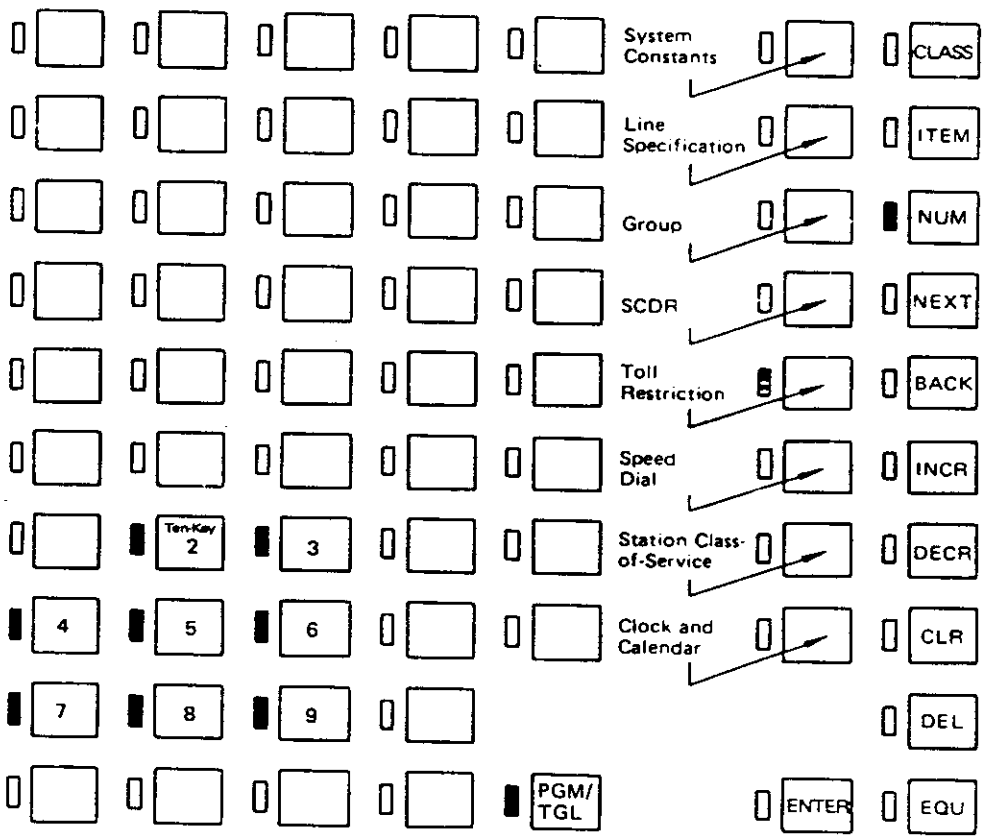
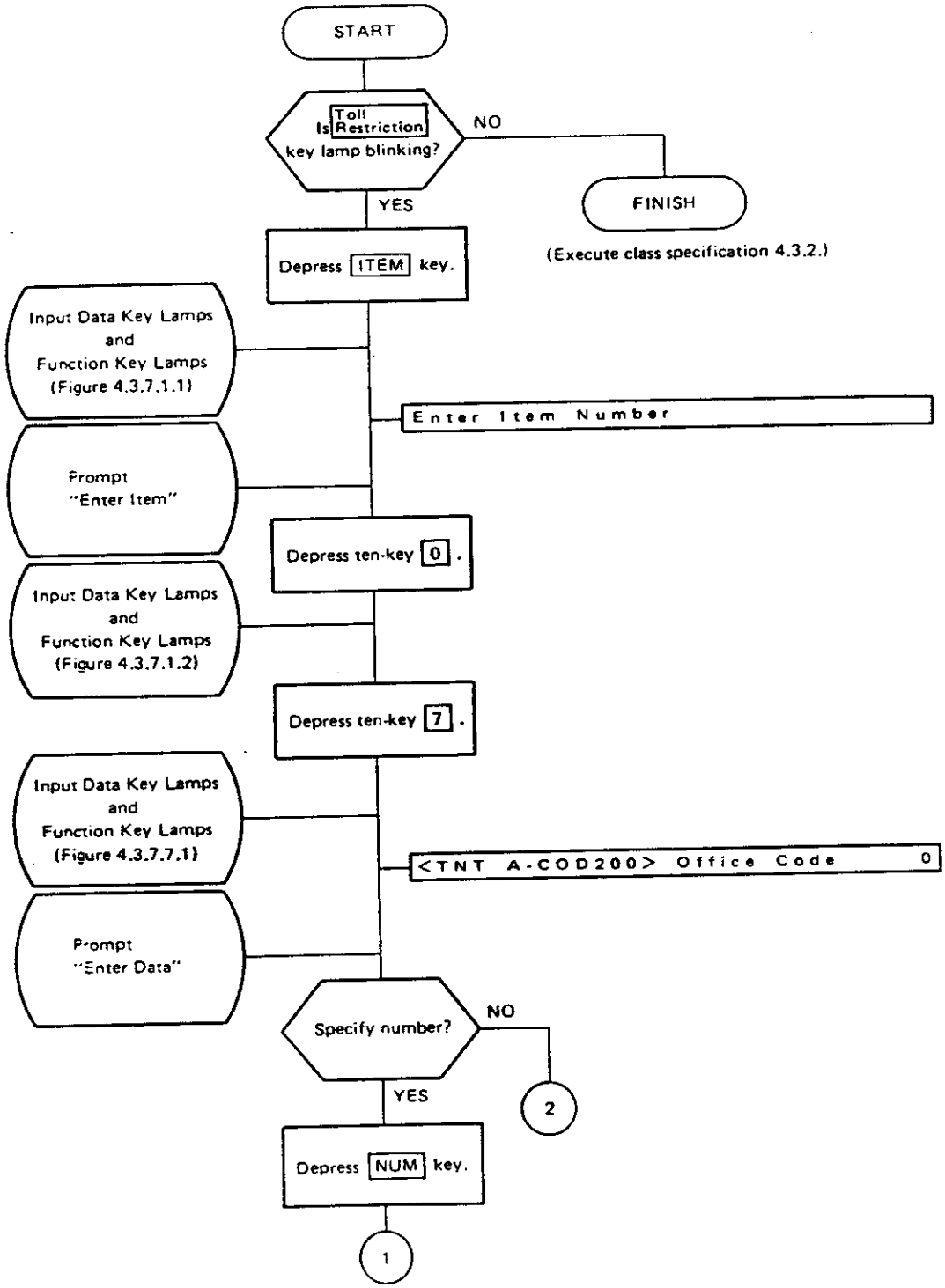
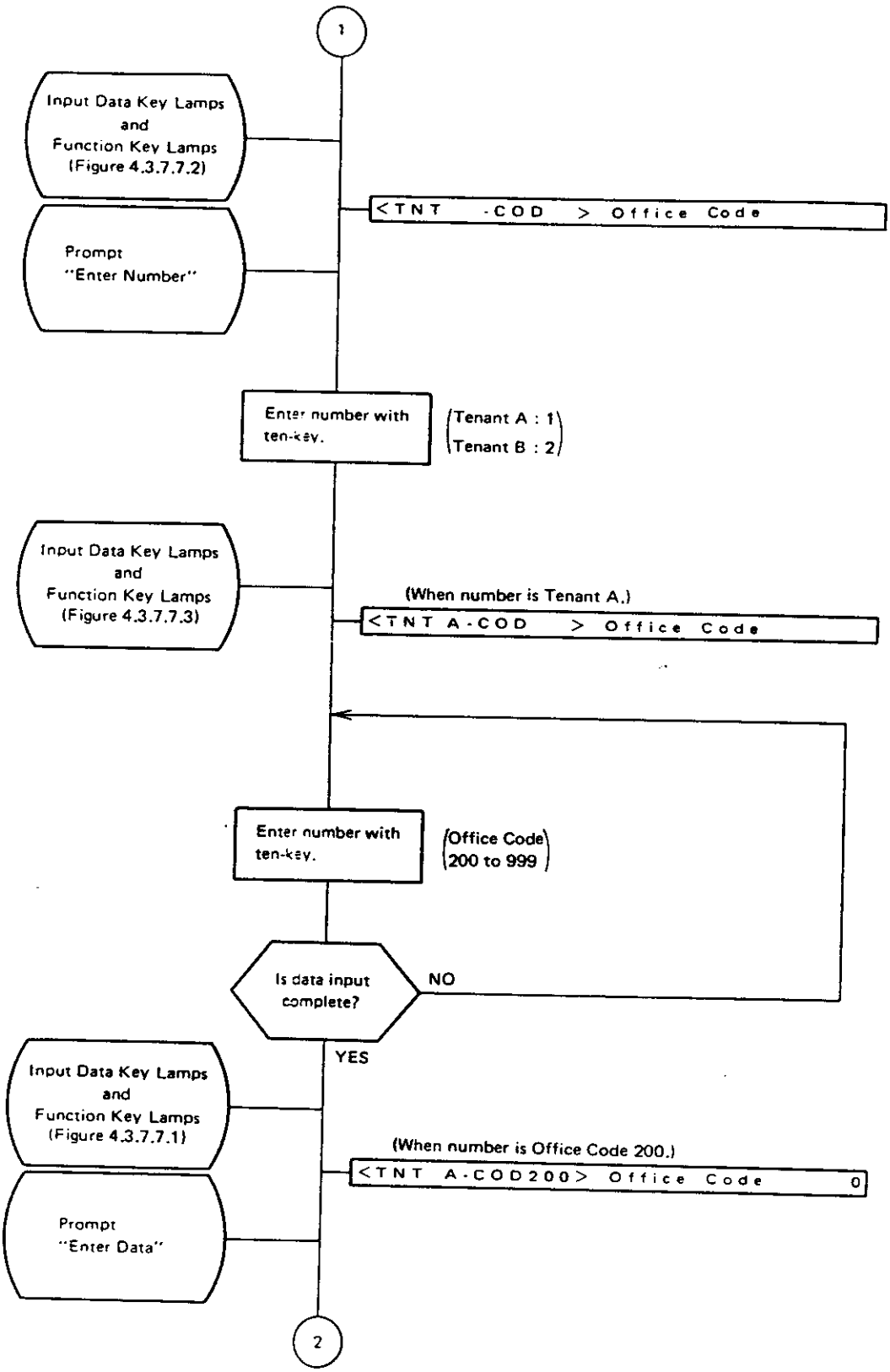


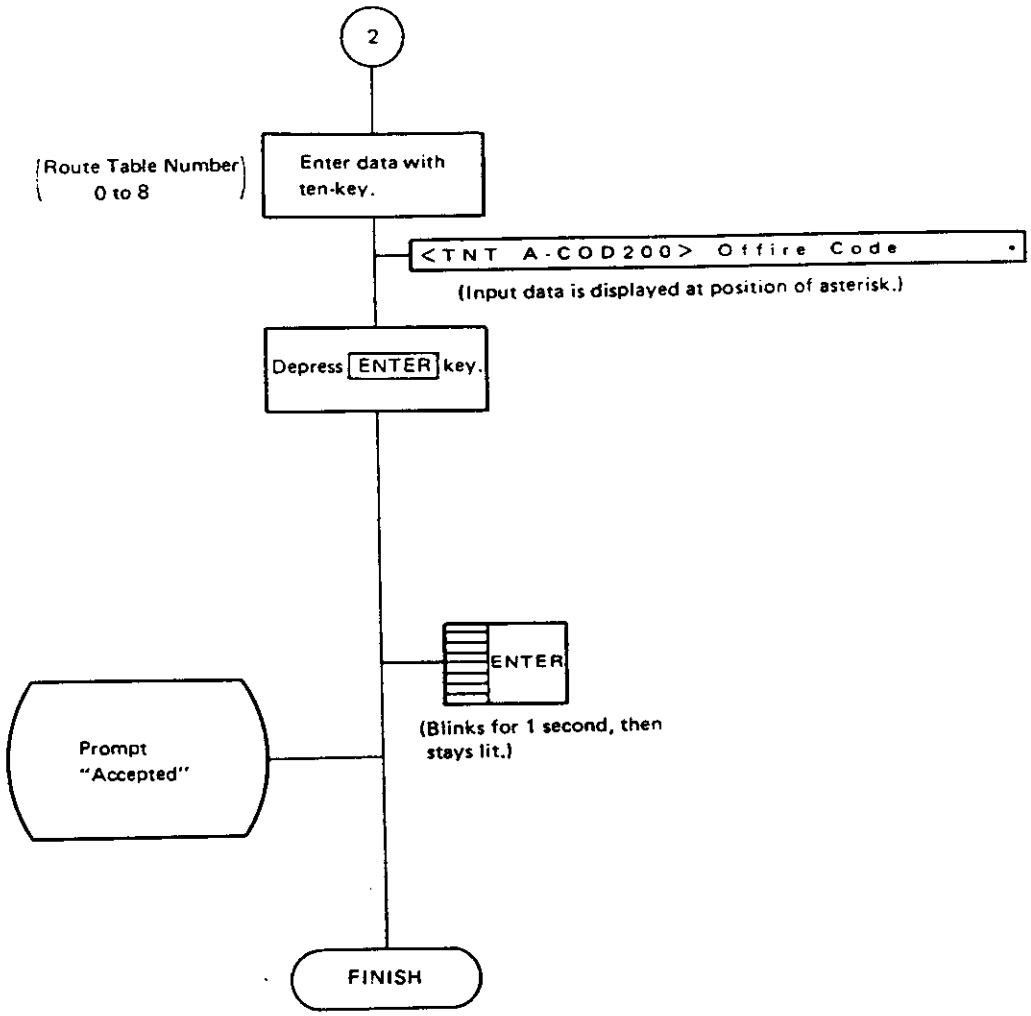
Figure 4.3.7.6.3

4.3.7.7 Office Code Table (Item 7)

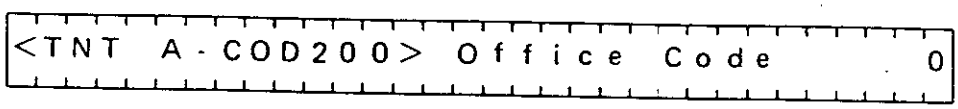
Feature: Setting Route Table No. according to Tenant A/B and Office Code




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.7.2)
<TNT -COD > Office Code
Prompt "Enter Number"
Enter number with ten-key.
(Tenant A : 1 Tenant B : 2)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.7.3)
(When number is Tenant A.)
<TNT A-COD > Office Code
Enter number with ten-key.
(Office Code 200 to 999)
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.7.1)
(When number is Office Code 200.)
<TNT A-COD200> Office Code 0
Prompt "Enter Data"
2


2
(Route Table Number 0 to 8)
Enter data with ten-key.
<TNT A-COD200> Offire Code •
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display



Key Lamp

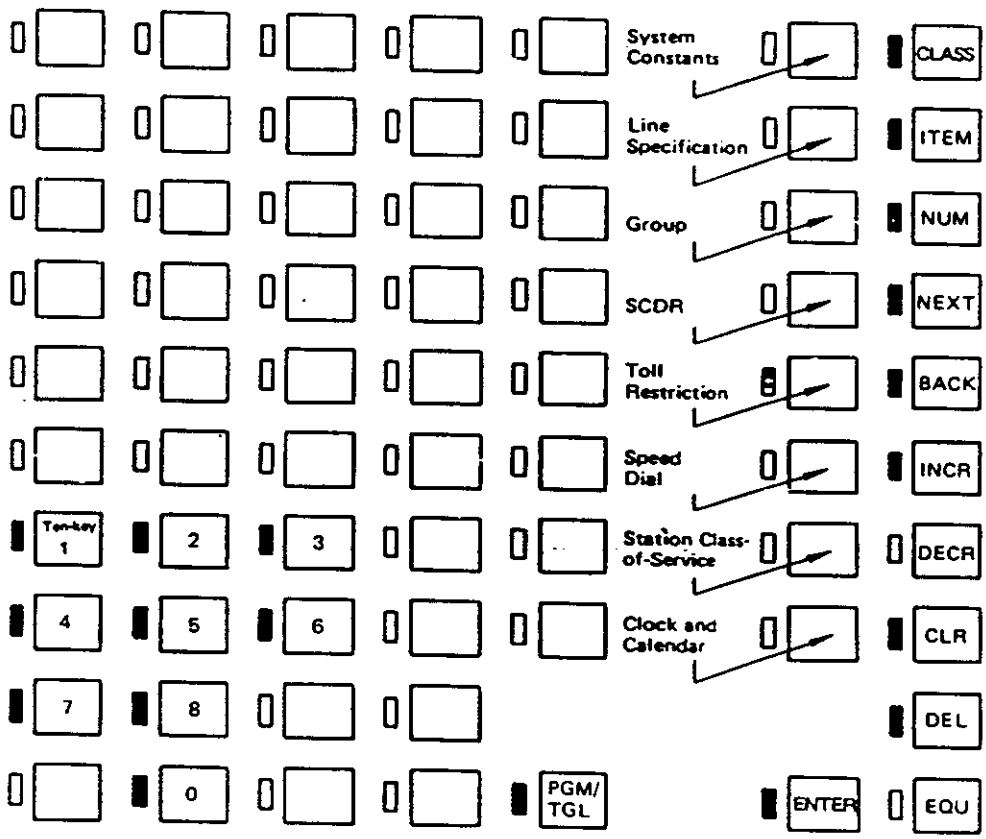
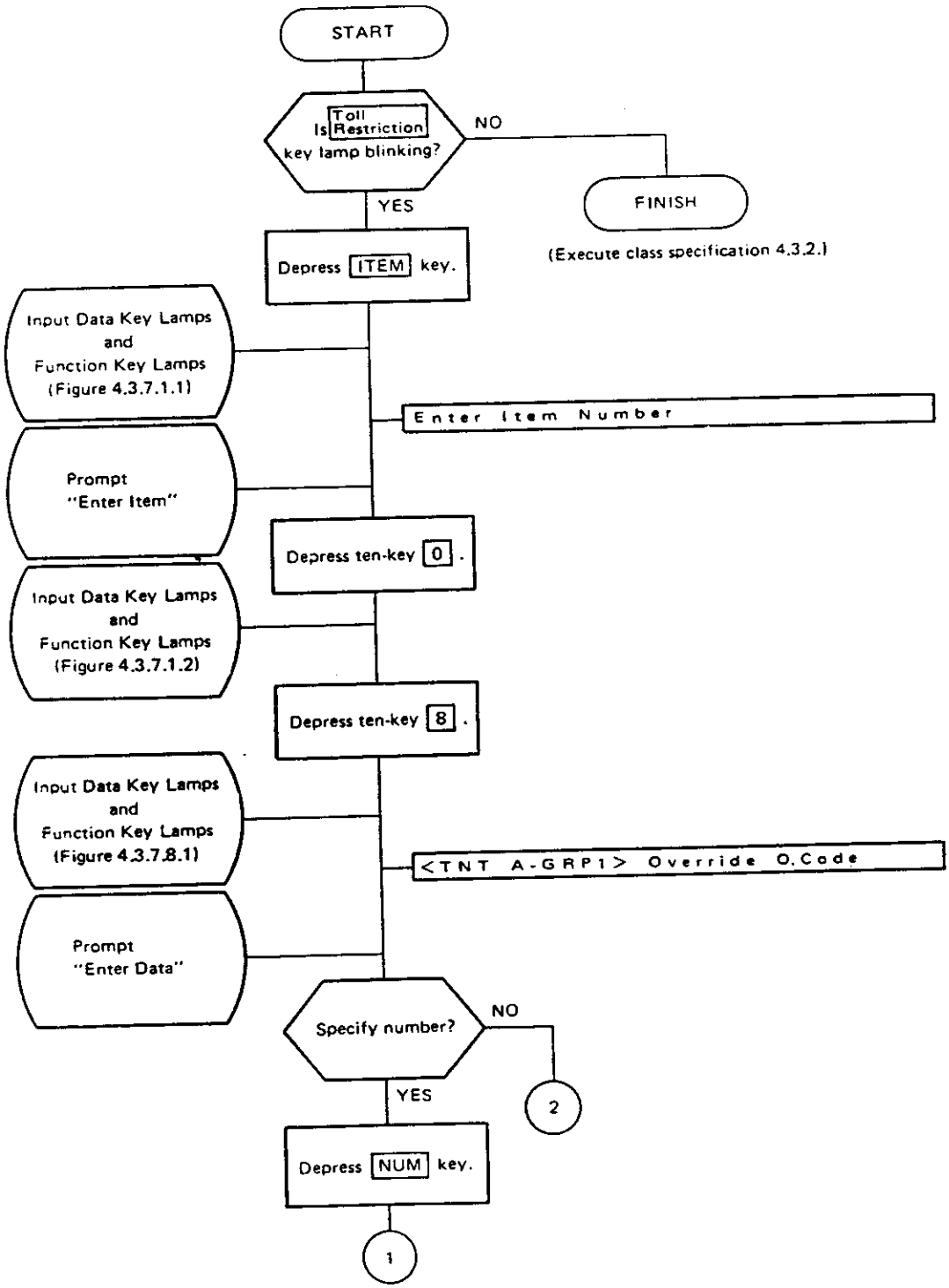
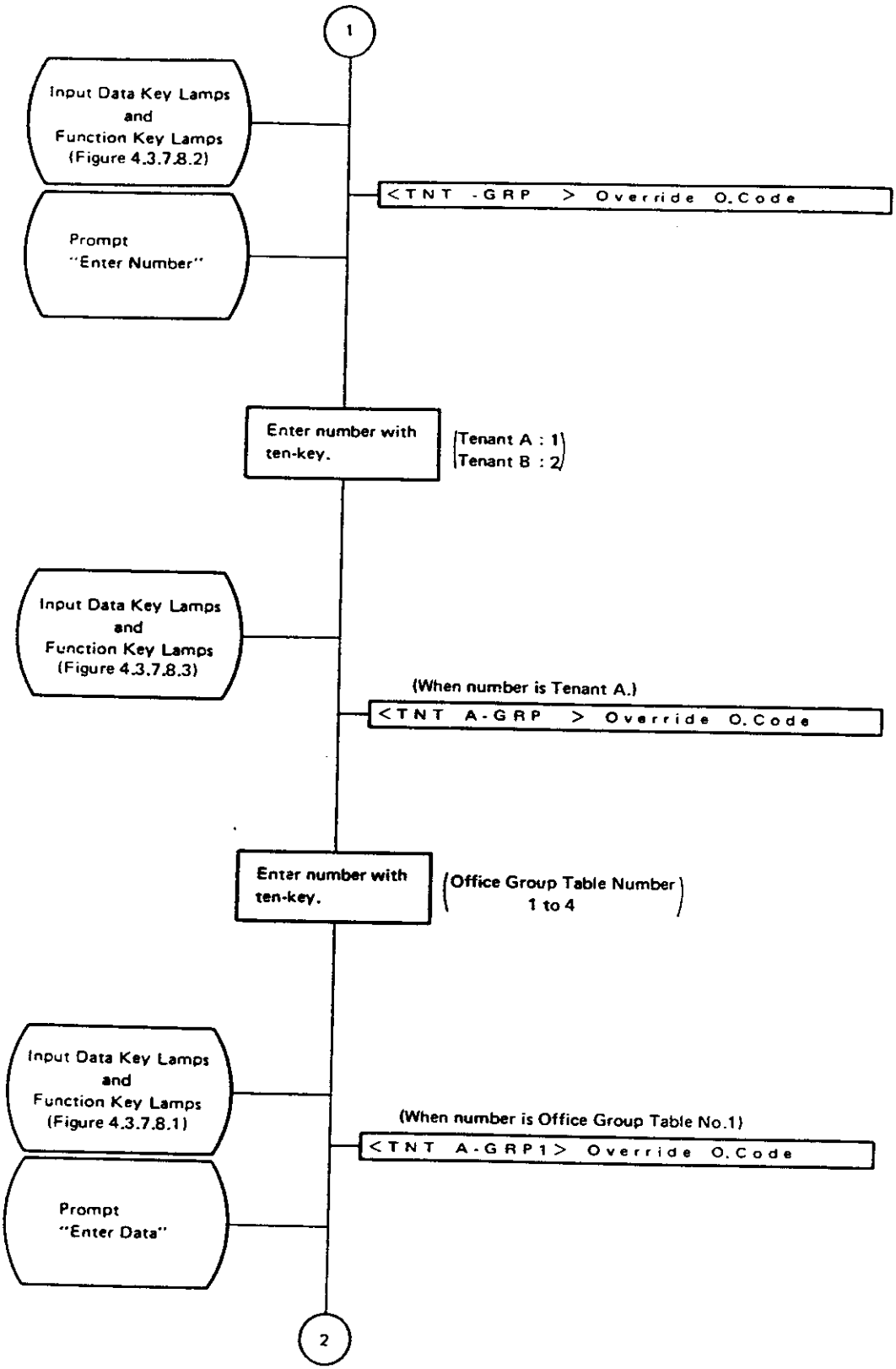


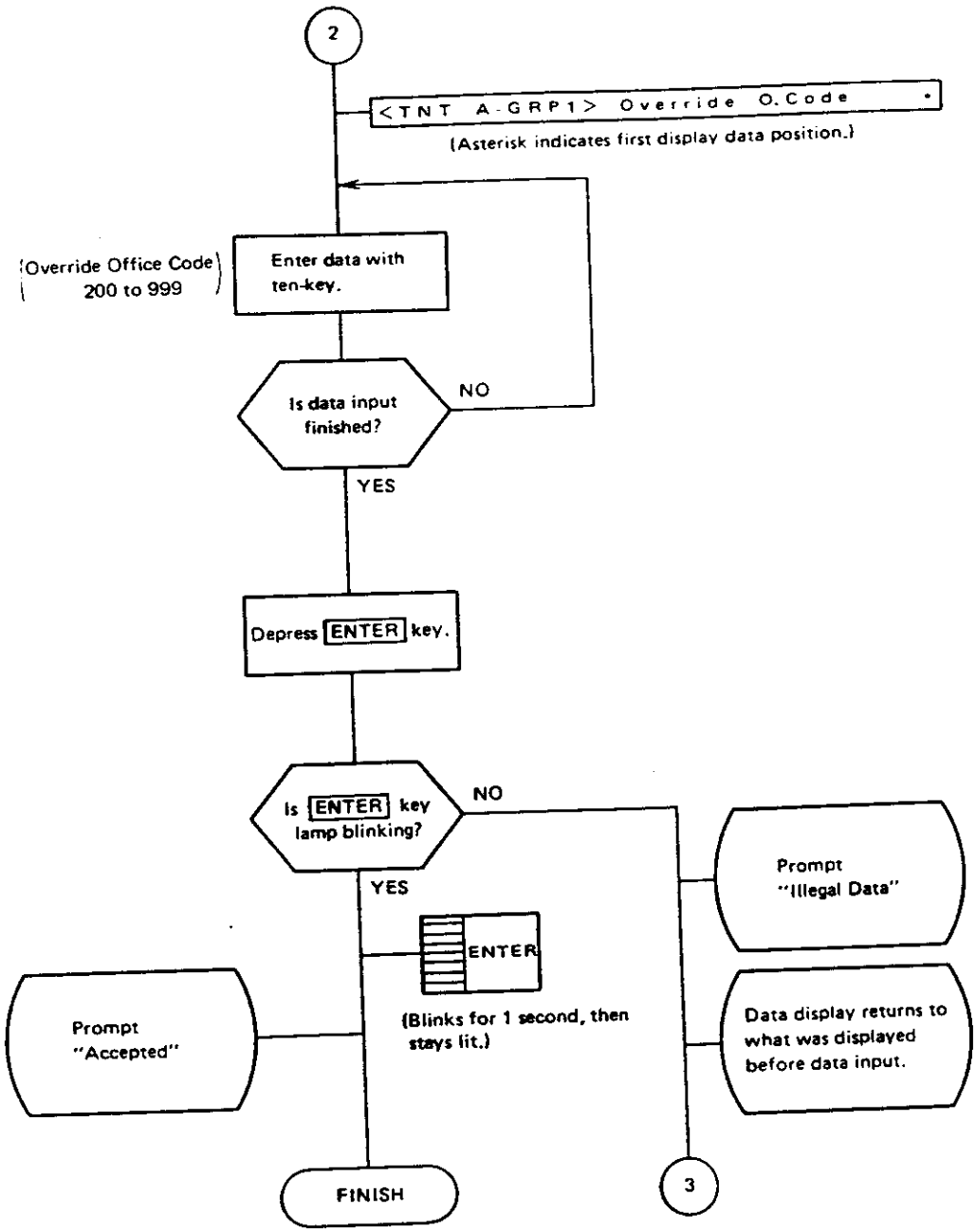
Figure 4.3.7.7.1

4.3.7.8 Override Office Code. (Item 8)

Feature: Setting Override Office Code according to Tenant A/B and Office Group Table No.




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.8.2)
<TNT -GRP > Override O.Code
Prompt "Enter Number"
Enter number with ten-key.
(Tenant A : 1 Tenant B : 2)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.8.3)
(When number is Tenant A.)
<TNT A-GRP > Override O.Code
Enter number with ten-key.
(Office Group Table Number 1 to 4)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.8.1)
(When number is Office Group Table No.1)
<TNT A-GRP1> Override O.Code
Prompt "Enter Data"
2


2
<TNT A-GRP1> Override O.Code *
(Asterisk indicates first display data position.)
(Override Office Code 200 to 999)
Enter data with ten-key.
Is data input finished?
NO
YES
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display

<TNT A-GRP > Override O.Code

Key Lamp

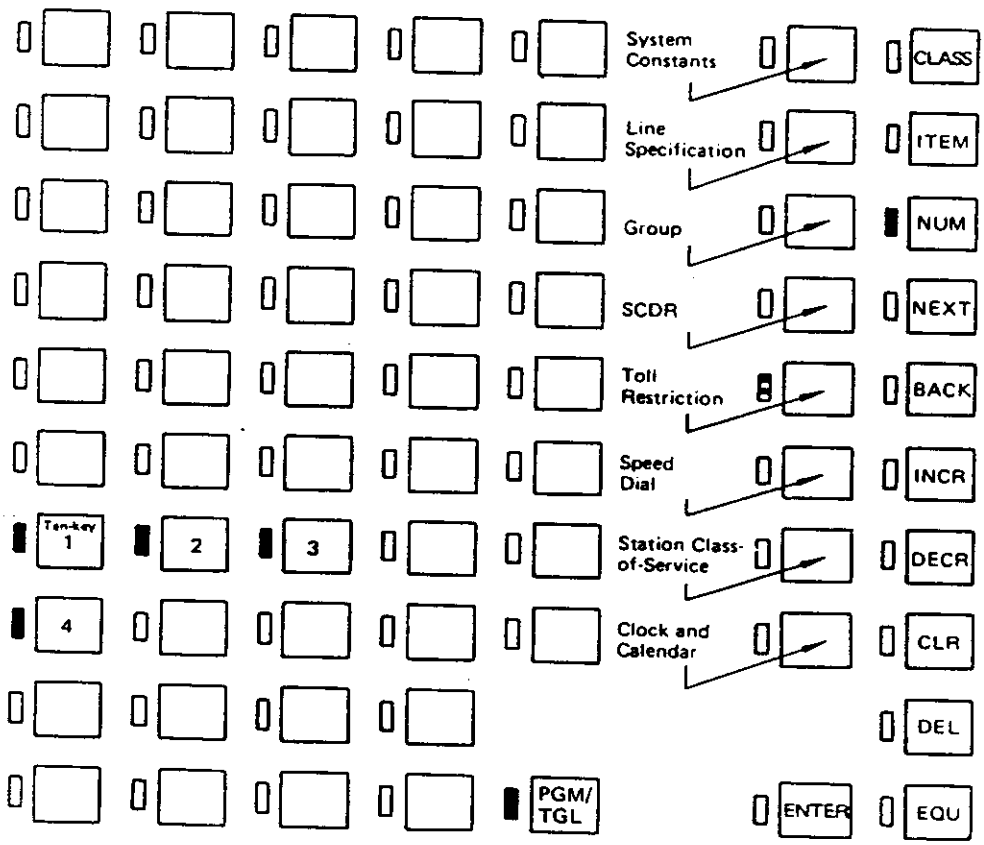
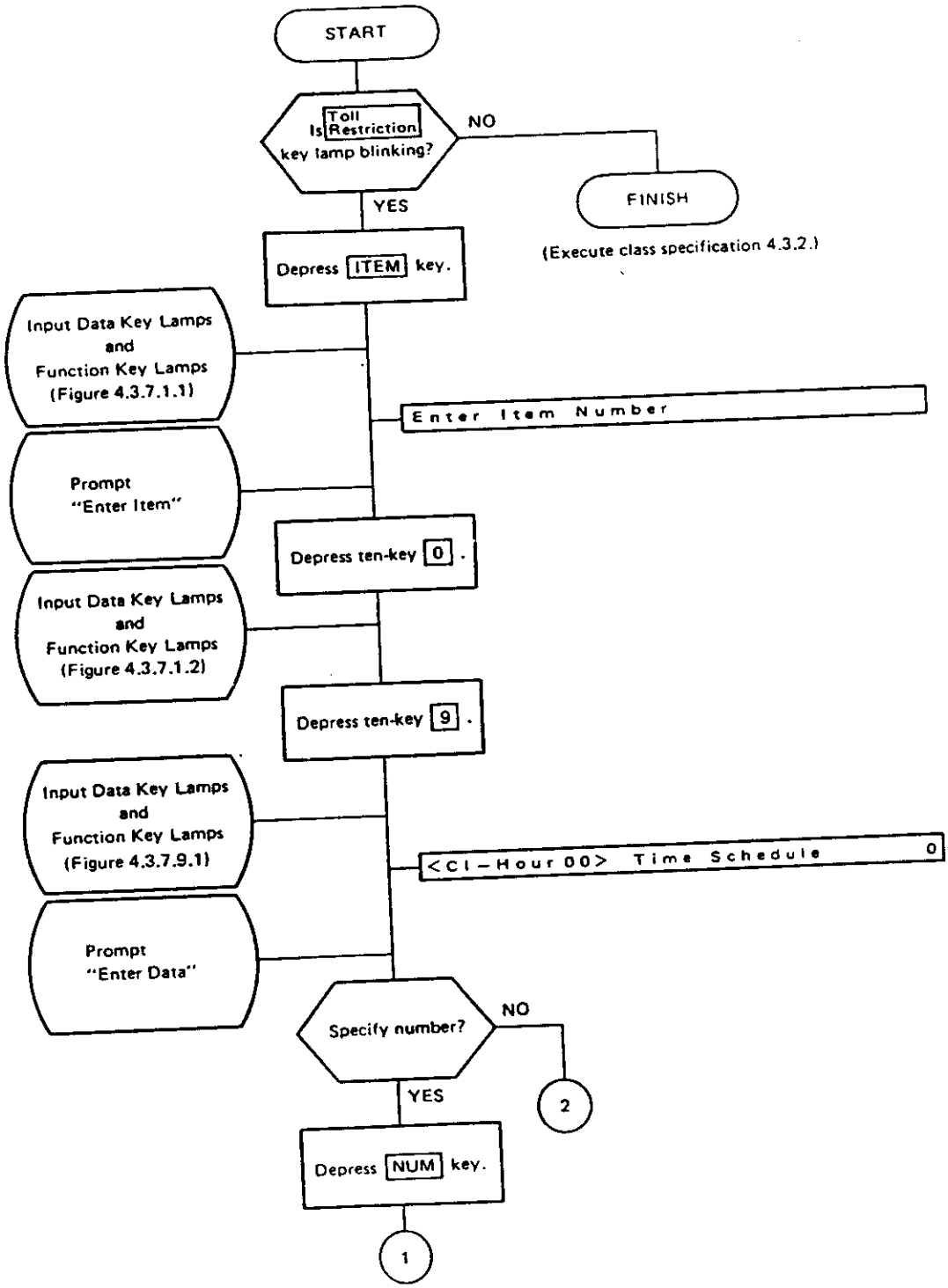


Figure 4.3.7.8.3

4.3.7.9 Time Schedule (Item 9)

Feature: Setting Time Zone according to Condition and Time Zone Hour



Display

<C -Hour > Time Schedule

Key Lamp

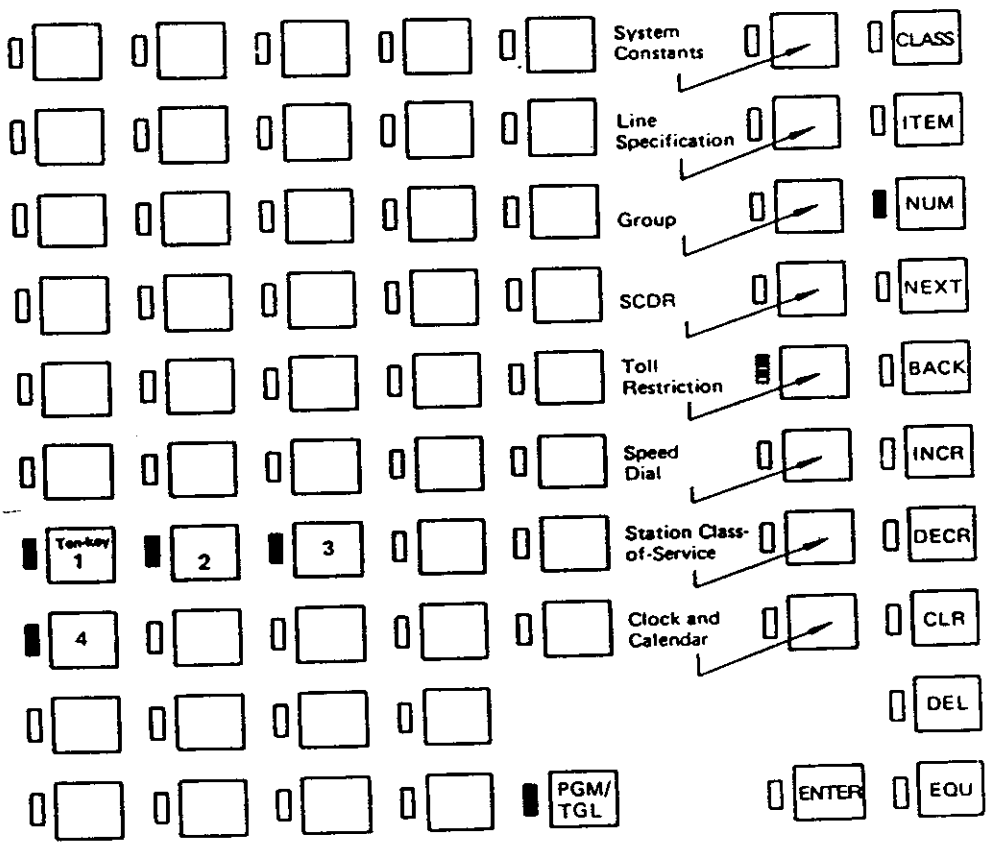


Figure 4.3.7.9.2

Display

<C1-Hour > Time Schedule

Key Lamp

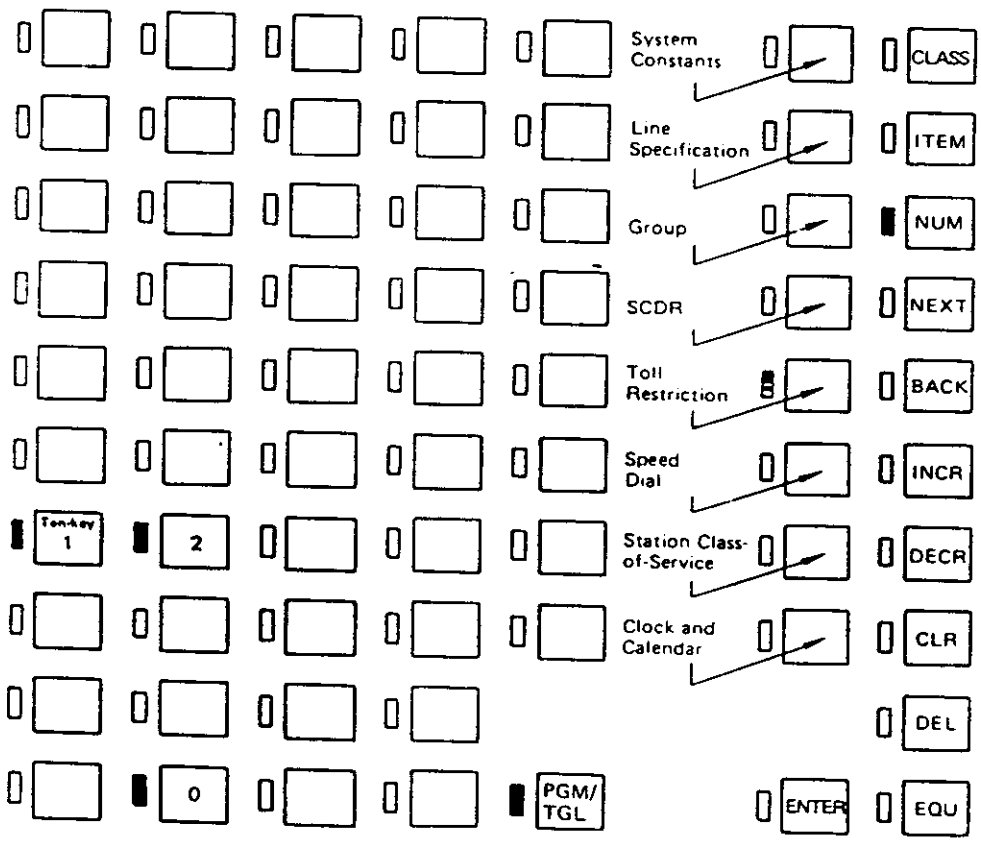
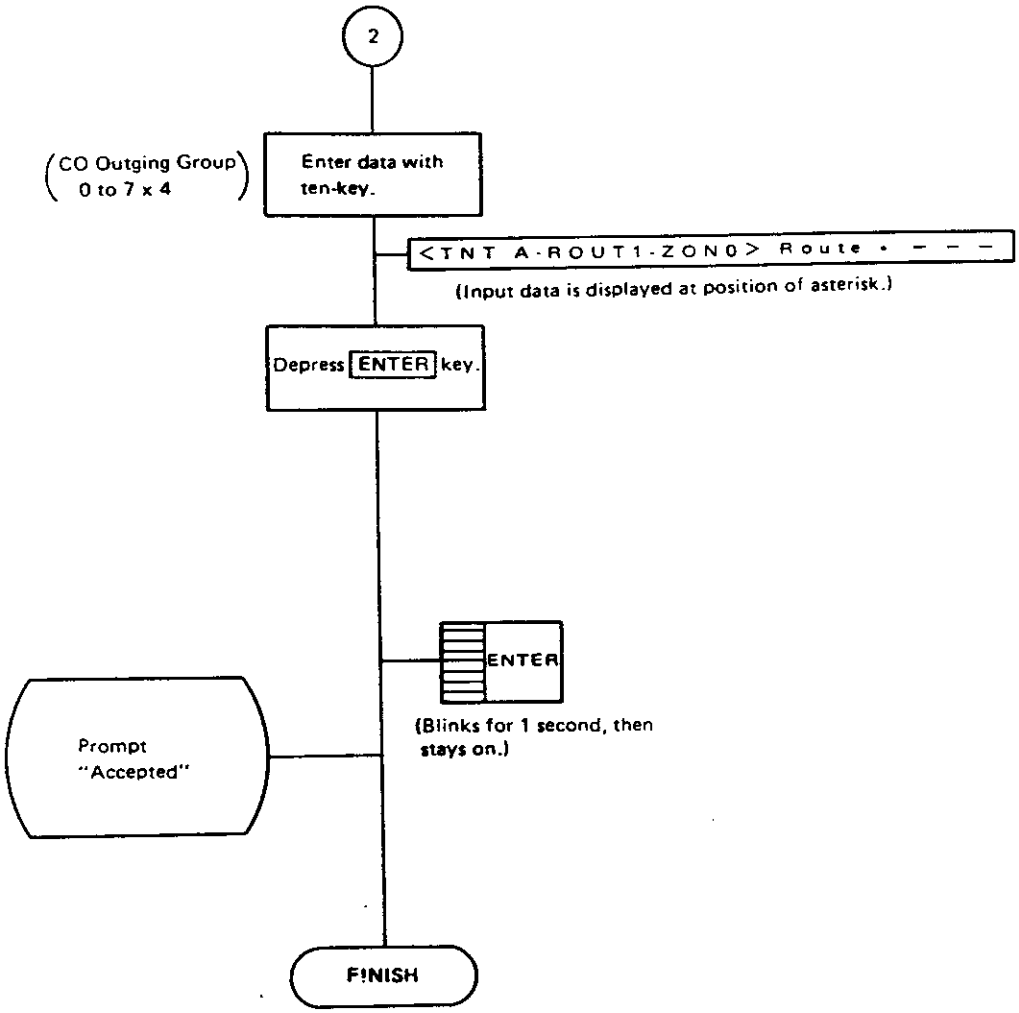
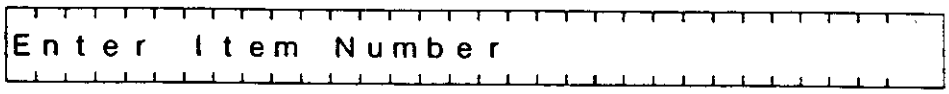


Figure 4.3.7.9.3


2
(CO Outging Group 0 to 7 x 4)
Enter data with ten-key.
<TNT A-ROUT1-ZON0> Route • – – –
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays on.)
Prompt "Accepted"
FINISH

Display



Key Lamp

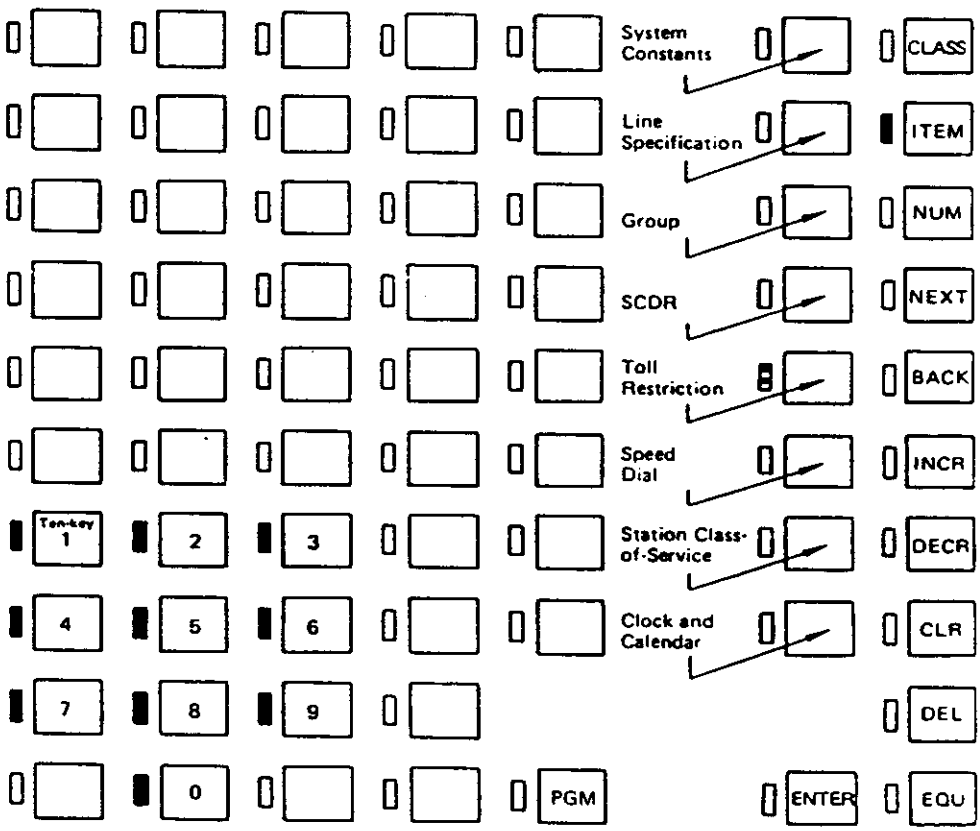


Figure 4.3.7.10.1

Display

<TNT A-ROUT1-ZON0> Route 0-0-0-0

Key Lamp

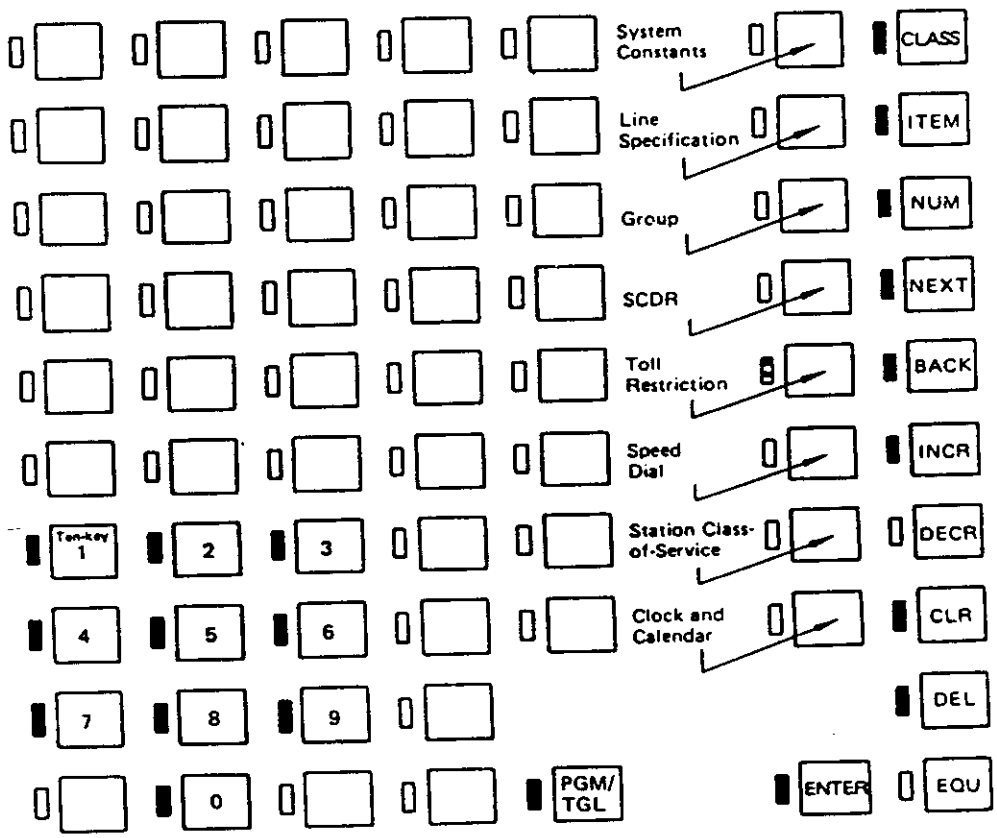
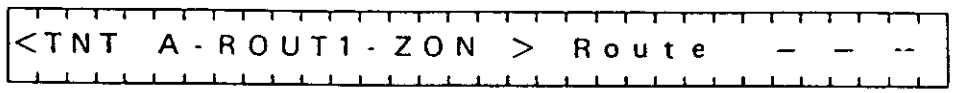


Figure 4.3.7.10.2

Display



Key Lamp

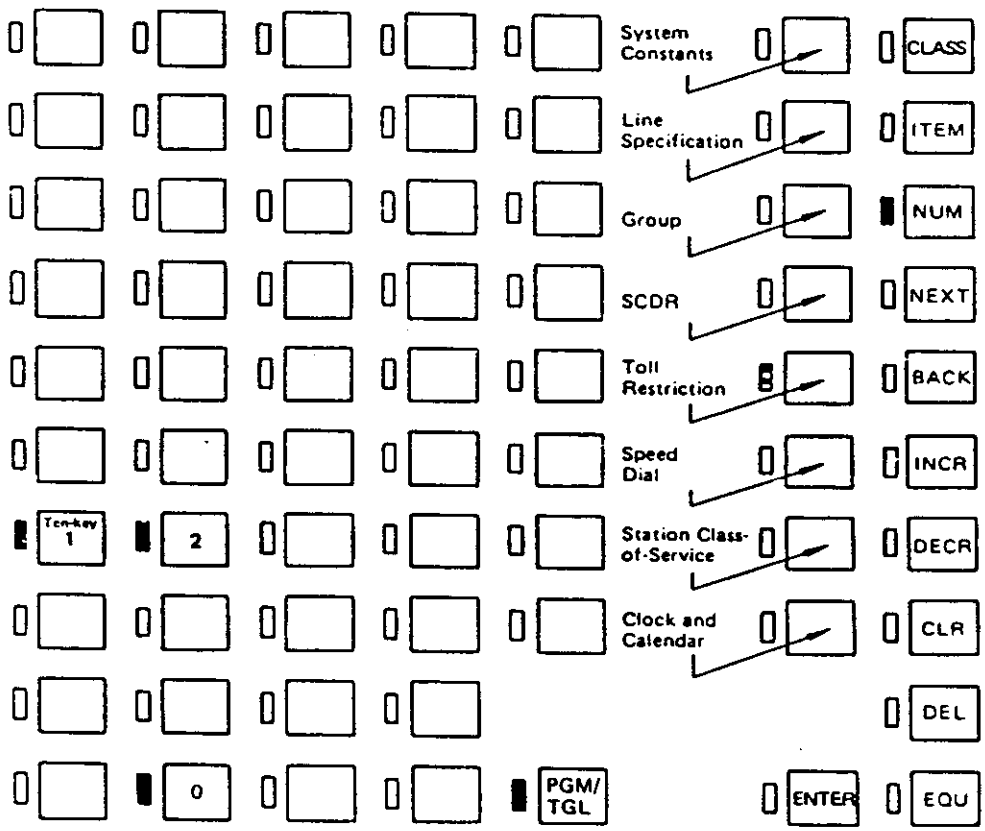
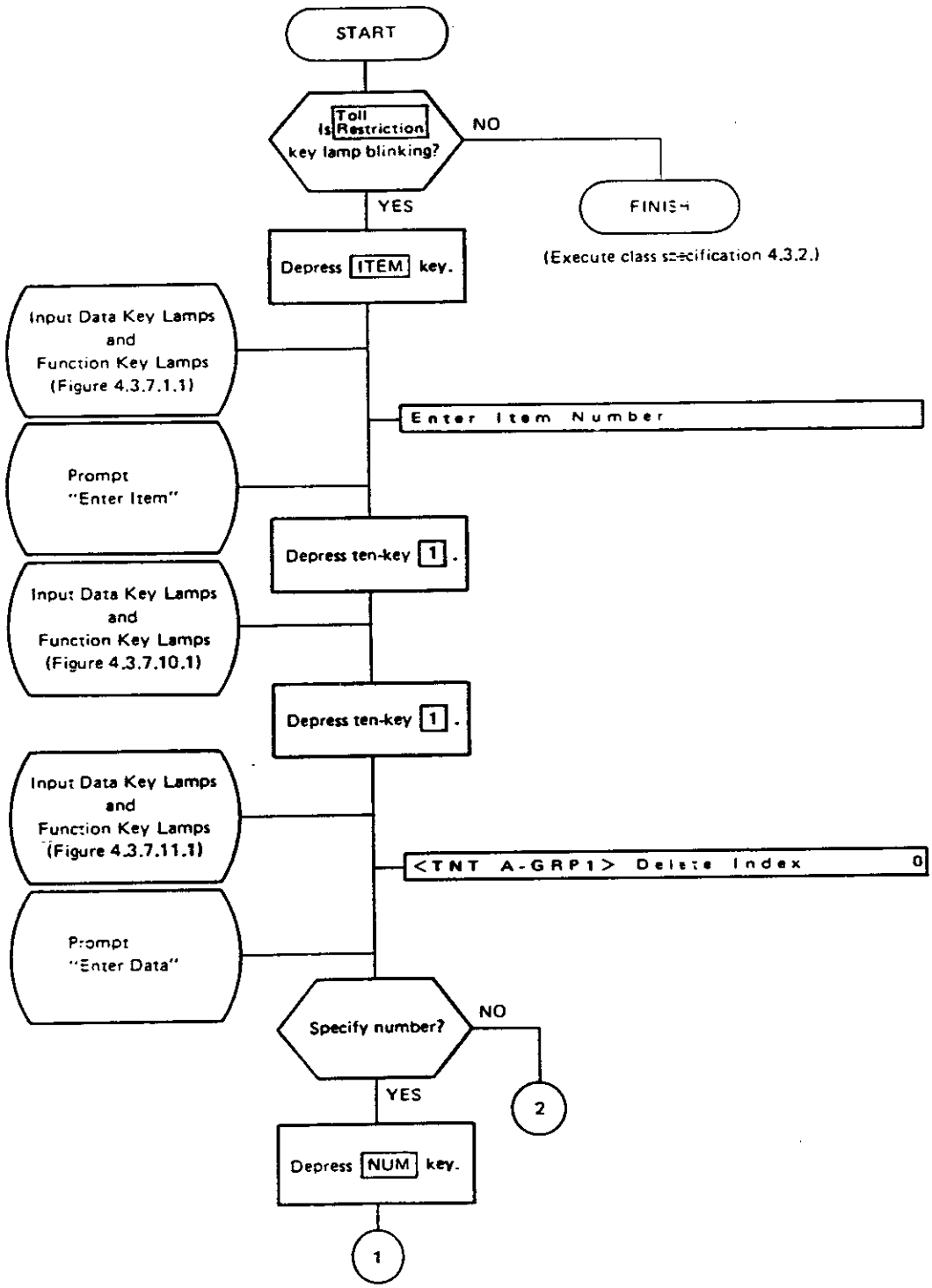
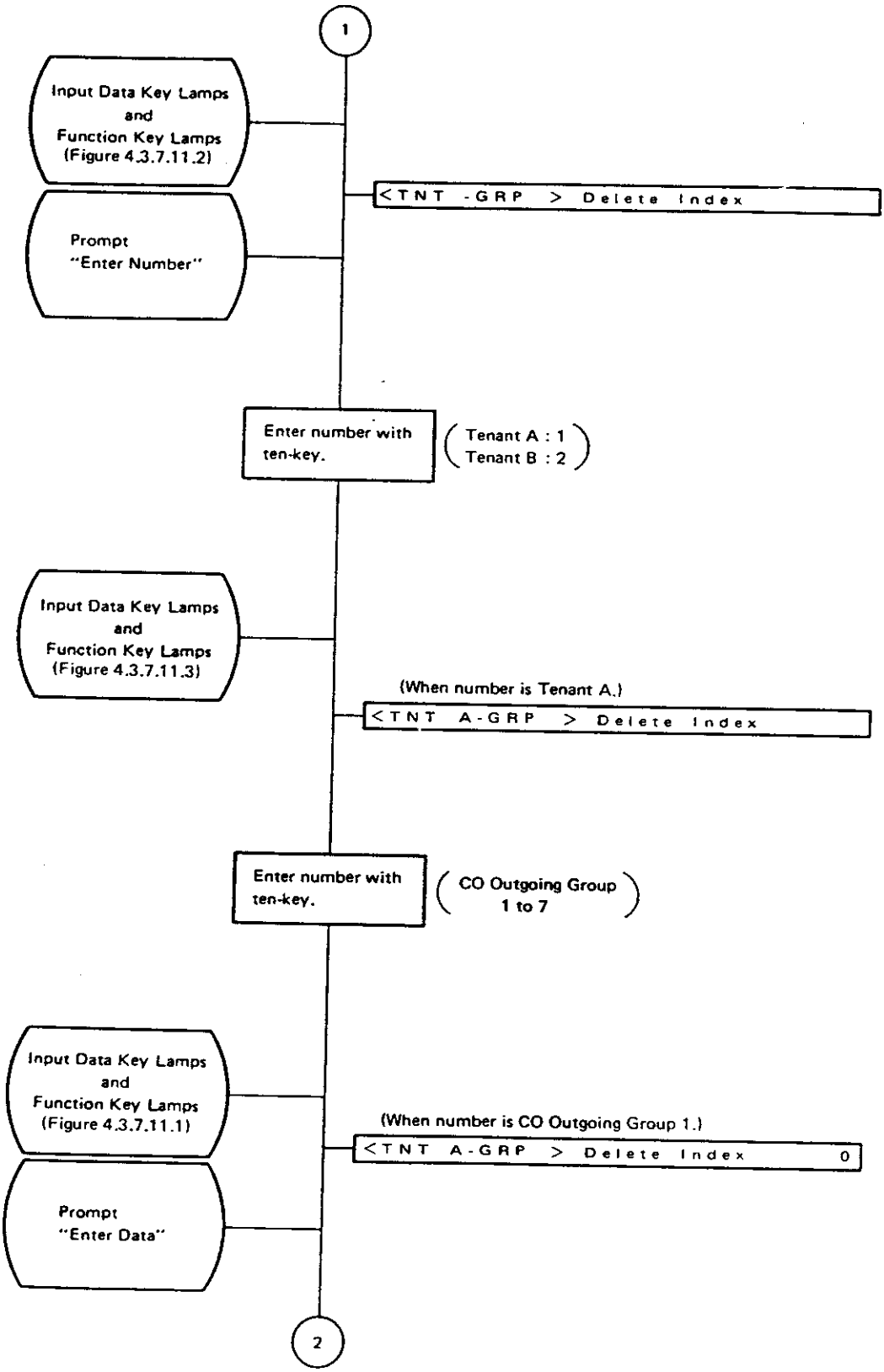


Figure 4.3.7.10.5

4.3.7.11 Delete Index Table (Item 11)

Feature: Setting Delete Data Table No. according to Tenant A/B and CO outgoing Group




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.11.2)
<TNT -GRP > Delete Index
Prompt "Enter Number"
Enter number with ten-key.
(Tenant A : 1 Tenant B : 2)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.11.3)
(When number is Tenant A.)
<TNT A-GRP > Delete Index
Enter number with ten-key.
(CO Outgoing Group 1 to 7)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.11.1)
(When number is CO Outgoing Group 1.)
<TNT A-GRP > Delete Index 0
Prompt "Enter Data"
2

Display

```
<TNT A-GRP > Delete Index
```

Key Lamp

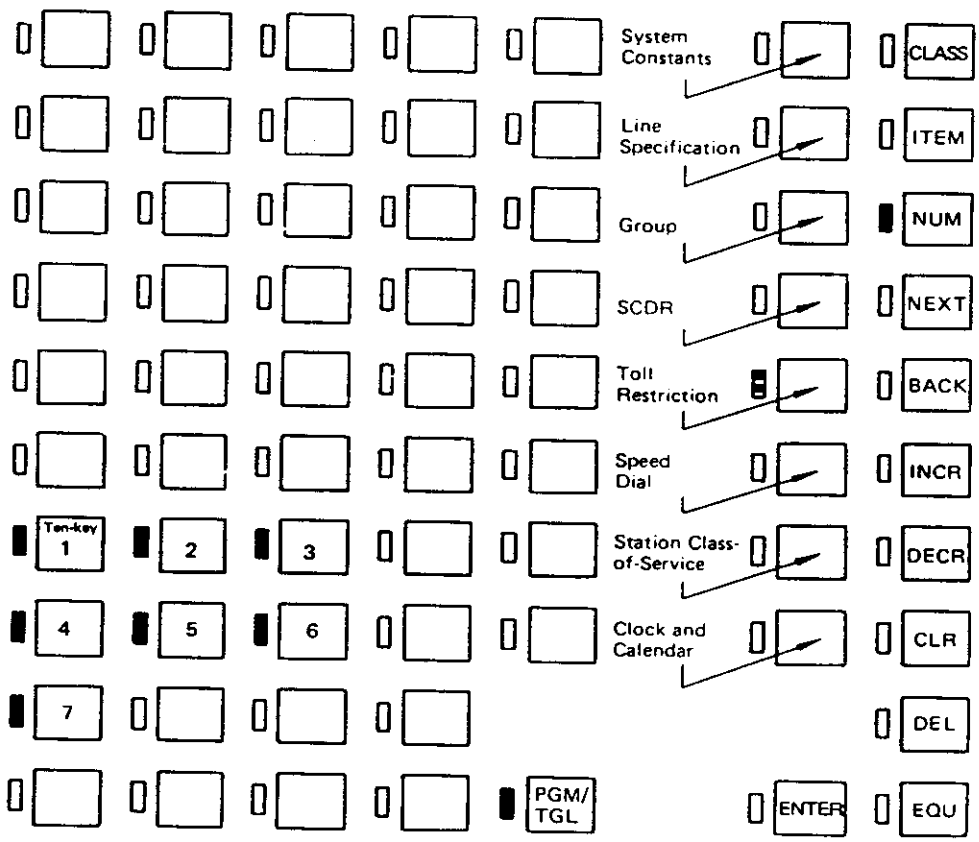
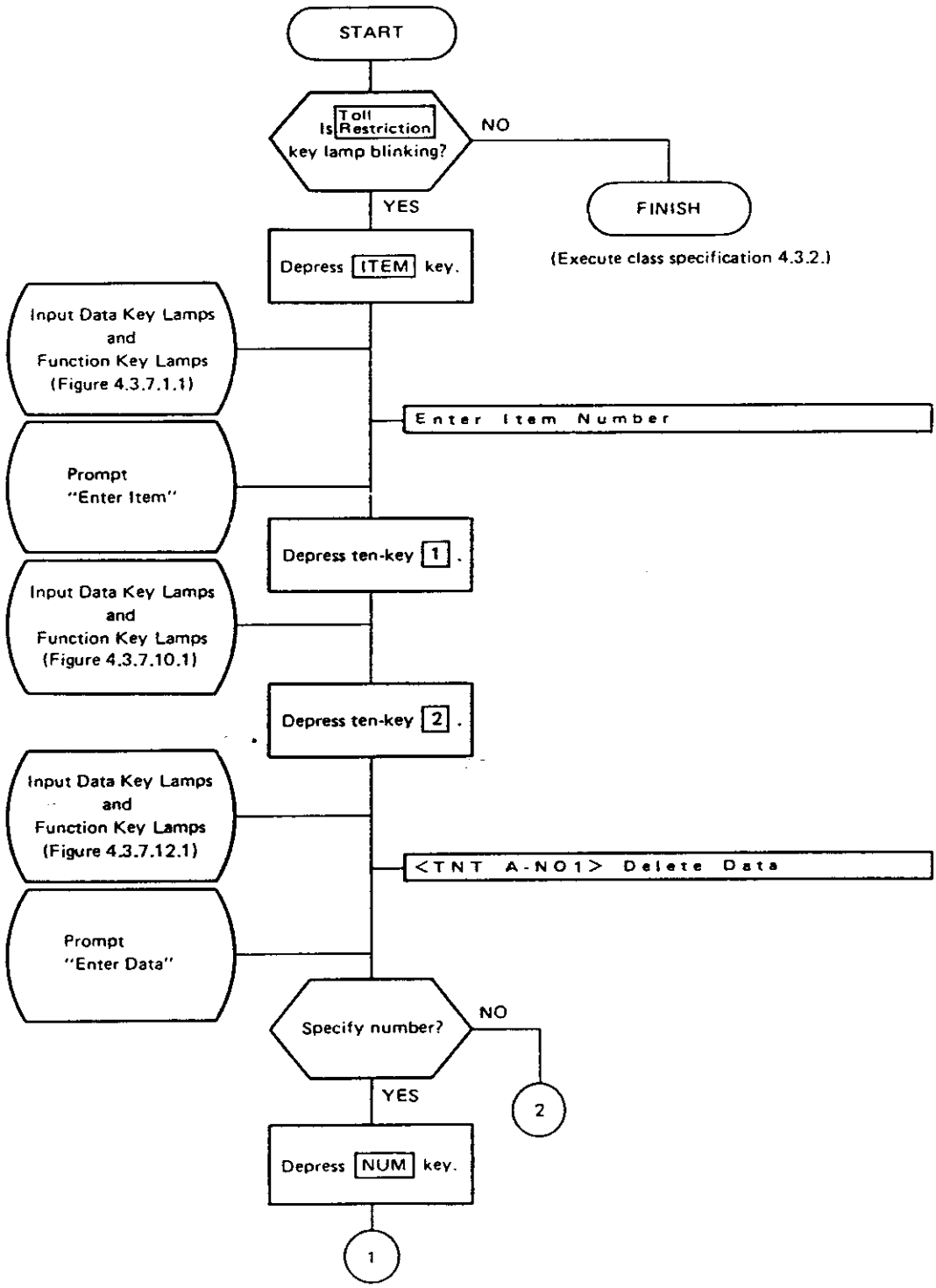


Figure 4.3.7.11.3

4.3.7.12 Delete Data Table (Item 12)

Feature: Setting Area Code according to Tenant A/B and Delete Data Table No.



Display

```
<TNT   -NO >  Delete  Data
```

Key Lamp

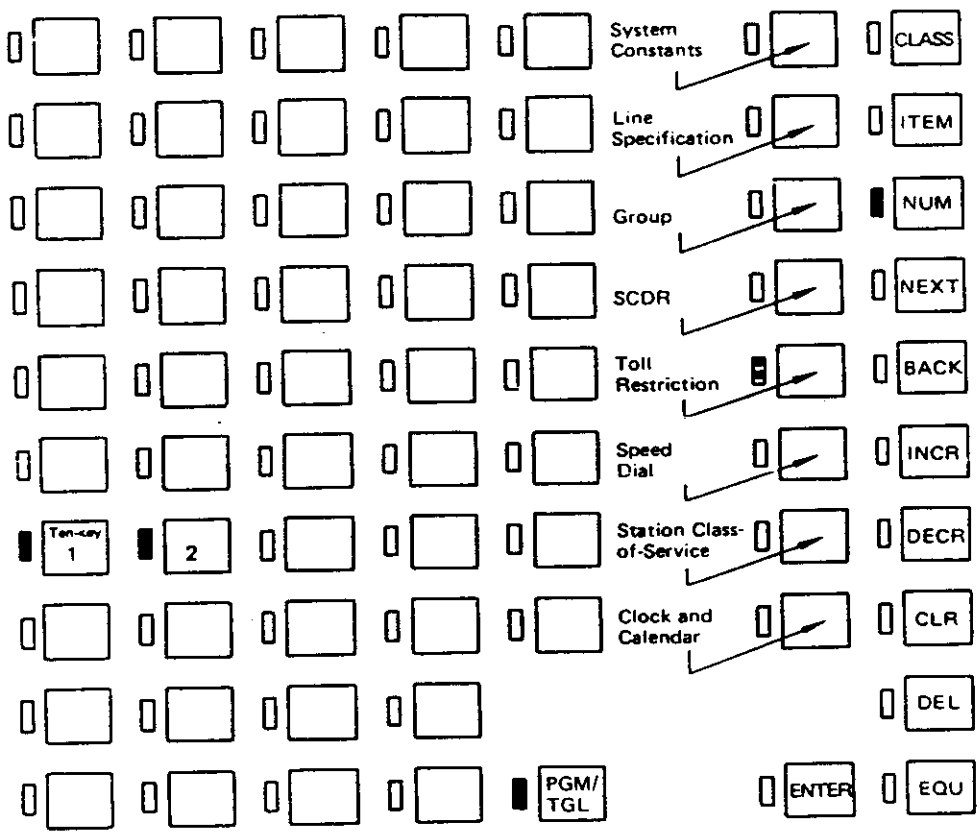


Figure 4.3.7.12.2

Display

<TNT A-NO > Delete Data

Key Lamp

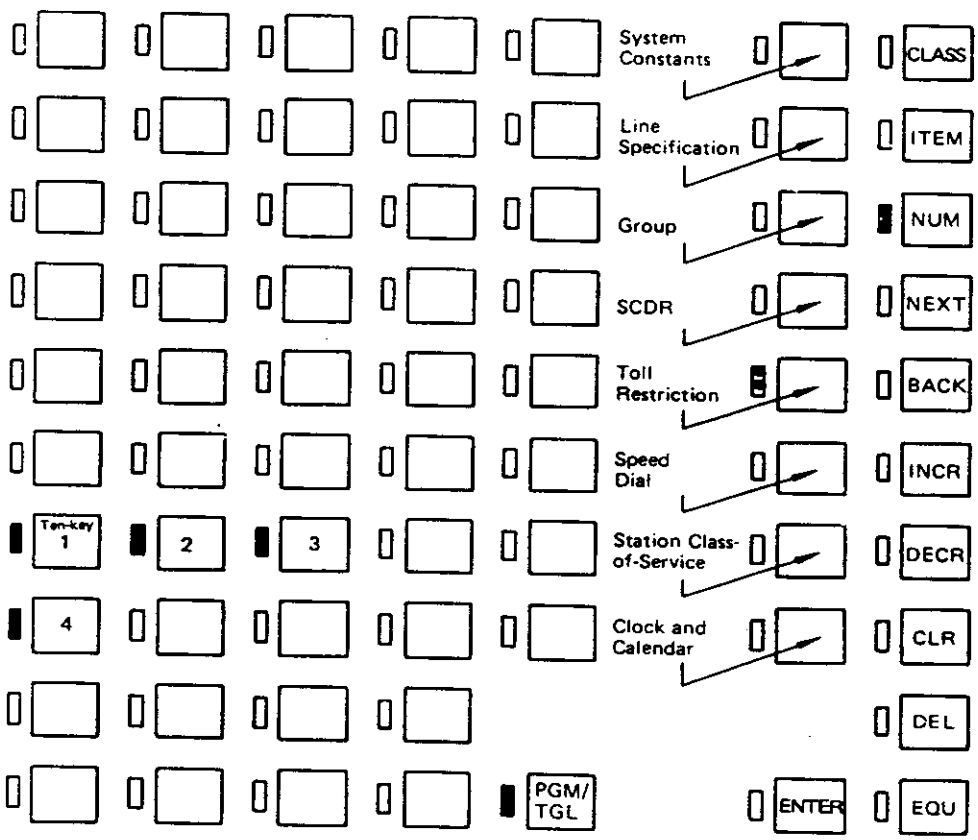
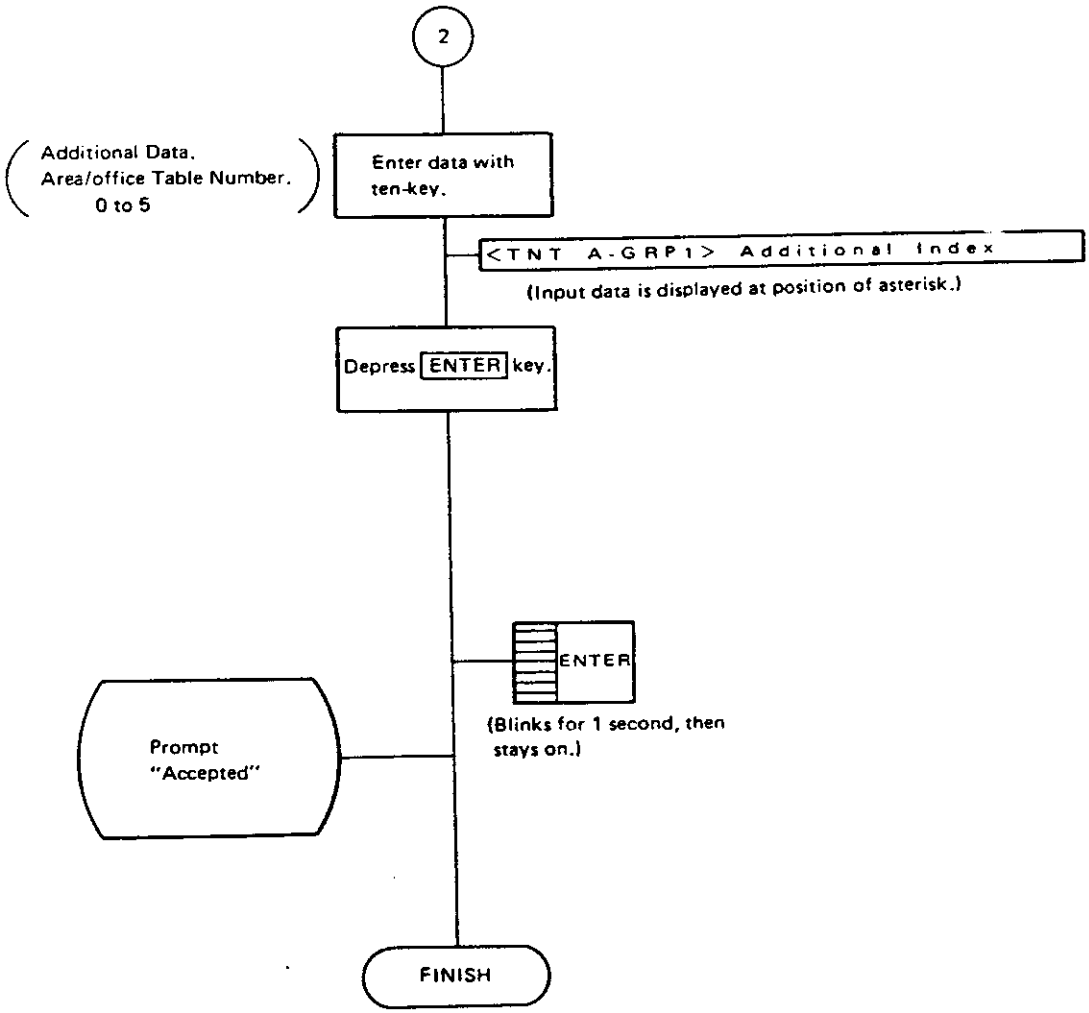


Figure 4.3.7.12.3


2
Additional Data.
Area/office Table Number.
0 to 5
Enter data with ten-key.
<TNT A-GRP1> Additional Index
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays on.)
Prompt "Accepted"
FINISH

Display

<TNT A-GRP 1> Additional Index 0

Key Lamp

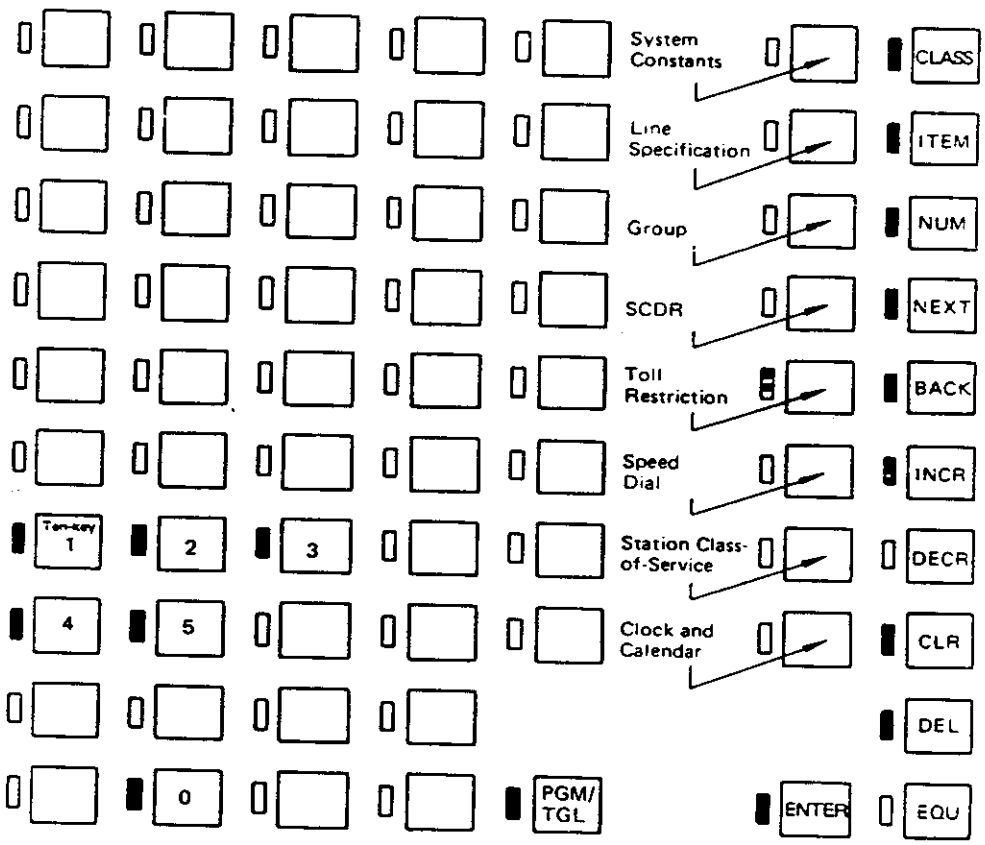


Figure 4.3.7.13.1

Display

<TNT -GRP > Additional Index

Key Lamp

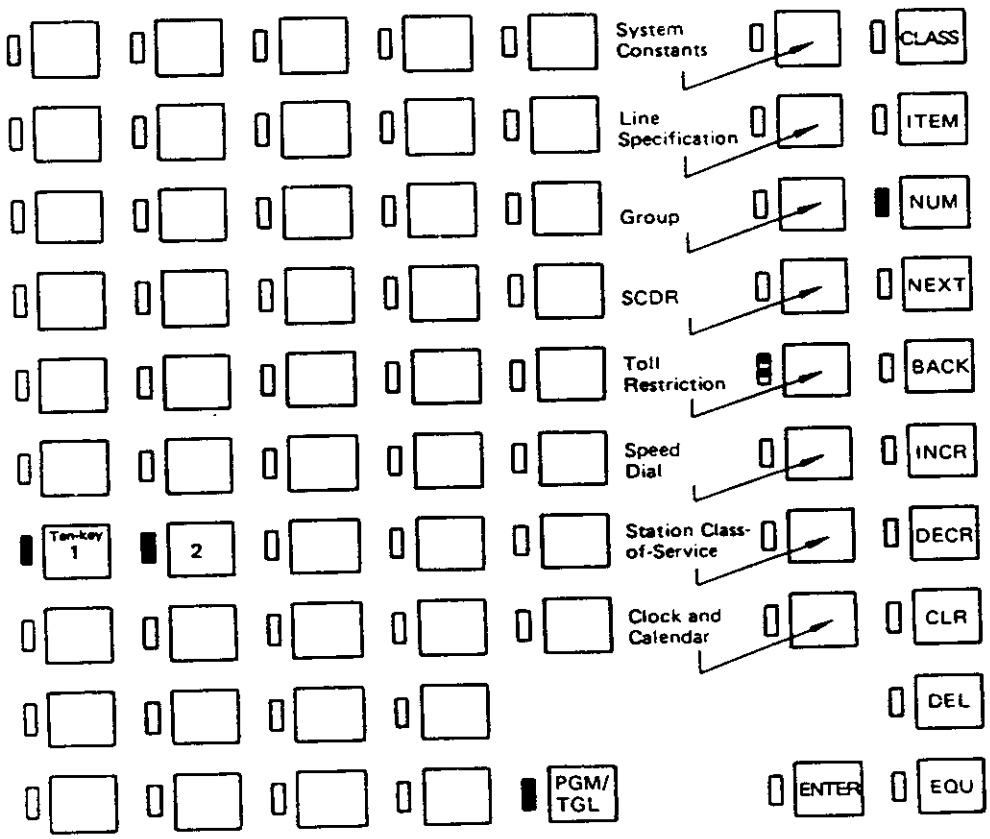
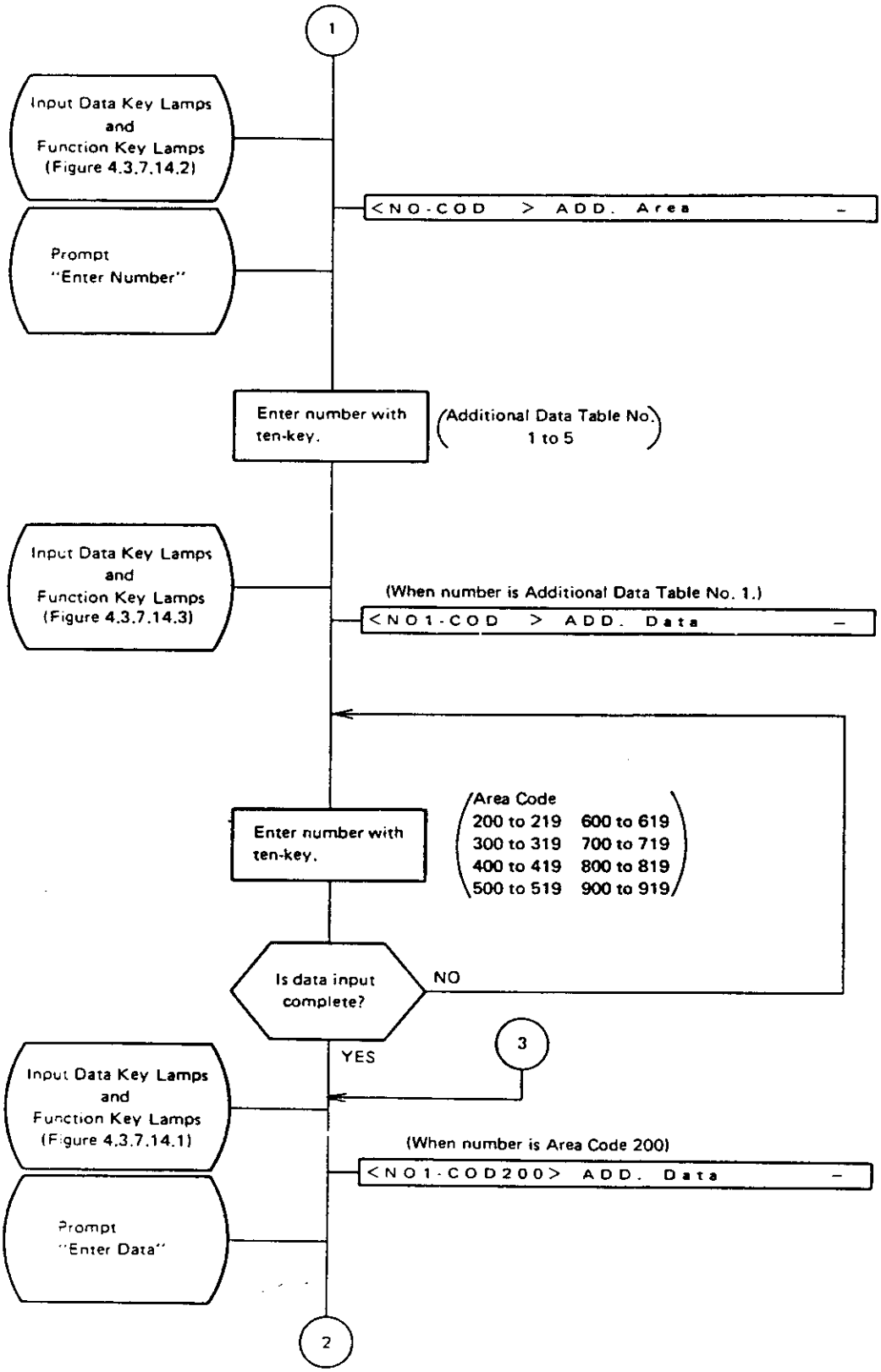
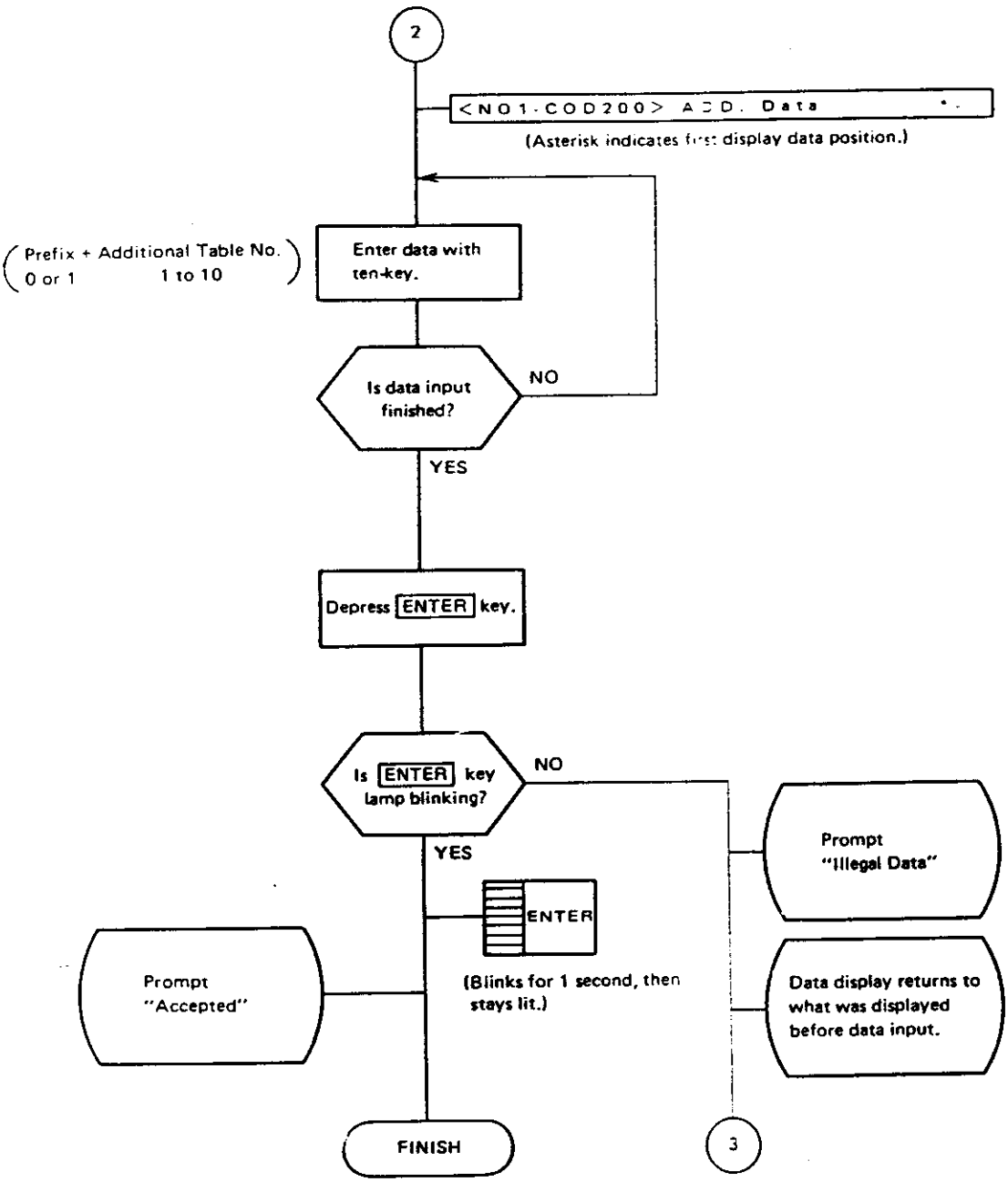


Figure 4.3.7.13.2


1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.14.2)
<NO-COD > ADD. Area _
Prompt "Enter Number"
Enter number with ten-key.
(Additional Data Table No. 1 to 5)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.14.3)
(When number is Additional Data Table No. 1.)
<NO1-COD > ADD. Data _
Enter number with ten-key.
Area Code
200 to 219 600 to 619
300 to 319 700 to 719
400 to 419 800 to 819
500 to 519 900 to 919
Is data input complete?
NO
YES
3
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.14.1)
(When number is Area Code 200)
<NO1-COD200> ADD. Data _
Prompt "Enter Data"
2


2
<NO1-COD200> ADD. Data *
(Asterisk indicates first display data position.)
(Prefix + Additional Table No.
0 or 1 1 to 10)
Enter data with ten-key.
Is data input finished?
NO
YES
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display

<NO1-COD200> ADD. Area 0-00

Key Lamp

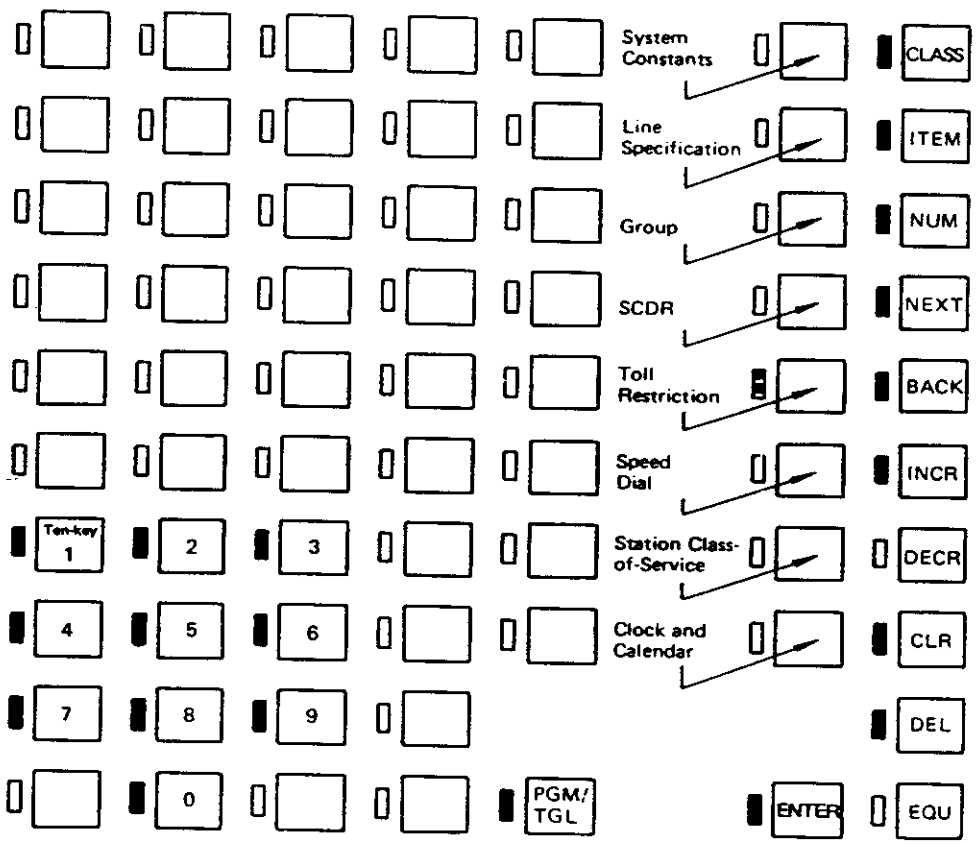
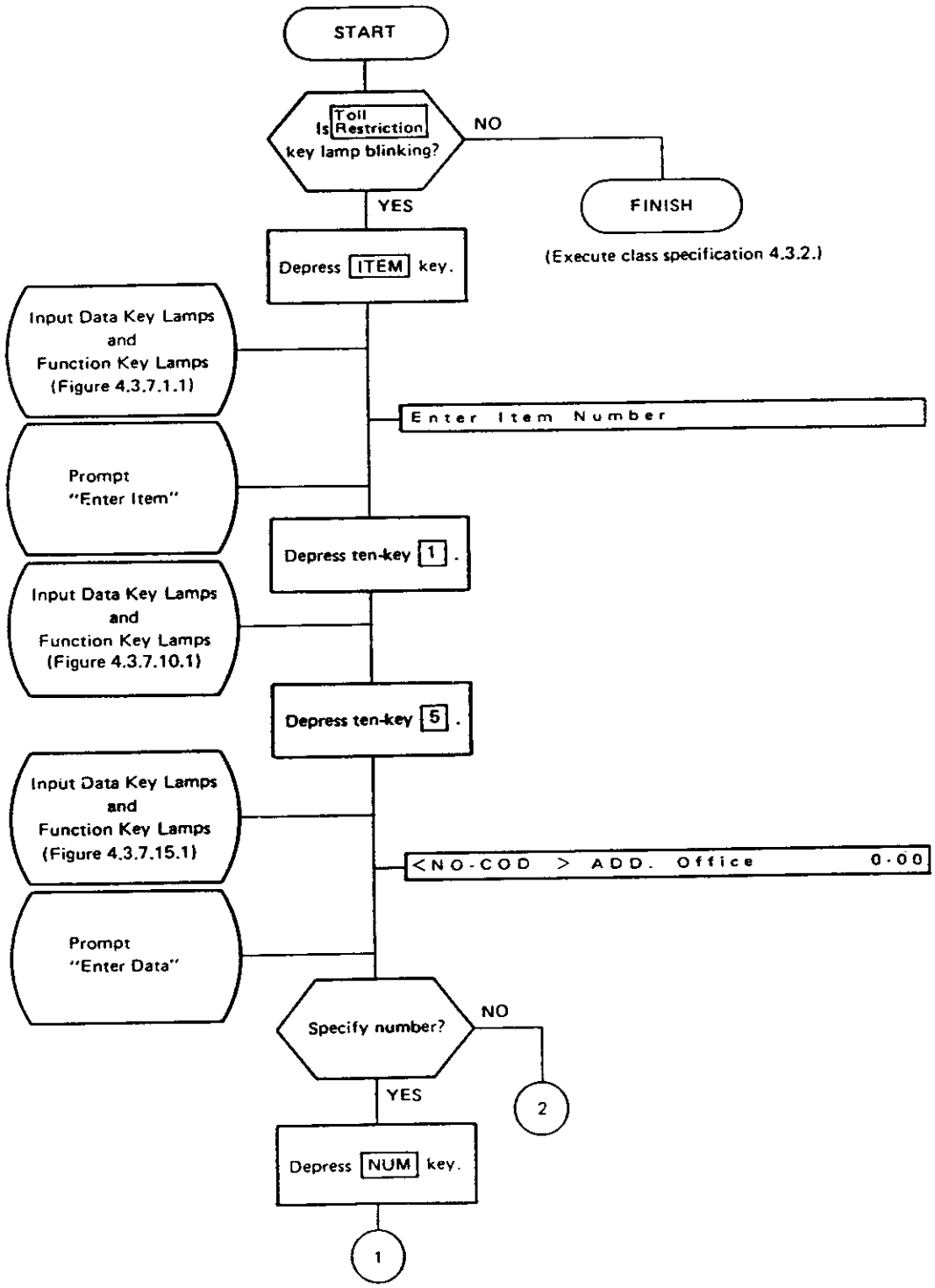
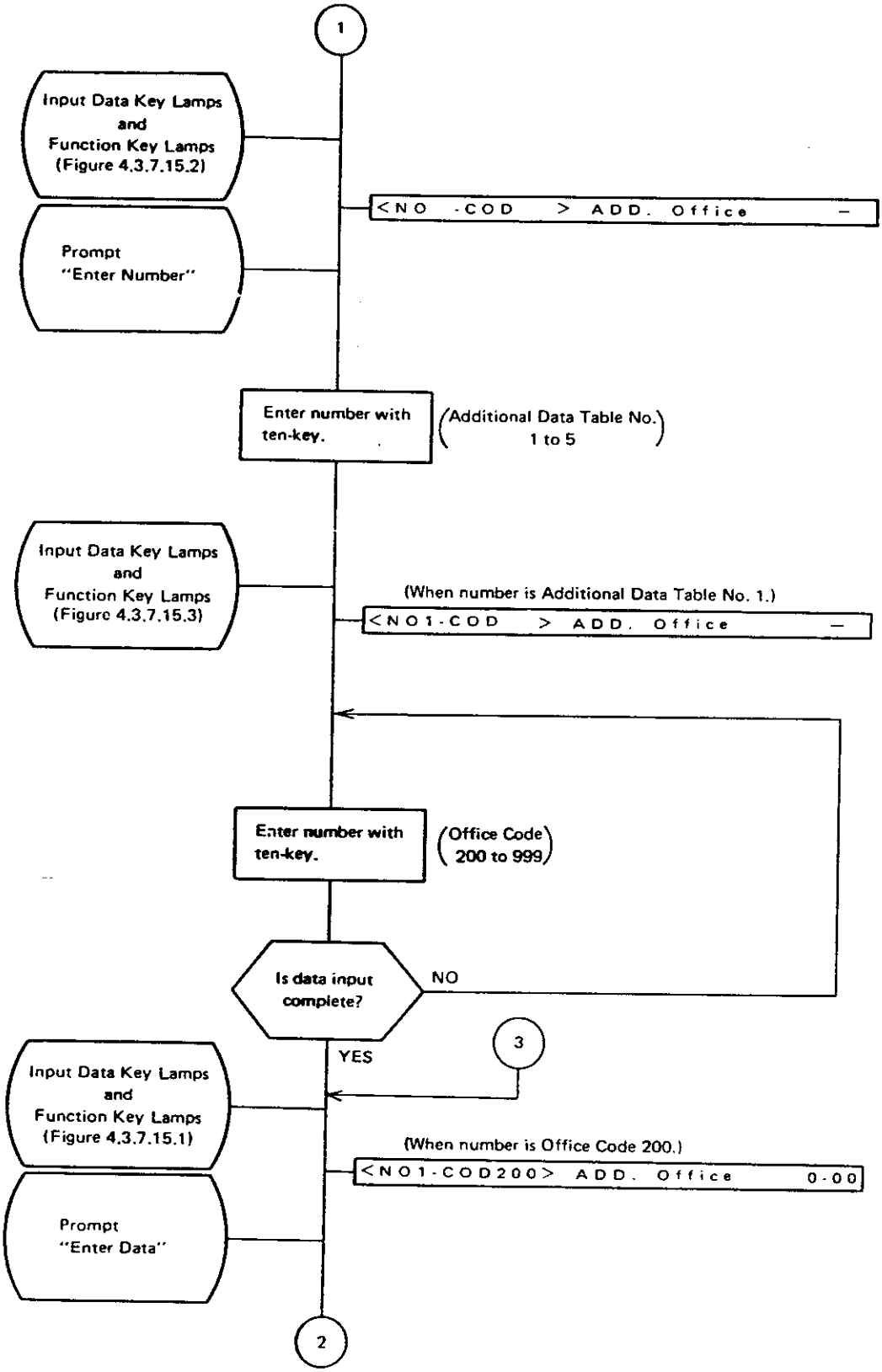


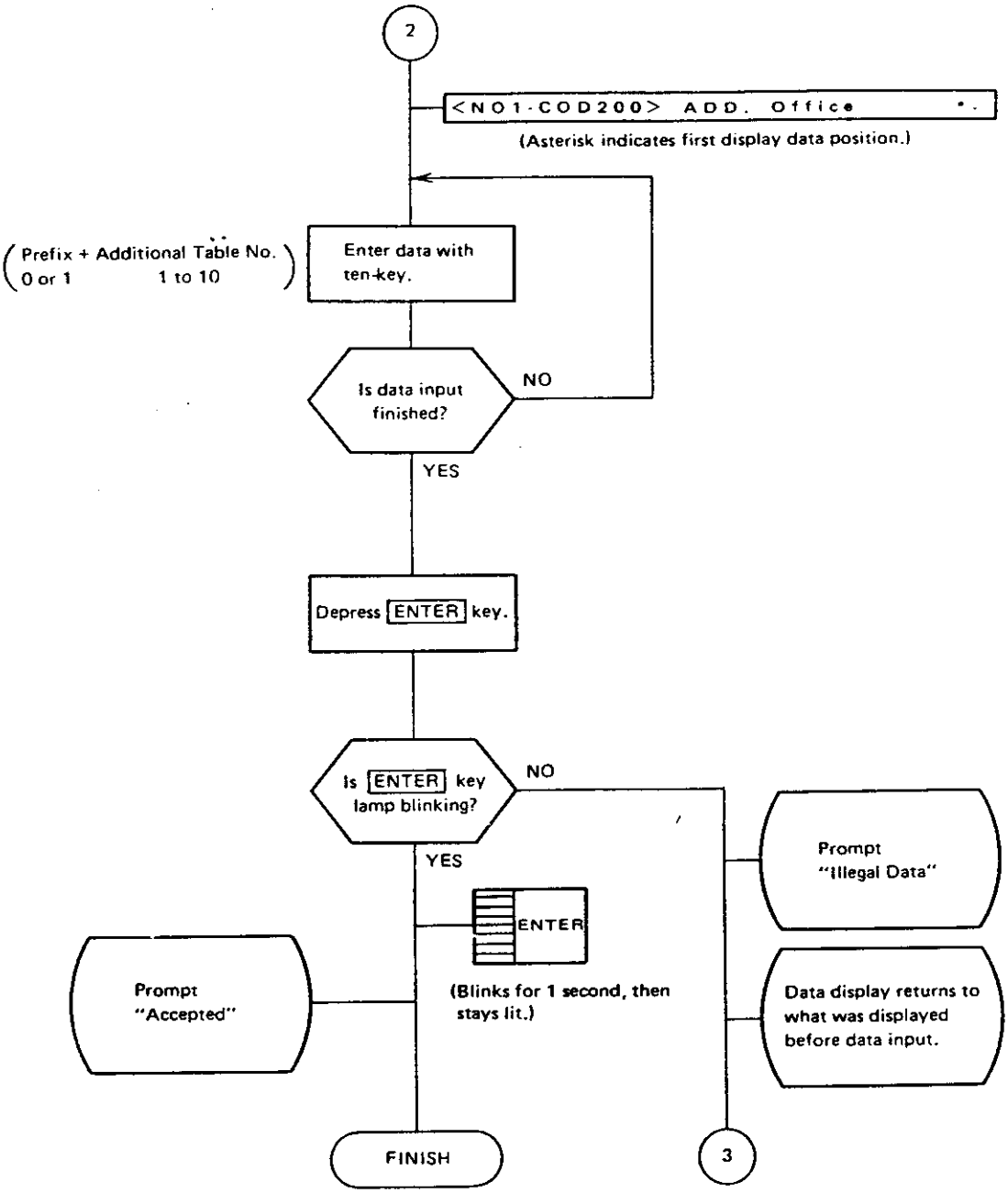
Figure 4.3.7.14.1

4.3.7.15 Additional Data Office Table (Item 15)

Feature: Setting Prefix and Additional Table No. according to Additional Table No. and Office Code.




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.15.2)
<NO -COD > ADD. Office –
Prompt "Enter Number"
Enter number with ten-key.
(Additional Data Table No. 1 to 5)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.15.3)
(When number is Additional Data Table No. 1.)
<NO1-COD > ADD. Office –
Enter number with ten-key.
(Office Code 200 to 999)
Is data input complete?
NO
YES
3
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.15.1)
(When number is Office Code 200.)
<NO1-COD200> ADD. Office 0-00
Prompt "Enter Data"
2


2
<NO1-COD200> ADD. Office *.
(Asterisk indicates first display data position.)
(Prefix + Additional Table No.
0 or 1 1 to 10)
Enter data with ten-key.
Is data input finished?
NO
YES
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display

<NO1-COD > ADD. Office .

Key Lamp

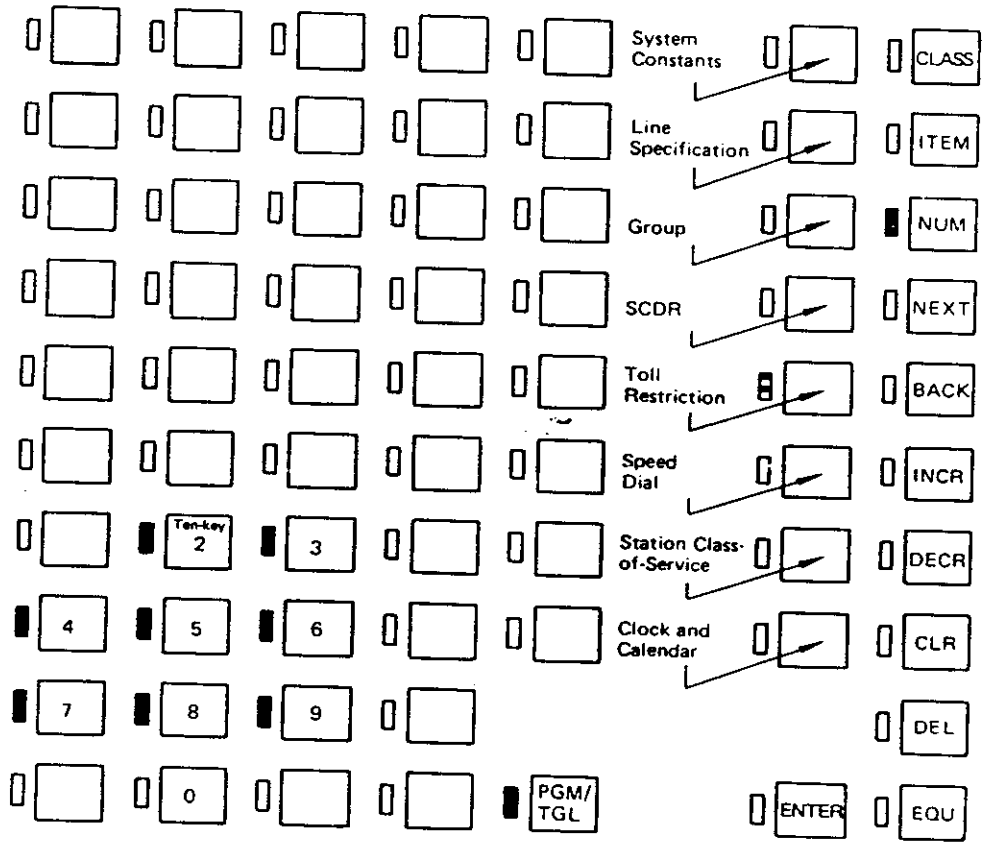
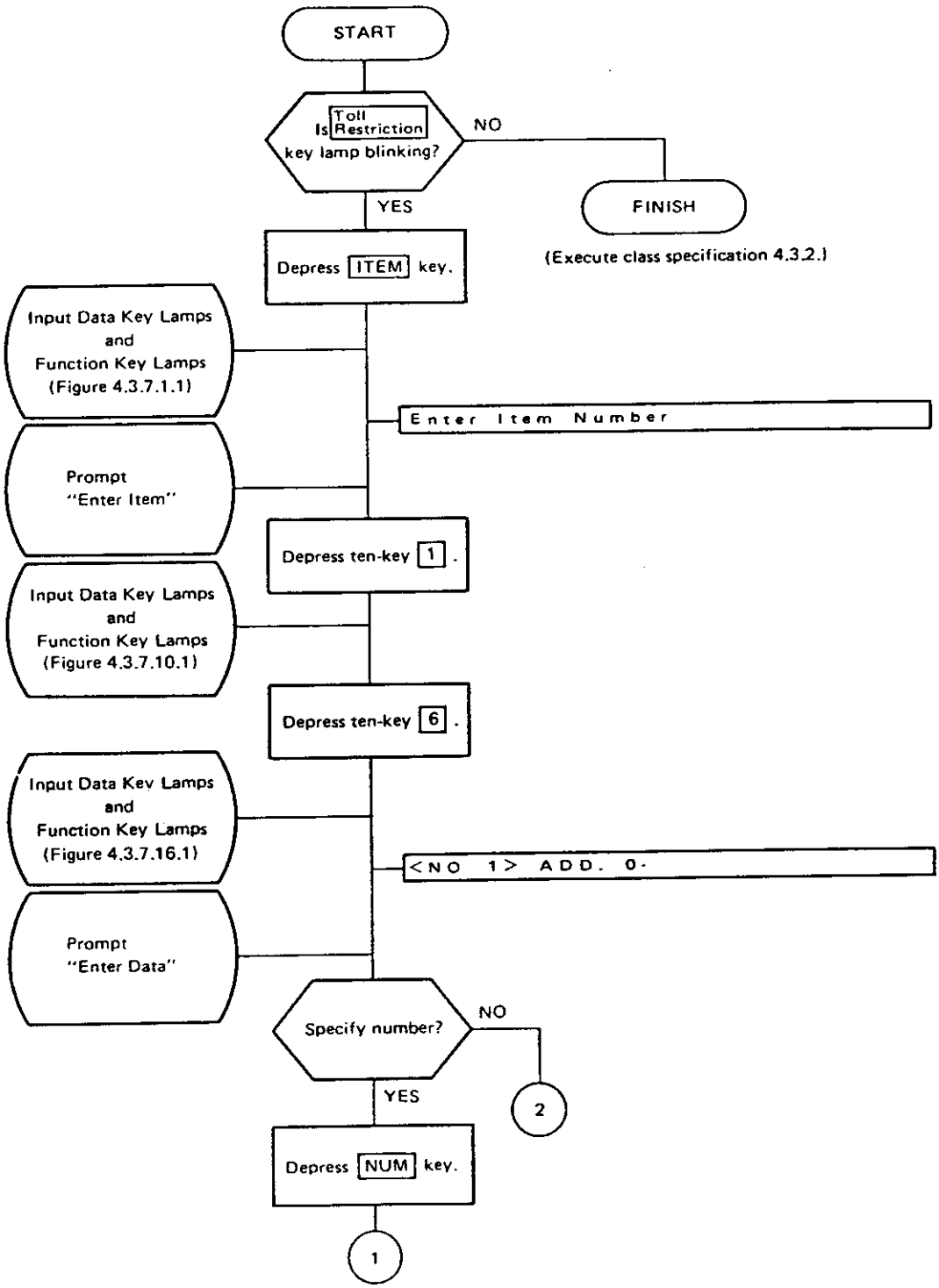
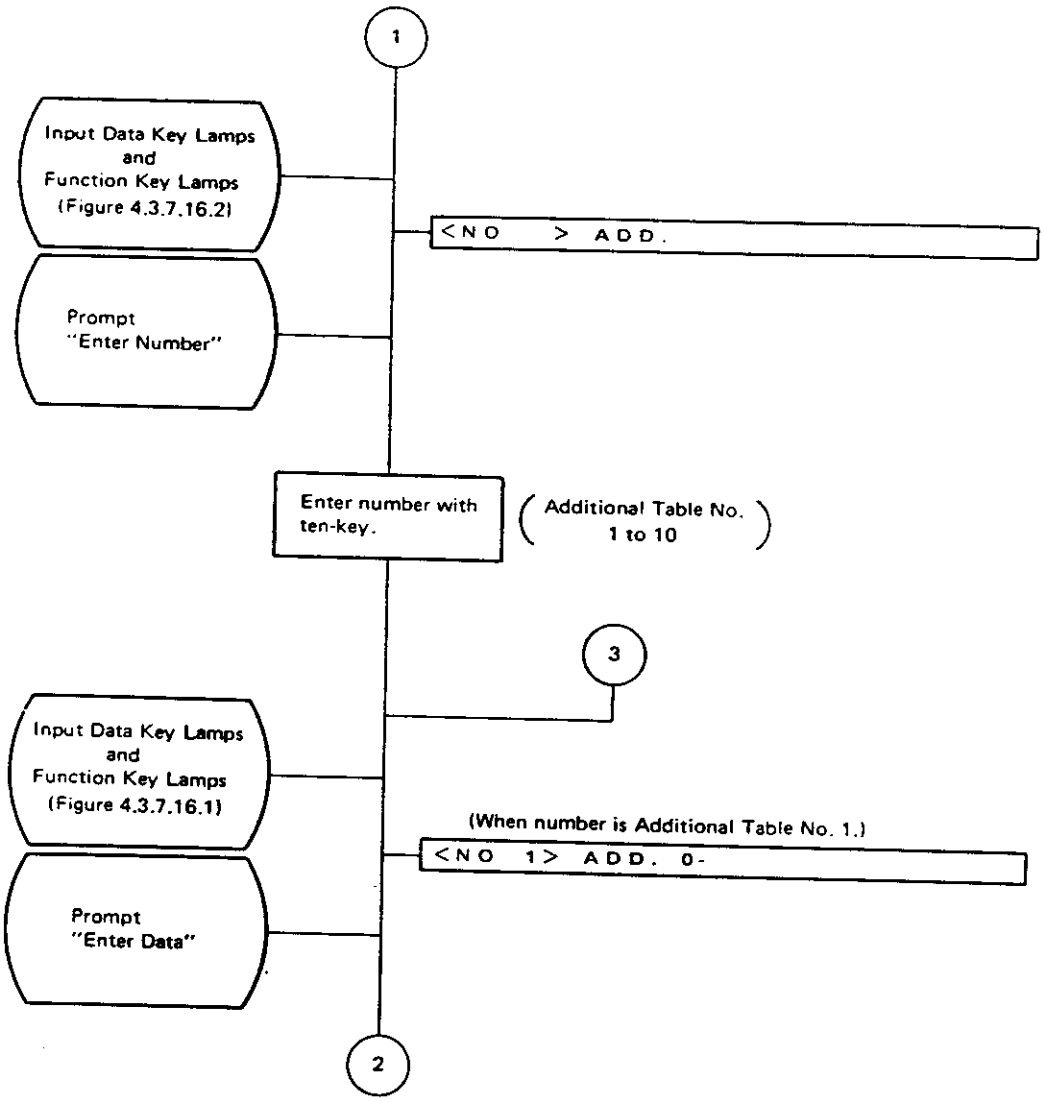


Figure 4.3.7.15.3

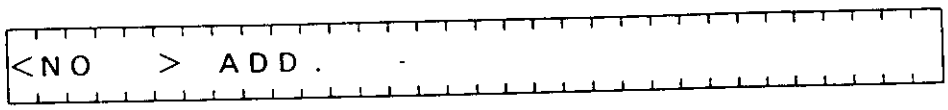
4.3.7.16 Additional Table (Item 16)

Feature: Setting Additional Flag and Additional Dial according to Additional Table No.




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.16.2)
<NO > ADD.
Prompt "Enter Number"
Enter number with ten-key.
Additional Table No. 1 to 10
3
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.16.1)
(When number is Additional Table No. 1.)
<NO 1> ADD. 0-
Prompt "Enter Data"
2

Display



Key Lamp

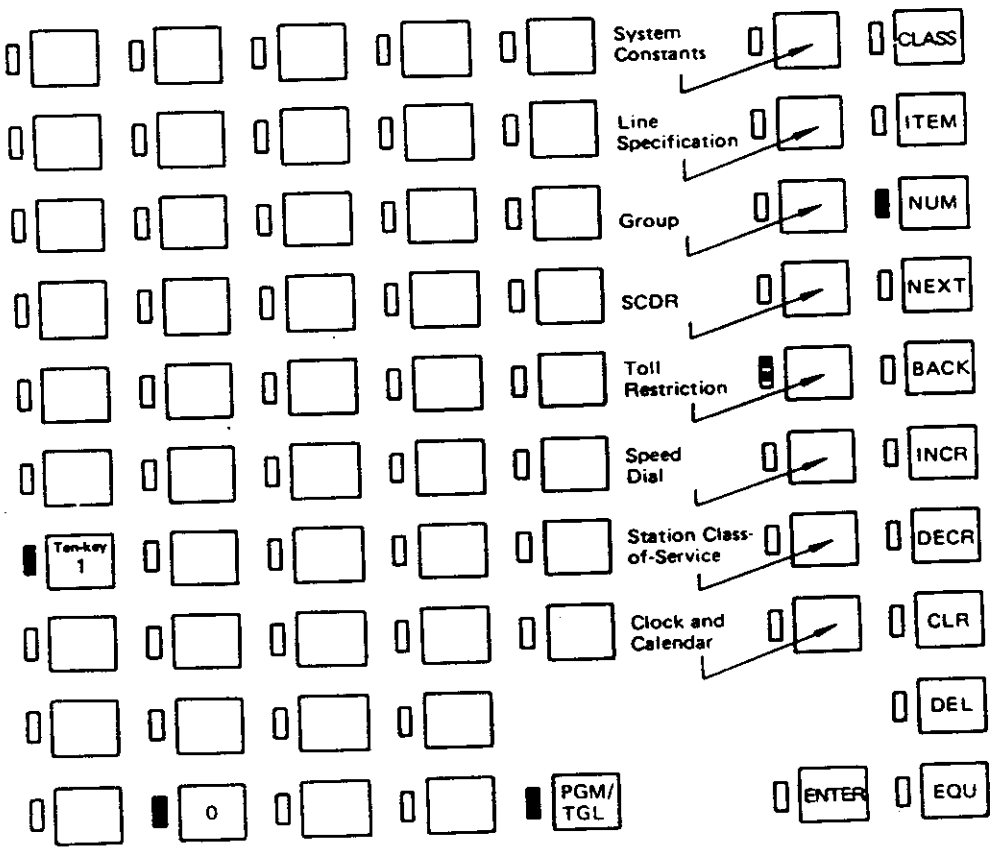
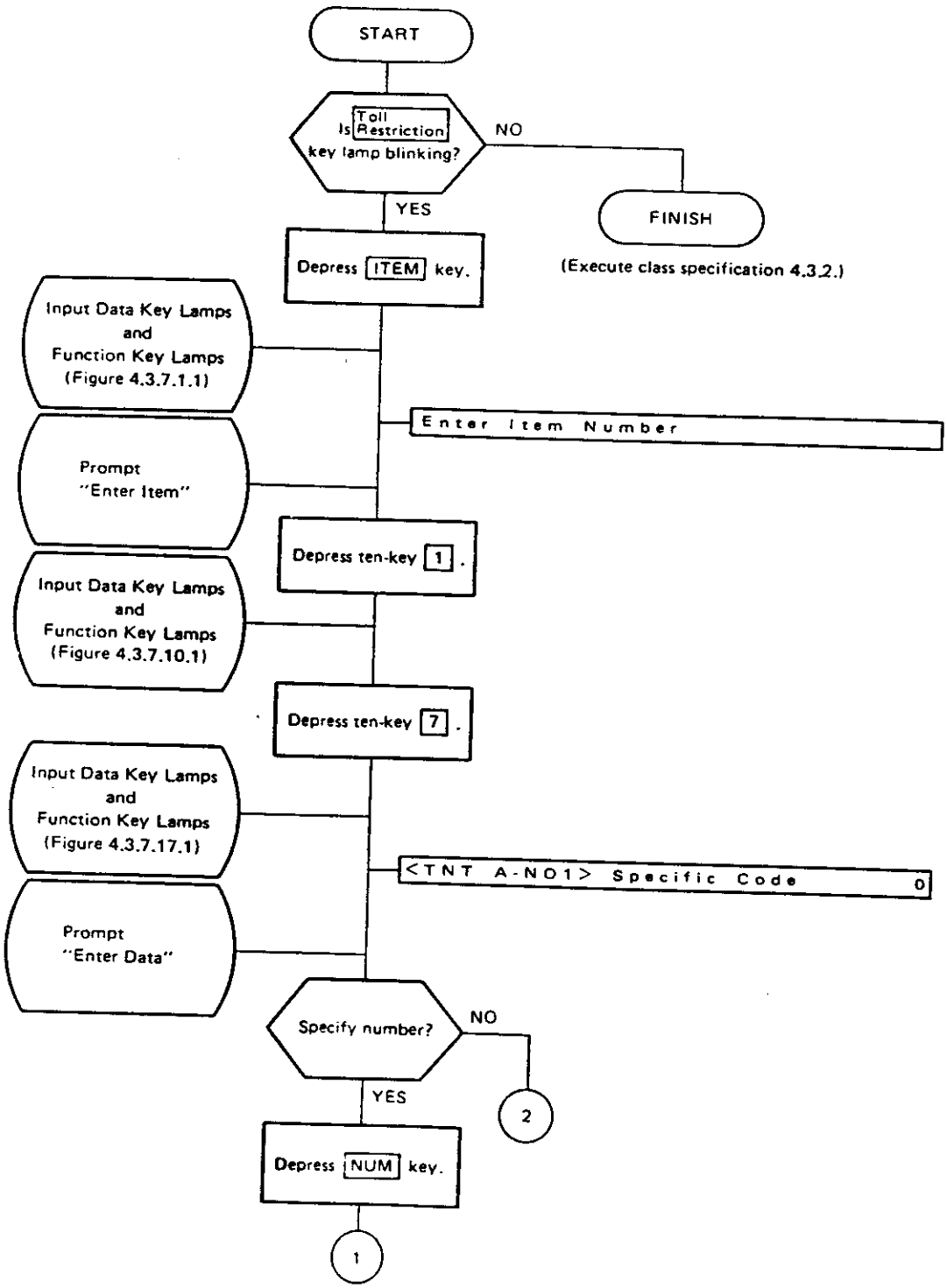
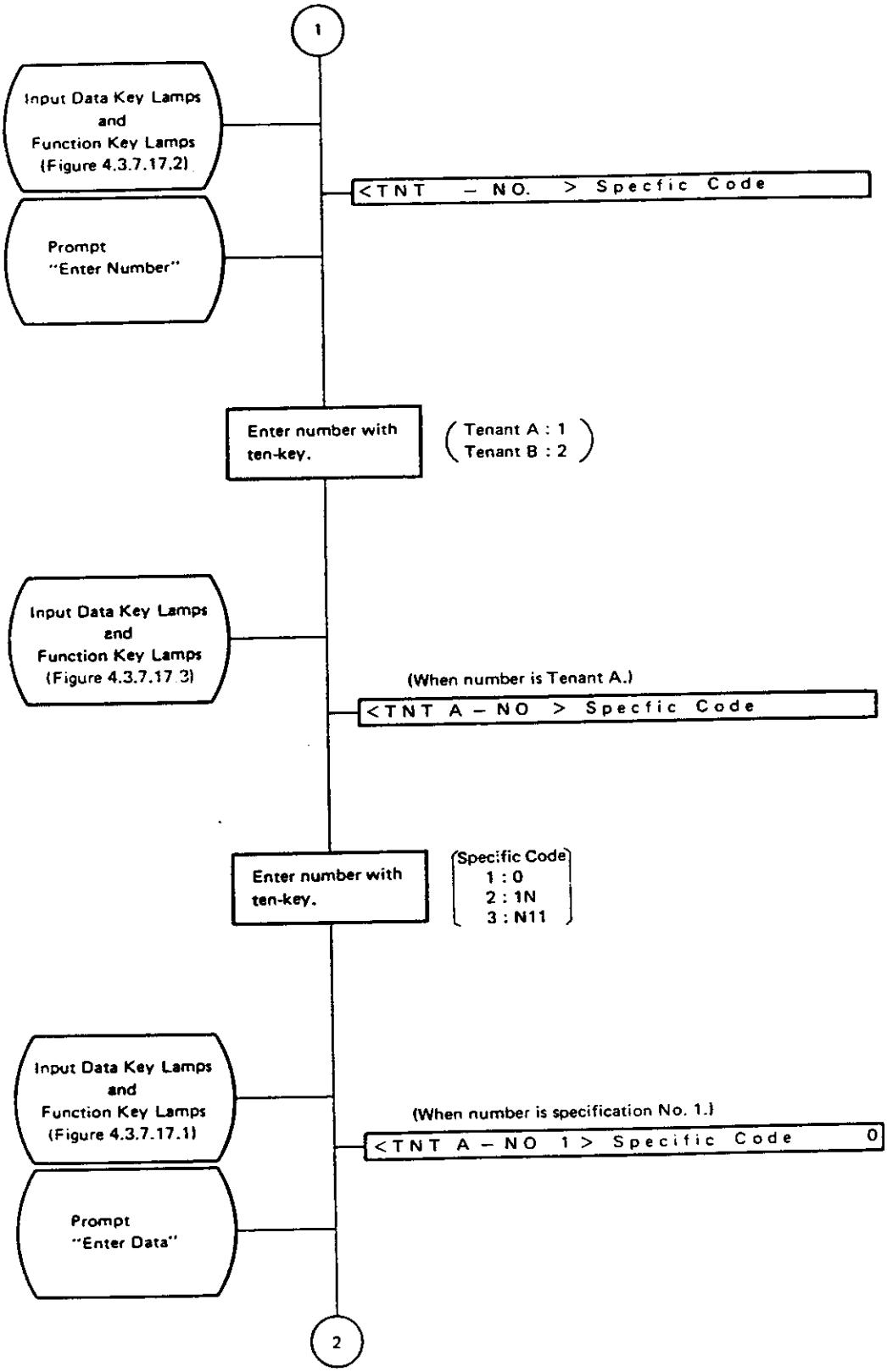


Figure 4.3.7.16.2

4.3.7.17 Specific Code Table (Item 17)

Feature: Setting CO Outgoing Group according to Tenant A/B and Specification No.




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.17.2)
<TNT – NO. > Specfic Code
Prompt "Enter Number"
Enter number with ten-key.
(Tenant A : 1
Tenant B : 2)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.17.3)
(When number is Tenant A.)
<TNT A – NO > Specfic Code
Enter number with ten-key.
(Specific Code
1 : 0
2 : 1N
3 : N11)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.17.1)
(When number is specification No. 1.)
<TNT A – NO 1 > Specific Code 0
Prompt "Enter Data"
2

Display

<TNT A-NO > Specific Code

Key Lamp

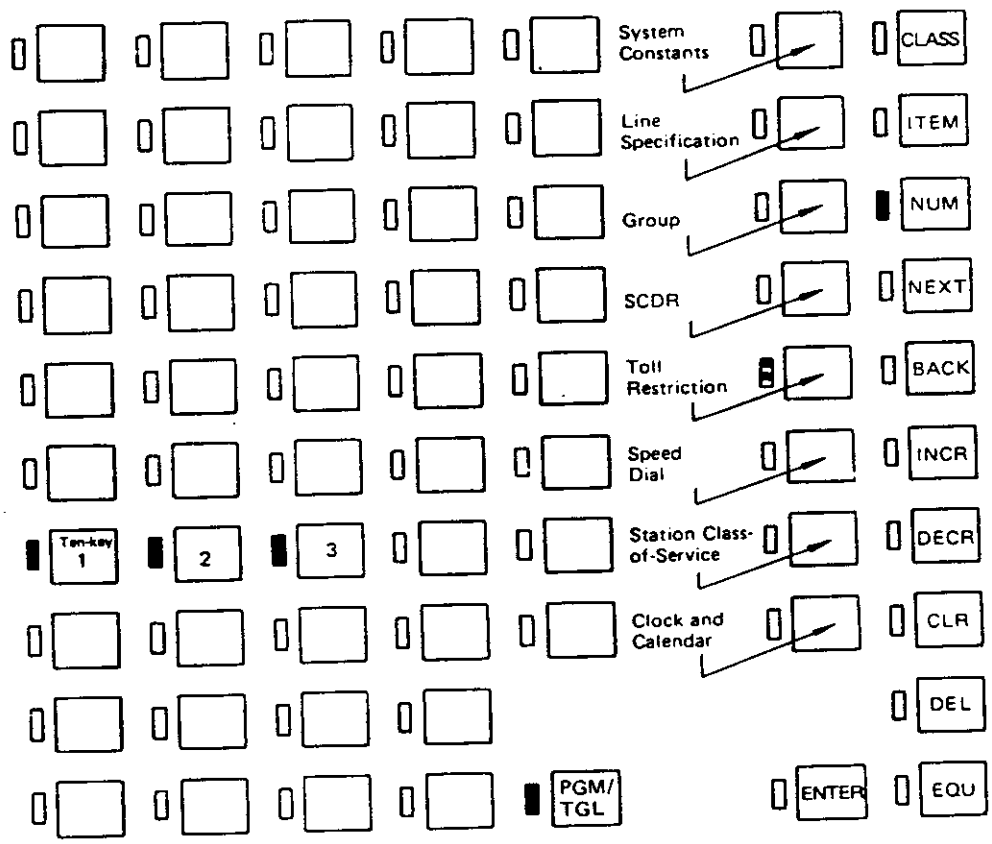
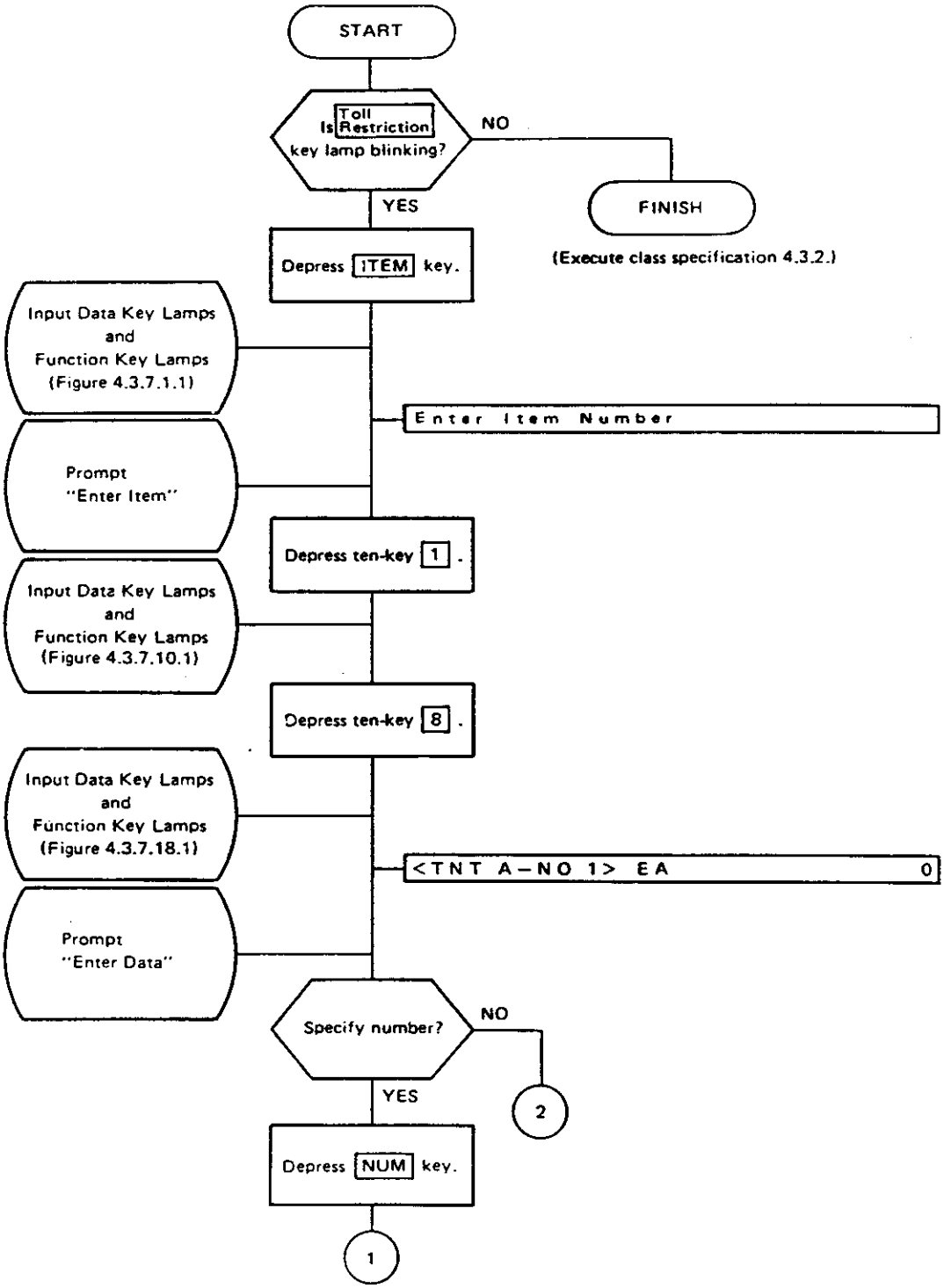


Figure 4.3.7.17.3

4.3.7.18 Equal Access Code Table (Item 18)

Feature: Setting Equal Access Code Dial according to Tenant A/B and Table No.



Display

<TNT -NO > EA

Key Lamp

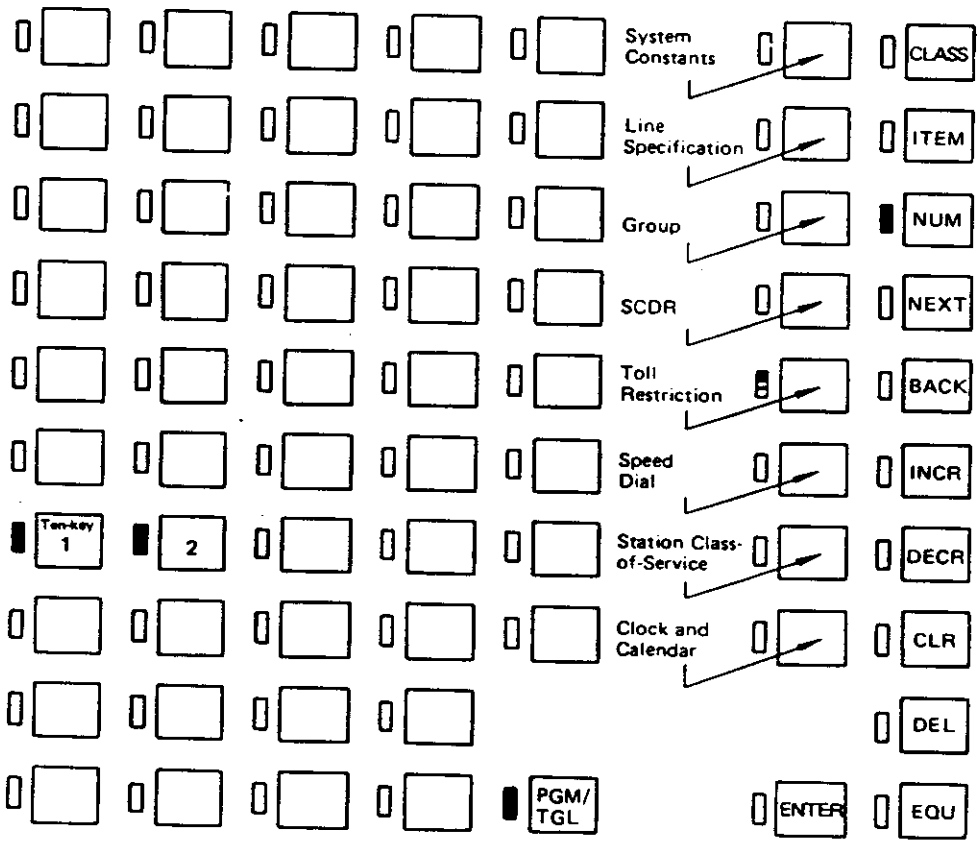
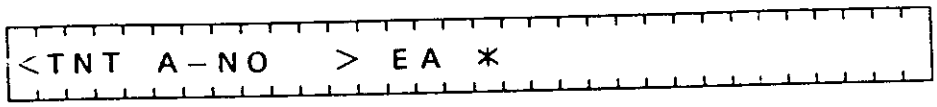


Figure 4.3.7.18.2

Display



Key Lamp

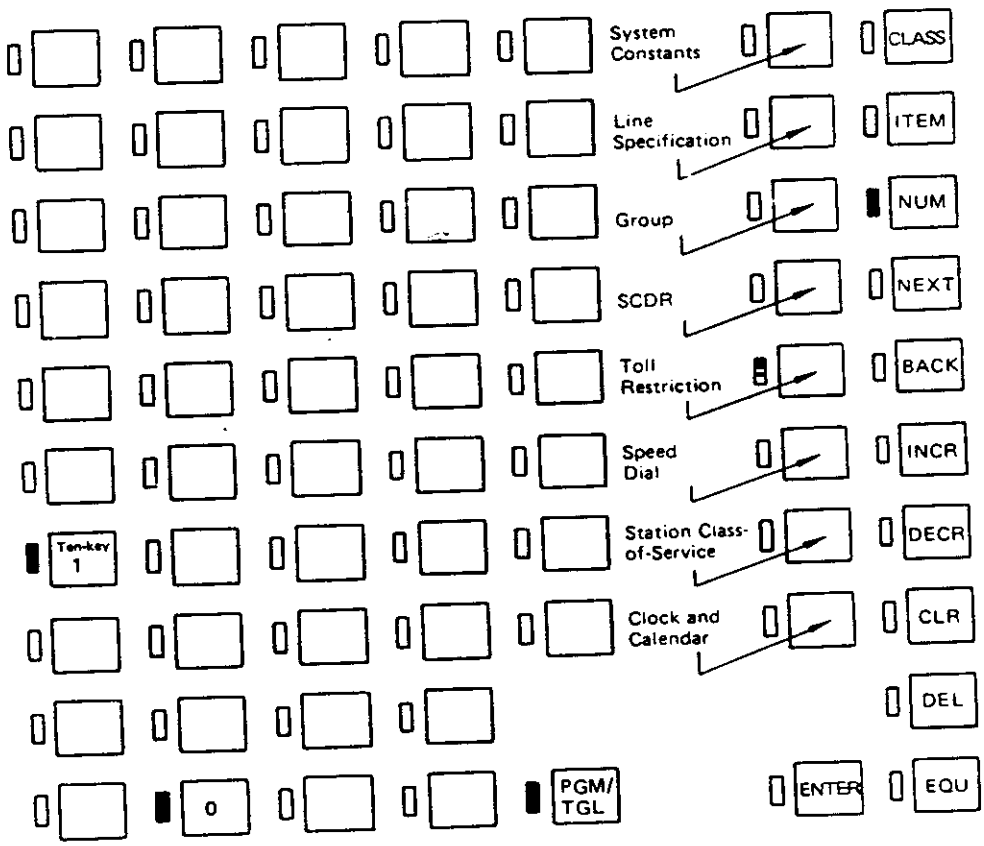


Figure 4.3.7.18.3

Display

<TNT A-NO 1> Pin Code

Key Lamp

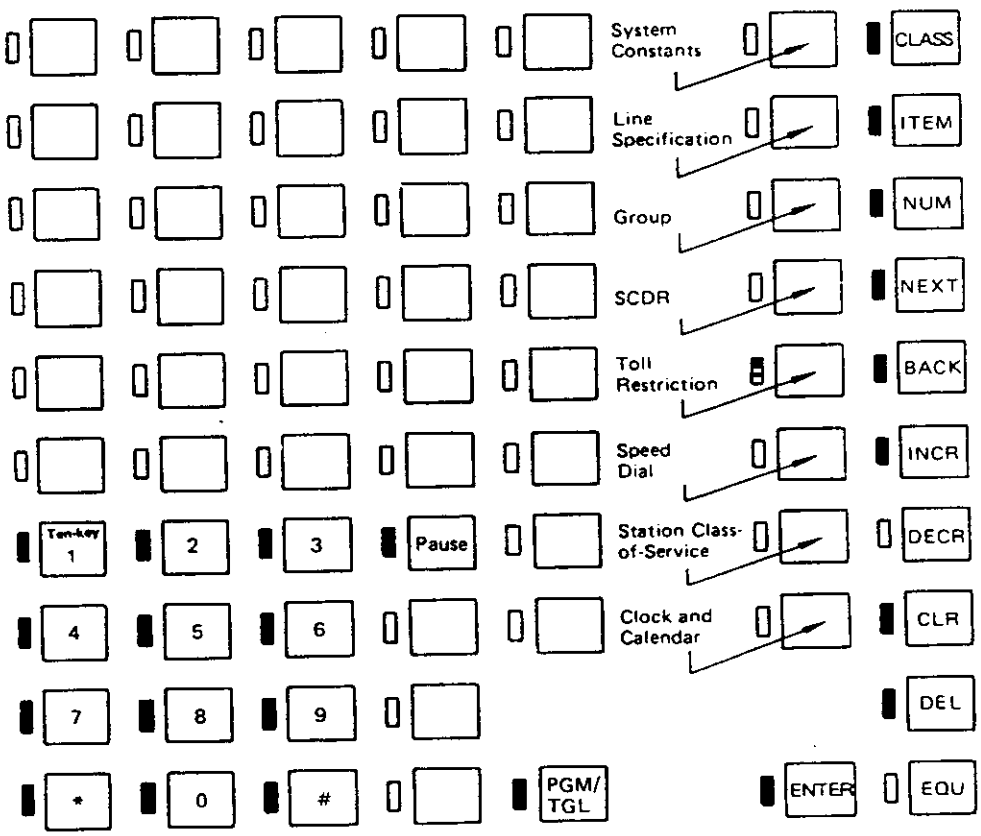


Figure 4.3.7.19.1

Display

<TNT -NO > Pin Code

Key Lamp

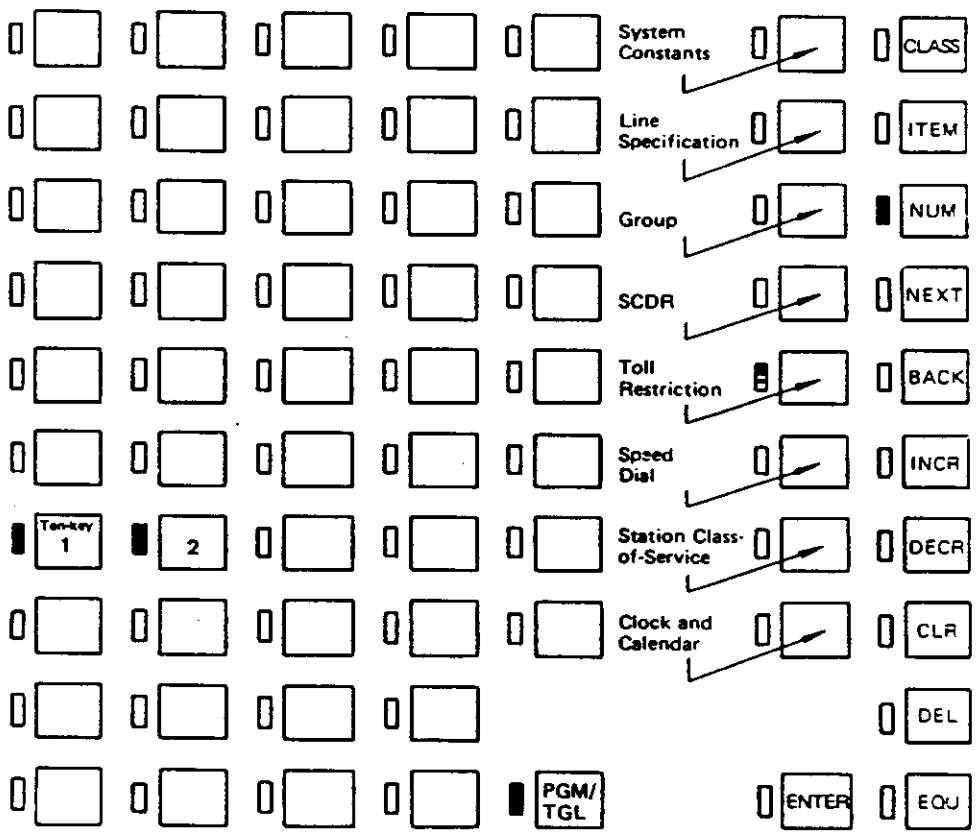


Figure 4.3.7.19.2

Display

<TNT A-NO 1> Pin Code Timing 0

Key Lamp

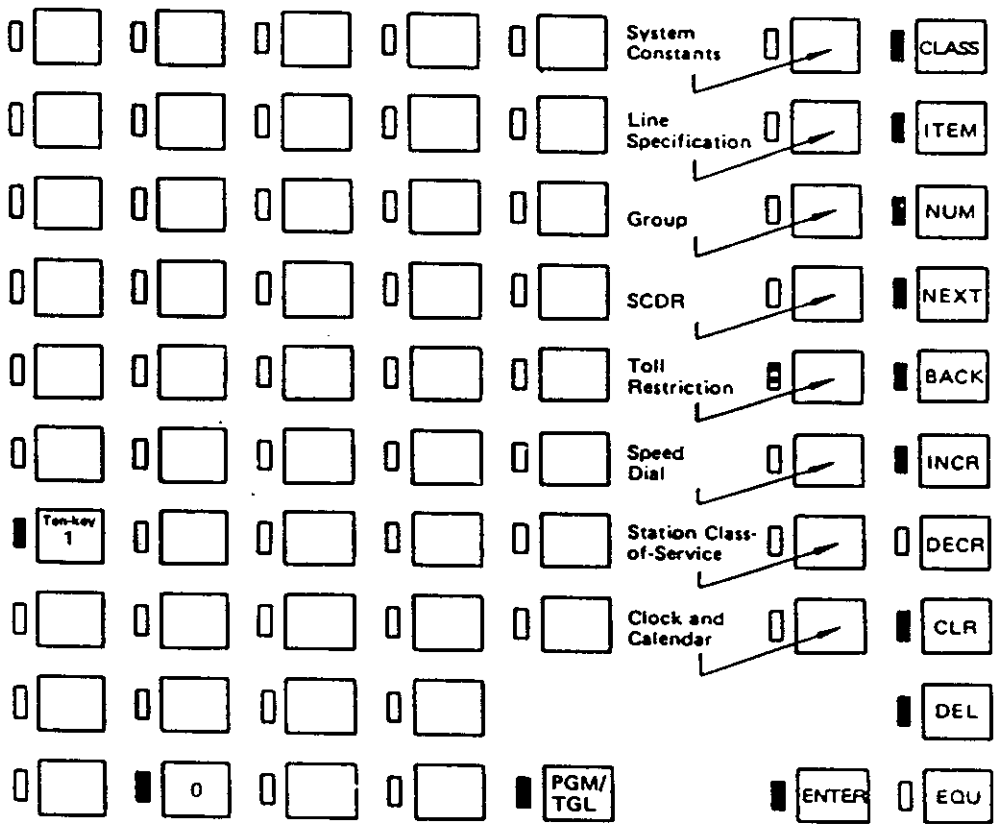
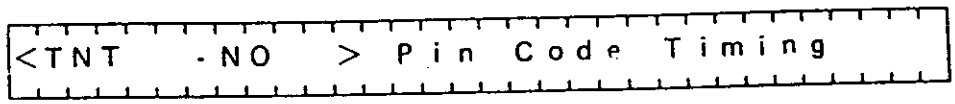


Figure 4.3.7.20.2

Display



Key Lamp

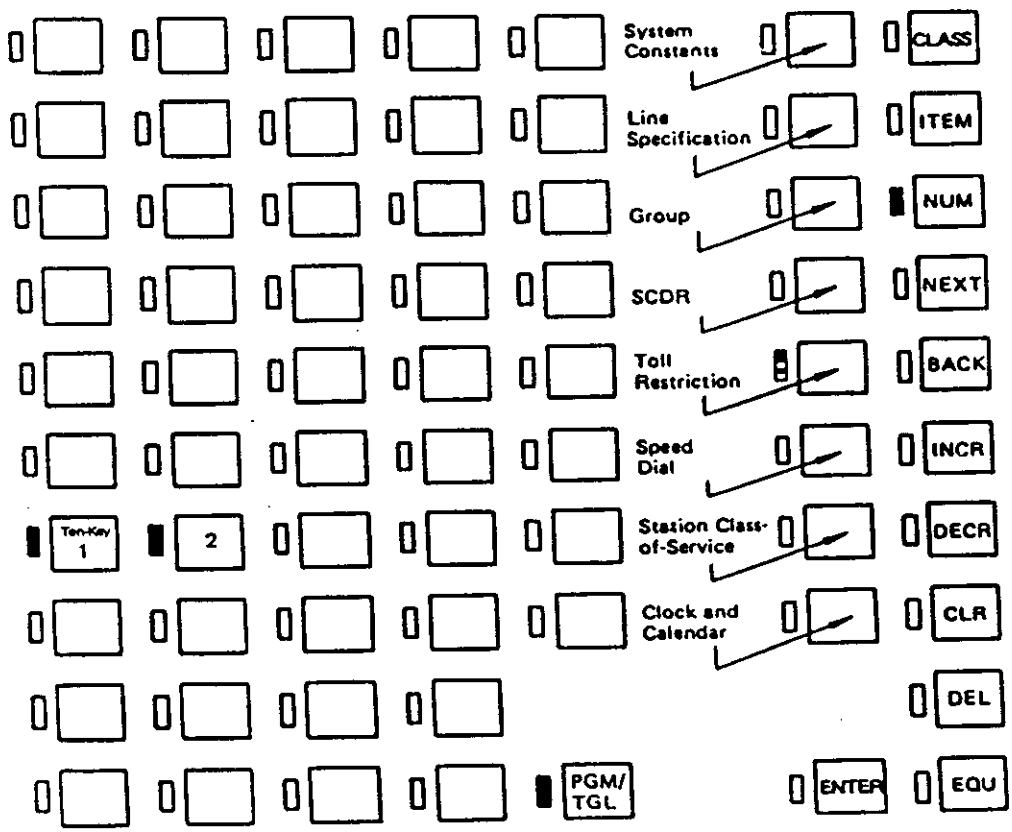
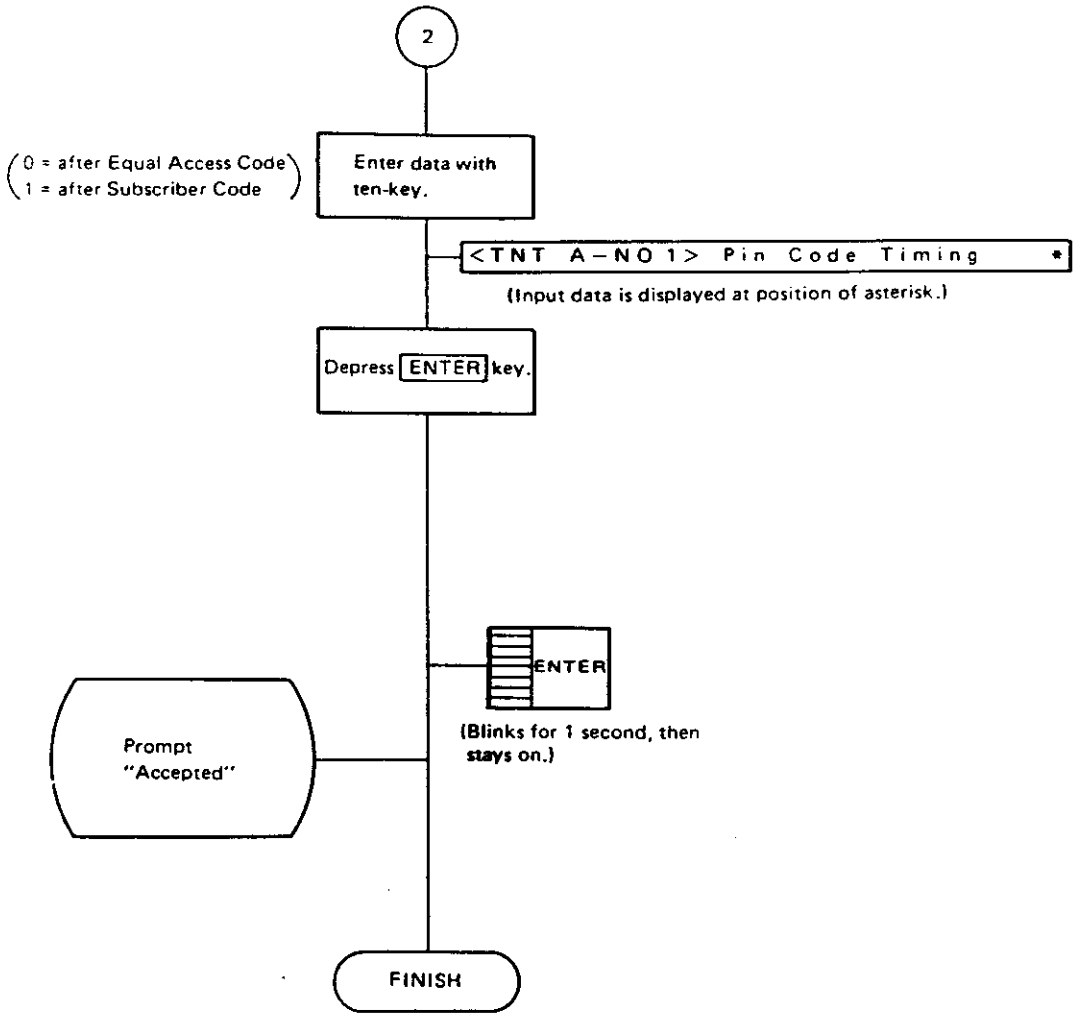
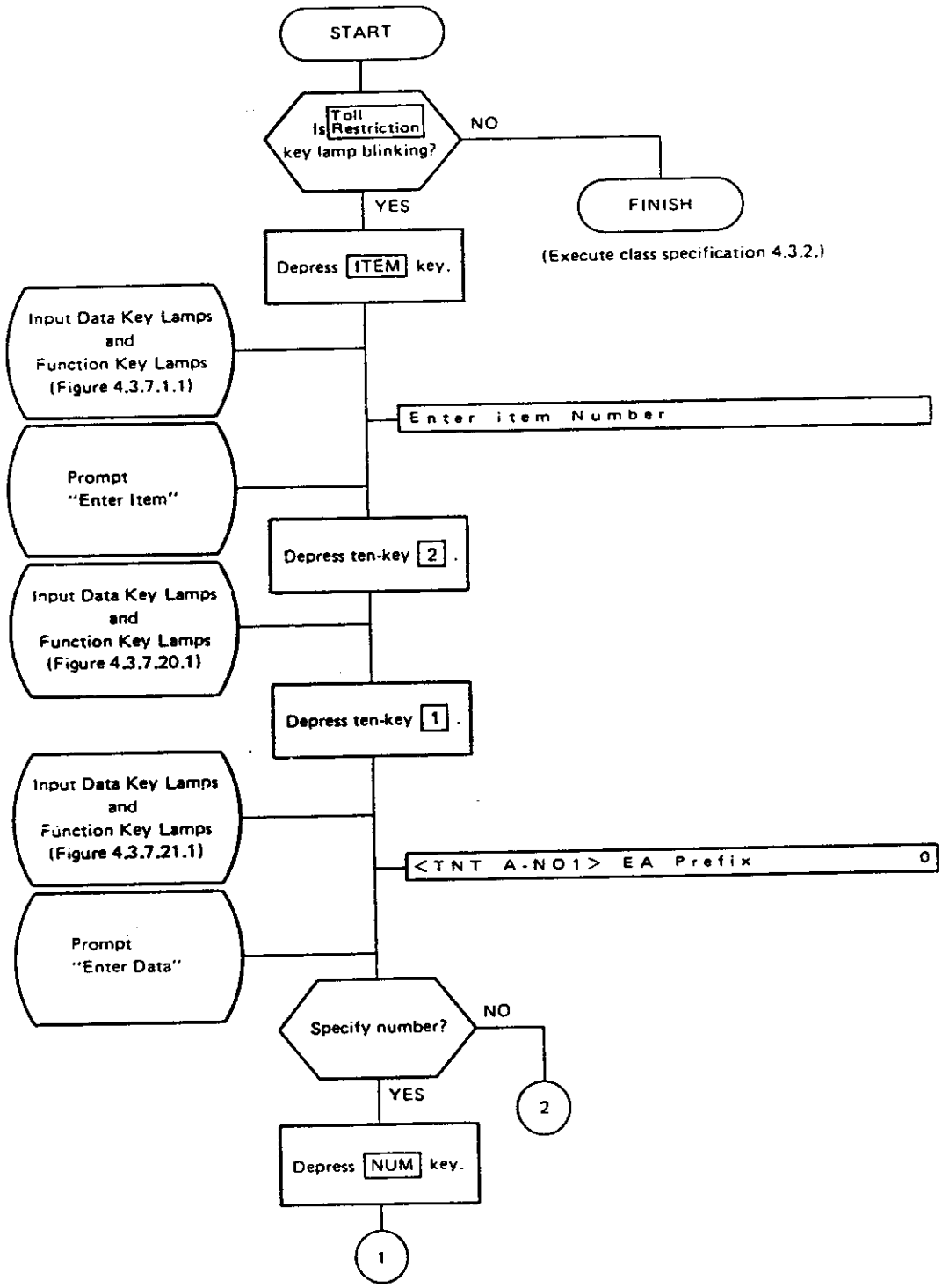


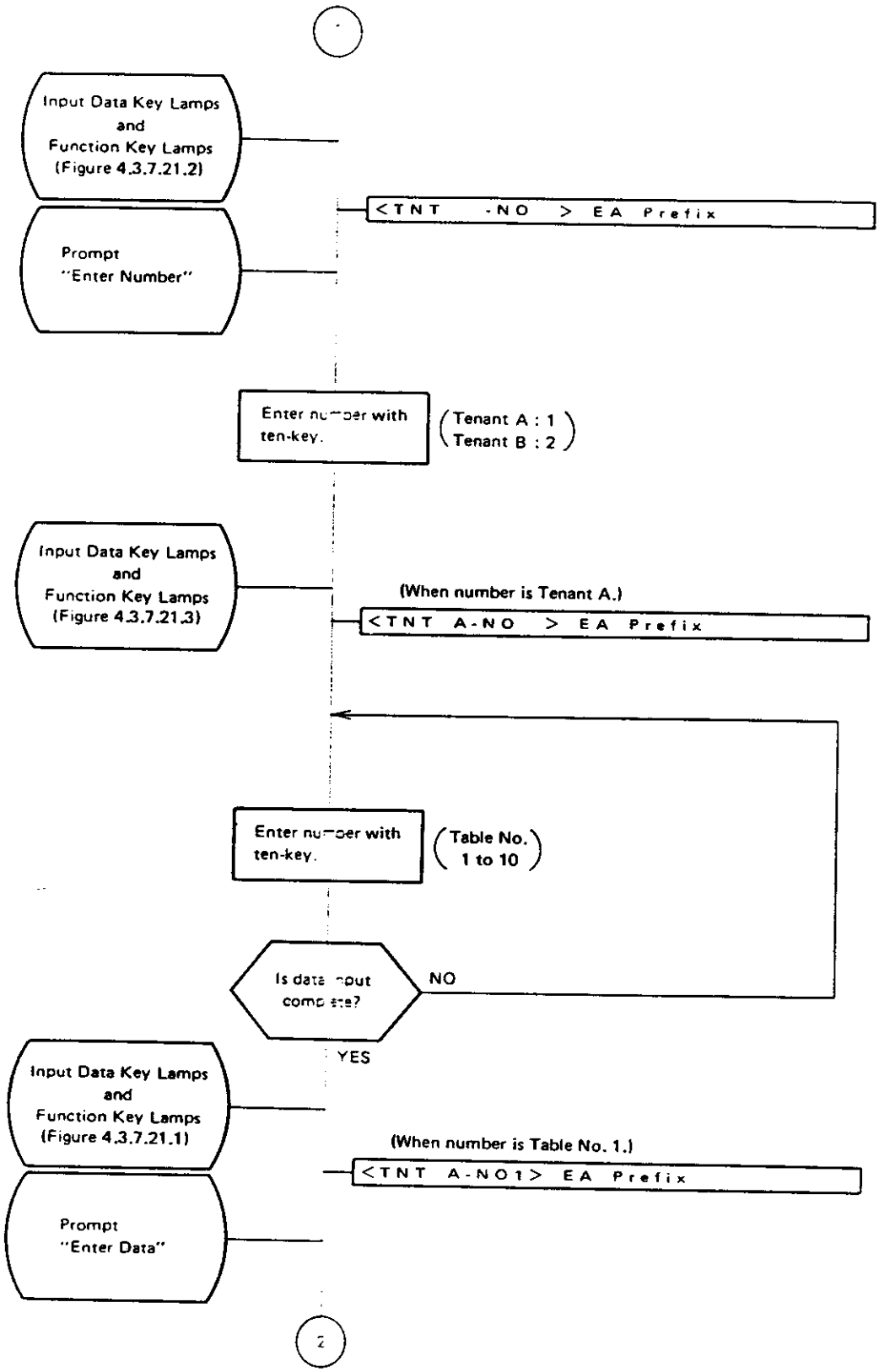
Figure 4.3.7.20.3

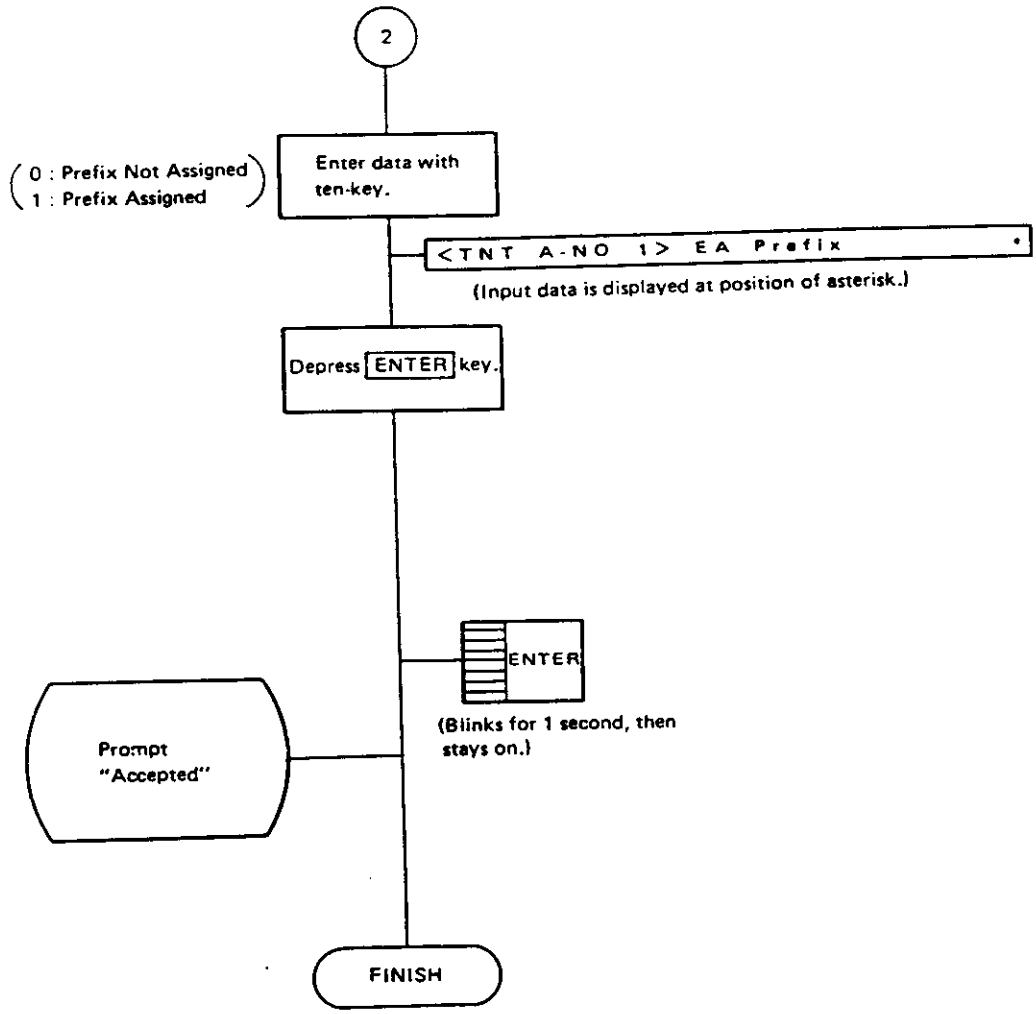

2
(0 = after Equal Access Code
1 = after Subscriber Code)
Enter data with ten-key.
<TNT A-NO 1> Pin Code Timing *
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays on.)
Prompt "Accepted"
FINISH

4.3.7.21 Equal Access Prefix Information (Item 21)

Feature: Setting Equal Access Prefix Information according to Tenant A/B and Table No.




Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.21.2)
<TNT -NO > EA Prefix
Prompt "Enter Number"
Enter number with ten-key.
(Tenant A : 1 Tenant B : 2)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.21.3)
(When number is Tenant A.)
<TNT A-NO > EA Prefix
Enter number with ten-key.
(Table No. 1 to 10)
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.21.1)
(When number is Table No. 1.)
<TNT A-NO1> EA Prefix
Prompt "Enter Data"
2


2
(0 : Prefix Not Assigned
1 : Prefix Assigned)
Enter data with ten-key.
<TNT A-NO 1> EA Prefix *
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays on.)
Prompt "Accepted"
FINISH

Display

<TNT A-NO > EA Prefix

Key Lamp

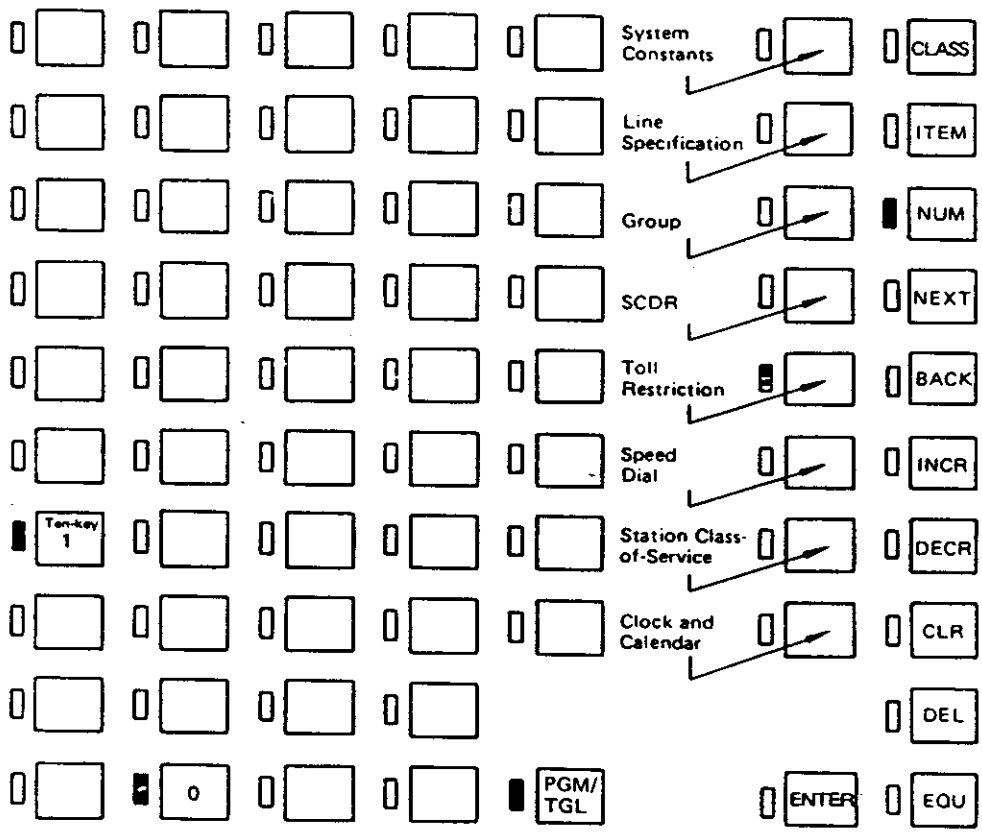
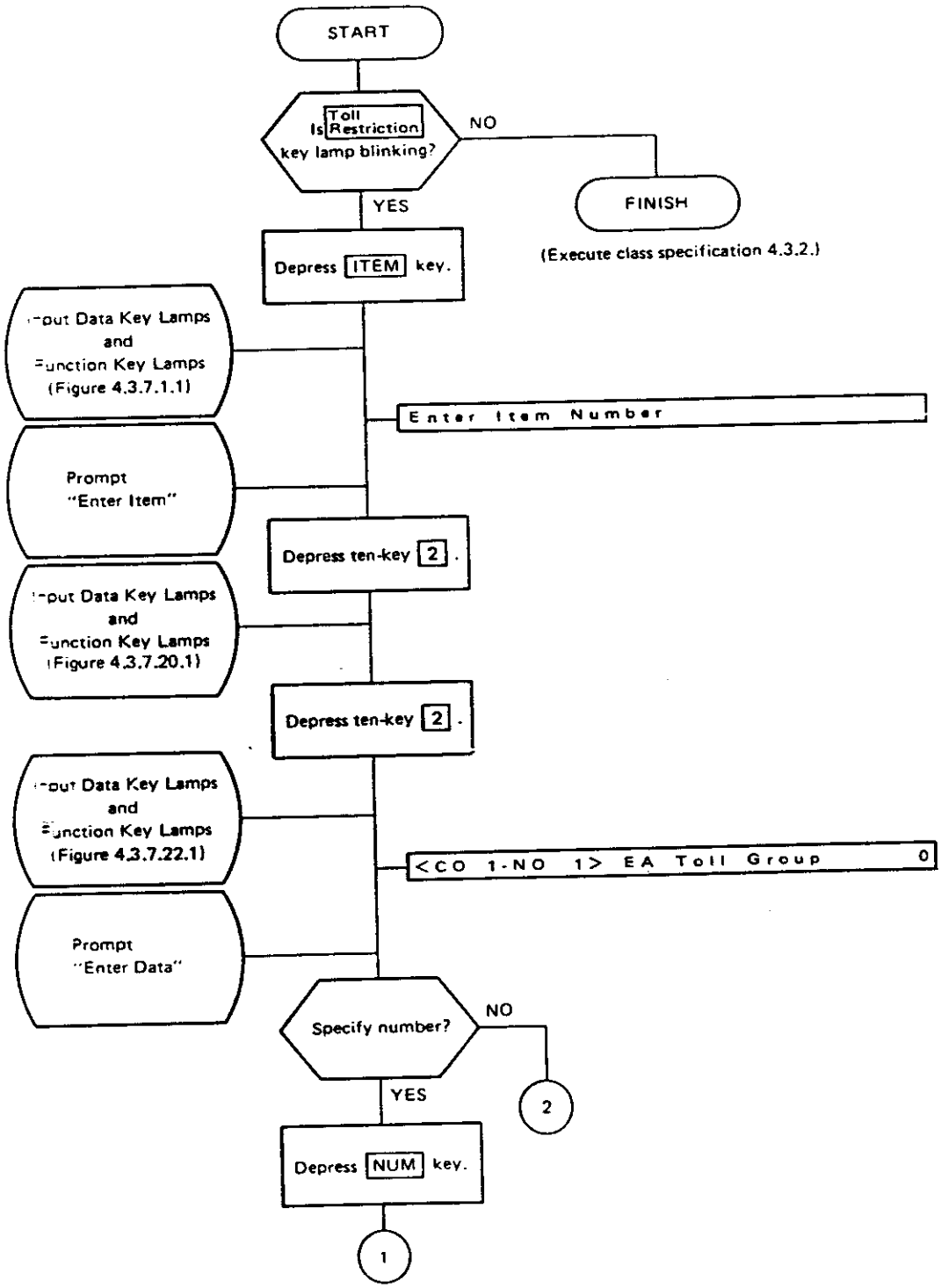
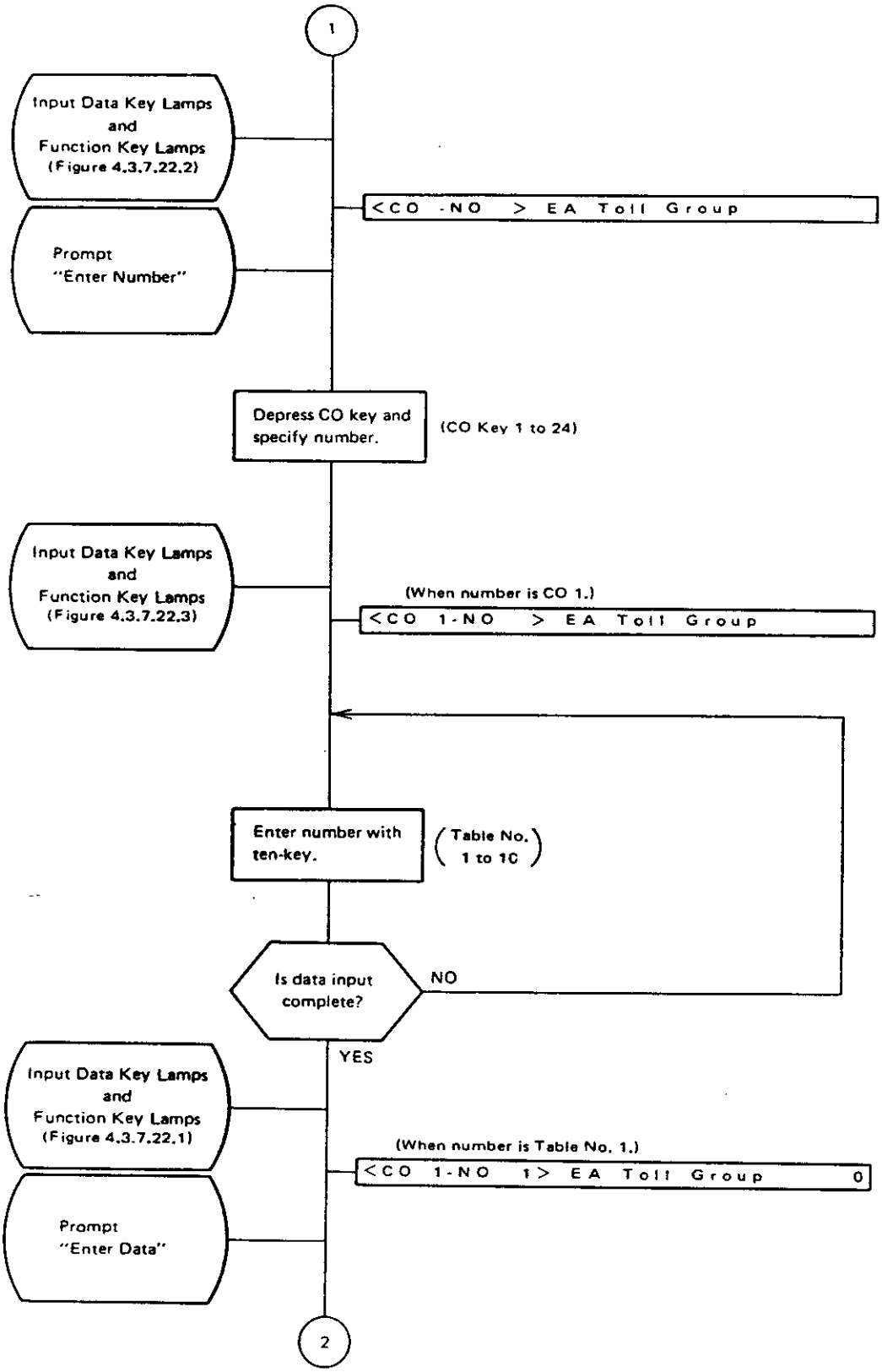


Figure 4.3.7.21.3

4.3.7.22 Equal Access Toll Group (Item 22)

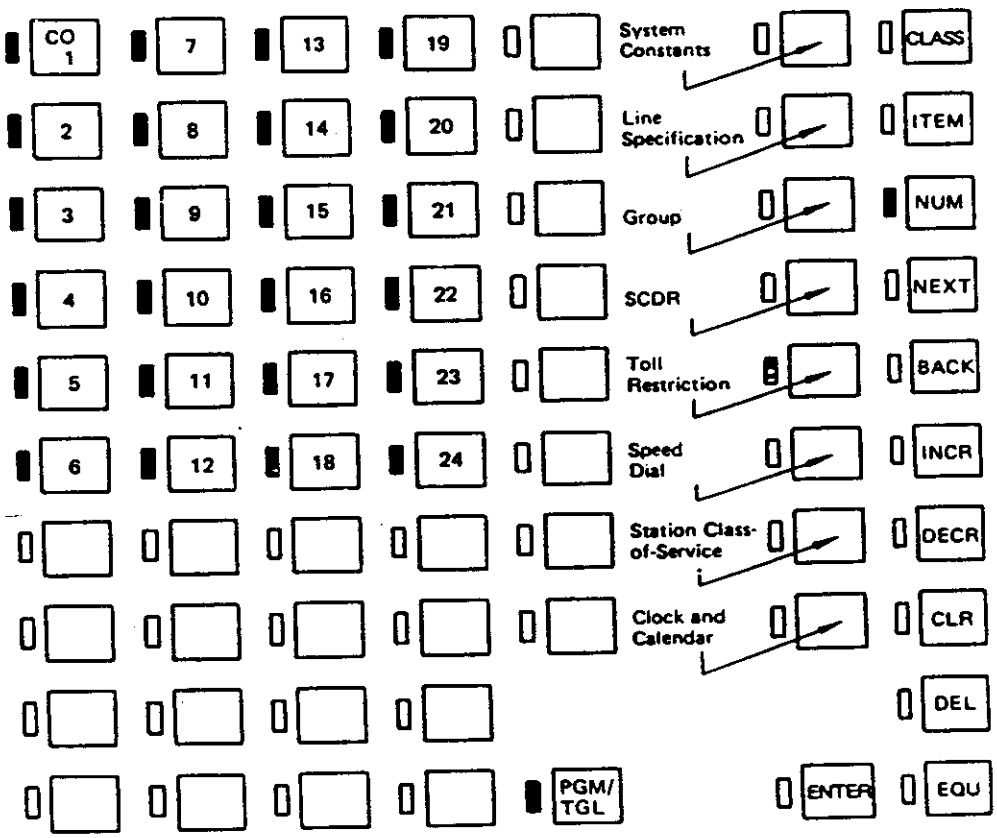
Feature: Setting Toll Restriction Group No. according to CO and Table No.




1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.22.2)
<CO -NO > EA Toll Group
Prompt "Enter Number"
Depress CO key and specify number.
(CO Key 1 to 24)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.22.3)
(When number is CO 1.)
<CO 1-NO > EA Toll Group
Enter number with ten-key.
(Table No. 1 to 10)
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.7.22.1)
(When number is Table No. 1.)
<CO 1-NO 1> EA Toll Group 0
Prompt "Enter Data"
2

Display

Key Lamp



Note: Data is indicated on the key lamp assigned to CO key of input data keys.

Figure 4.3.7.22.2

Display

<CO 1-NO > EA Toll Group

Key Lamp

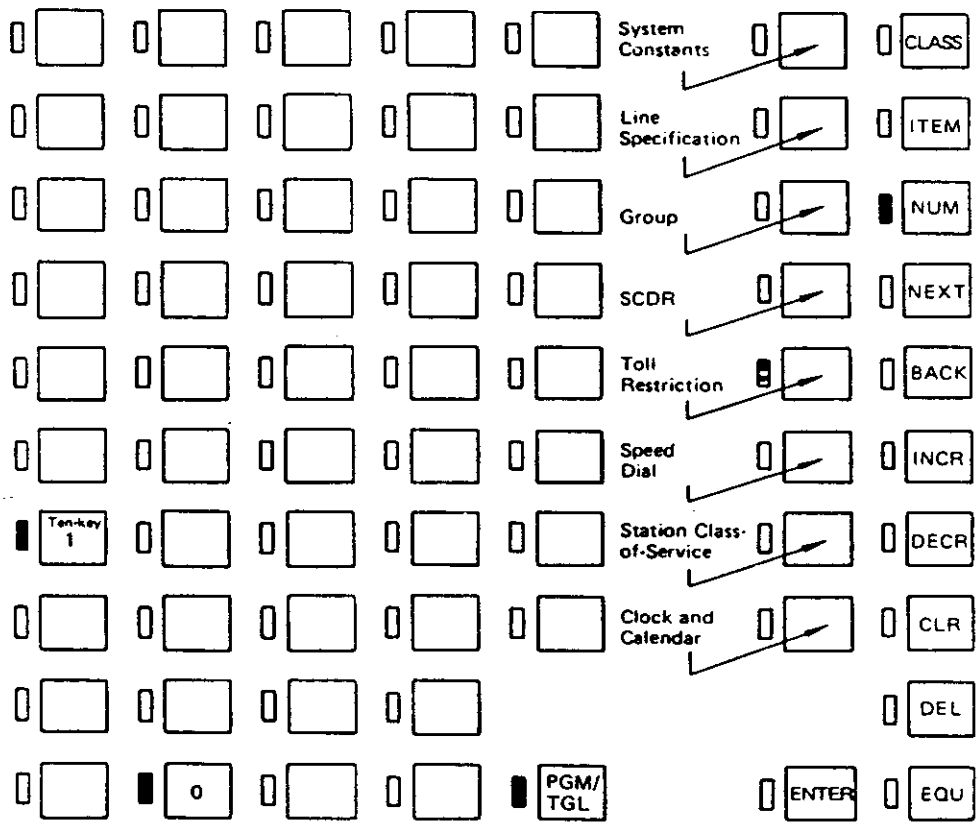


Figure 4.3.7.22.3

4.3.8 Programming of Speed Dial

After Speed Dial Class is specified with the operation in Subsection 4.3.2, the following settings can be entered:

Item 1) System Speed Dial
Item 2) System Speed Dial Invisible
Item 3) Station Speed Dial

PART 4

EX-1232/2464

Display

Key Lamp

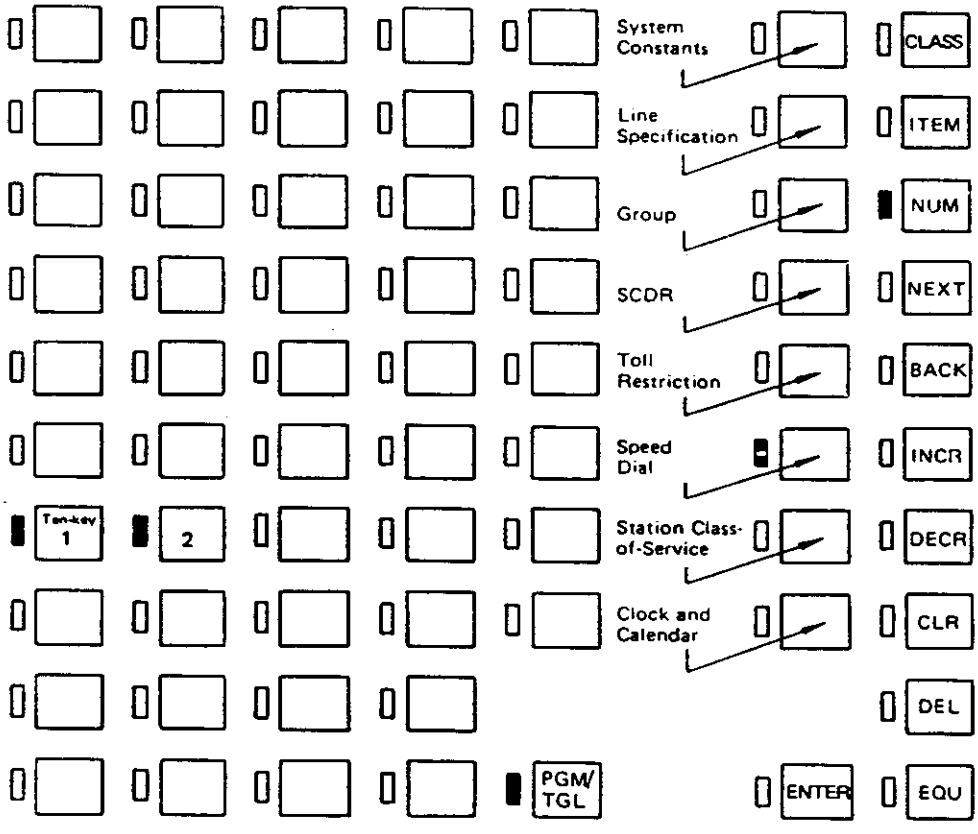
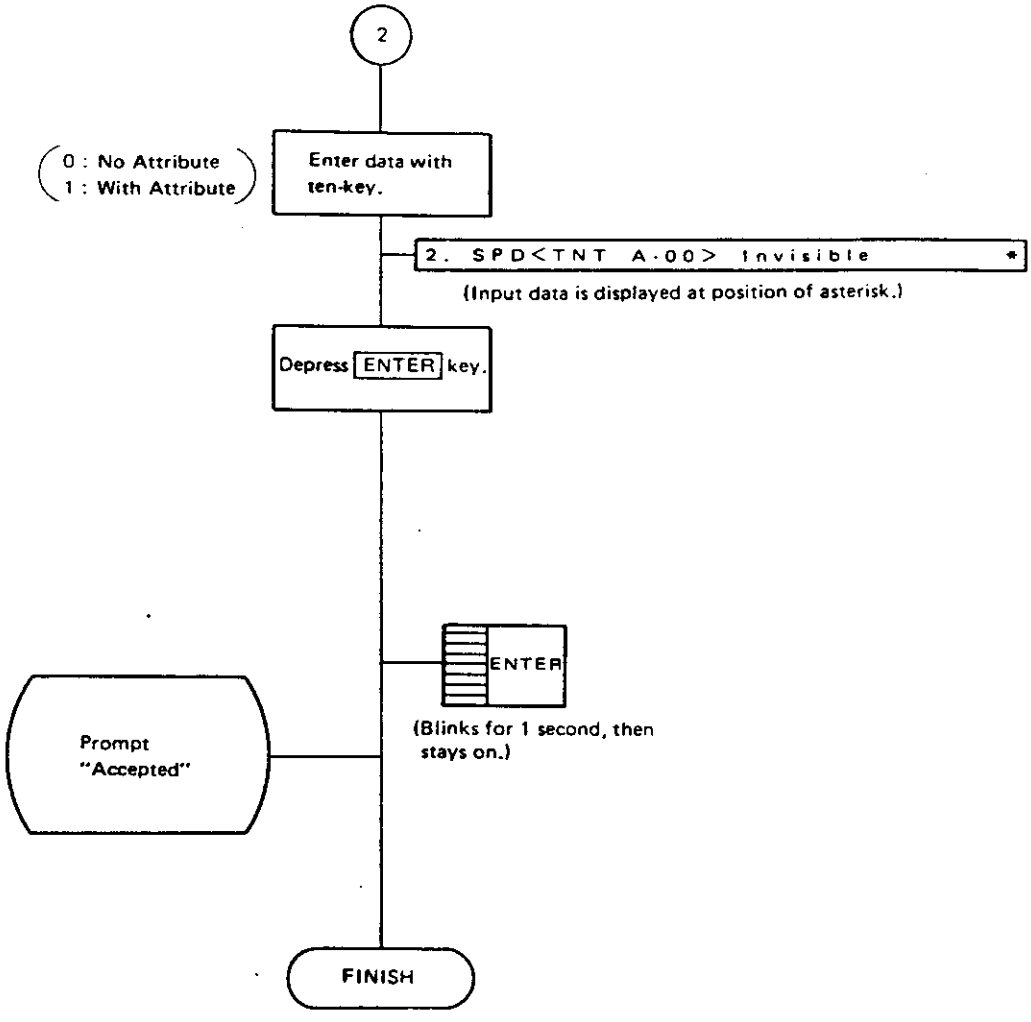


Figure 4.3.8.1.2


2
0 : No Attribute
1 : With Attribute
Enter data with ten-key.
2. SPD<TNT A·00> Invisible *
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays on.)
Prompt "Accepted"
FINISH

Display

```
2.SPD<TNT A-00> Invisible          0
```

Key Lamp

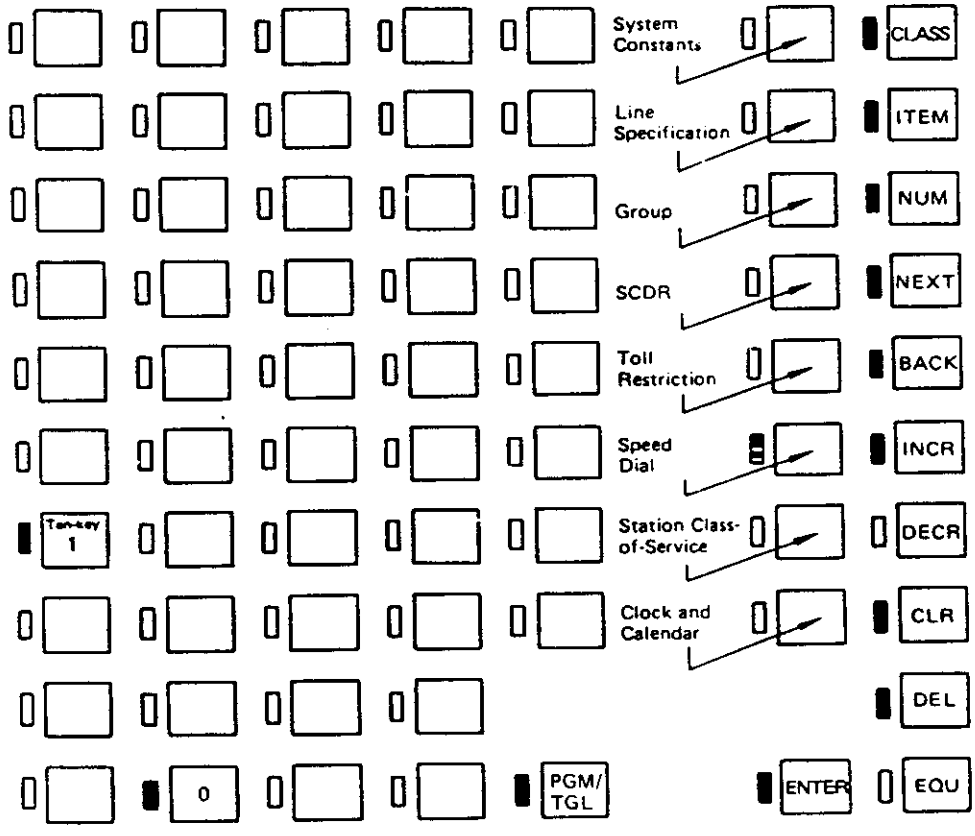


Figure 4.3.8.2.1

Display

```
2.SPD<TNT   -   > Invisible
```

Key Lamp

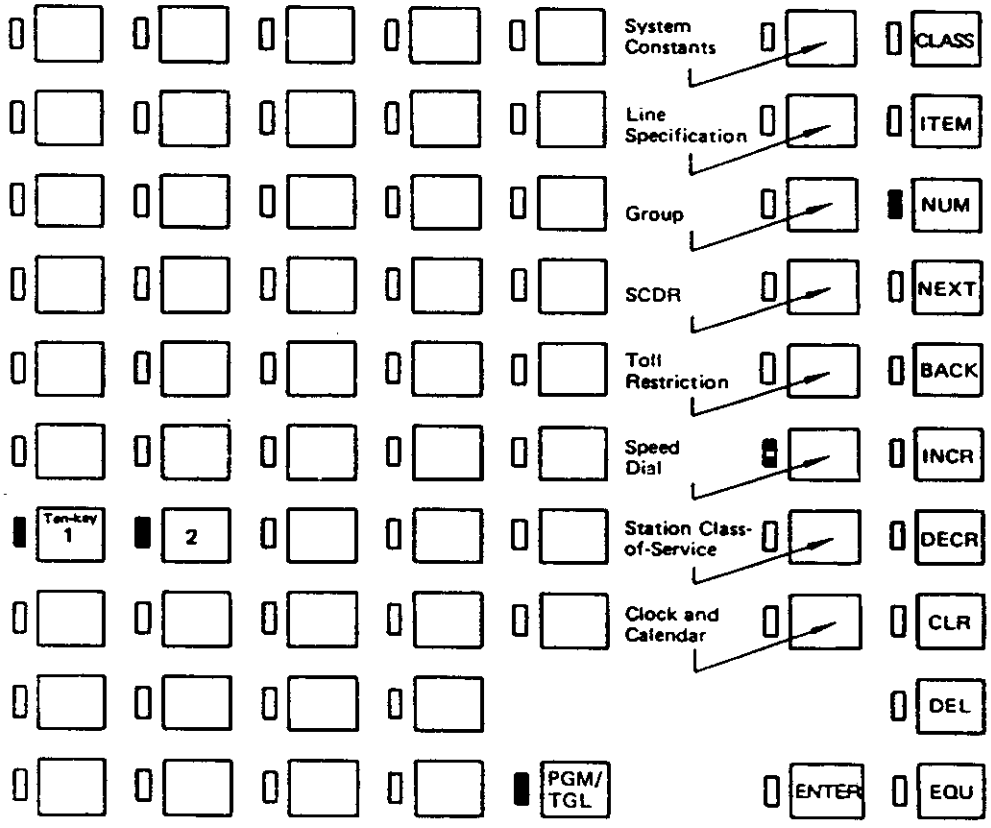
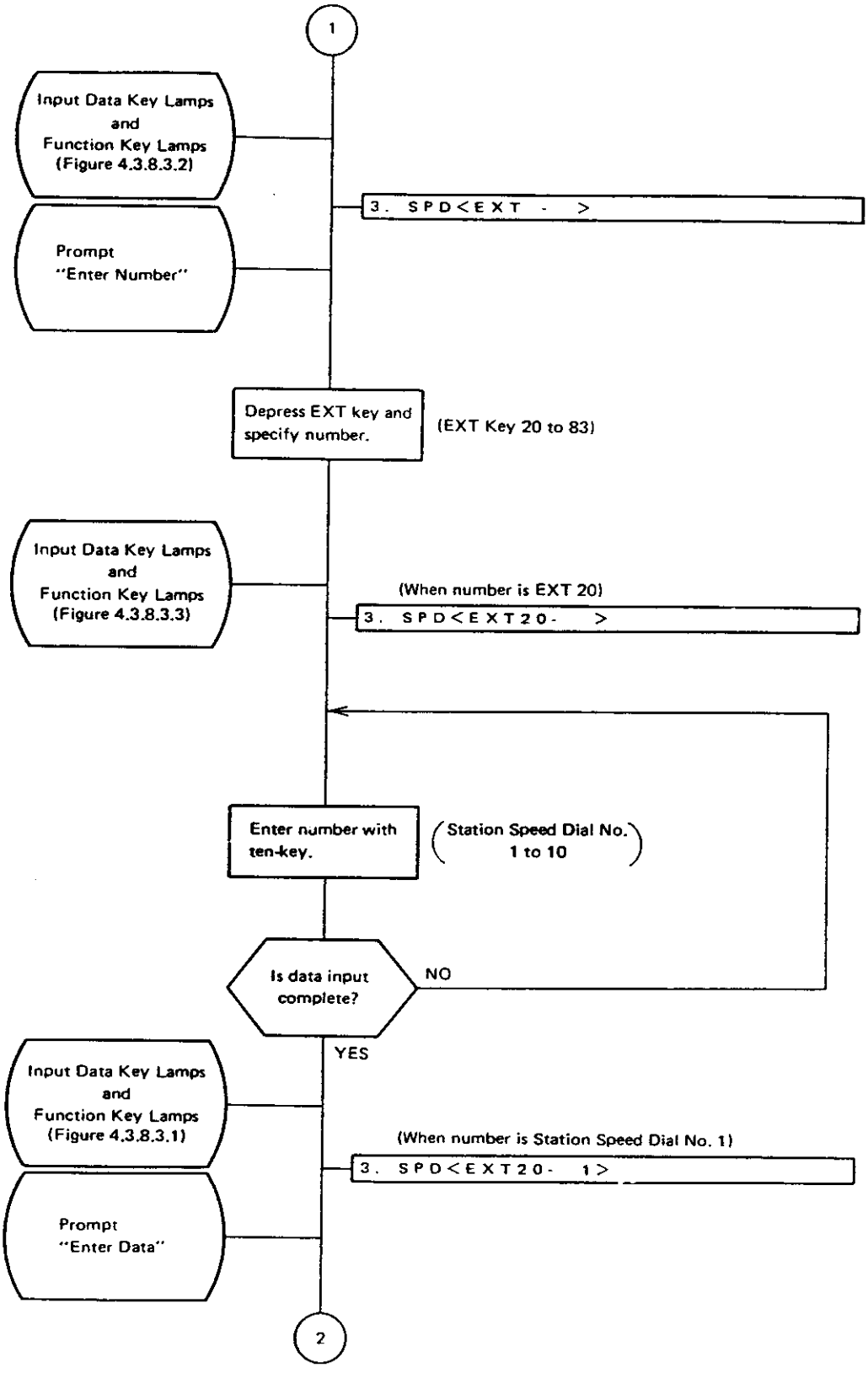
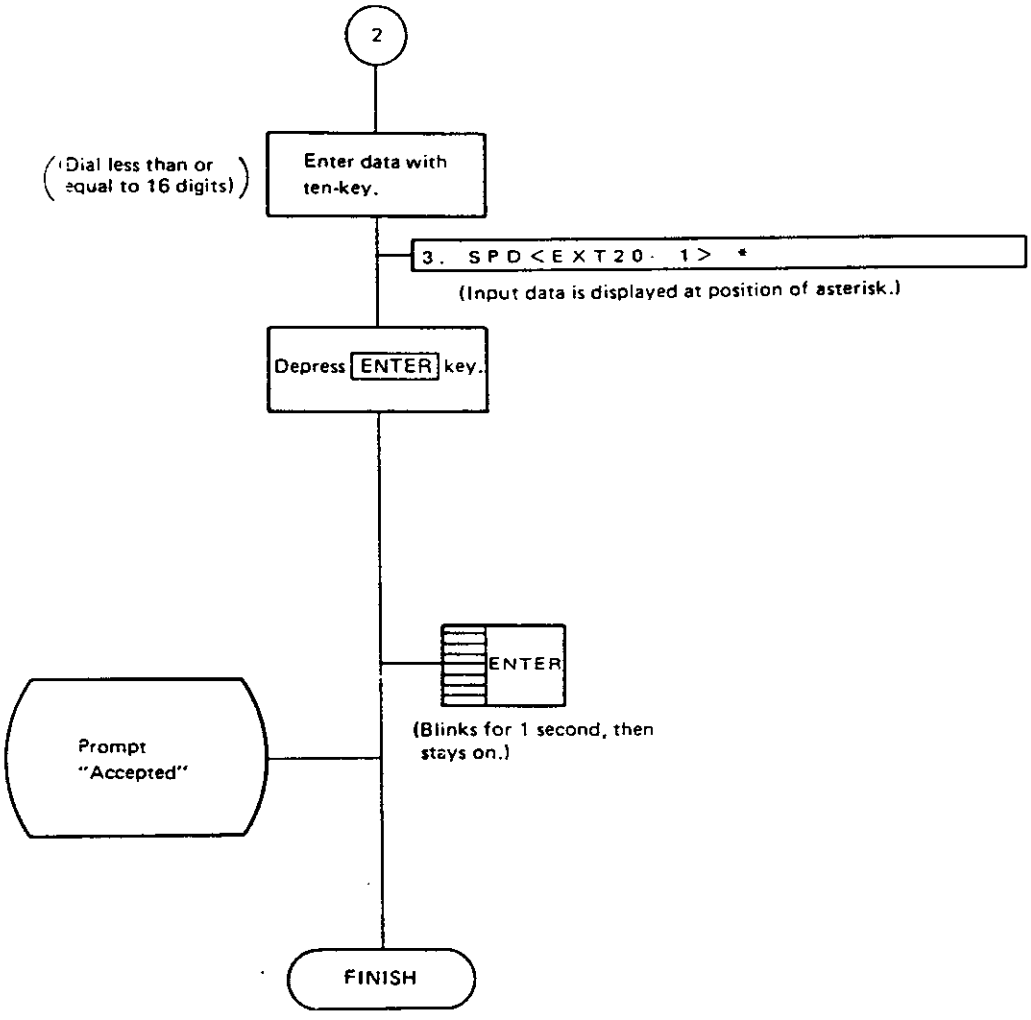


Figure 4.3.8.2.2


1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.8.3.2)
3. SPD<EXT - >
Prompt "Enter Number"
Depress EXT key and specify number.
(EXT Key 20 to 83)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.8.3.3)
(When number is EXT 20)
3. SPD<EXT20- >
Enter number with ten-key.
(Station Speed Dial No. 1 to 10)
Is data input complete?
NO
YES
Input Data Key Lamps and Function Key Lamps (Figure 4.3.8.3.1)
(When number is Station Speed Dial No. 1)
3. SPD<EXT20- 1>
Prompt "Enter Data"
2


2
(Dial less than or equal to 16 digits)
Enter data with ten-key.
3. SPD<EXT20- 1> *
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays on.)
Prompt "Accepted"
FINISH

Display

```
3 . S P D < E X T 2 0 -  1 >
```

Key Lamp

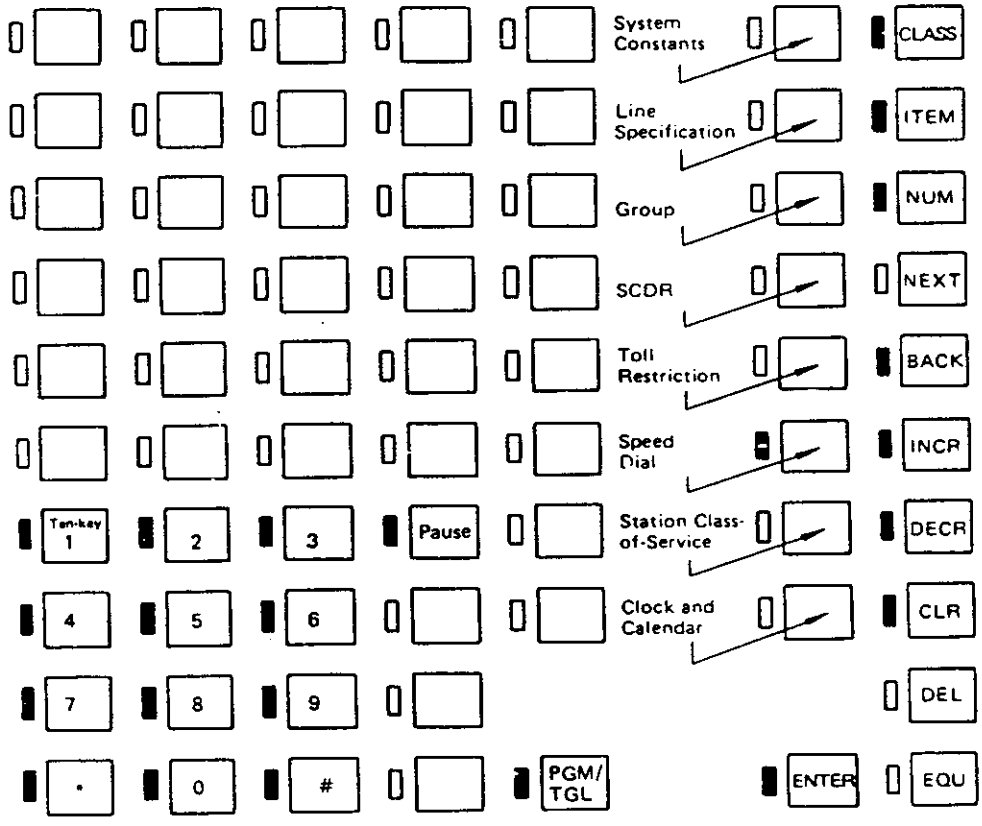
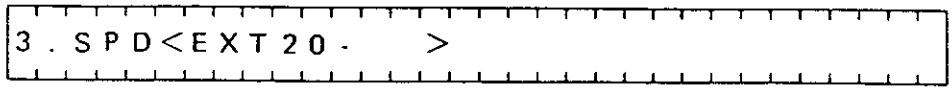


Figure 4.3.8.3.1

Display



Key Lamp

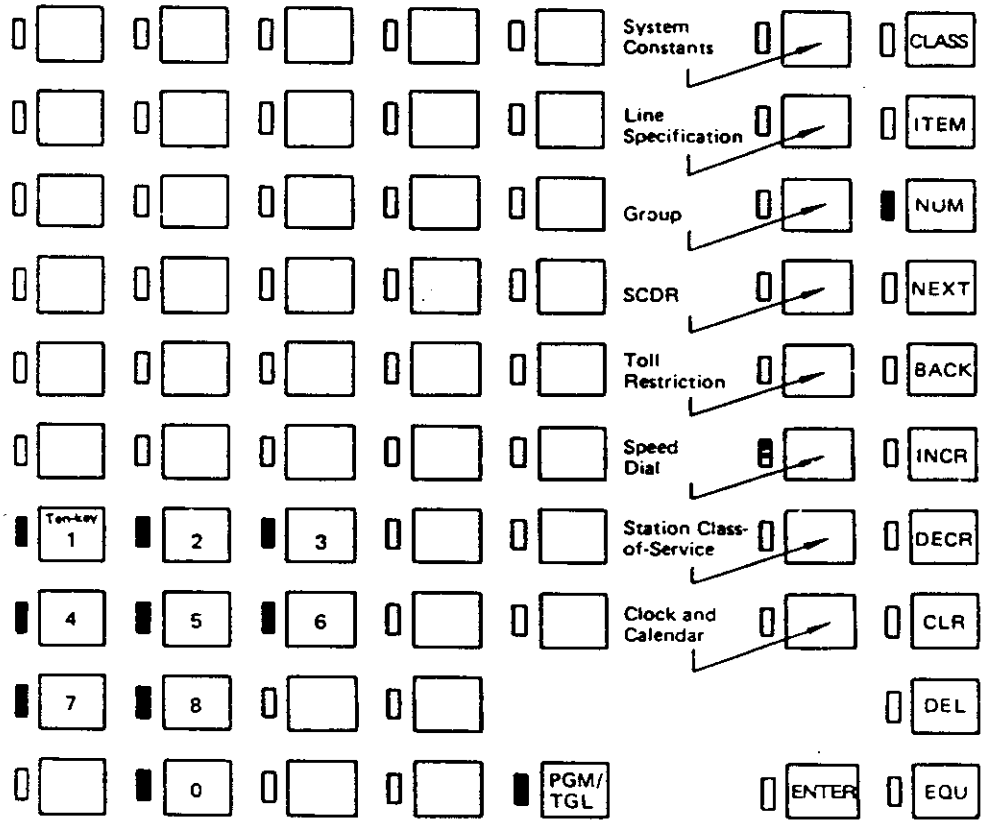


Figure 4.3.8.3.3

4.3.9 Programming of Station Class-of-Service

After Station Class-of-Service is specified with the operation in Subsection 4.3.2, the following settings can be entered:

Item 1) Tenant Group B
Item 2) Secretary Atrribution
Item 3) Protected Attribution
Item 4) Executive Attribution
Item 5) Versa Phone Attribution
Item 6) Busy Call Forward
Item 7) Message Attribution
Item 8) Quick Mode Deny
Item 9) Off-Hook Signal Deny
Item 10) Off-Hook All-Call Deny
Item 11) All-Call Deny
Item 12) Hold Recall Deny
Item 13) Speed Dial Access Deny
Item 14) Toll Speed Dial Access Deny
Item 15) CO Automatic Answer Deny
Item 16) ICM Automatic Answer Deny
Item 17) Paging Call Access Deny
Item 18) Call Forward Deny
Item 19) Do Not Disturb Deny
Item 20) Optimized Call Routing Access Deny
Item 21) Equal/SCC Access Deny
Item 22) Toll Dial Class of Restriction
Item 23) CO Outgoing Level
Item 24) Route Advance Step
Item 25) Pickup Restriction
Item 26) KT Key Assignment
Item 27) Personal ID Code

When system data (Station Class-of Service) of a busy EXT is renewed (ENTER key is depressed), the EXT is disconnected automatically.

Display

Enter Item Number

Key Lamp

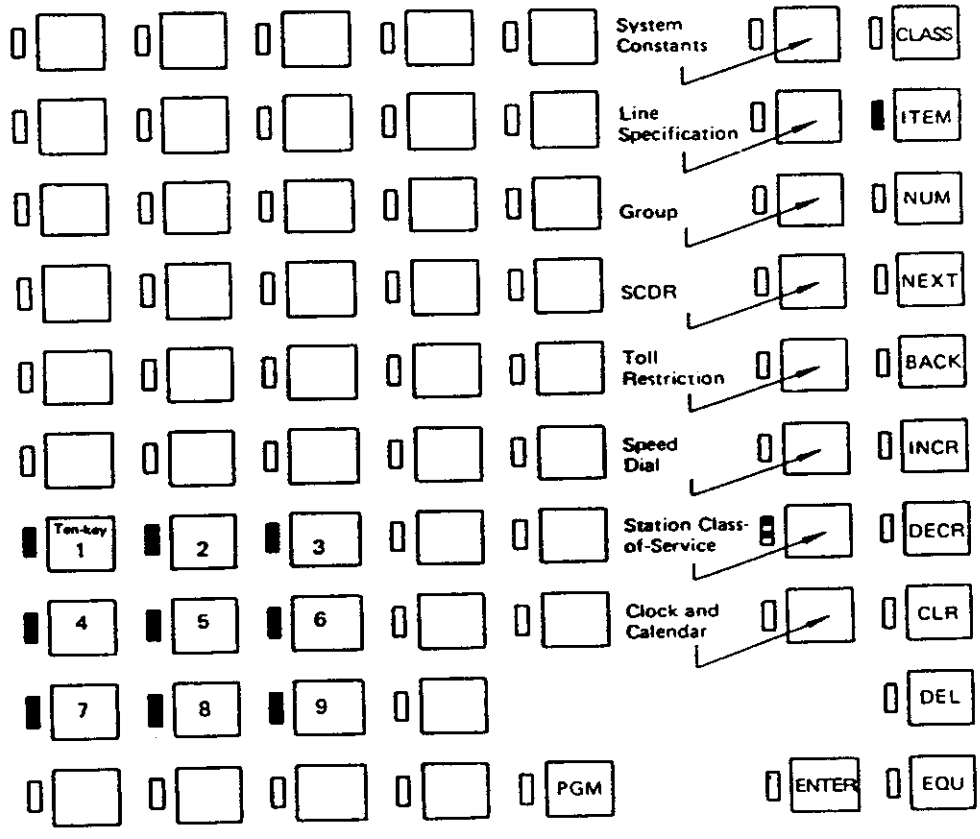
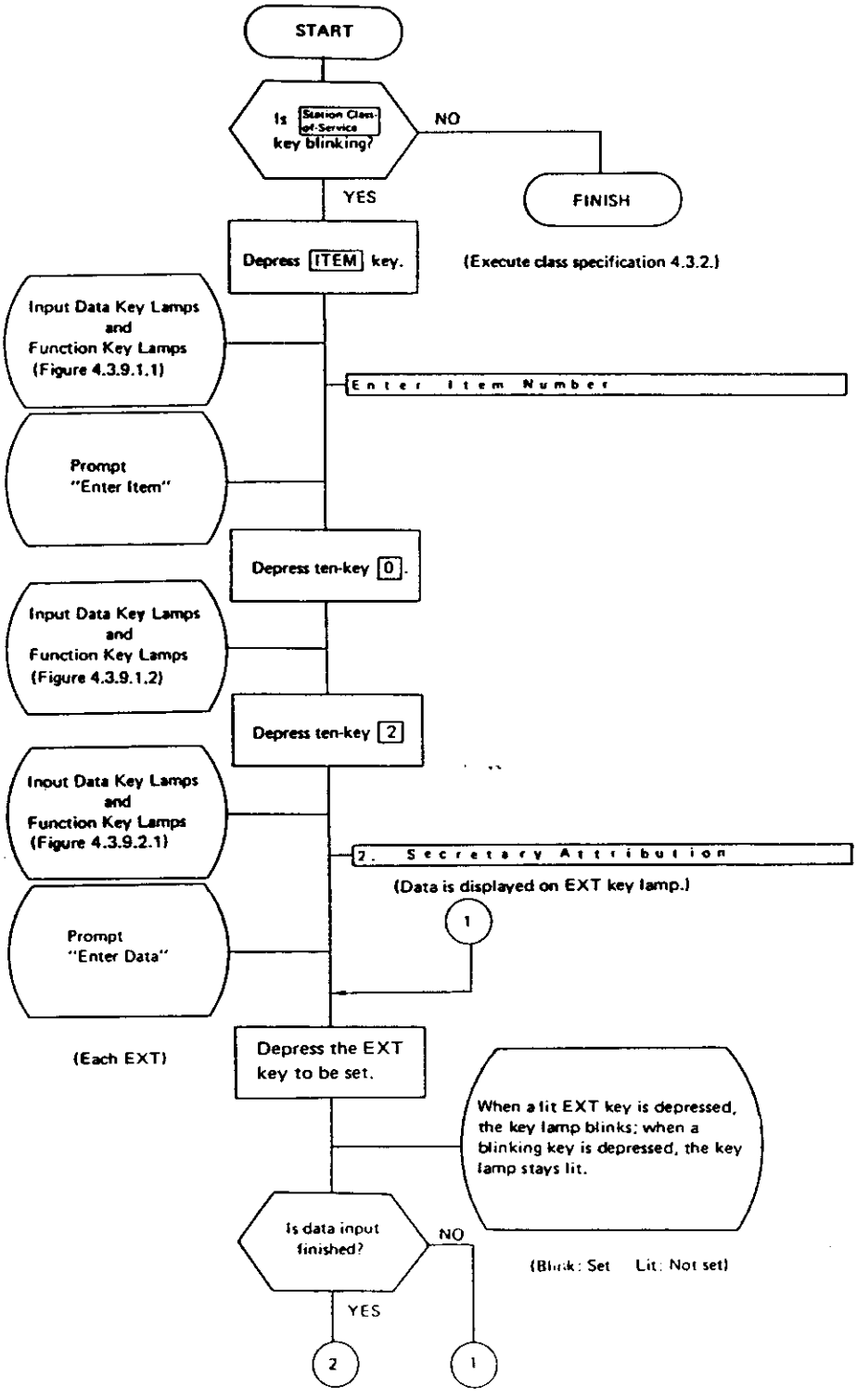
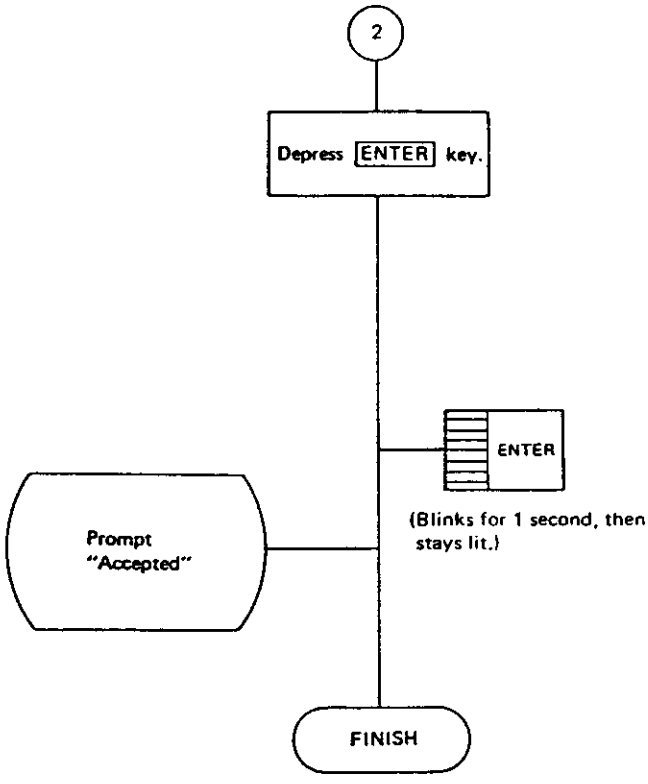


Figure 4.3.9.1.2

4.3.9.2 Secretary Attribution (Item 2)

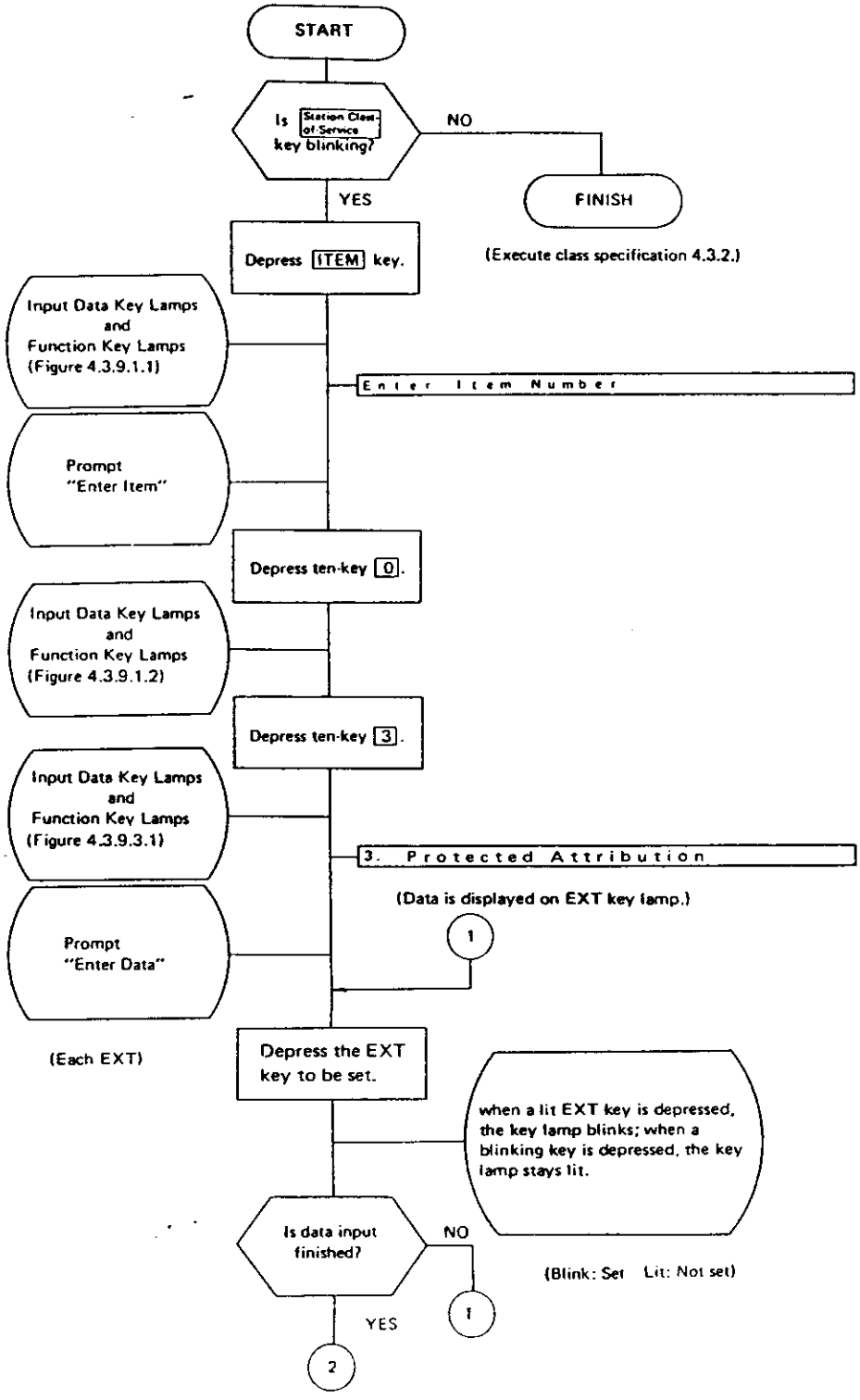
Feature: Setting Secretary Attribute for each EXT

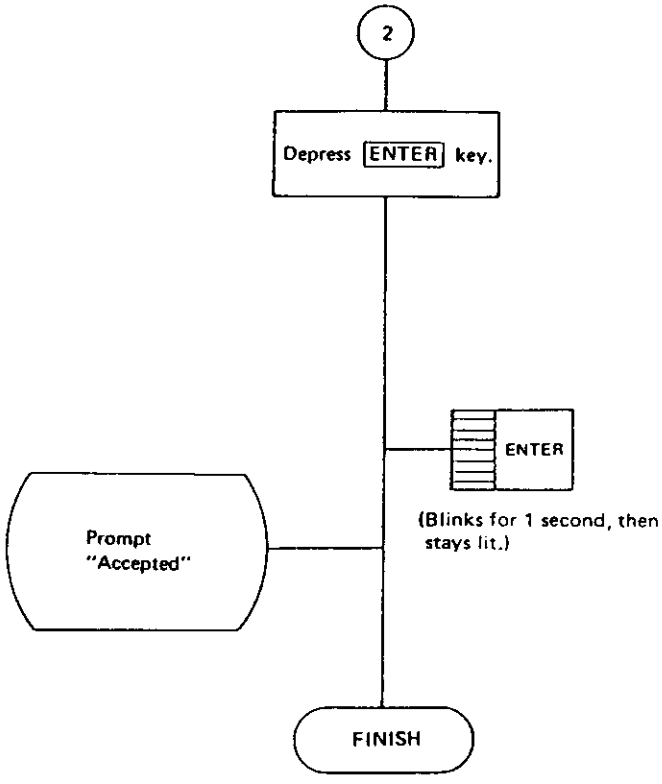



2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

4.3.9.3 Protected Attribution (Item 3)

Feature: Setting Protected Attribute for each EXT

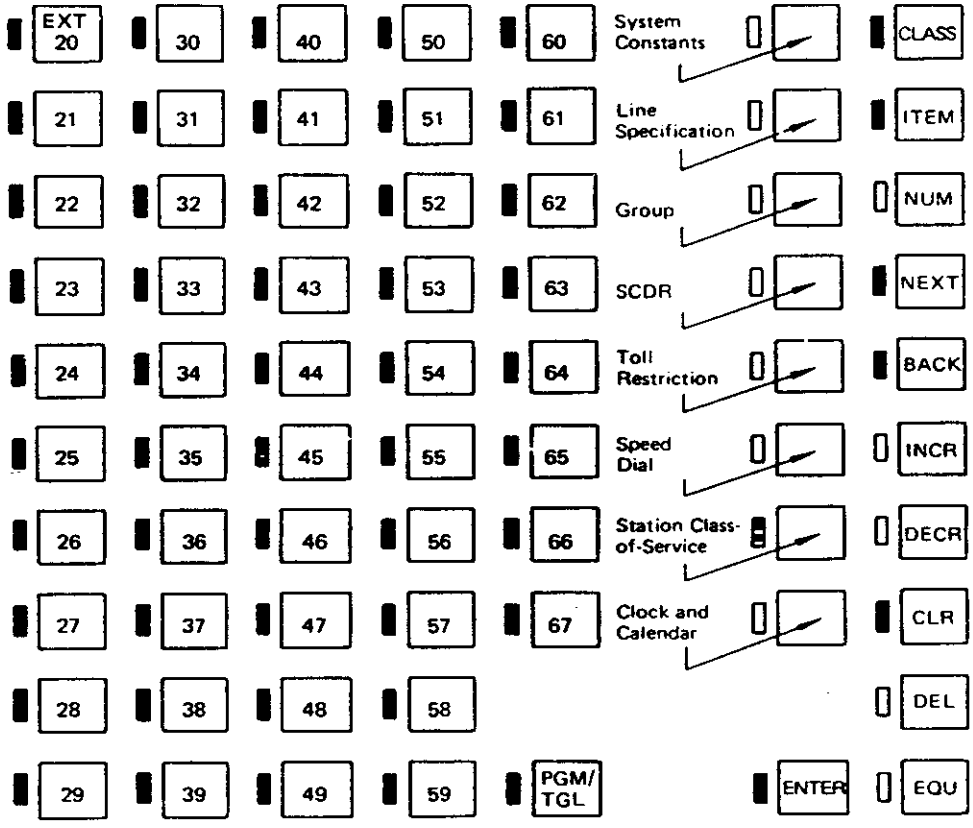



2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

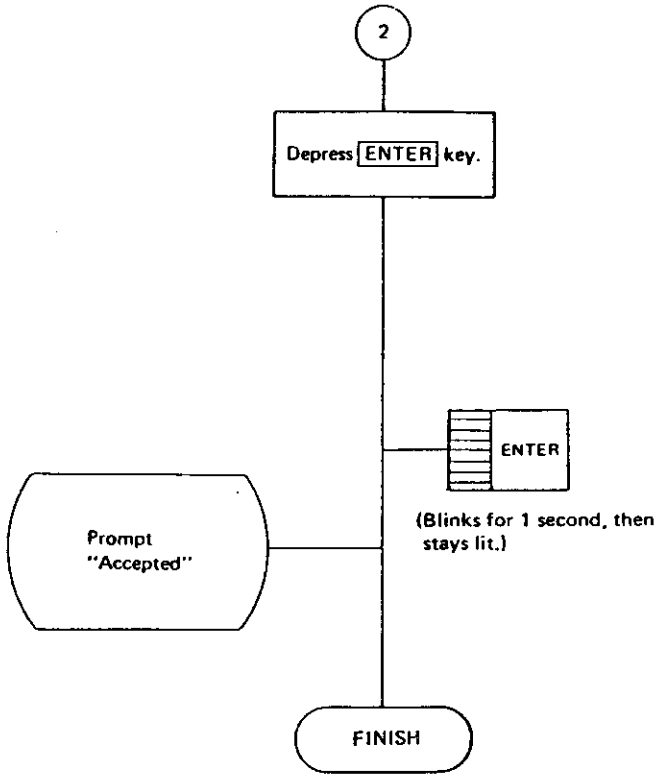
```
3. Protected Attribution
```

Key Lamp



Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

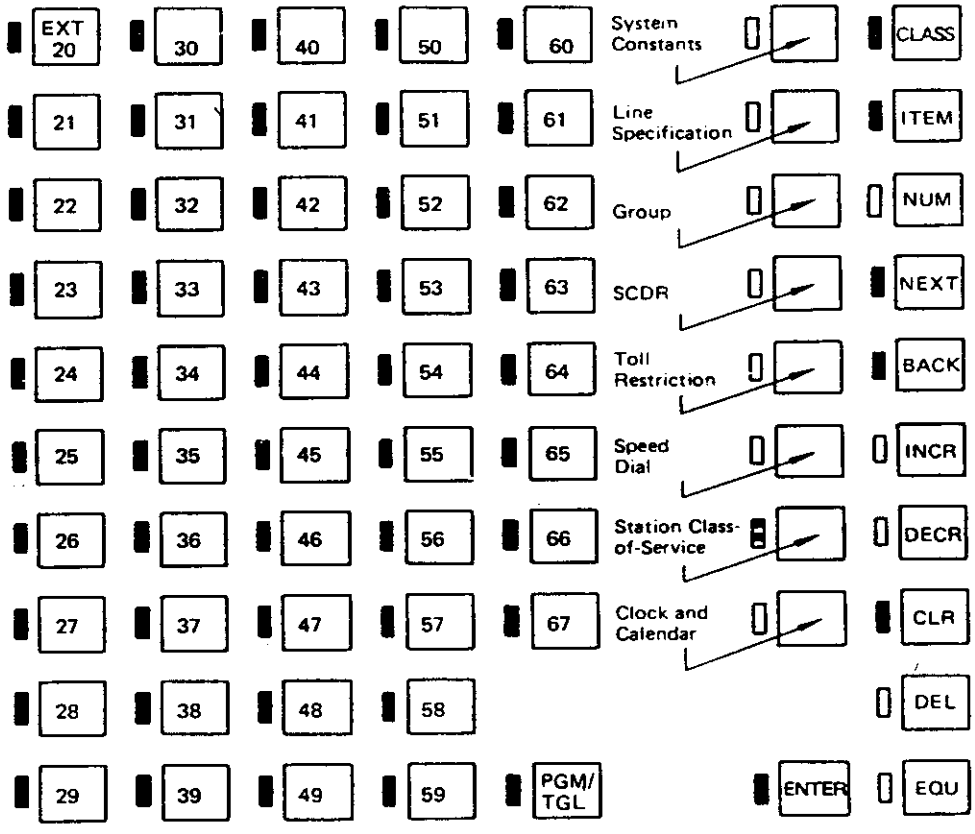
Figure 4.3.9.3.1.a


2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

```
4. Executive Attribution
```

Key Lamp



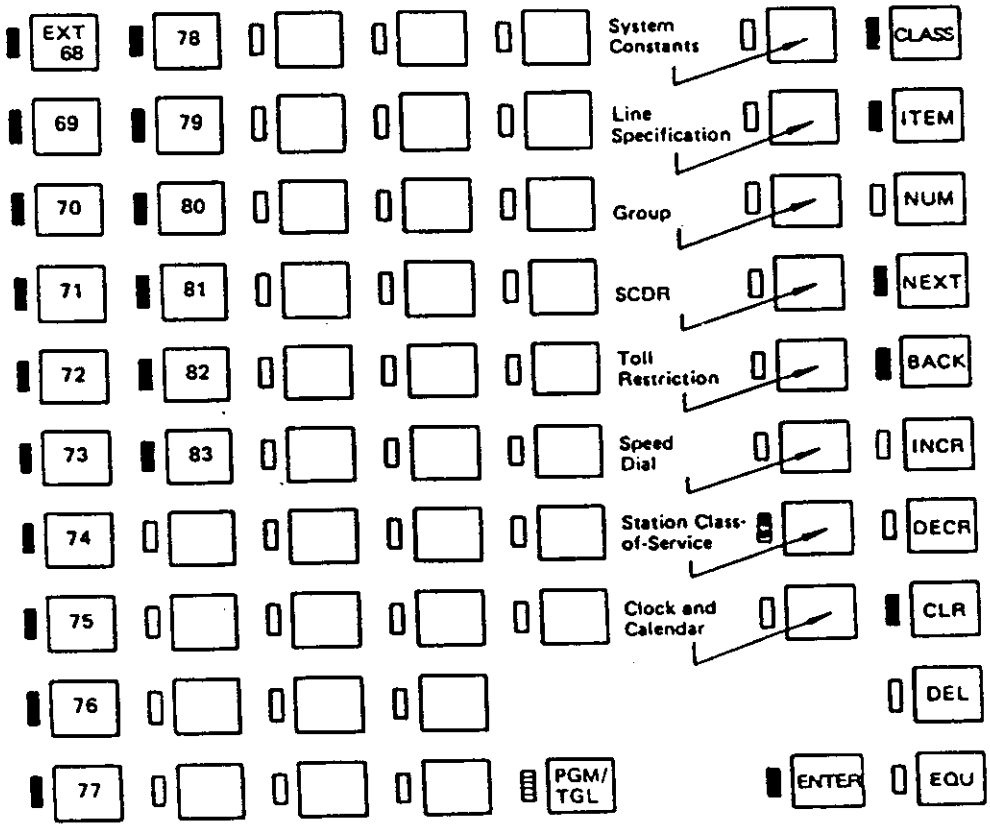
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.9.4.1.a

Display

```
5. Versaphone Attribution
```

Key Lamp



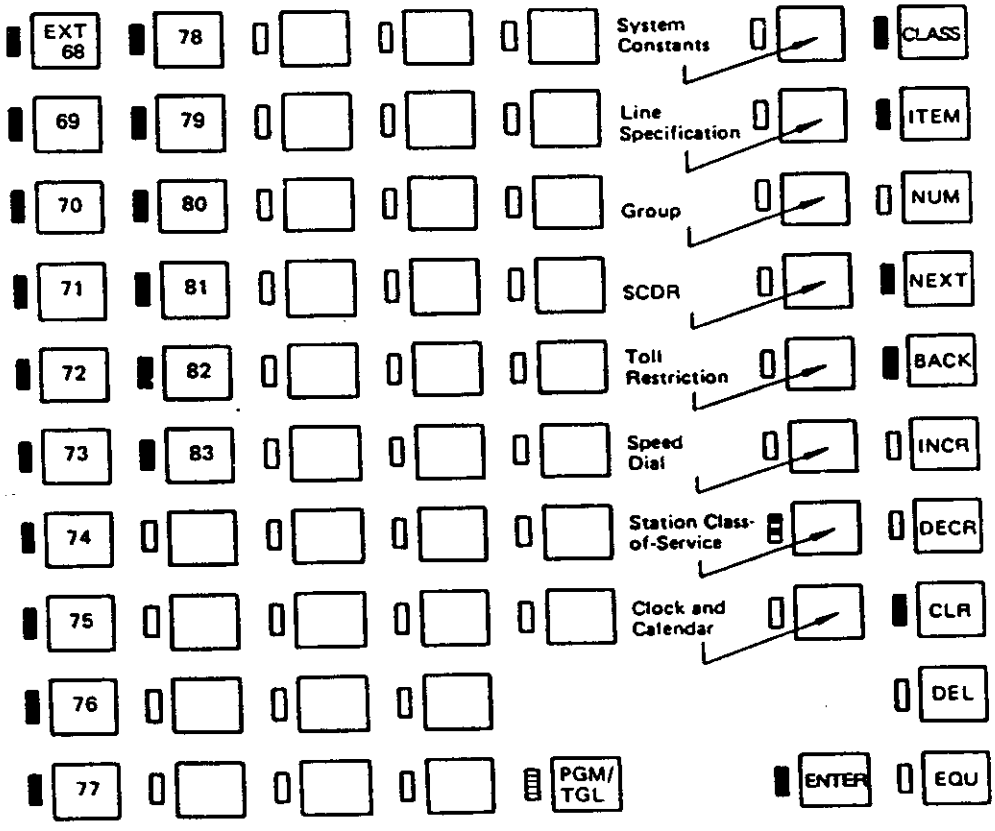
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

Figure 4.3.9.5.1.b

Display

```
6. Busy Call Forward
```

Key Lamp

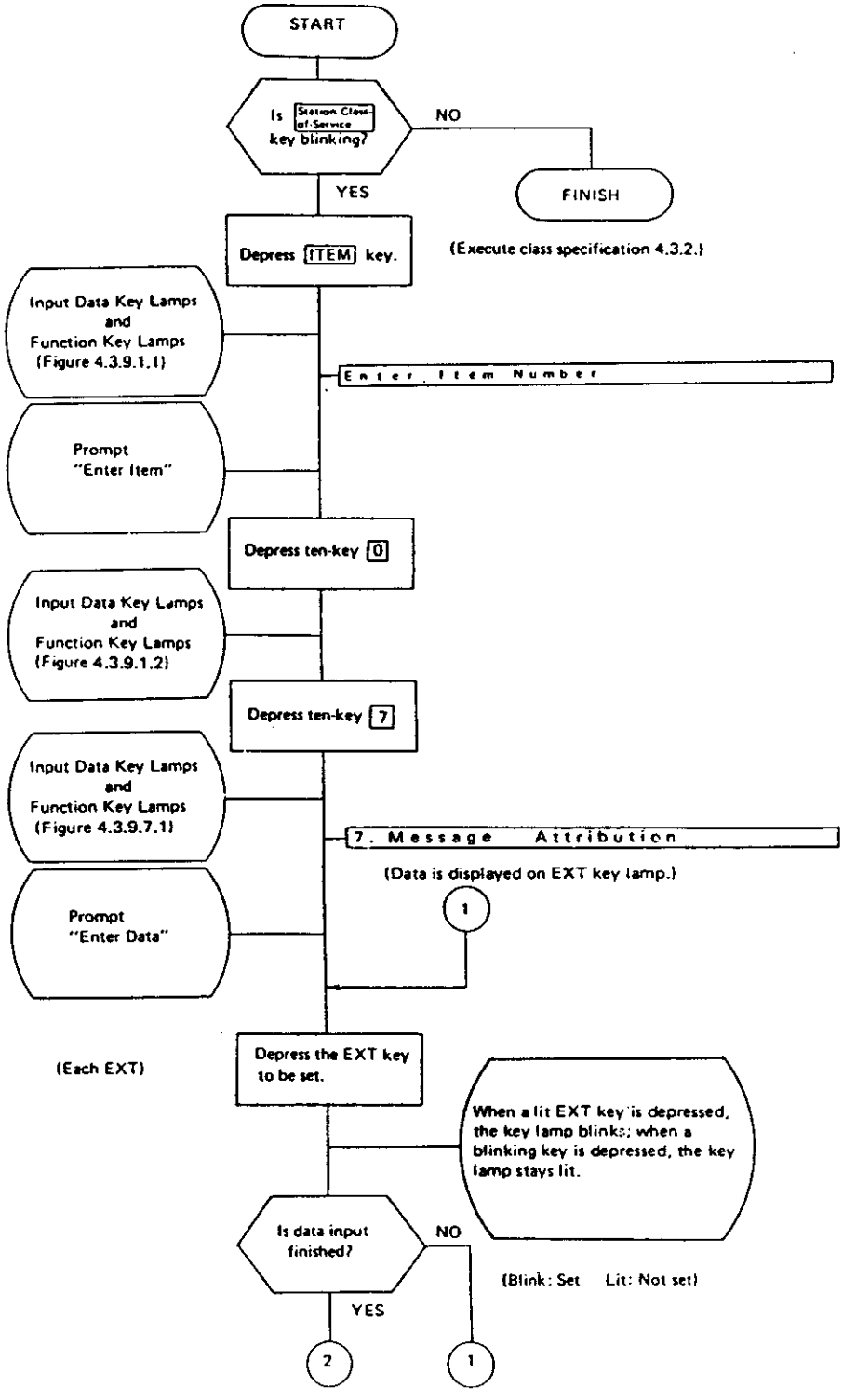


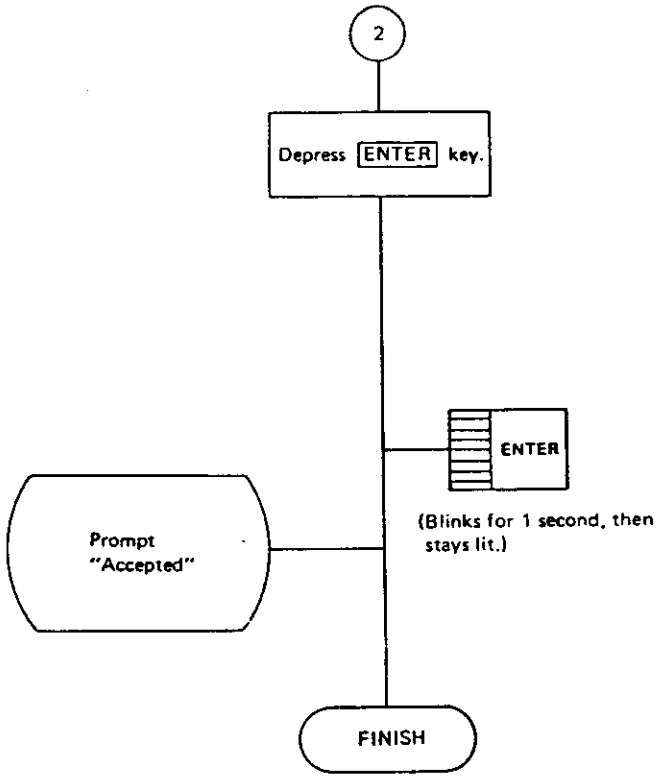
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

Figure 4.3.9.6.1.b

4.3.9.7 Message Attribution (Item 7)

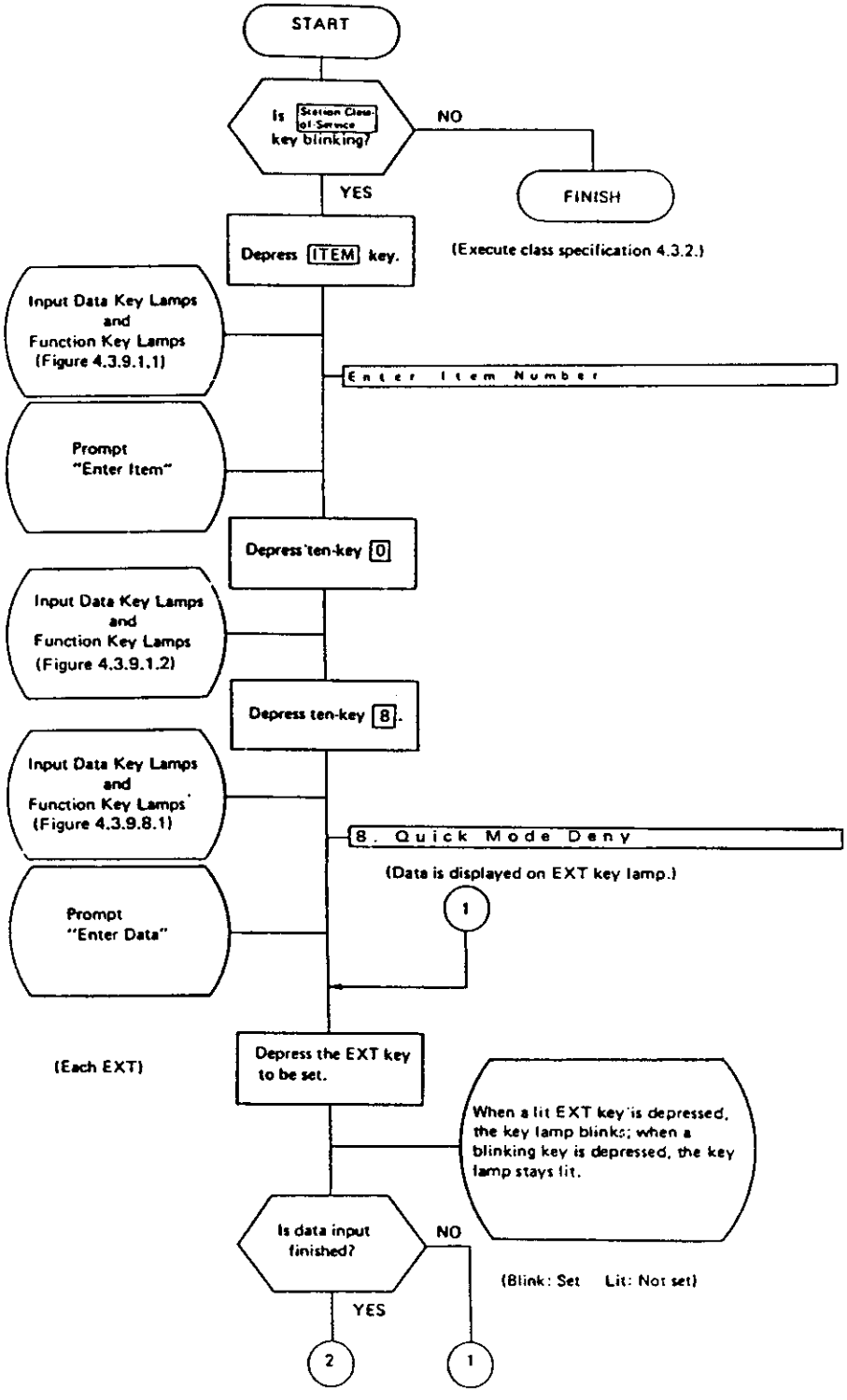
Feature: Setting Mail Class Attribution for each EXT

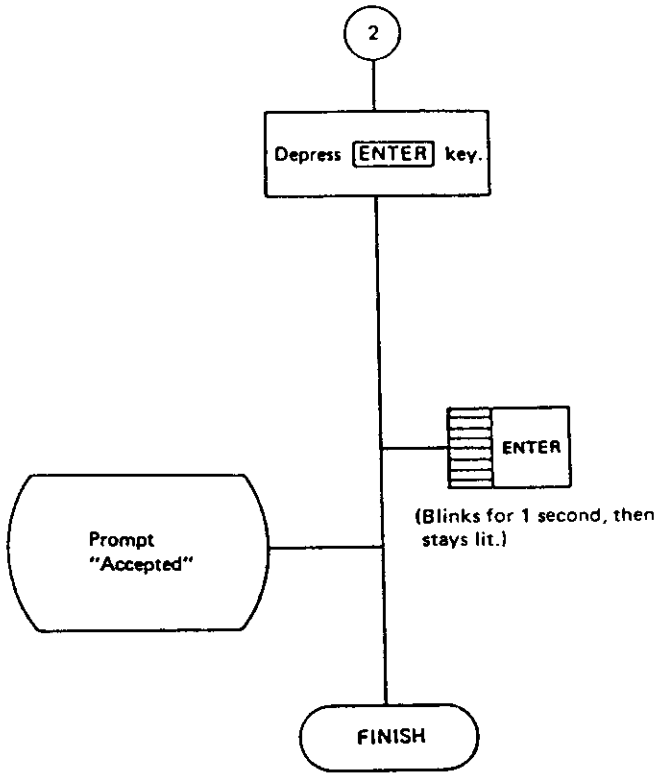



2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

4.3.9.8 Quick Mode Deny (Item 8)

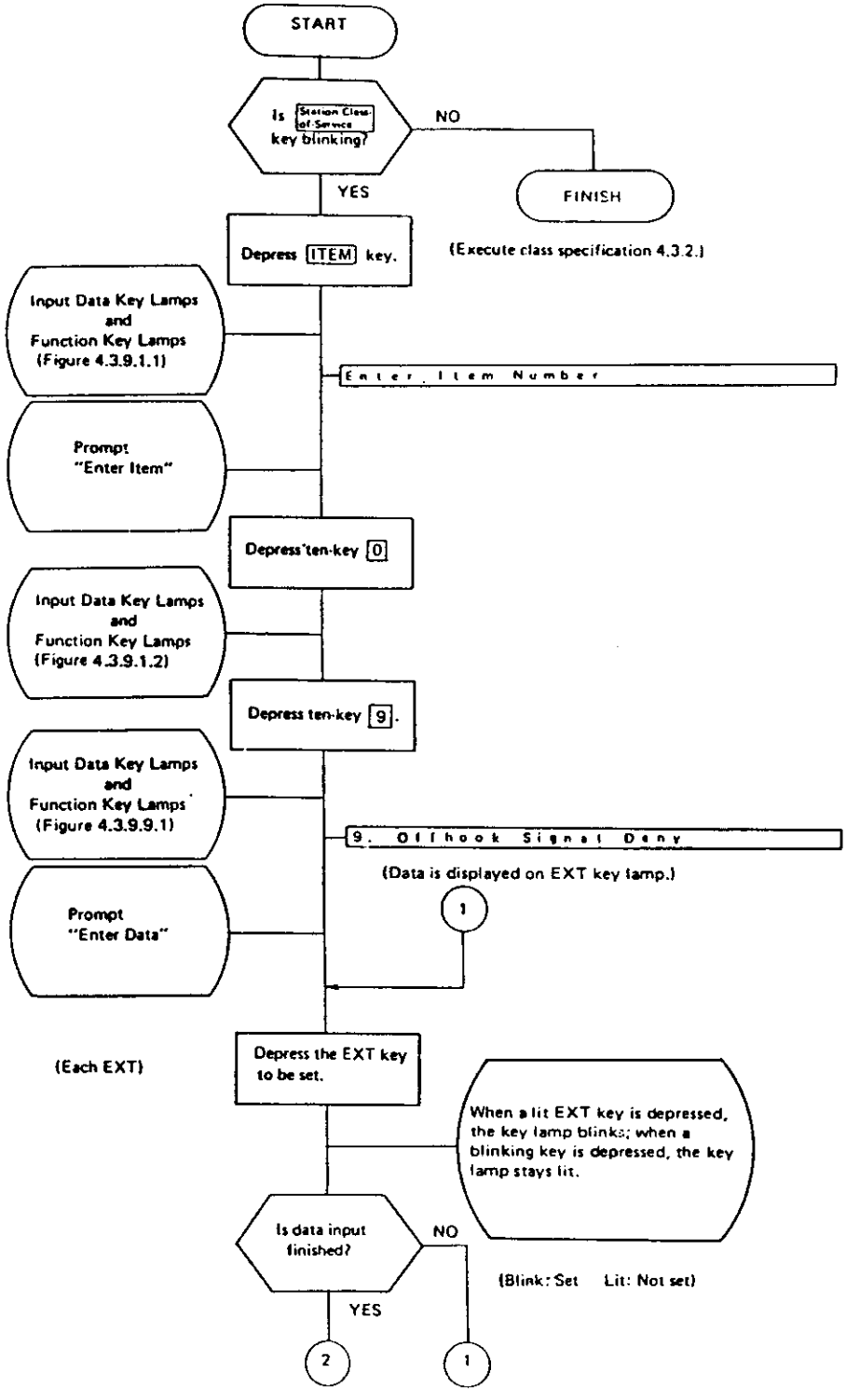
Feature: Setting Quick Mode Deny for each EXT

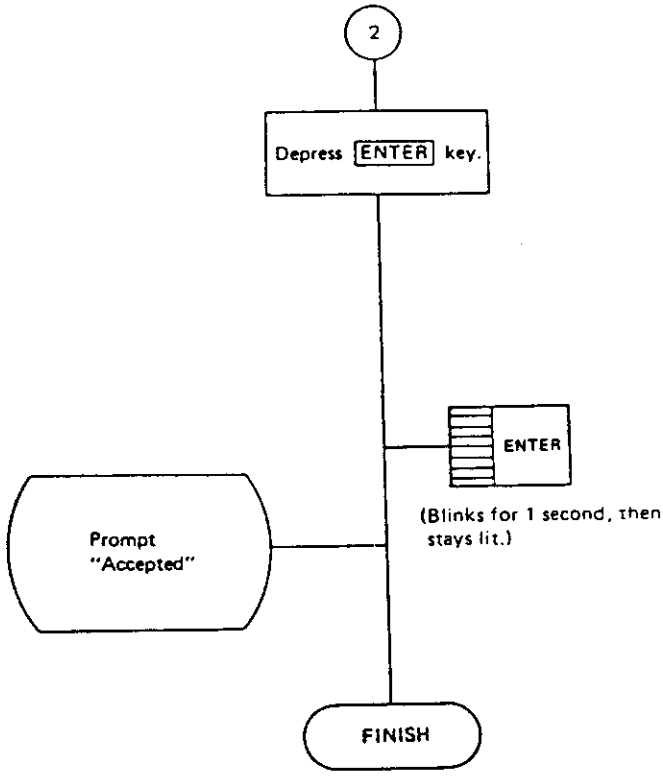



2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

4.3.9.9 Off-Hook Signal Deny (Item 9)

Feature: Setting Off-Hook Signal Deny for each EXT

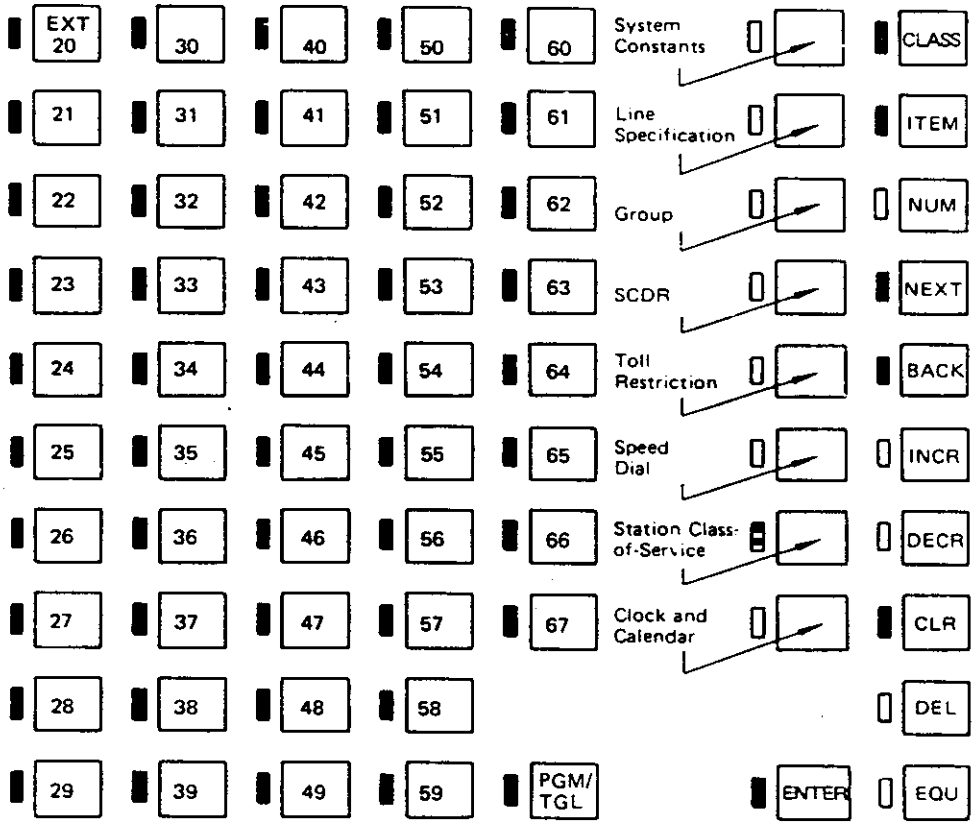



2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

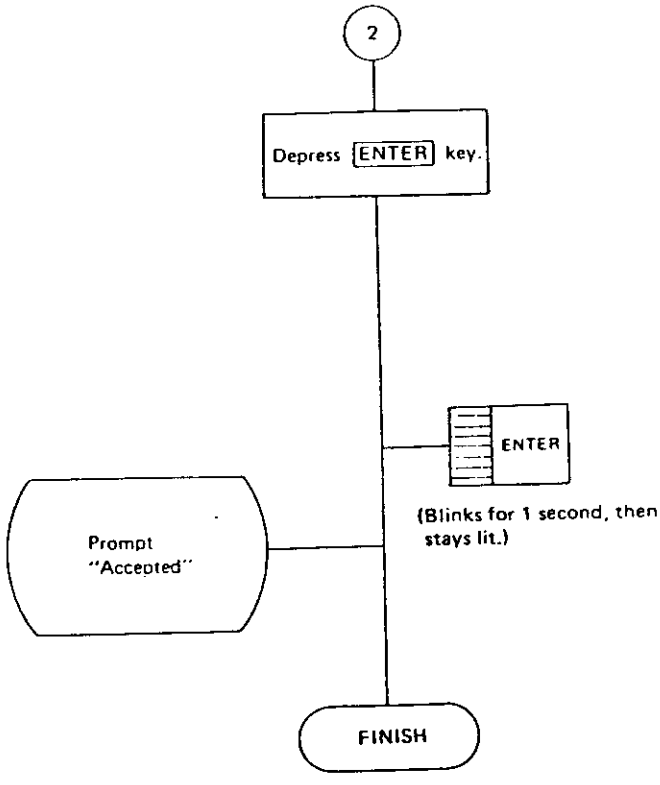
```
9. Offhook Signal Deny
```

Key Lamp



Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.9.9.1.a


2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

Enter Item Number

Key Lamp

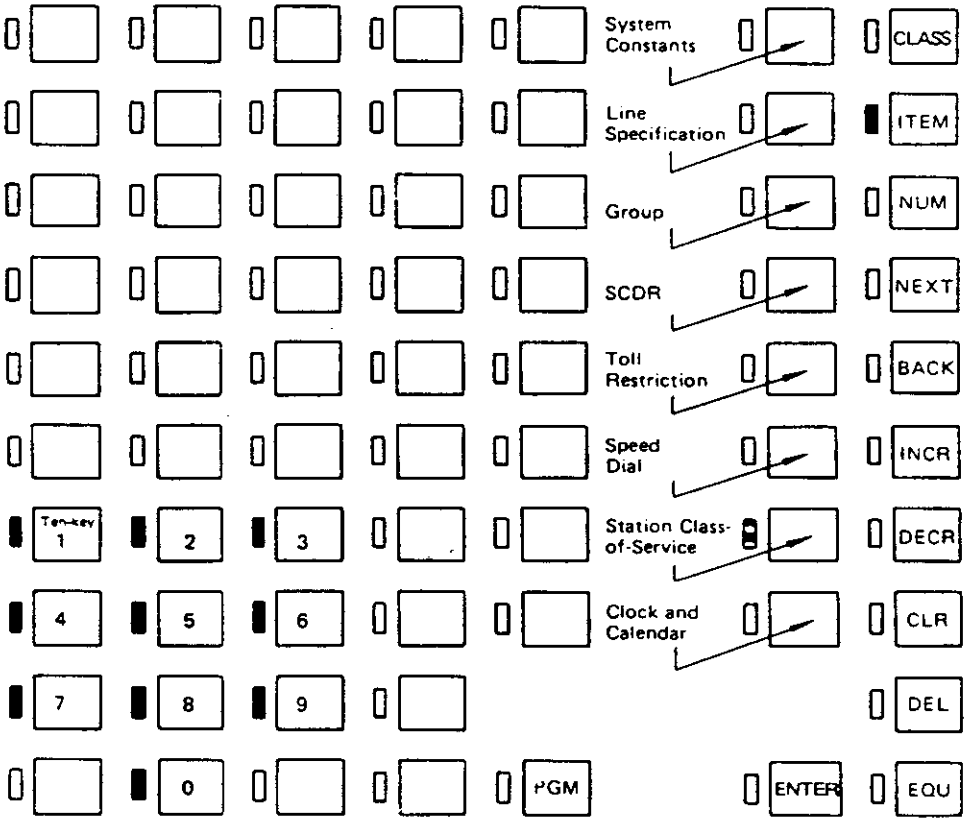
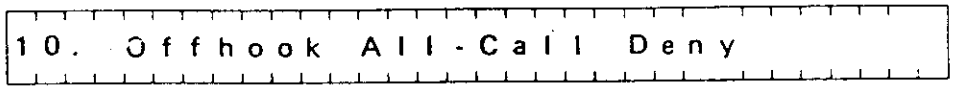
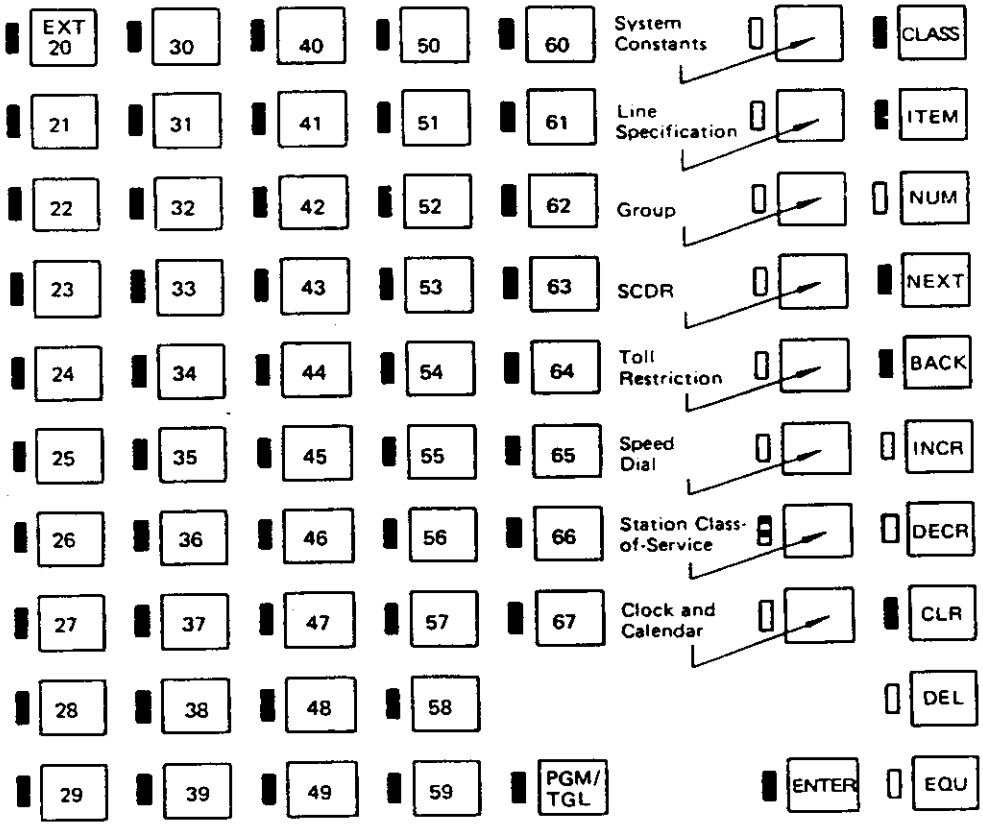


Figure 4.3.9.10.1

Display



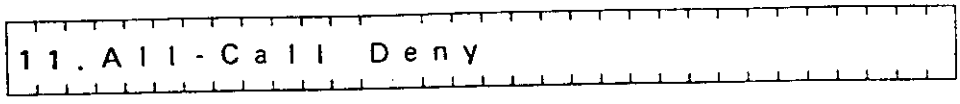
Key Lamp



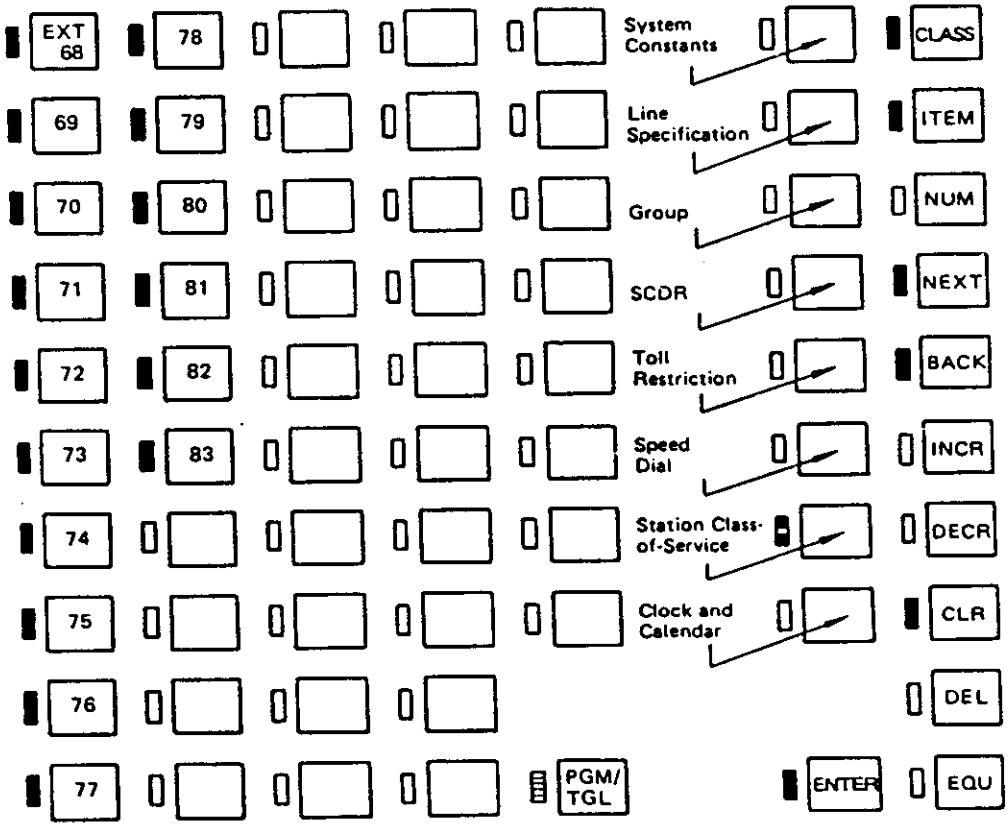
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.9.10.2.a

Display



Key Lamp

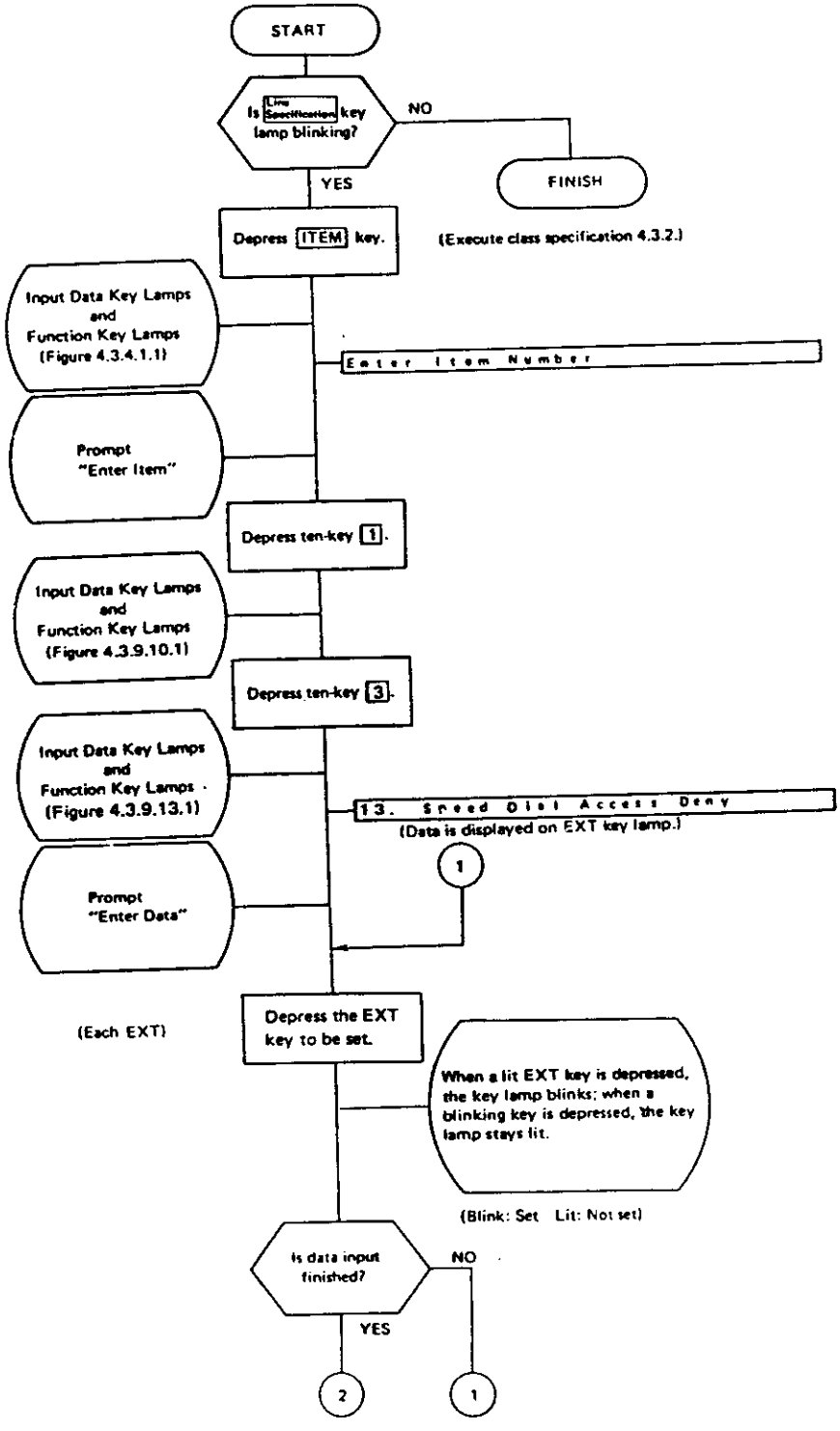


Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

Figure 4.3.9.11.1.b

4.3.9.13 Speed Dial Access Deny (Item 13)

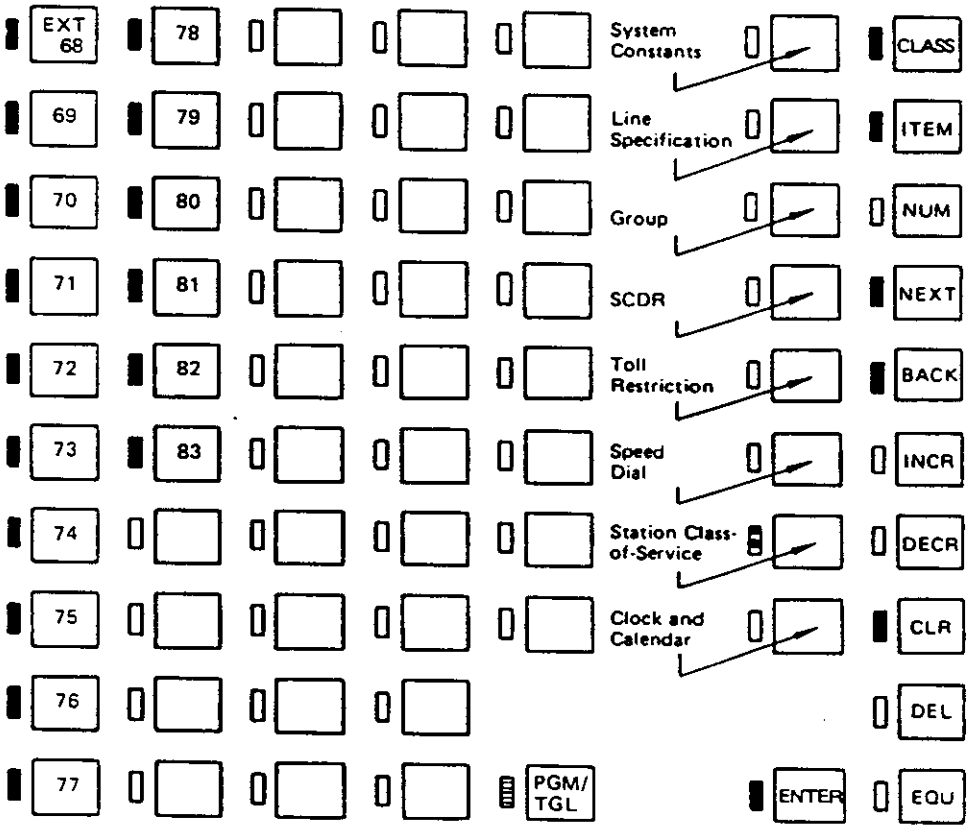
Feature: Setting Speed Dial Access Deny for each EXT



Display

```
13. Speed Dial Access Deny
```

Key Lamp

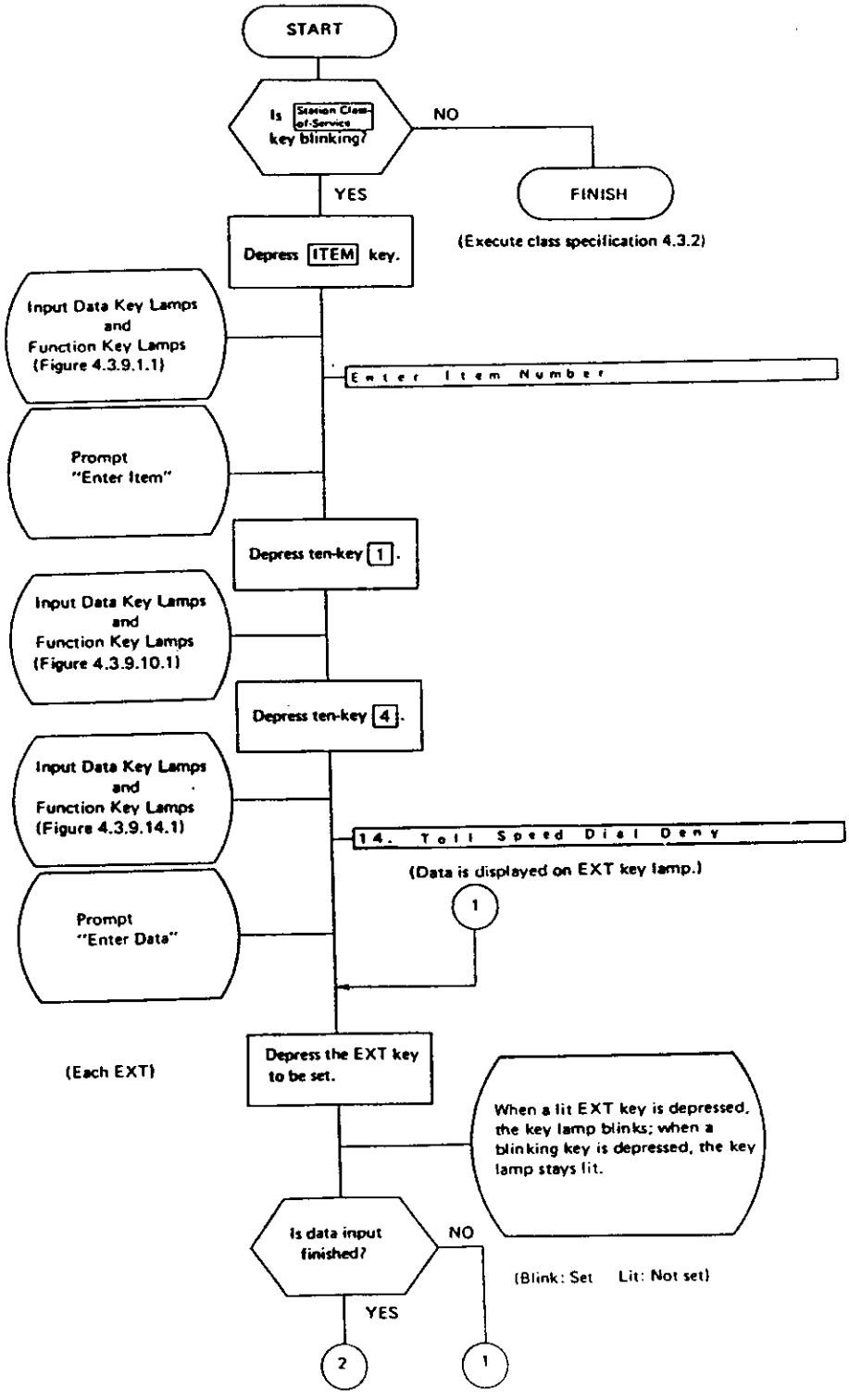


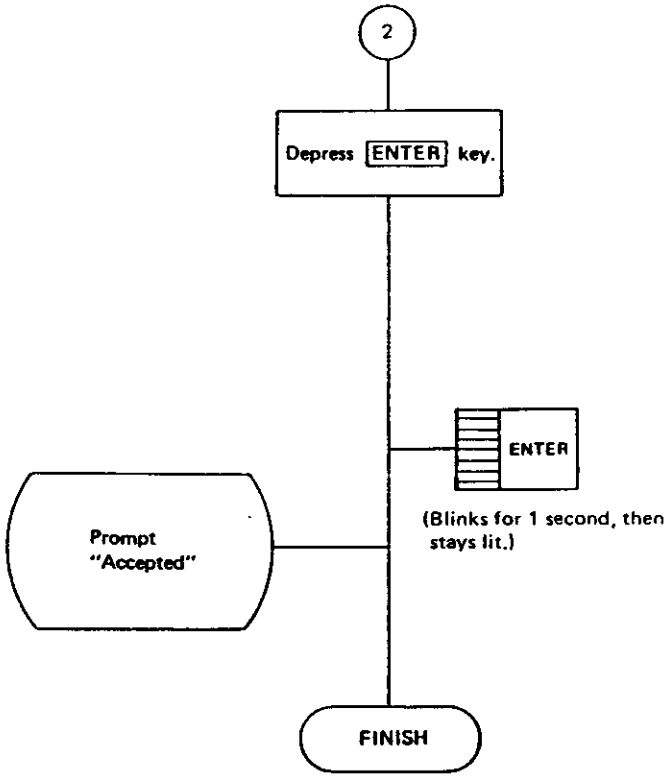
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

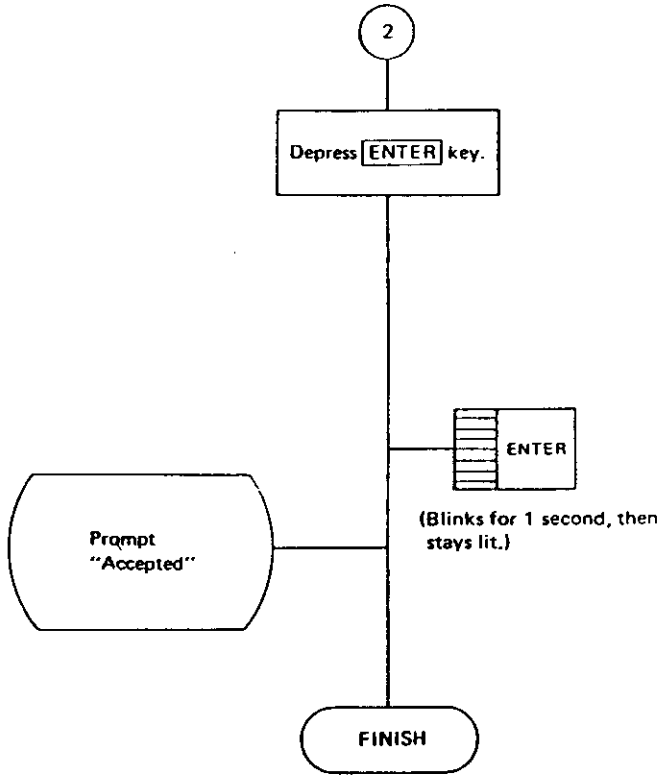
Figure 4.3.9.13.1.b

4.3.9.14 Toll Speed Dial Access Deny (Item 14)

Feature: Setting Toll Speed Dial Access Deny for each EXT



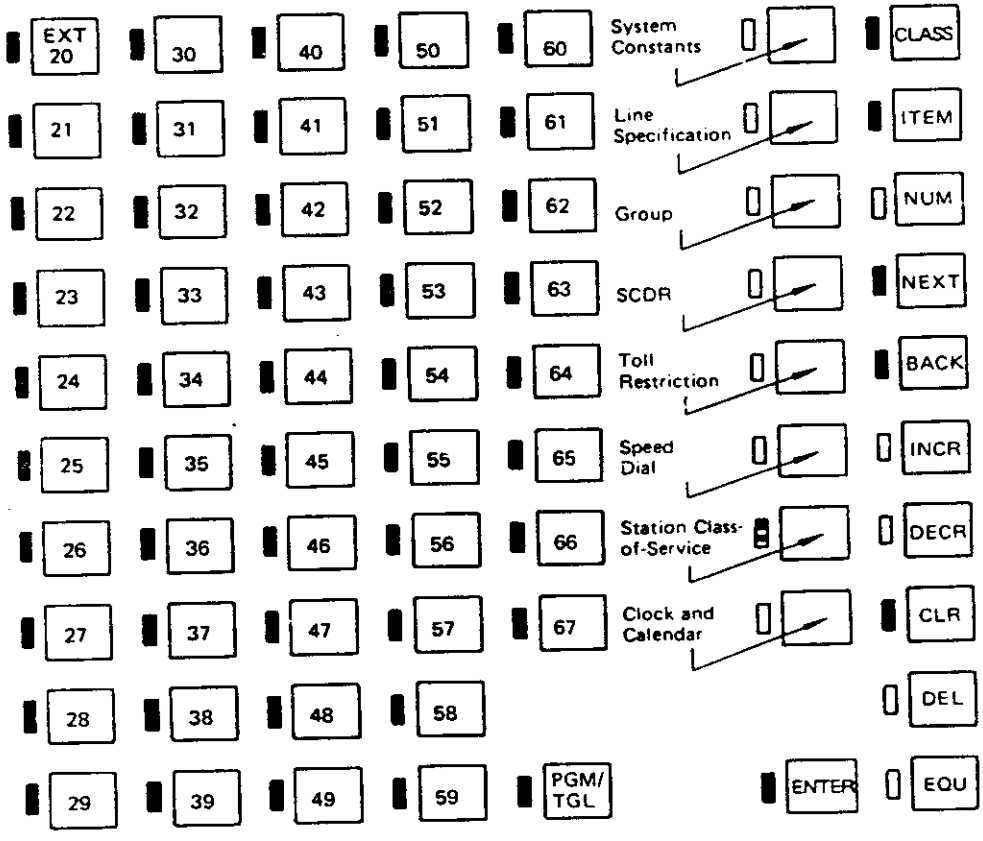

2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH


2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

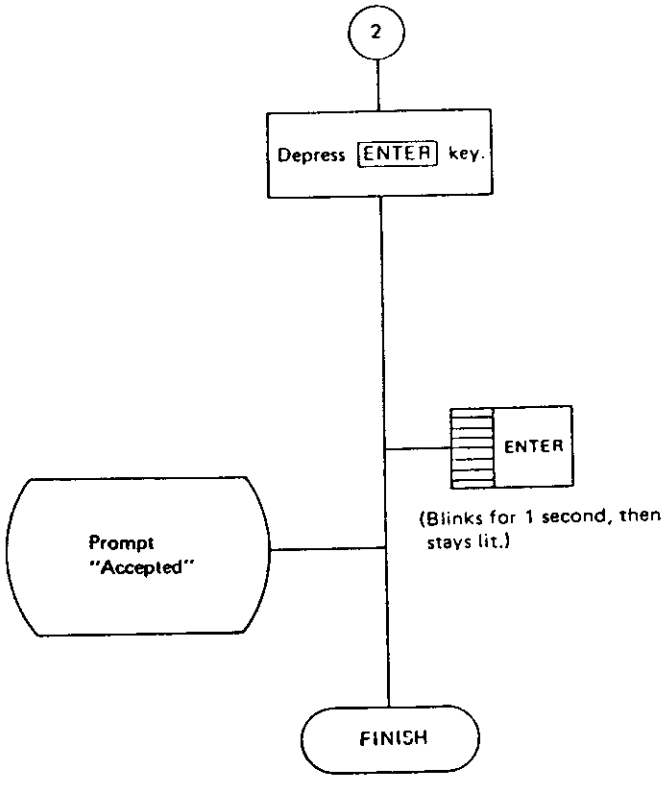
```
15. CO Automatic Answer Deny
```

Key Lamp



Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

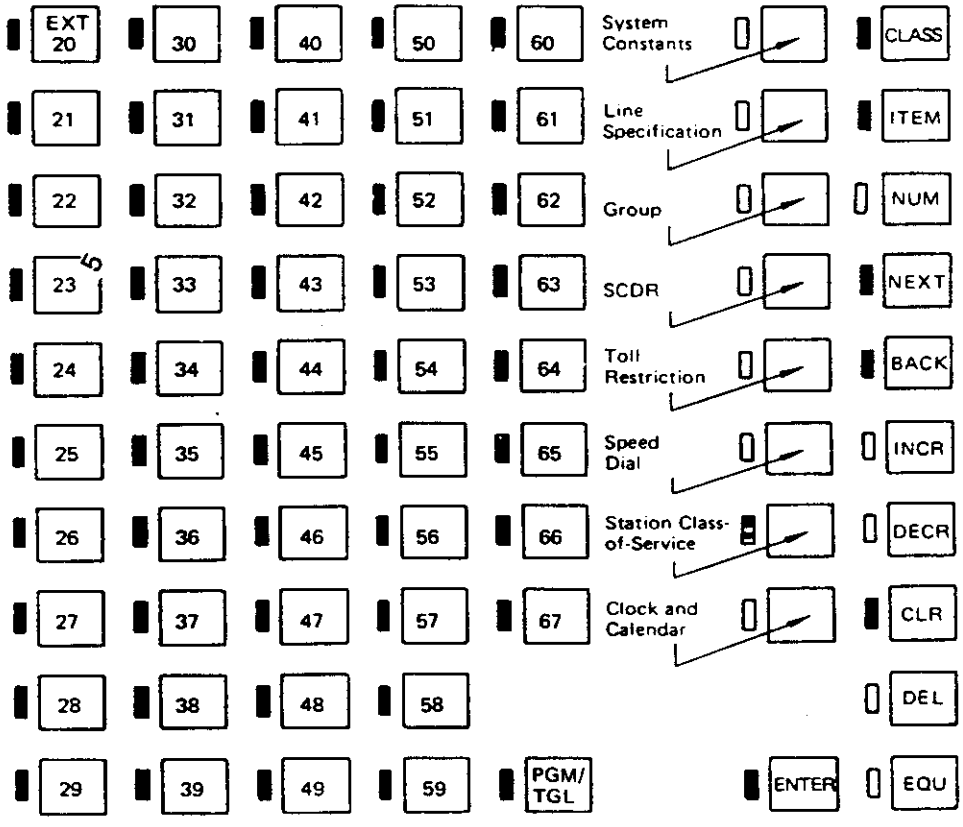
Figure 4.3.9.15.1.a


2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

```
16. ICM Automatic Answer Deny
```

Key Lamp



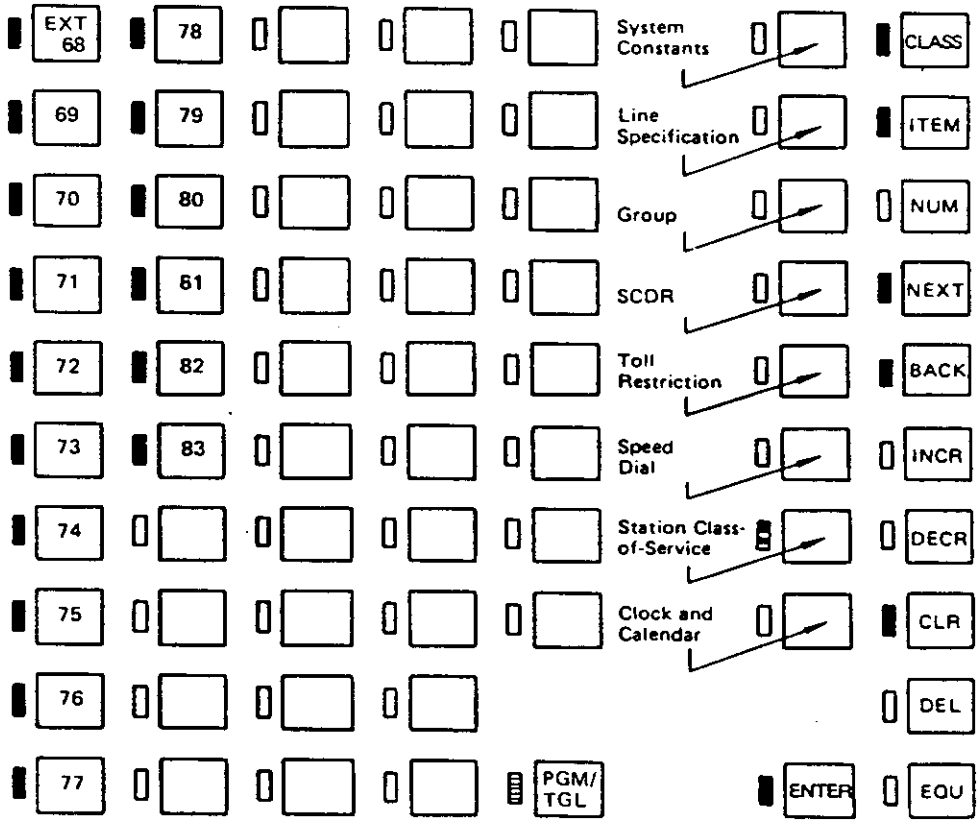
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.9.16.1.a

Display

```
16. ICM Automatic Answer Deny
```

Key Lamp



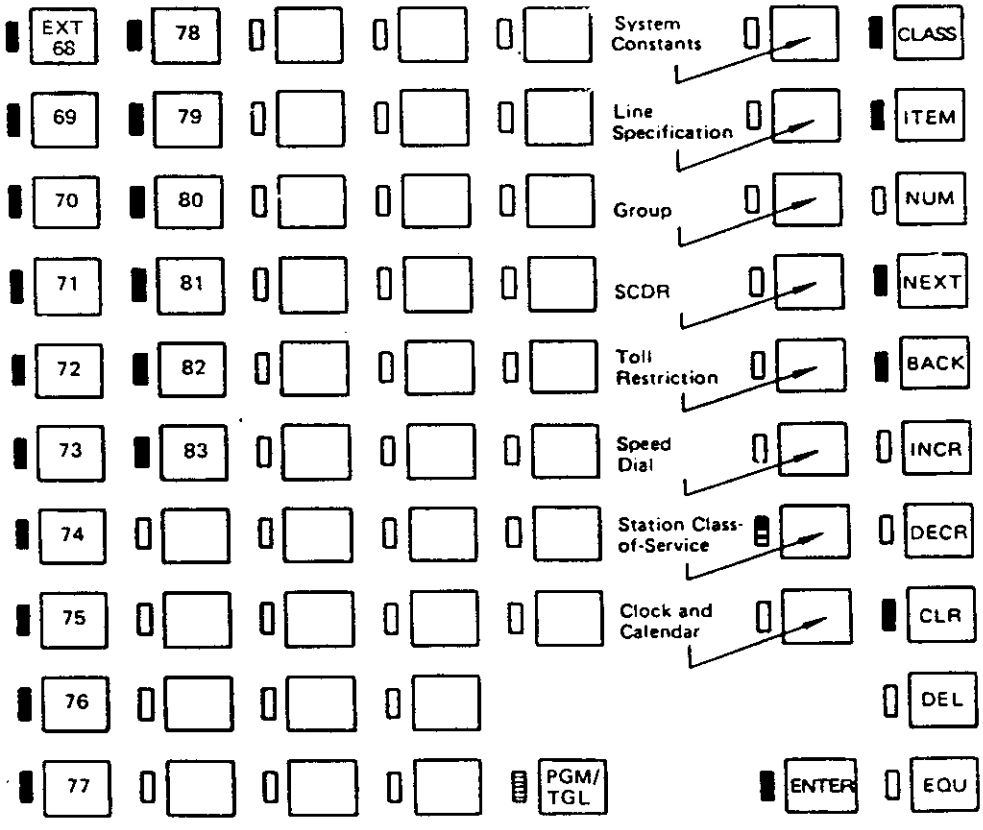
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

Figure 4.3.9.16.1.b

Display

```
17. Paging Access Deny
```

Key Lamp

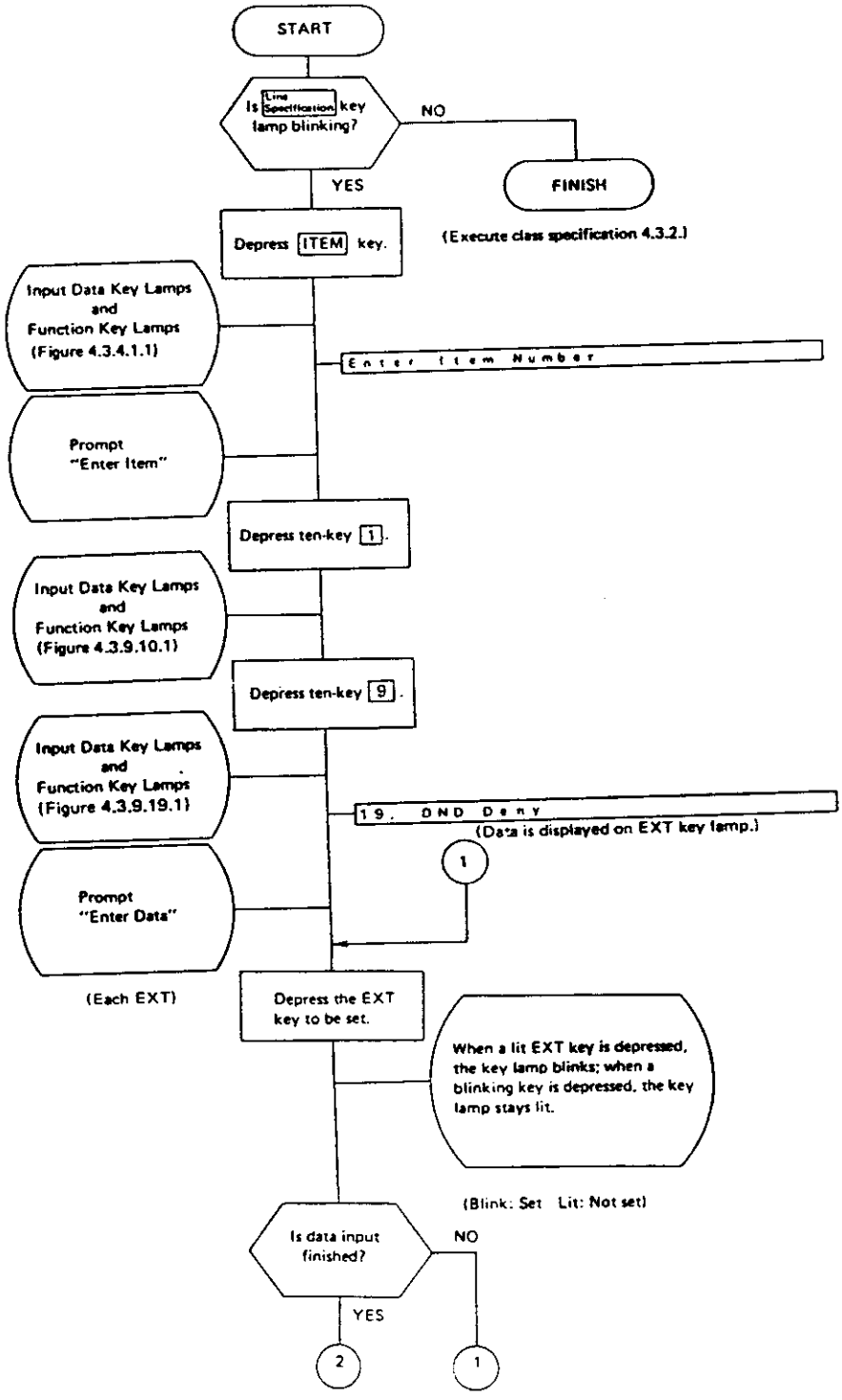


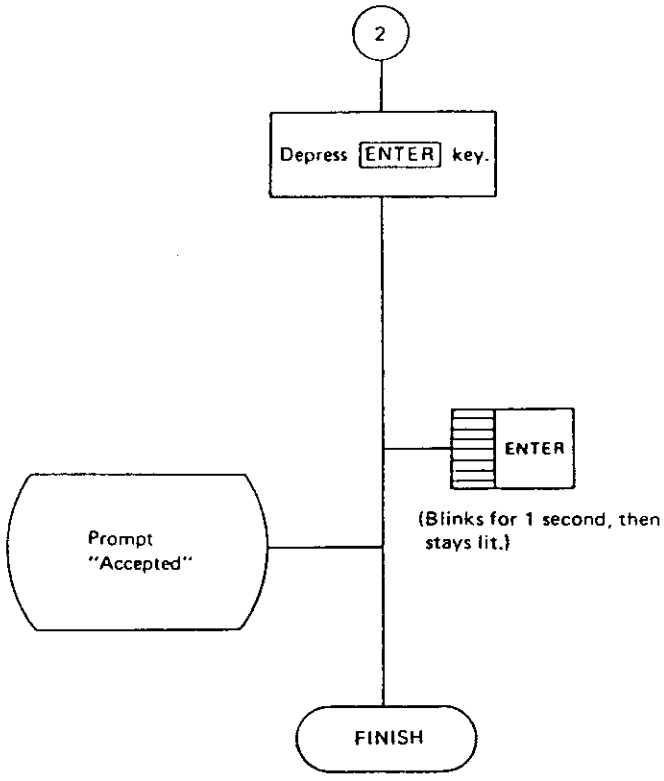
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

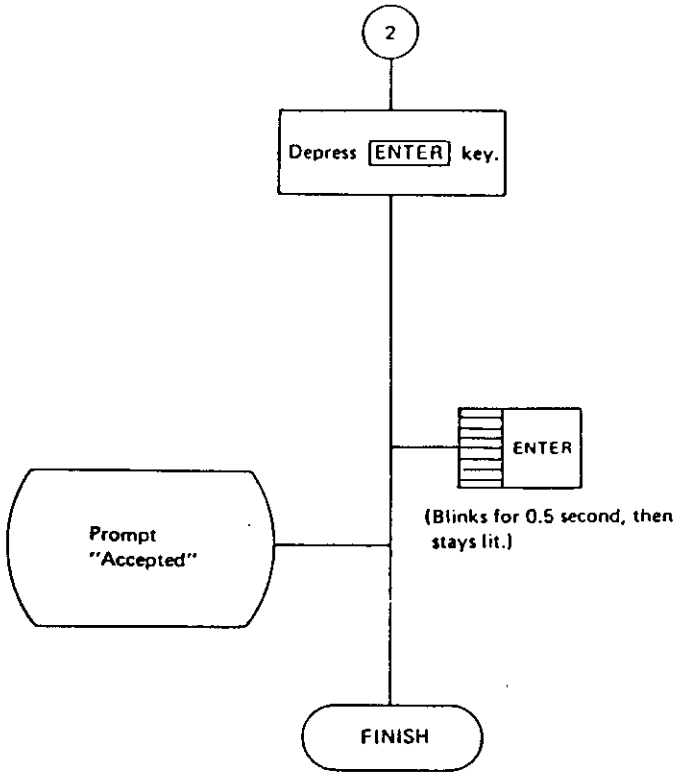
Figure 4.3.9.17.1.b

4.3.9.19 Do-Not-Disturb Deny (Item 19)

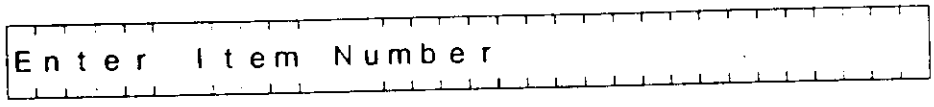
Feature: Setting Do-Not-Disturb Deny for each EXT




2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH


2
Depress ENTER key.
ENTER
(Blinks for 0.5 second, then stays lit.)
Prompt "Accepted"
FINISH

Display



Key Lamp

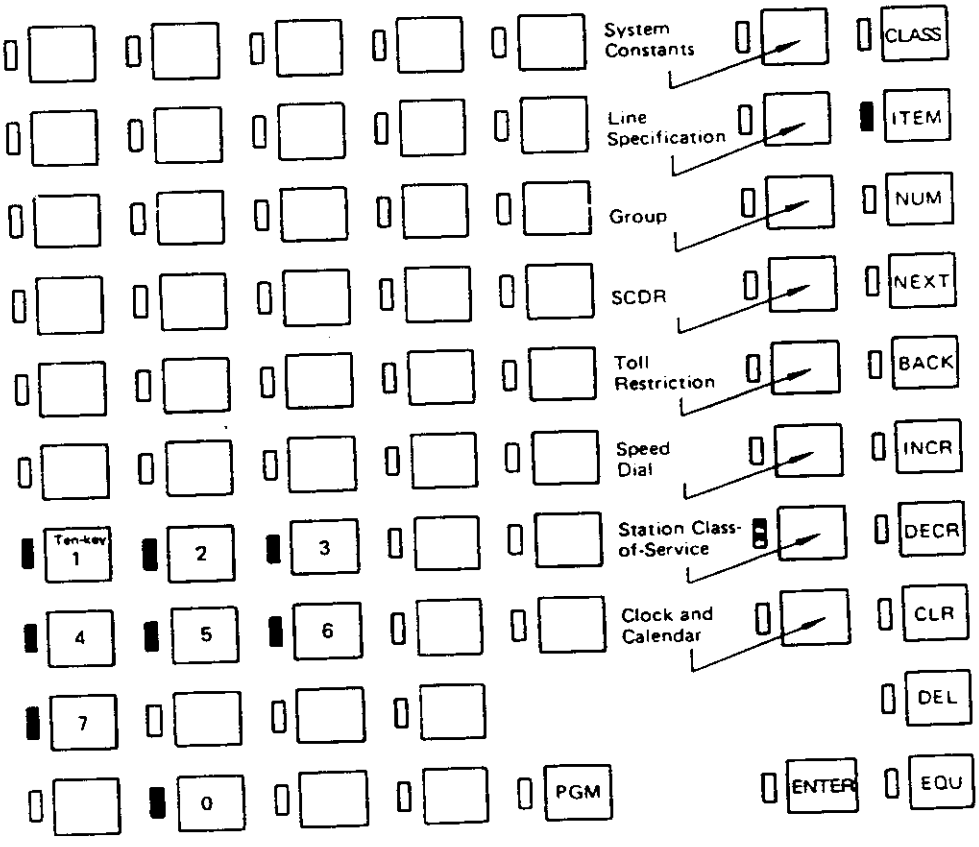
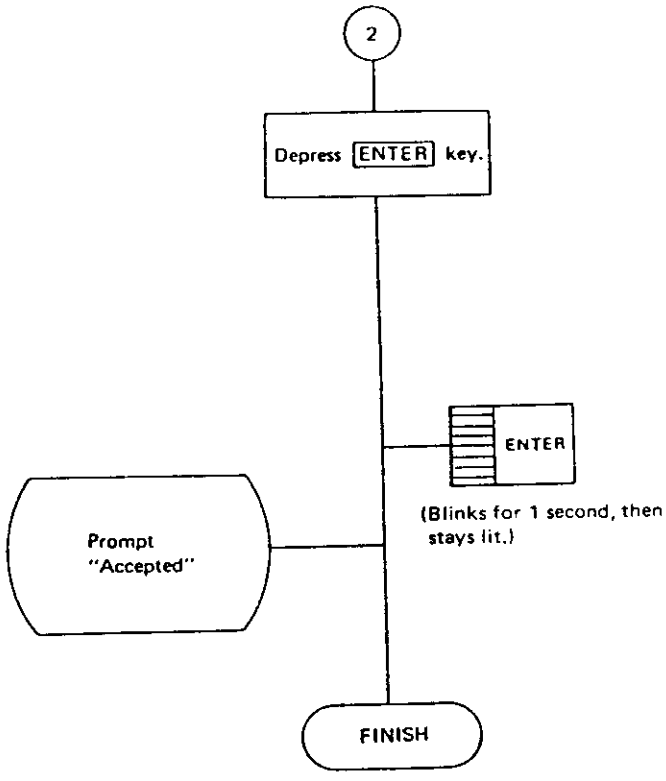


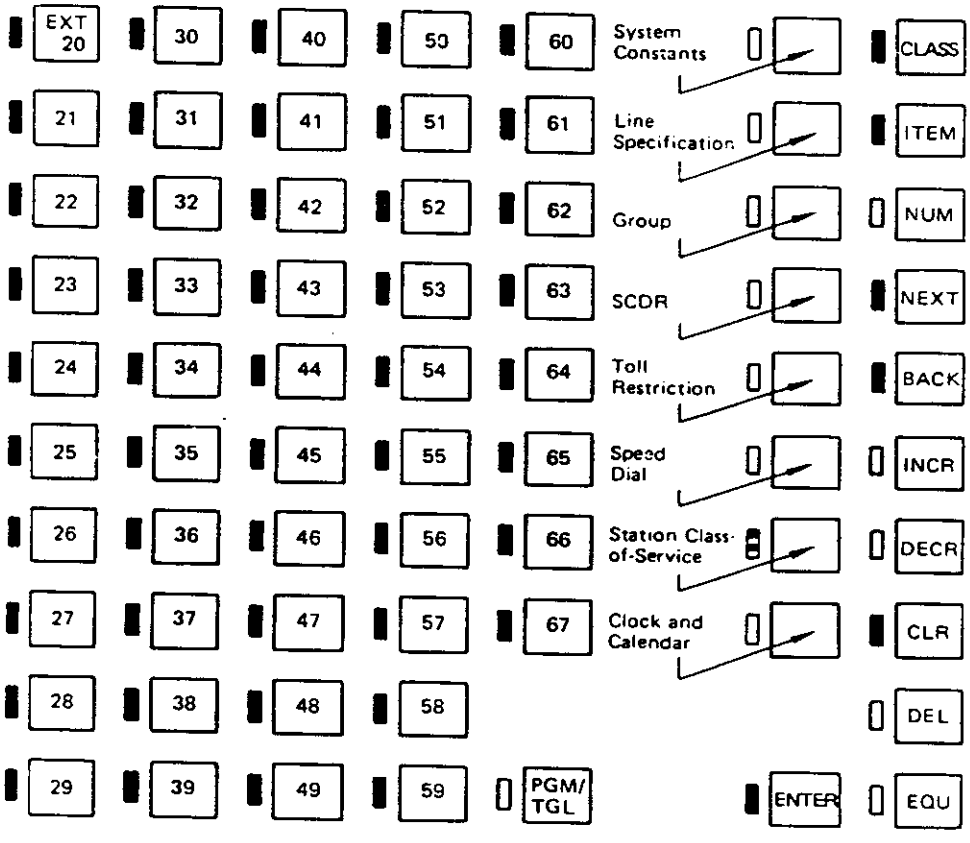
Figure 4.3.9.20.1


2
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

```
21. Equal / SCC Access Deny
```

Key Lamp



Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.9.21.1.a

Display

```
<EXT20>  22.  Toll Dial C.O.R          0
```

Key Lamp

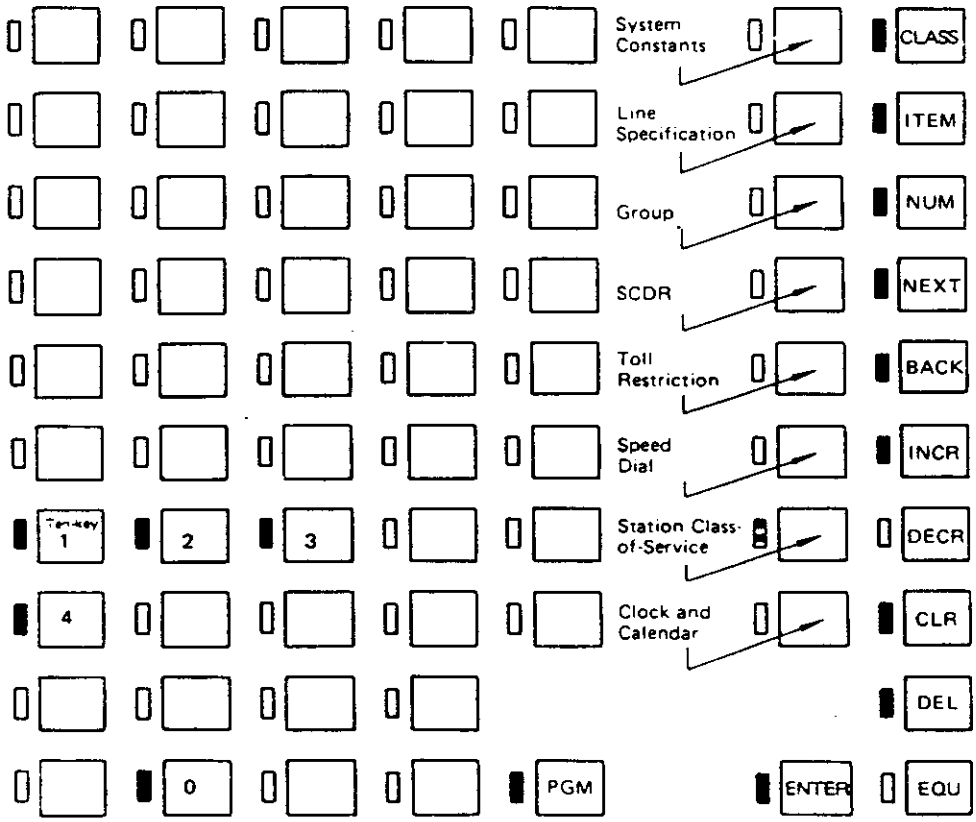
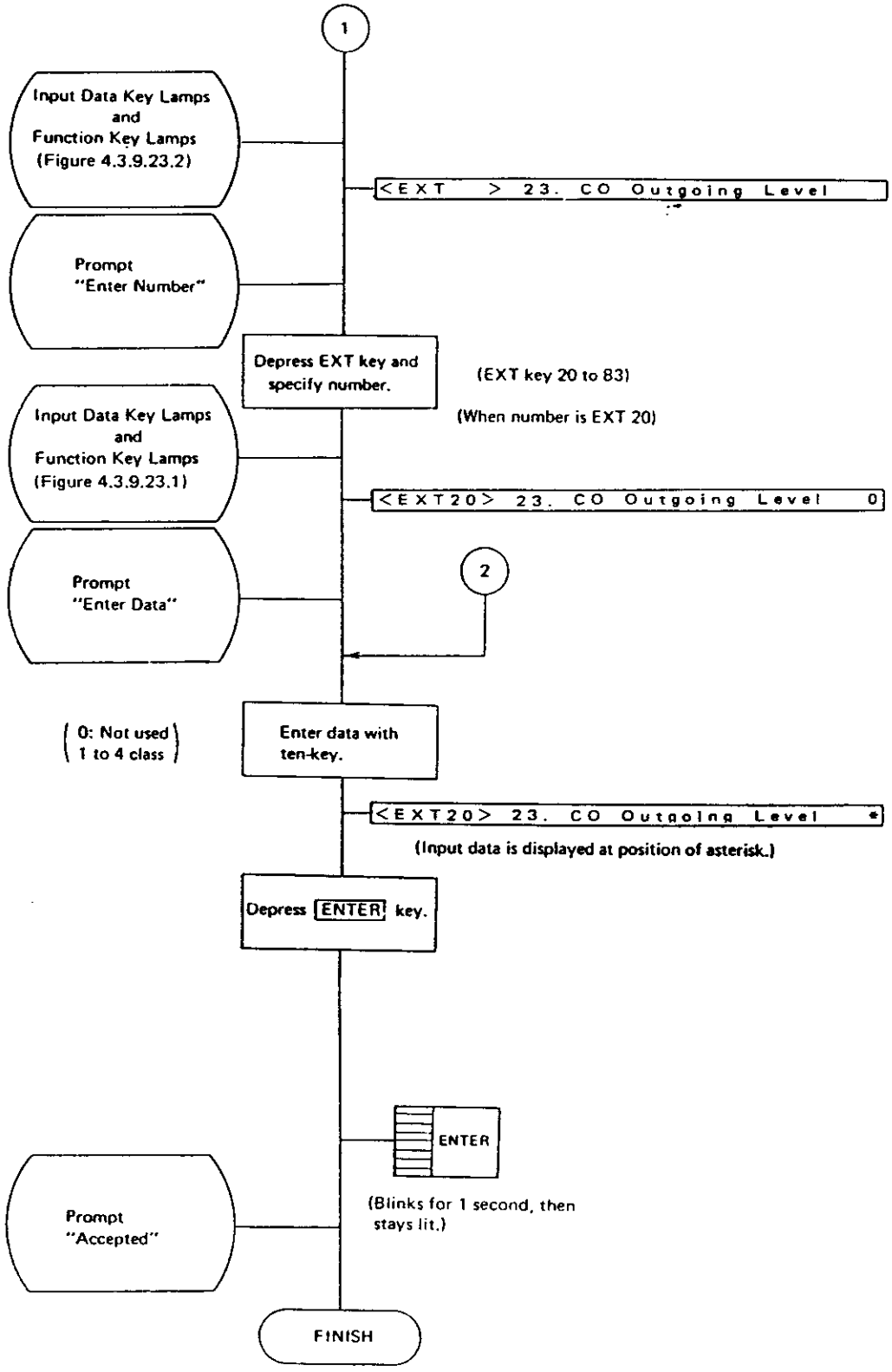


Figure 4.3.9.22.1


1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.9.23.2)
<EXT > 23. CO Outgoing Level
Prompt "Enter Number"
Depress EXT key and specify number.
(EXT key 20 to 83)
(When number is EXT 20)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.9.23.1)
<EXT20> 23. CO Outgoing Level 0
Prompt "Enter Data"
2
(0: Not used
1 to 4 class)
Enter data with ten-key.
<EXT20> 23. CO Outgoing Level *
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

<EXT20> 23. CO Outgoing Level 0

Key Lamp

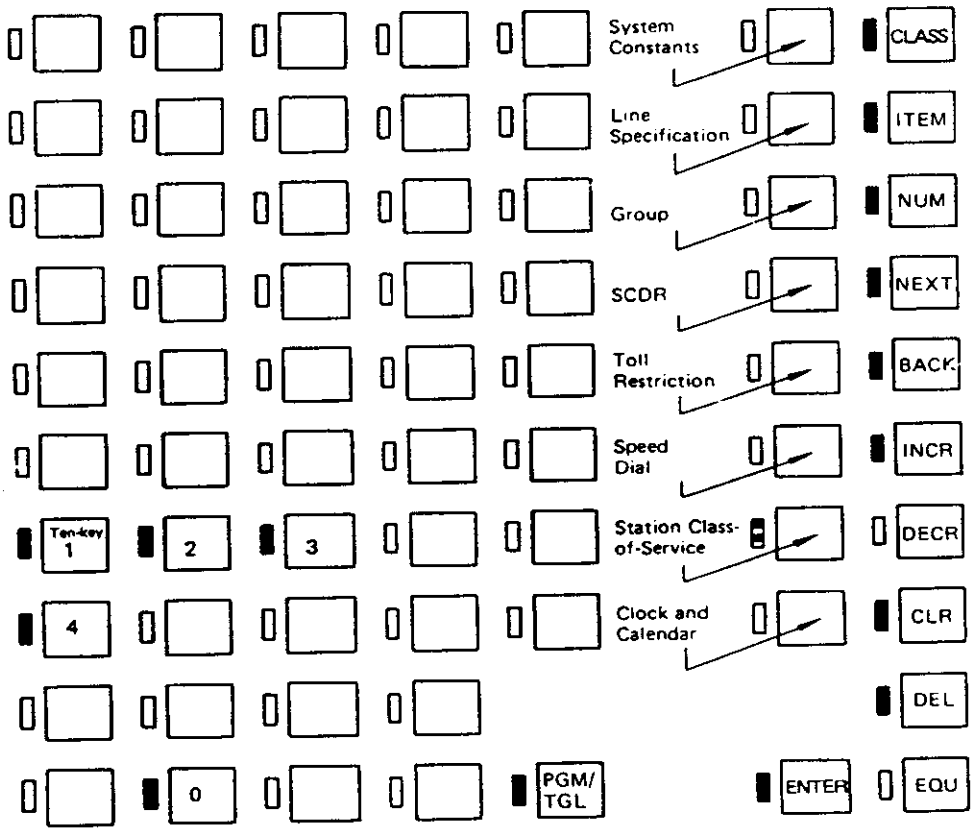
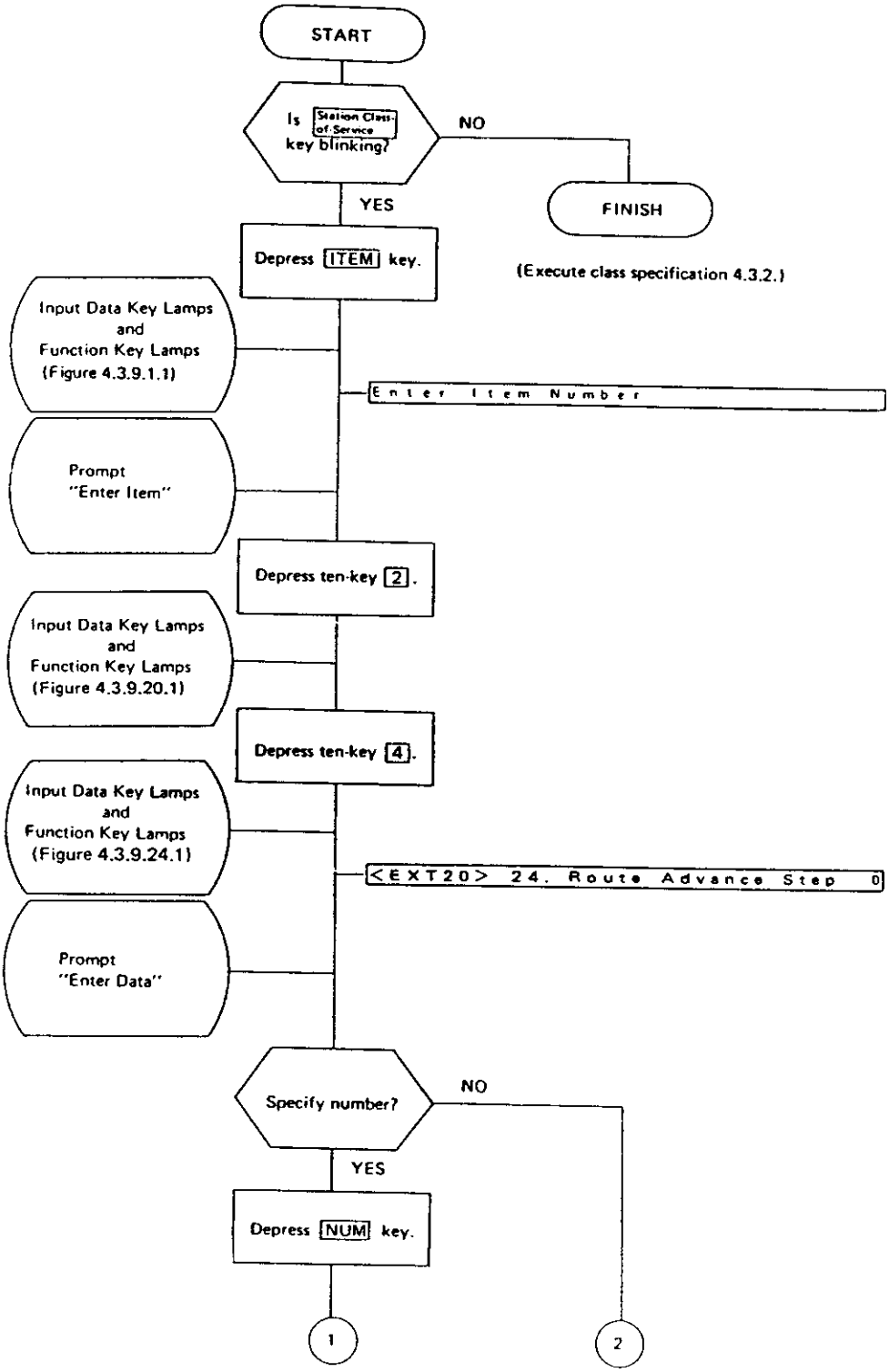
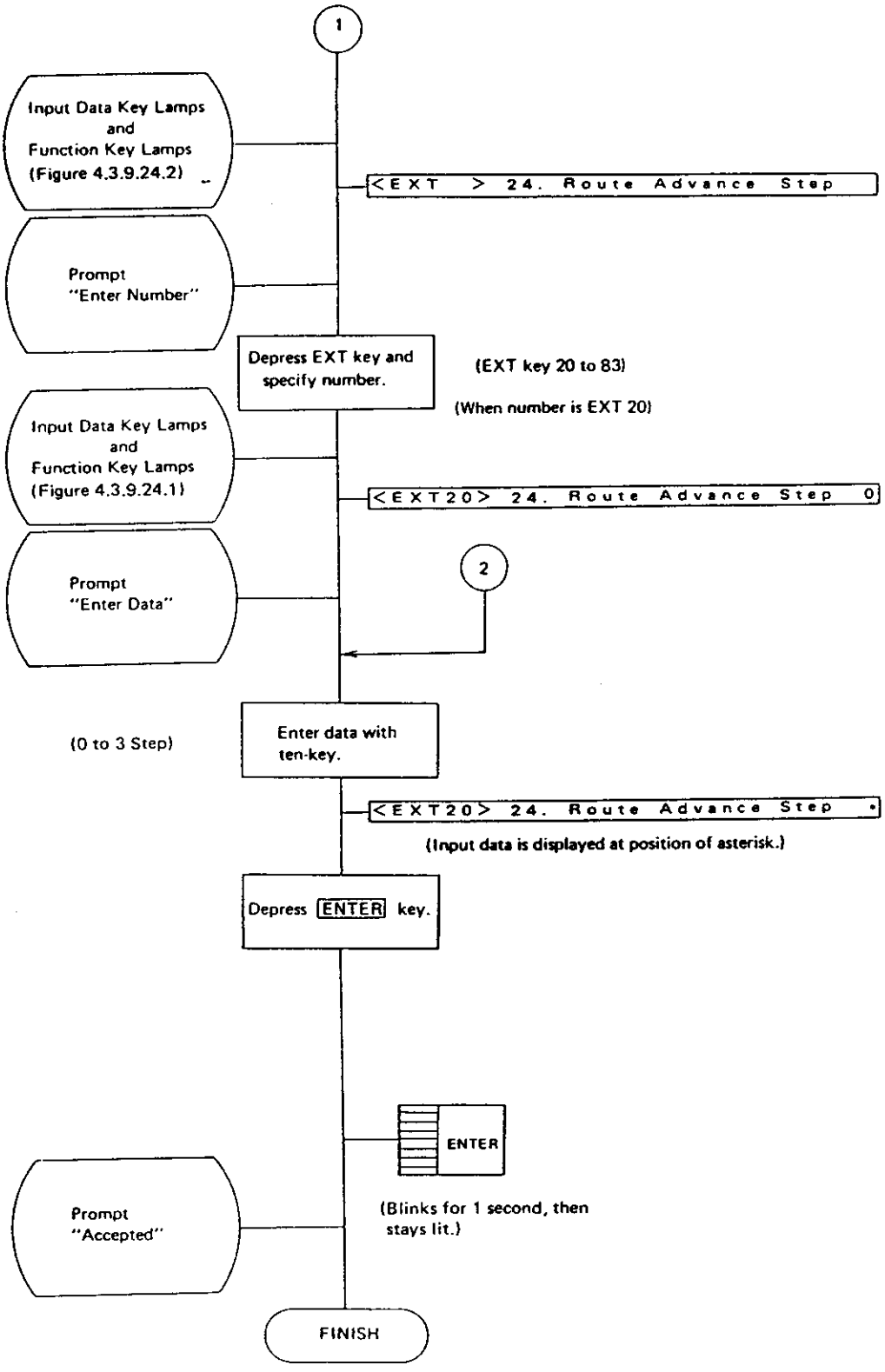


Figure 4.3.9.23.1

4.3.9.24 Route Advance Step (Item 24)

Feature: Setting Route Advance Step for each EXT

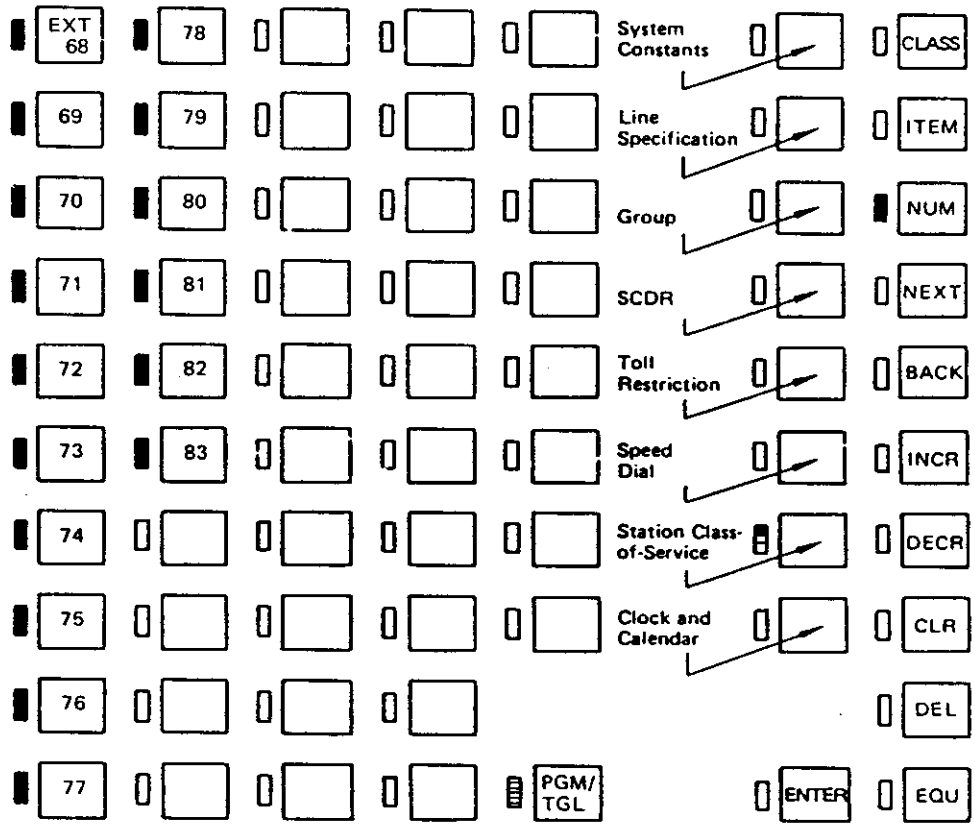



1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.9.24.2)
<EXT > 24. Route Advance Step
Prompt "Enter Number"
Depress EXT key and specify number.
(EXT key 20 to 83)
(When number is EXT 20)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.9.24.1)
<EXT20> 24. Route Advance Step 0
Prompt "Enter Data"
2
(0 to 3 Step)
Enter data with ten-key.
<EXT20> 24. Route Advance Step *
(Input data is displayed at position of asterisk.)
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display

<EXT > 24. Route Advance Step

Key Lamp

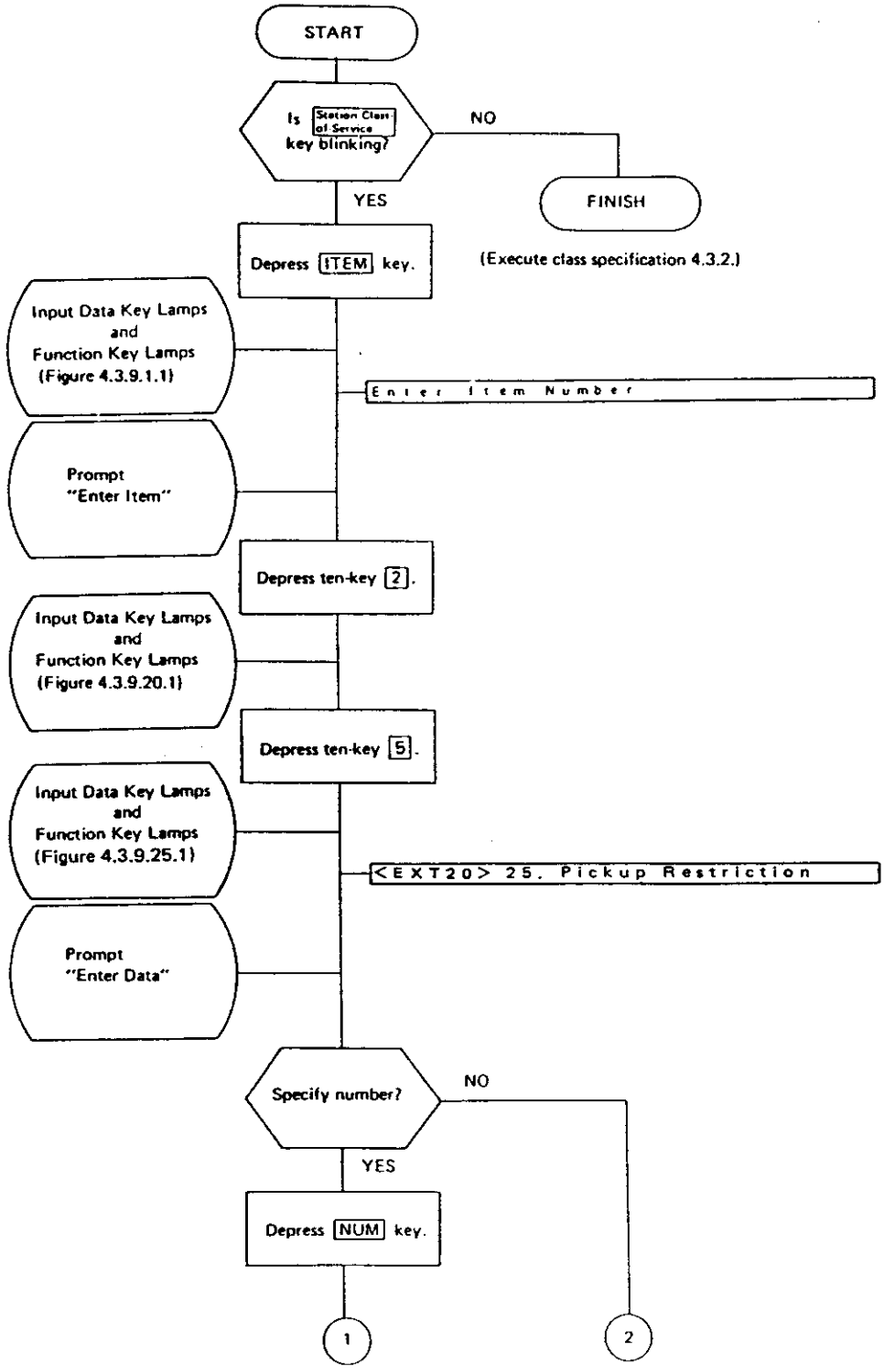


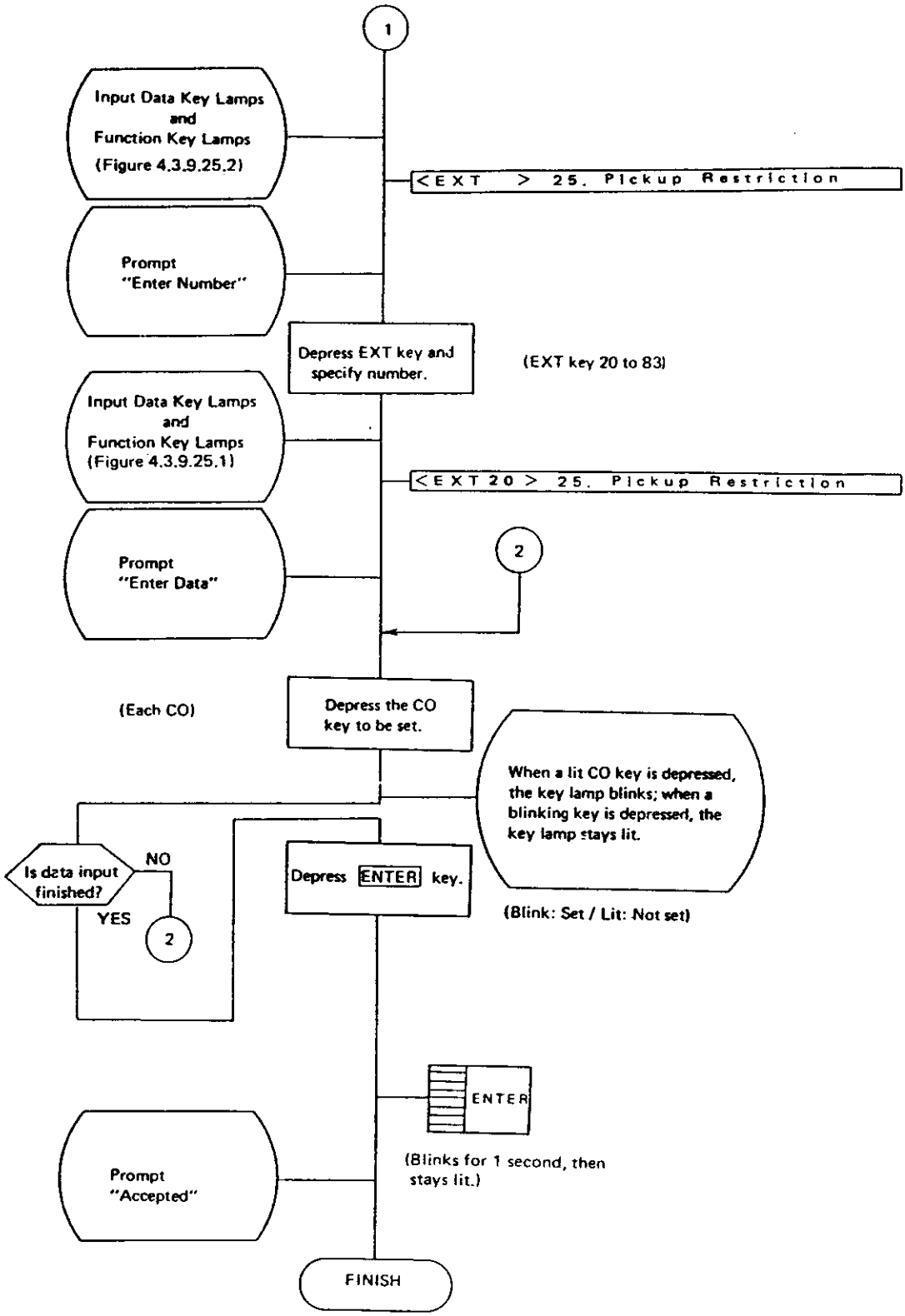
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the reverse-side mode of the input data keys.

Figure 4.3.9.24.2.b

4.3.9.25 Pickup Restriction (Item 25)

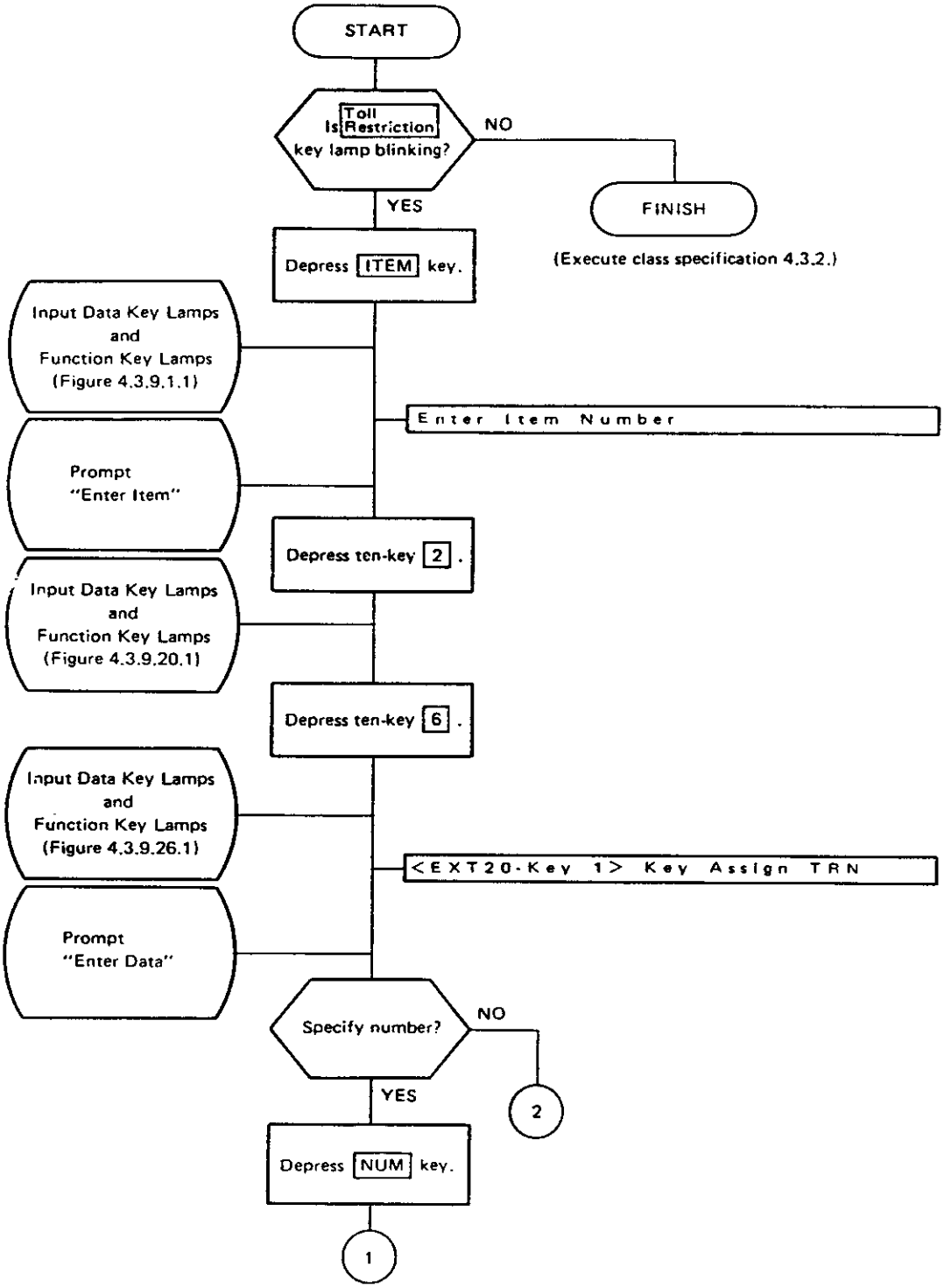
Feature: Setting Pickup Restriction for each EXT

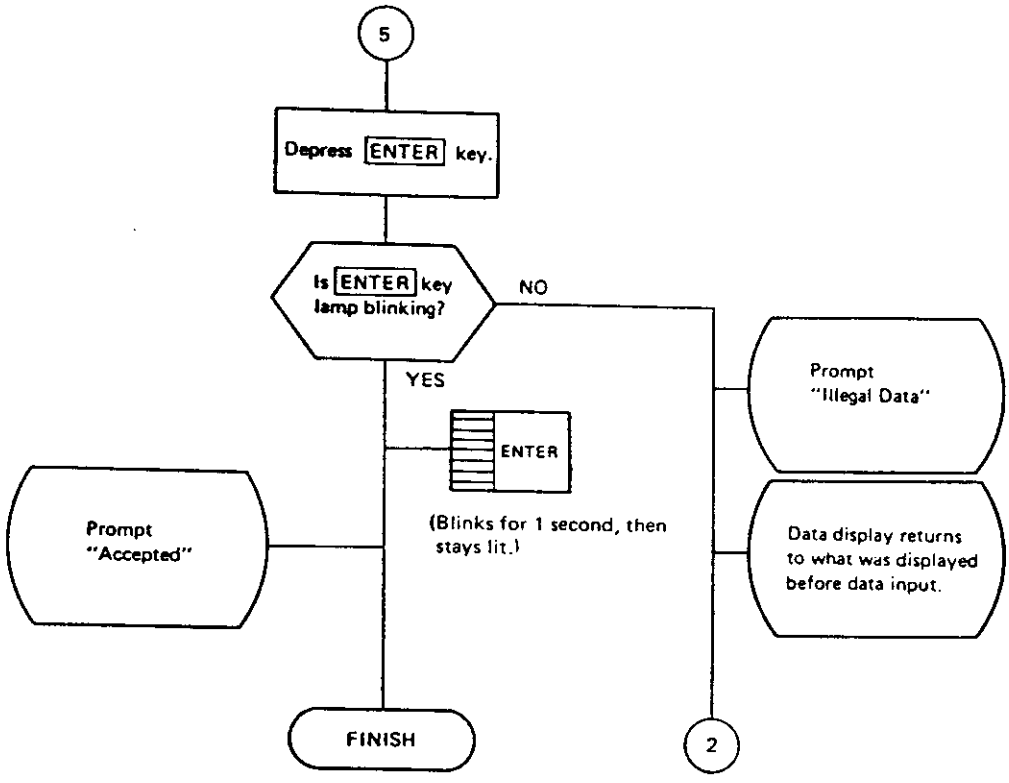



1
Input Data Key Lamps and Function Key Lamps (Figure 4.3.9.25.2)
<EXT > 25. Pickup Restriction
Prompt "Enter Number"
Depress EXT key and specify number.
(EXT key 20 to 83)
Input Data Key Lamps and Function Key Lamps (Figure 4.3.9.25.1)
<EXT 20 > 25. Pickup Restriction
Prompt "Enter Data"
2
(Each CO)
Depress the CO key to be set.
When a lit CO key is depressed, the key lamp blinks; when a blinking key is depressed, the key lamp stays lit.
Is data input finished?
NO
YES
2
Depress ENTER key.
(Blink: Set / Lit: Not set)
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

4.3.9.26 KT Key Assignment (Item 26)

Feature: KT/VP Key Assignment




5
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
2

Display

```
<EXT20-Key  1> Key Assign TRN
```

Key Lamp

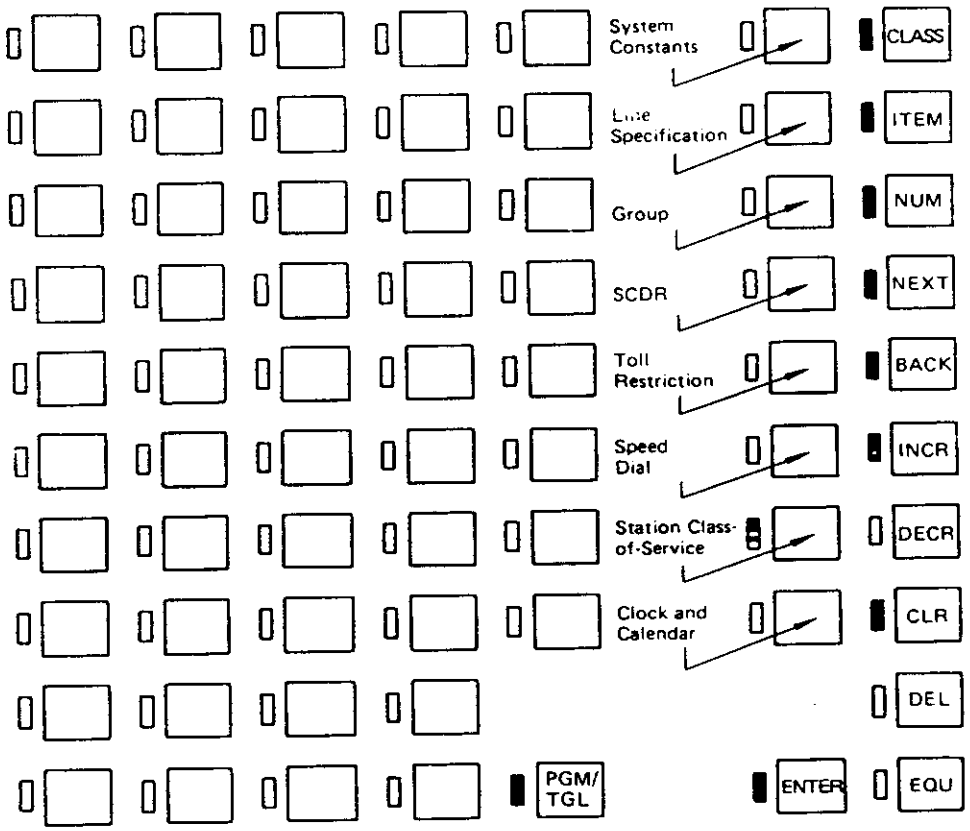


Figure 4.3.9.26.1

Display

<EXT20-Key 1> Key Assign

Key Lamp

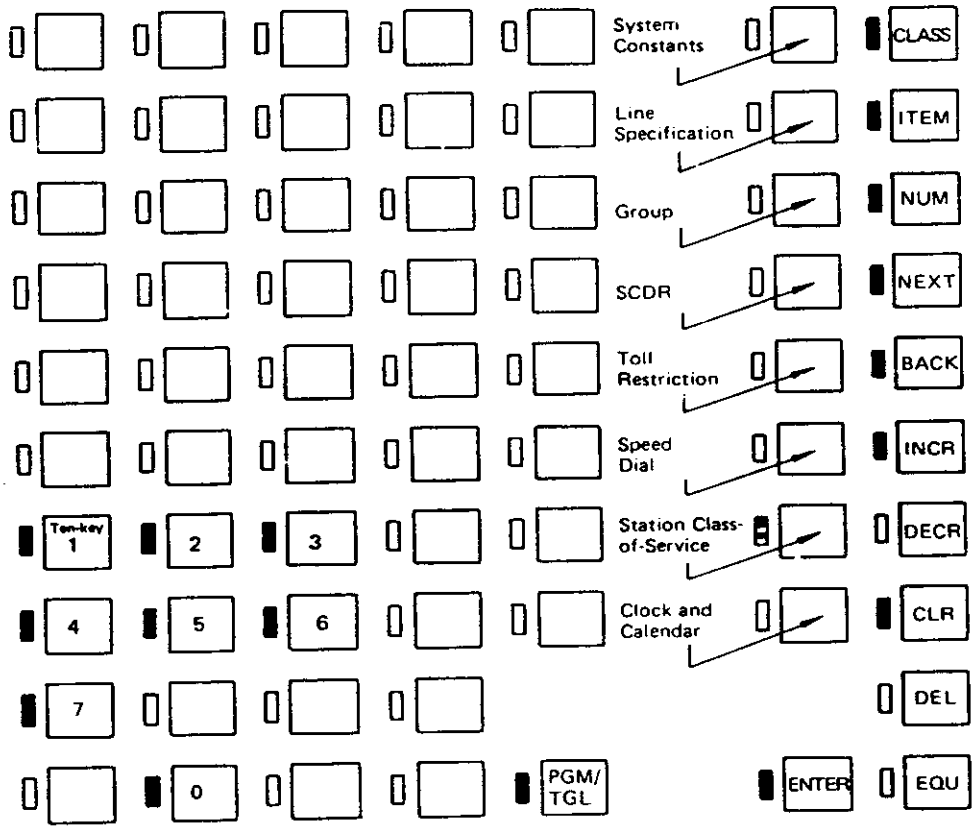


Figure 4.3.9.26.4

Display

<EXT20-Key 1> Key Assign SPD

Key Lamp

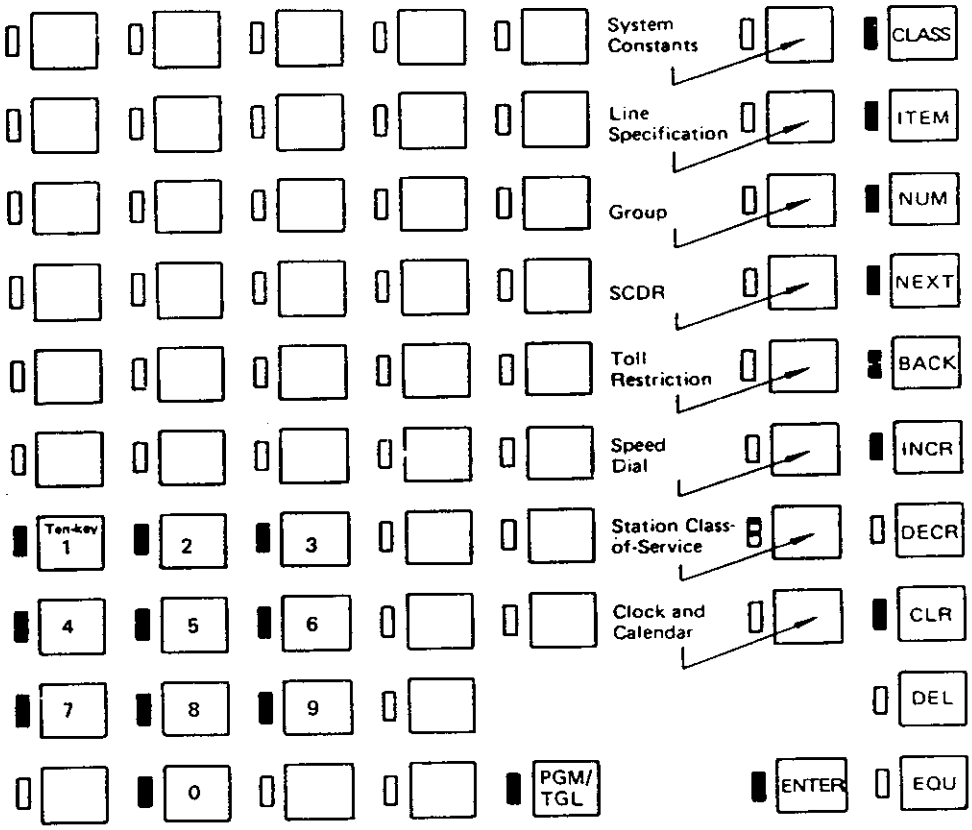


Figure 4.3.9.26.7

Display

<EXT20> 27. Personal ID Code 000

Key Lamp

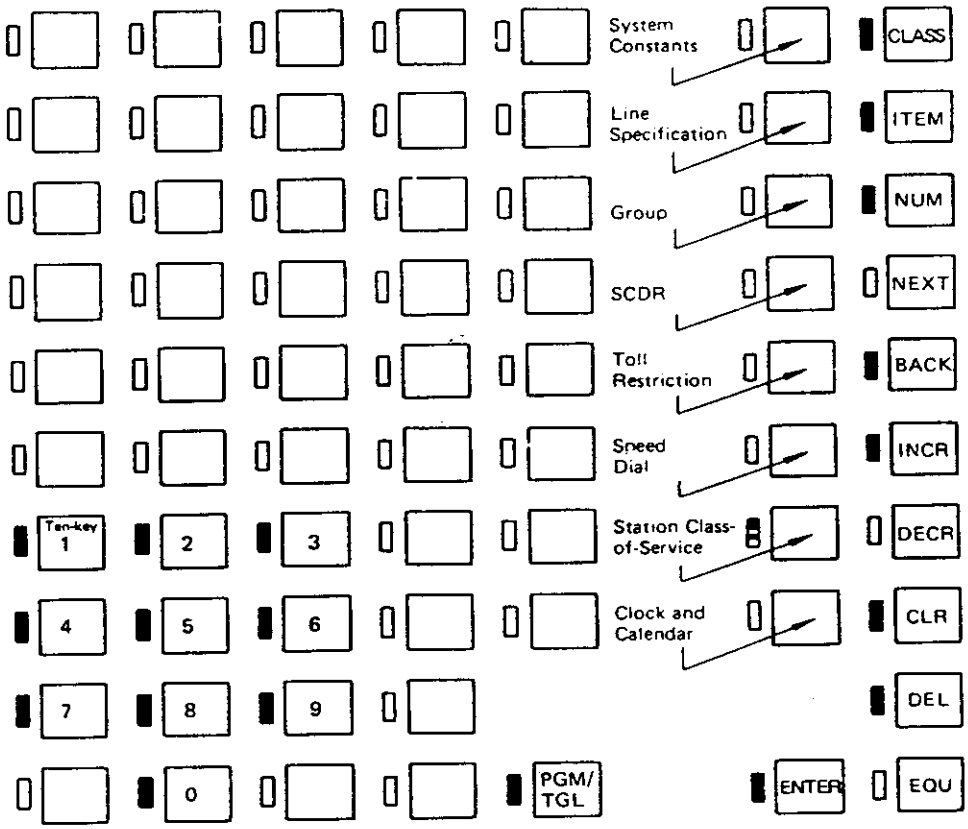
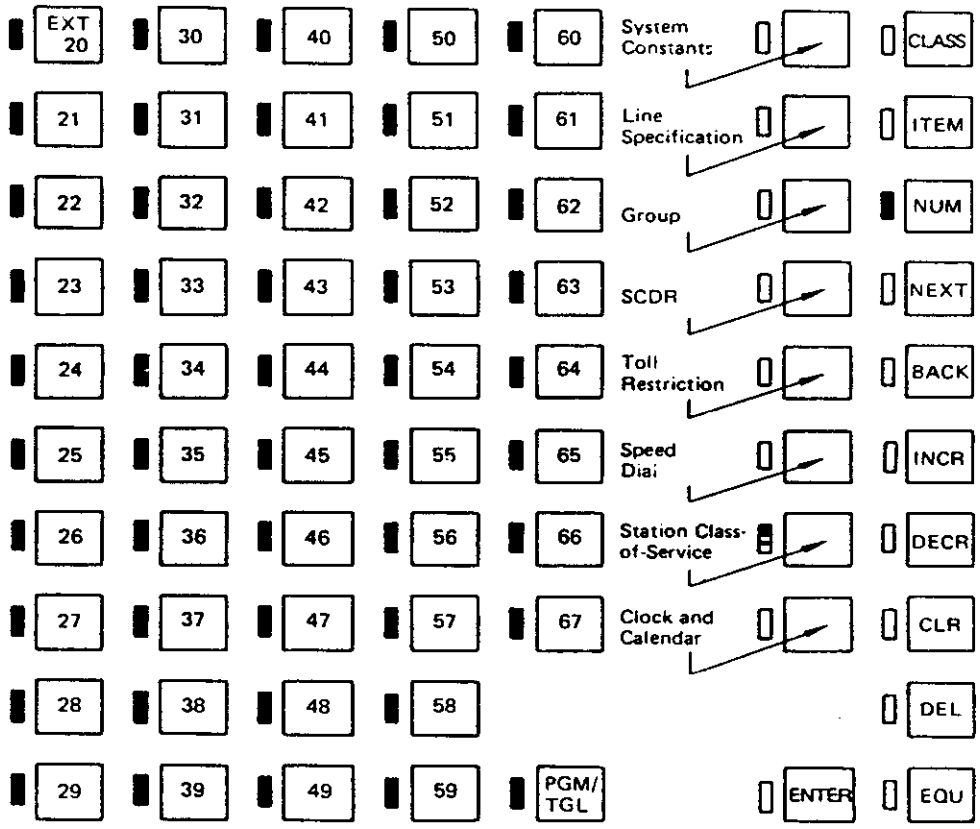


Figure 4.3.9.27.1

Display

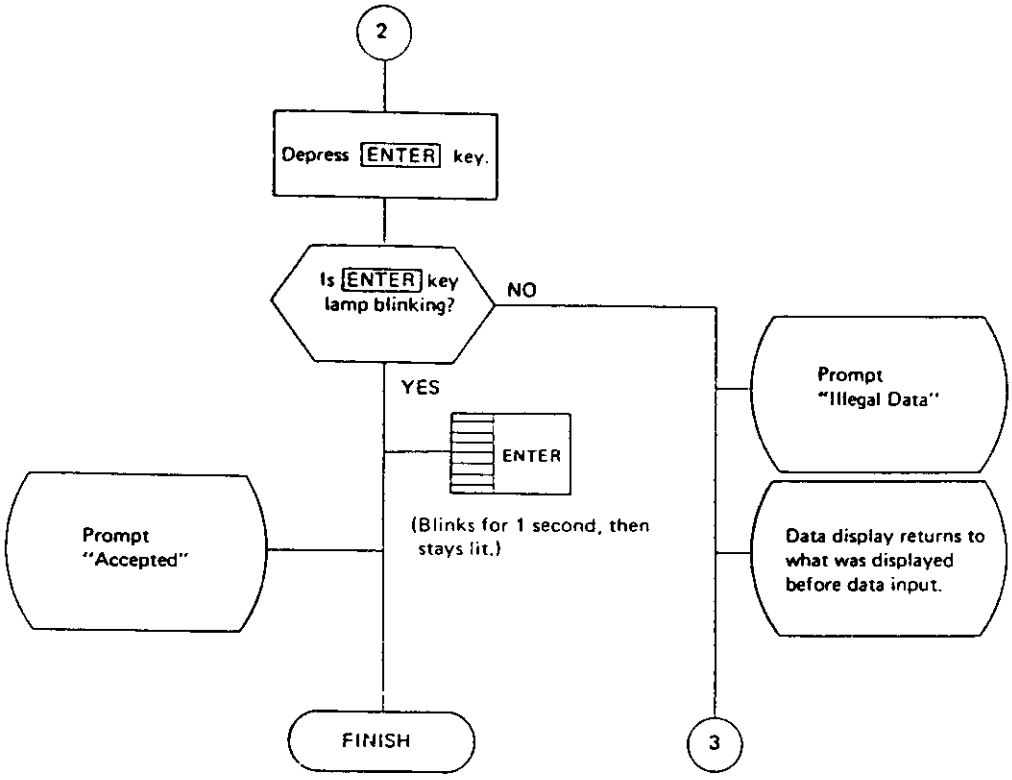
```
<EXT   > 27.  Personal ID Code
```

Key Lamp

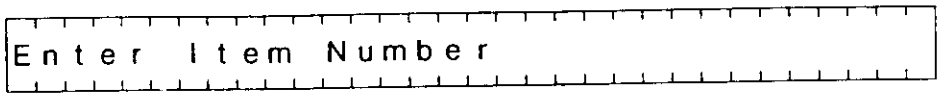


Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.9.27.2.a


2
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display



Key Lamp

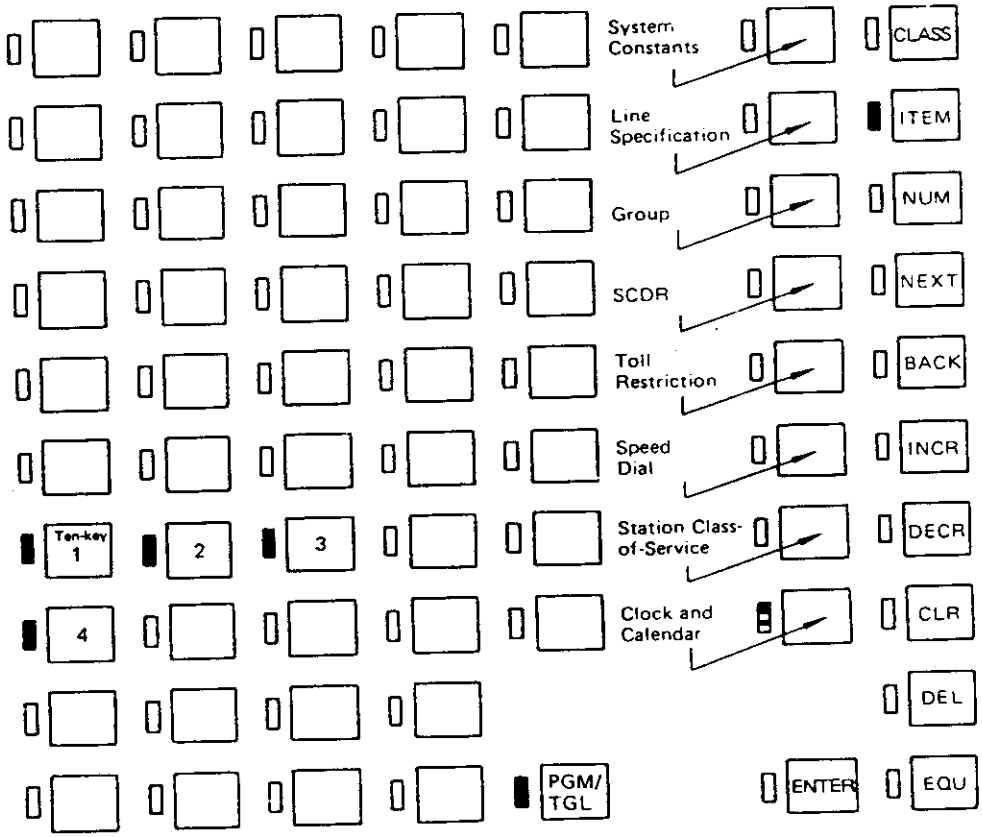
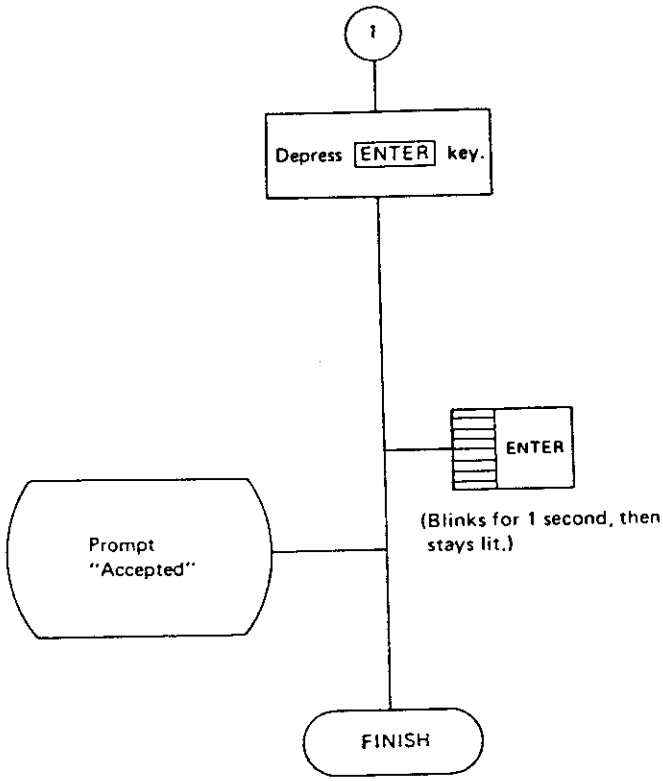
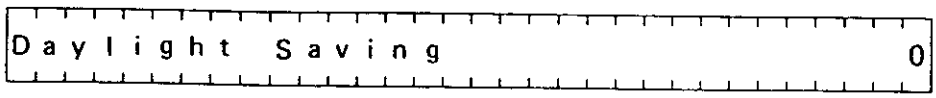


Figure 4.3.10.1.1


1
Depress ENTER key.
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
FINISH

Display



Key Lamp

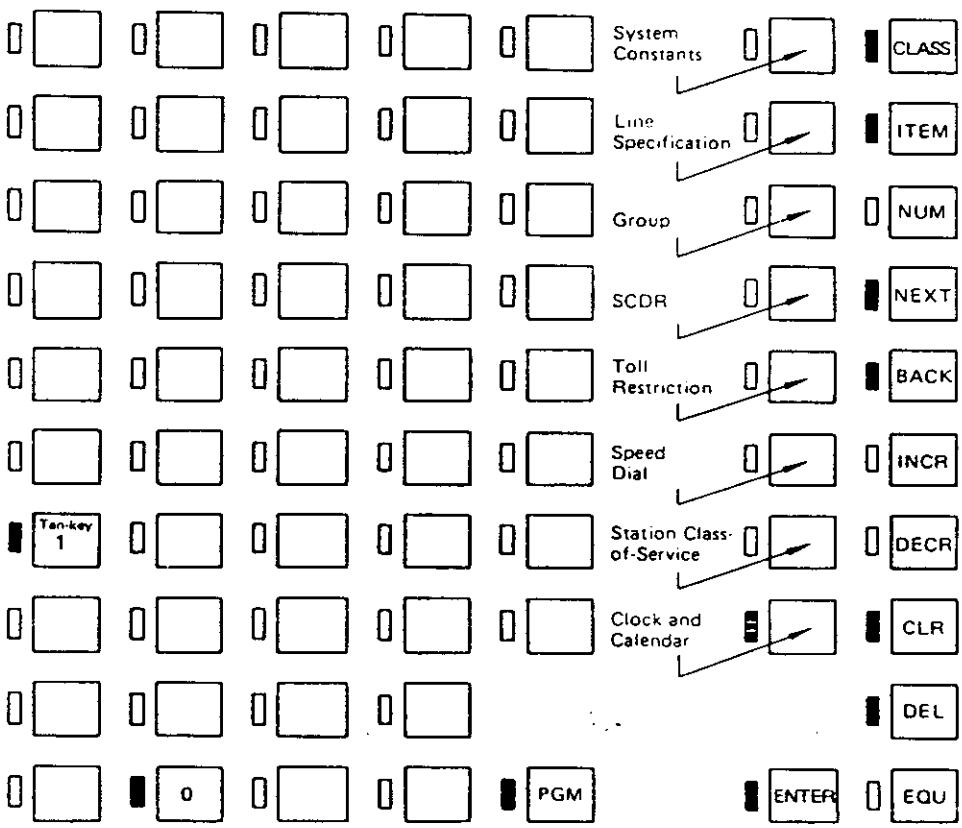
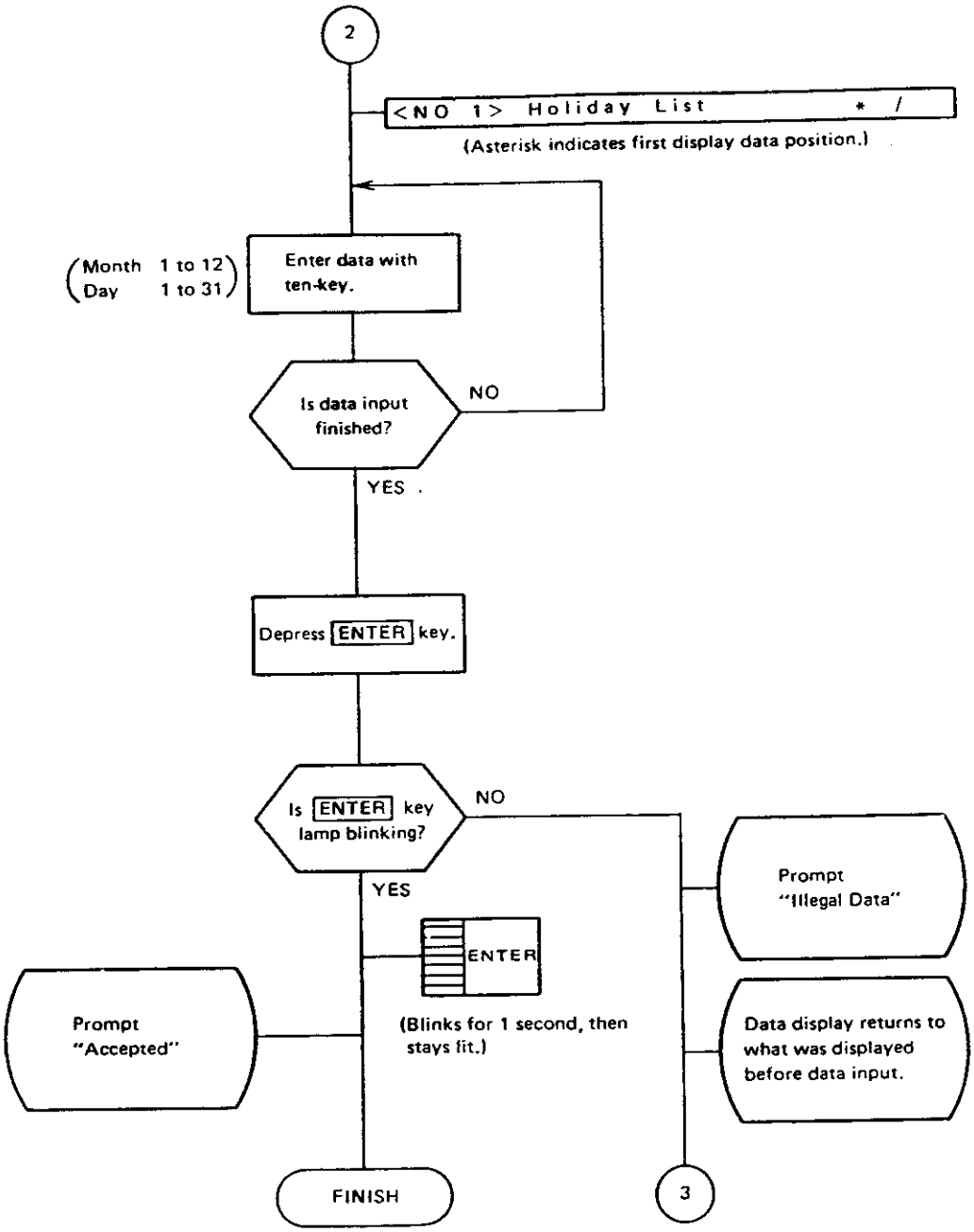


Figure 4.3.10.3.1


2
<NO 1> Holiday List *
(Asterisk indicates first display data position.)
(Month 1 to 12
Day 1 to 31)
Enter data with ten-key.
Is data input finished?
NO
YES
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays fit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

Display

<NO 1> Holiday List /

Key Lamp

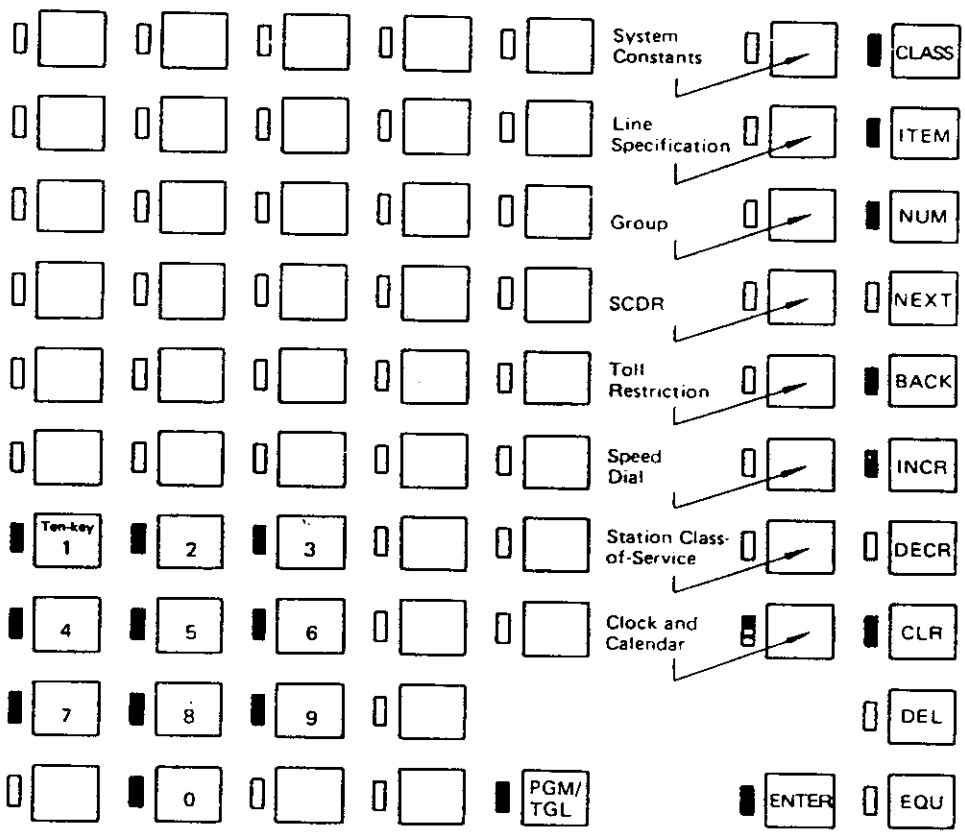


Figure 4.3.10.4.1

Display

<NO > Holiday List /

Key Lamp

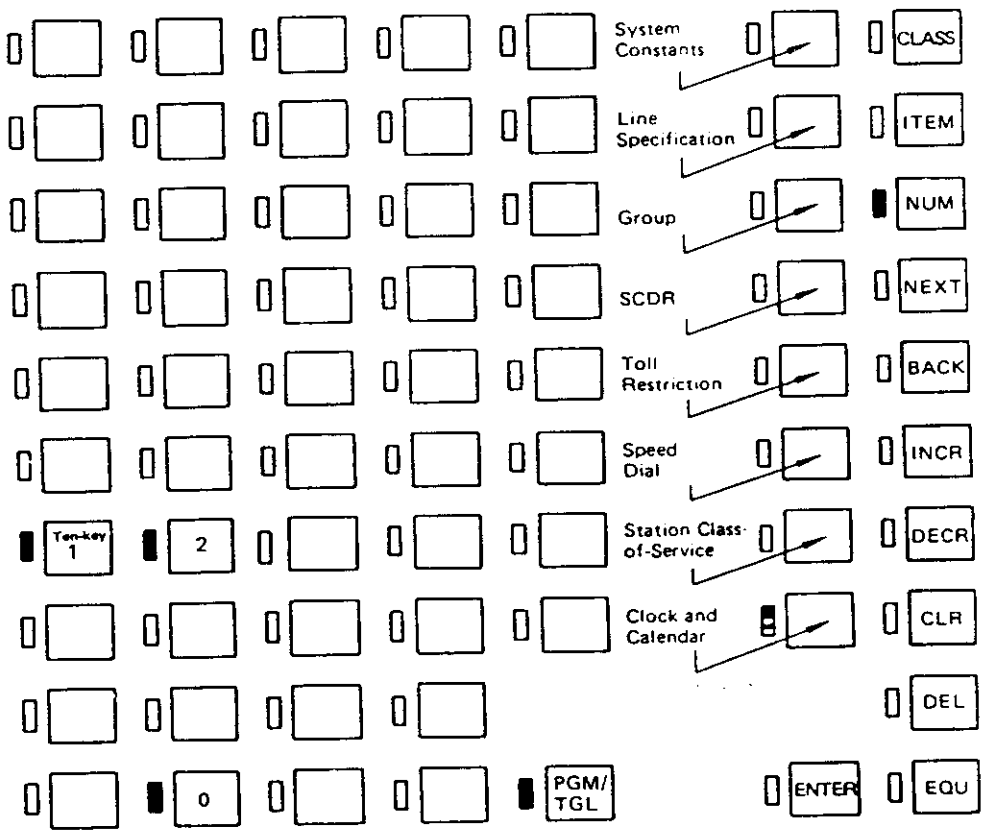
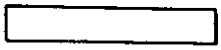
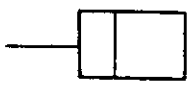


Figure 4.3.10.4.2

Operation flow symbol	
	Start or end
	Display
	Decision or verification
	Execution
	Status description or comment
	Additional explanation
	Continue
	Key and Lamp

(See Table 2.2.3.1 for lamp indication.)

Figure 4.3.1

EX-1232/2464
ELECTRONIC KEY TELEPHONE SYSTEM
INSTRUCTION MANUAL

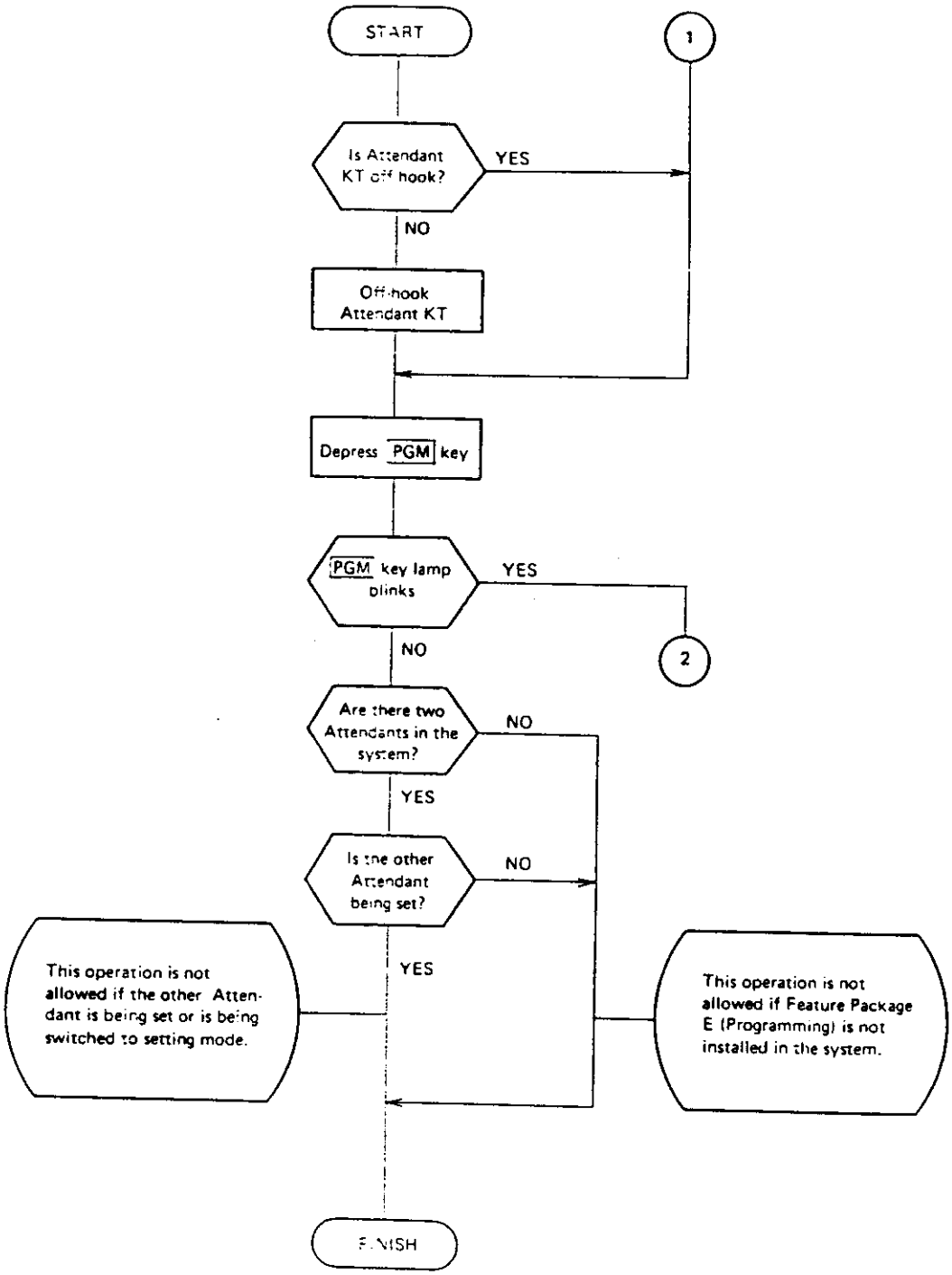
OMEGA-PHONE®
IV

4.3 PROGRAMMING OPERATION

This section describes the entering of system data according to system data class and item, using flow charts with the operation flow symbols shown in Figure 4.3.1.

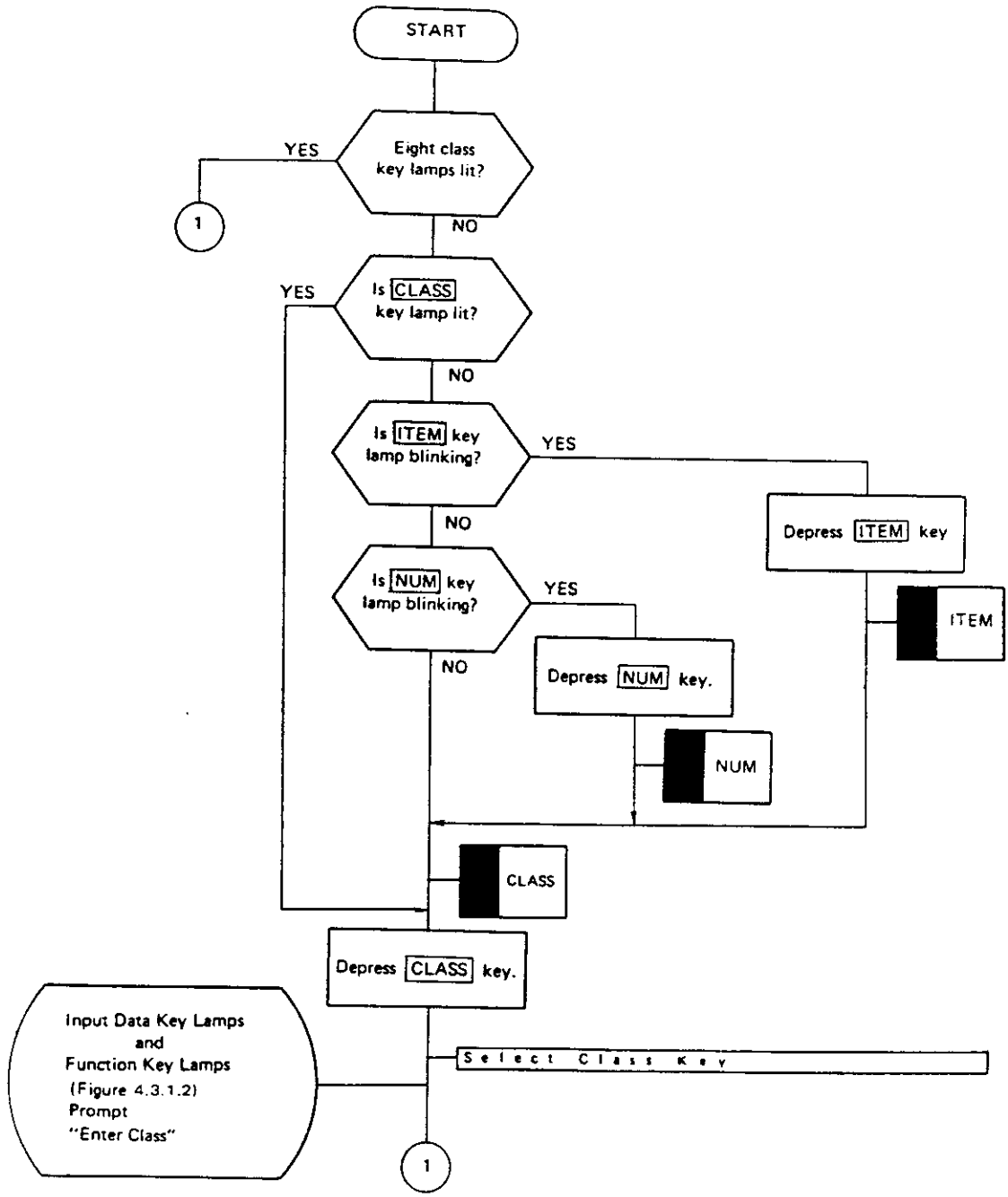
4.3.1 Enter Programming Mode

Feature: Operation to switch Attendant Console from Ordinary Mode to Programming Mode.

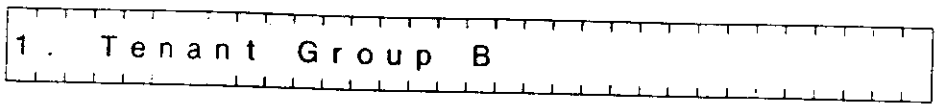


4.3.2 Programming Class Select

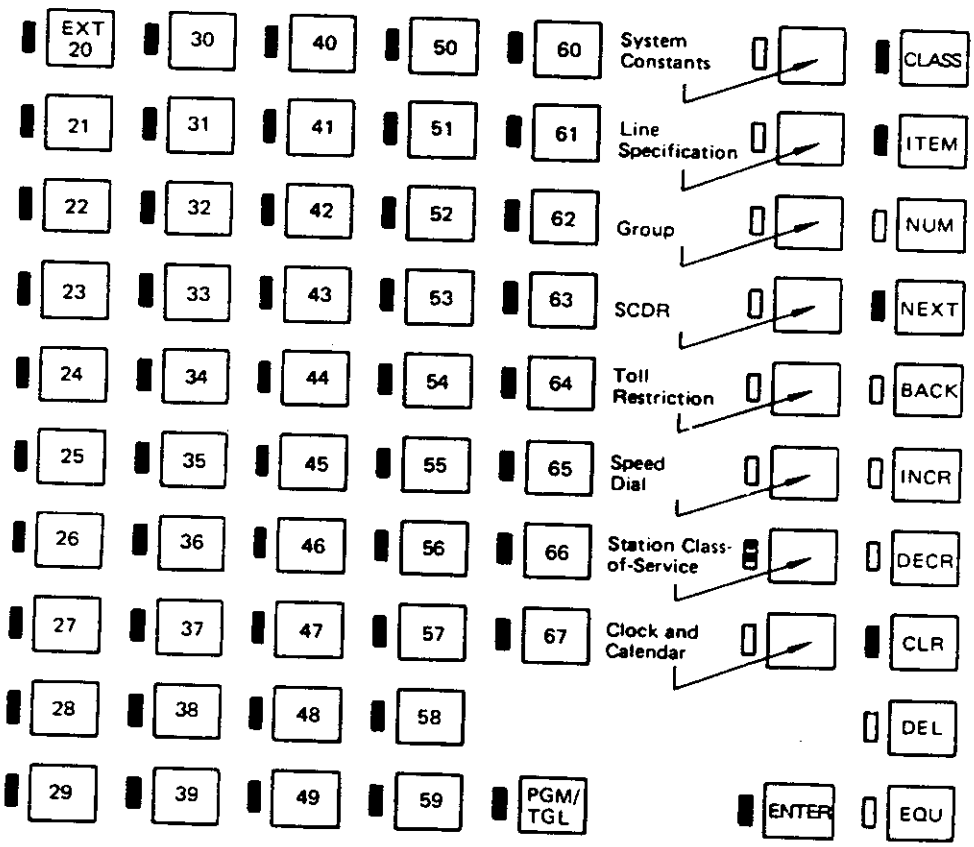
Feature: Operation to specify class.



Display



Key Lamp

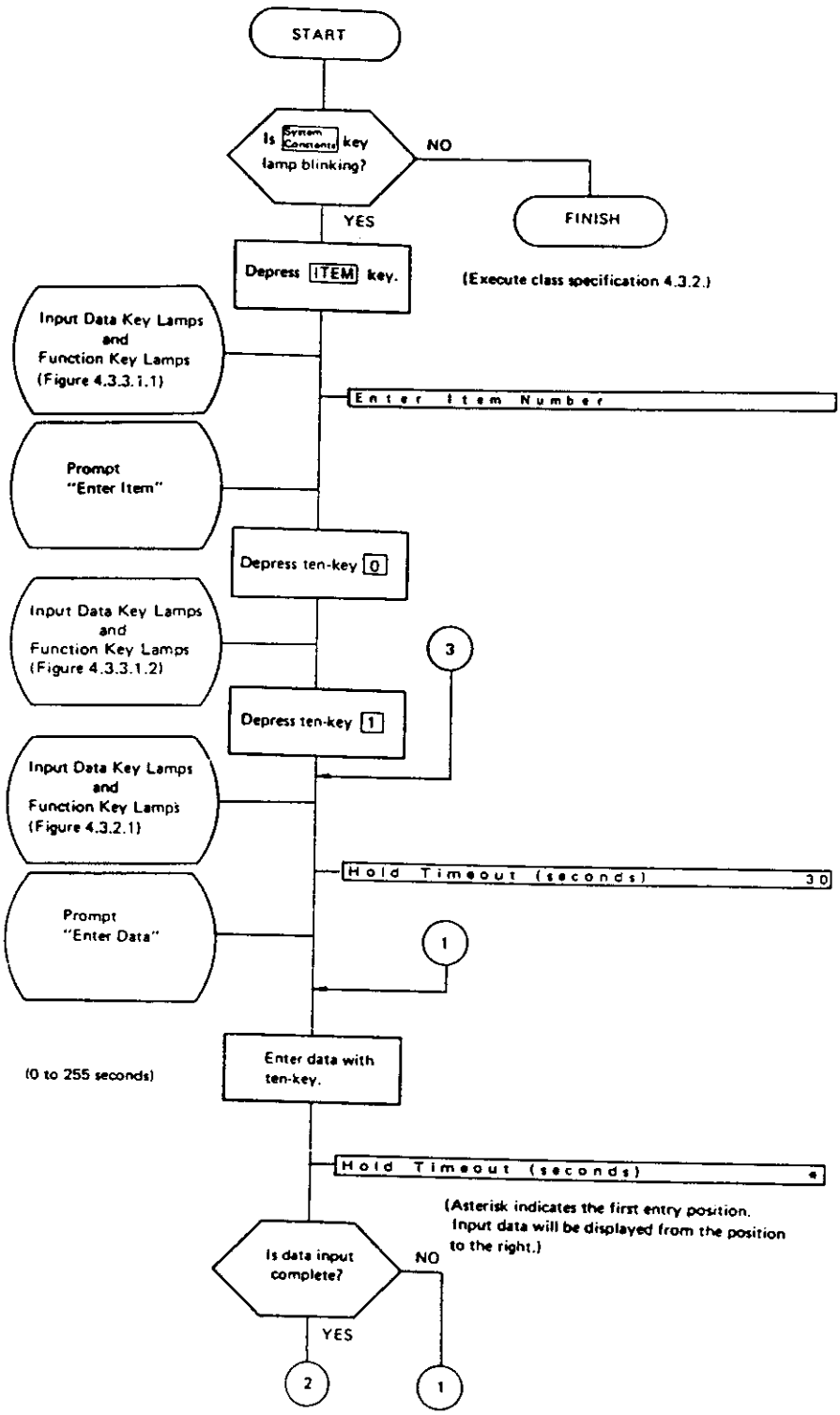


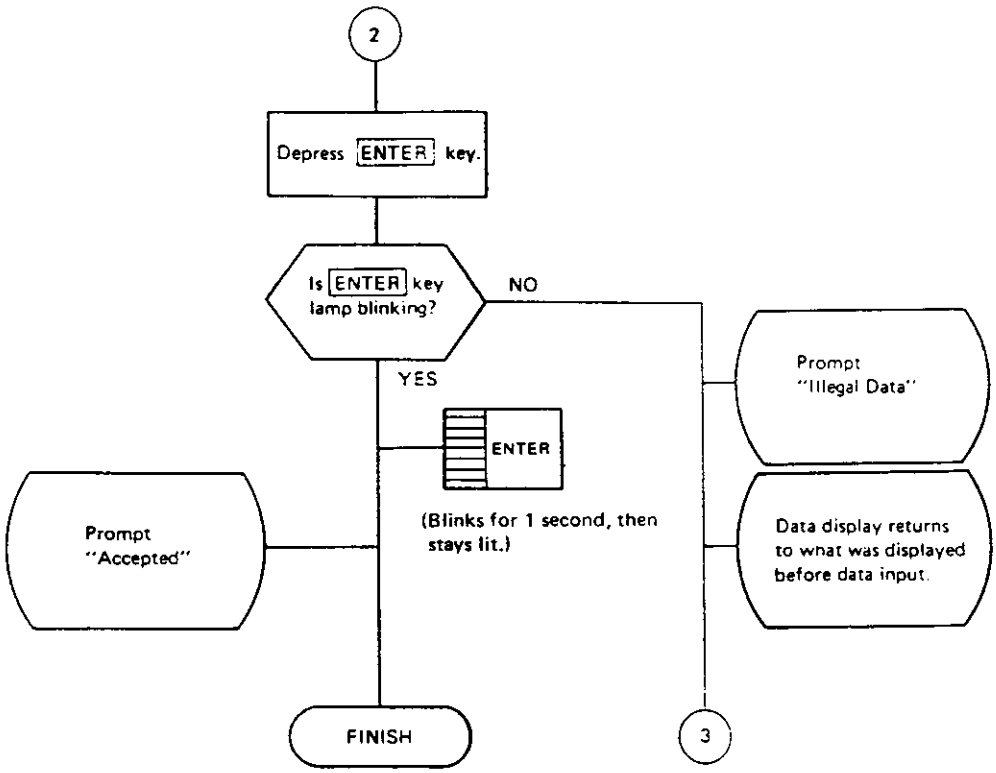
Note: Data is indicated on the key lamp assigned to the EXT key.
Key lamp indications are applicable to the normal-side mode of the input data keys.

Figure 4.3.2.7. a

4.3.3.1 Hold Timeout (Item 1)

Feature: Setting Hold Timeout time




2
Depress ENTER key.
Is ENTER key lamp blinking?
NO
YES
Prompt "Illegal Data"
ENTER
(Blinks for 1 second, then stays lit.)
Prompt "Accepted"
Data display returns to what was displayed before data input.
FINISH
3

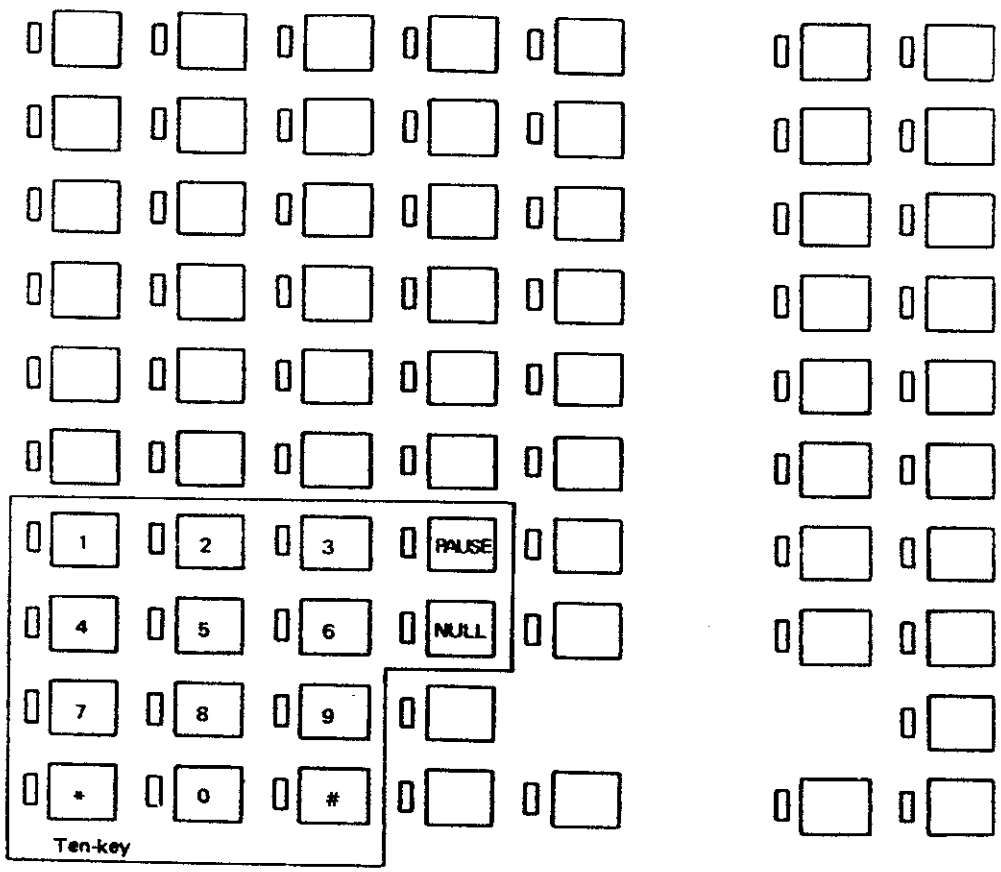


Figure 4.2.1.1.4 Ten-Key

4.2.1.2 LCD Indications

In Programming Mode, the display shows the contents of data, input prompts, and input data. The operator can check programming operation on the display. The content of the display is changed by depressing the keys. The display is changed under the following conditions:

- When displaying the input prompt:

  Input prompt is displayed when the [CLASS], [ITEM], or [PGM] key is depressed.

  [CLASS] "Select Class Key"

  [ITEM] "Enter Item"

  [PGM] "Enter Password"

- When the content of data changes:

  The display content changes when the [NEXT], [BACK], [INCR], or [DECR] key is depressed. When the [NUM] key is depressed, the number display is cleared and numbers can be entered. When the [DEL] key is depressed, one character at the right end of the data display is cleared.
  When new data is entered, the data display is cleared and the new data is displayed.

4.2.1.3 Key Lamp Indications

Key assignments for entering data were described in Section 4.2.1.1. In this section, the functions of key lamps are described.

1) Function key lamps

Function keys are used depending on the state. When a function key is available, the key lamps light, when it is not available, the key lamps go out. The following table shows the availability of functior keys according to state.

- Off-Hook All-Call Deny (Item 10)
- All-Call Deny (Item 11)
- Hold Recall Deny (Item 12)
- Speed Dial Access Deny (Item 13)
- Toll Speed Dial Access Deny (Item 14)
- CO Auto-Answer Deny (Item 14)
- ICM Auto-Answer Deny (Item 15)
- Paging Call Access Deny (Item 16)
- Call Forward Deny (Item 17)
- Do not Disturb Deny (Item 18)
- Optimized Call Routing Access Deny (Item 20)
- Equal/SCC Access Deny (Item 21)
- Pickup Restriction (Item 25)
- KT Key Assignment (Item 26)

3) **Blinking of lamp when Function Key is depressed**

The ENTER key lamp blinks for 1 second when the input data is valid and is registered. This enables the operator to verify registration.

4.2.1.4 Prompts

A prompt is voice information service. It either tells the operator the next operation or is a response to an operation just performed. A prompt is issued from the Attendant KT speaker when VSCU-M, Feature Package is installed. The operator should perform the following upon receiving a prompt:

a) "Enter Password"
Enter password "428" and return to Ordinary Mode.

b) "Enter Class"
Select class and depress the key.

c) "Enter Item"
Enter the item number.

d) "Enter Number"
Enter the specified number.

e) "Enter Data" or "Illegal Data"
Enter data to be input.

f) "Accepted"
Go to next operation.

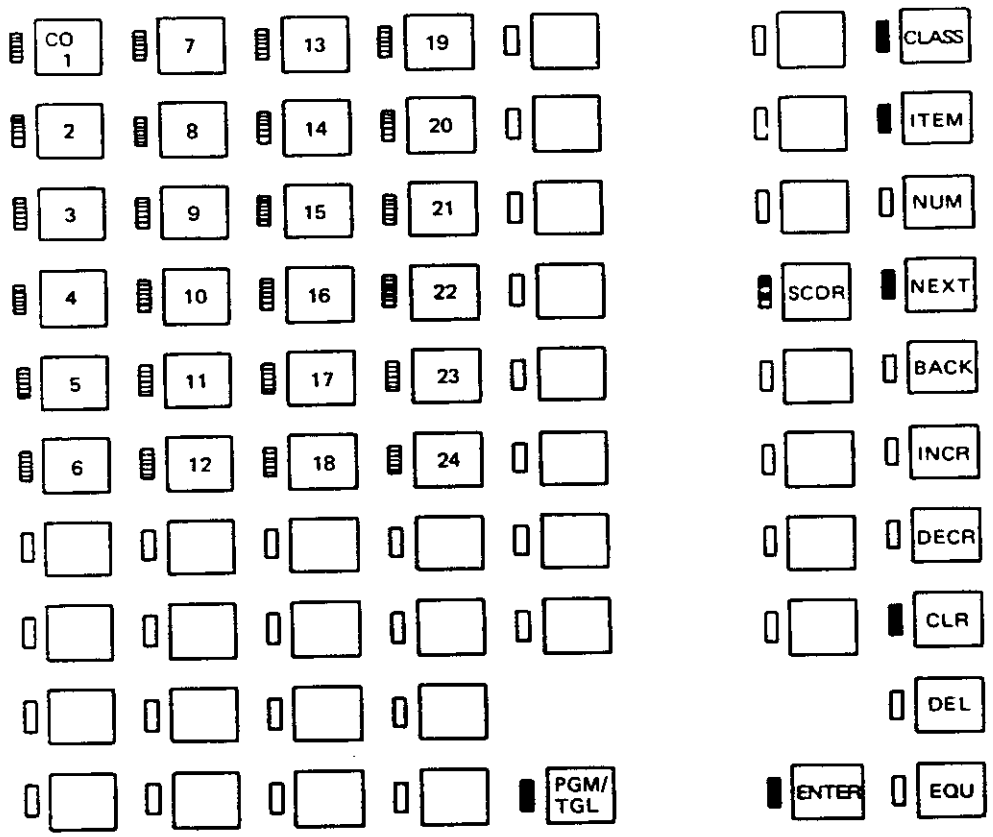


Figure 4.2.2.3.3

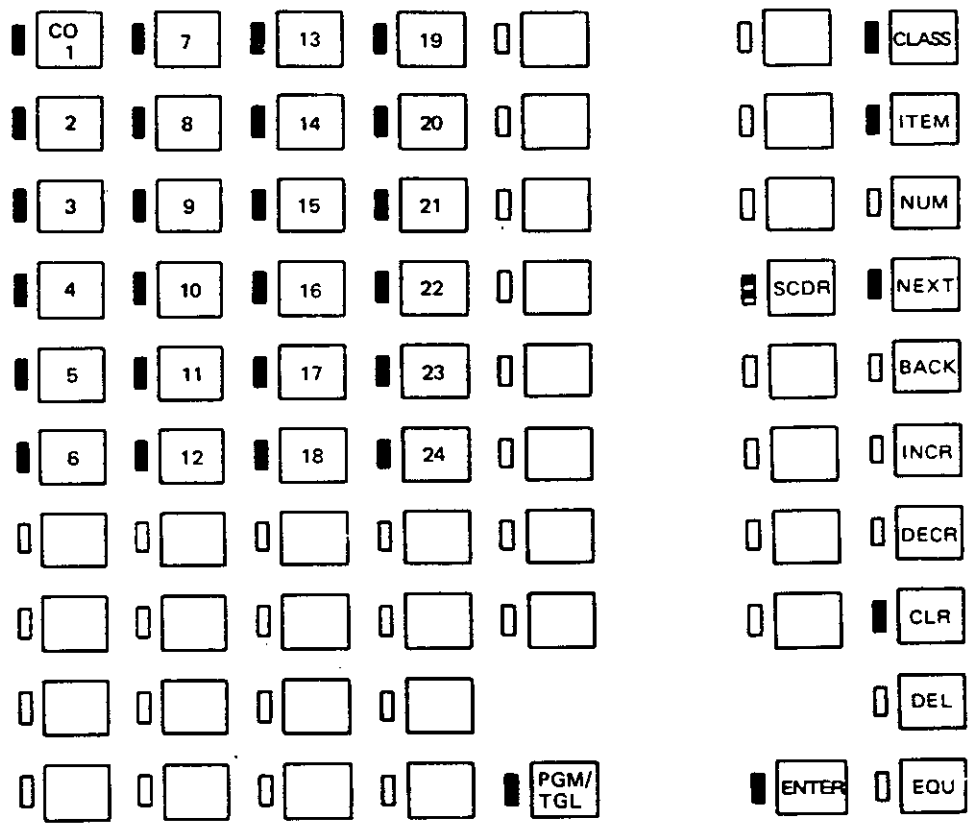


Figure 4.2.2.3.4

4.2.2.4 Modifying Data in Sequence

For items with Numbers, the same data can be input continuously. Also, Numbers can be kept constant while item is changed.

1) Registering the same data continuously

For example, to enter the Line Class (Item 1) of Line Specification Class, proceed as follows:
Depress the [INCR] key when the data for CO 2 is as shown in Figure 4.2.2.4.1 to display CO 3, shown in Figure 4.2.2.4.2.
Then depress the [EQU] key to display the CO 2 data (Figure 4.2.2.4.3).
Repeat this operation to continuously register the same data.

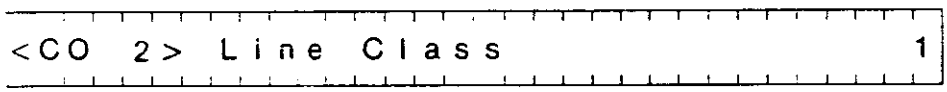


Figure 4.2.2.4.1

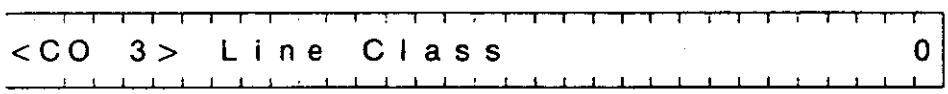


Figure 4.2.2.4.2

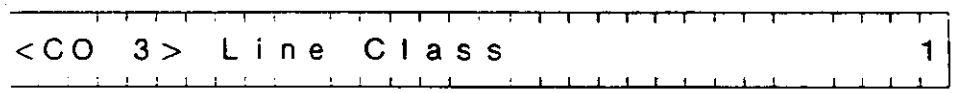


Figure 4.2.2.4.3

2) Registering the same Number while changing the item

Some Numbers are common among items as with Line Specification. With Class, the items can be changed without changing the Number. For example, if the [NEXT] key is depressed when setting Line Class (Figure 4.2.2.4.4), the item changes to Tenant Group (Figure 4.2.2.4.5) but the Number, CO 1, does not change.
The same Number for each item can be easily entered in this manner.
This method can be applied to Line Specification and Station Class of service.

```
* EX - 1232/2464 System Software V1.0 --- system Data Listing *

                                        86/ 5/21/3          12 : 30

* System Constants *

  1.  Hold Timeout (seconds)                                    30
  2.  Sender Timeaut (seconds)                                  20
  3.  Page Timeout (seconds)                                    10
  4.  Hold Recall Timeout (seconds)                             20
  5.  Camp On Timeout (seconds)                                 30
  6.  Callback Timeeout (seconds)                               20
  7.  Automatic Answer Time (seconds)                           12
  8.  Attendant Intercept Time (seconds)                        20
  9.  Master Group Hunt Timeout (seconds)                       20
  10. PBX Outgoing Specification Code
                Code No
                    1                                           23
                    2                                           234
                    3                                           123
                    4                                           235
                    5                                           1111
  11. Overflow Transfer Minimum
                Attendant
                    1                                           3
  12. Overflow Transfer Extension
                Attendant
                    1                                           23
                    2                                           20
  13. ICM Call Mode
                Tenant
                    A                                           1
                    B                                           1
  14. External Paging Speakers
                Tenant
                    A                                           2
                    B                                           3
  15. System Prefix                                             1
  16. Automatic Pause Length                                    5
  17. Timed Trunk Queuing Interval                              10
  18. Attendant Key Assignment
      Attendant 1
        Key     1      2      3      4      5      6      7      8      9      10
          0   DSS 1  DSS 2  DSS 3  DSS 4  DSS 5  DSS 6  DSS 7  DSS 8  DSS 9  DSS10
          1   DSS11  DSS12  DSS13  DSS14  DSS15  DSS16  DSS17  DSS18  DSS19  DSS20
          2   DSS21  DSS22  DSS23  DSS24  DSS25  DSS26  DSS27  DSS28  DSS29  DSS30
          3   DSS31  DSS32  DSS33  DSS34  DSS35  DSS36  DSS37  DSS38  DSS39  DSS40
          4   DSS41  DSS42  DSS43  DSS44  DSS45  DSS46  DSS47  DSS48  DSS49  DSS50
          5   DSS51  DSS52  DSS53  DSS54  DSS55  DSS56  DSS57  DSS58  DSS59  DSS60
          6   DSS61  DSS62  DSS63  DSS64  SPD 0  SPD 1  SPD 2  SPD 3  SPD 4  SPD 5
          7   SPD 6  SPD 7  SPD 8  SPD 9  SPD10  SPD11  SPD12  SPD13  SPD14  SPD15
          8   SPD16  SPD17  SPD18  SPD19  SPD20  SPD21  SPD22  SPD23  SPD24  SPD25
          9   SPD26  SPD27  SPD28  SPD29  SPD30  SPD31
  19. Attendant EXT Assignment
                Attendant
                    1                                           20
                    2                                           21
```

Figure 4.2.3.2.1 System Data Format (1/4)

4.2.2.5 Key Assignment

Keys on a key telephone or Versa Phone and DSS keys on an Attendant can be freely assigned by setting from the programming terminal.

4.2.2.5.1 Key Telephone/Versa Phone Key Assignment

1) Table 4.2.2.5.1.A shows the keys that can be assigned to a key telephone or Versa Phone and their corresponding key code numbers used for setting.
2) The ICM and FEAT keys are fixed keys.
3) When assigning the PAGE (Press Page) key, the key position is fixed to Key No. 6. It cannot be assigned to a key in another position.
4) Setting is made by Class 7 Station Class of Service Item 27 key telephone Key Assignment.
5) Figure 4.2.2.5.1.A and 4.2.2.5.1.B show the default key assignment for key telephones and Versa Phones respectively.

Table 4.2.2.5.1.A

Key Message	Key	Key Code No.
ADD	Add On Conference Key	00
FLSH	Flash Key	01
FWD	Call Forward Key	02
HOLD	Hold/DND Key	03
MSG	Message Key	04
PARK	Call Park Key	05
SPKR	Speaker Key	06
TRN	Transfer Key	07
P. PAG	Press Page Key	08
CO nn	Direct COL Key	1
FLT	Floating COL Group Access Key	20
FLT 1	Floating COL Group 1 Direct Access Key	21
FLT 2	Floating COL Group 2 Direct Access Key	22
FLT 3	Floating COL Group 3 Direct Access Key	23
FLT 4	Floating COL Group 4 Direct Access Key	24
FLT 5	Floating COL Group 5 Direct Access Key	25
FLT 6	Floating COL Group 6 Direct Access Key	26
FLT 7	Floating COL Group 7 Direct Access Key	27
OPT	Optimized Routing Access Key	28
DSS mm	Direct Station Select Key	3
D. PAG n	Direct Page Key	4
HNT n	Direct Master Hunt Group Key	5
SPD nn	Direct Speed Dial Key	6
DSP	Display Key	70
CALC	Calculator Key	71

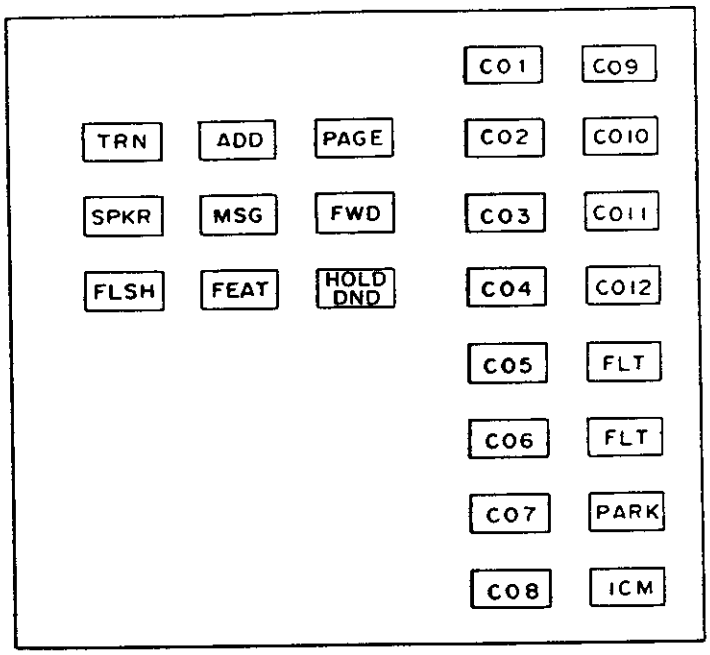


Figure 4.2.2.5.1.A KT Default Key Assignment

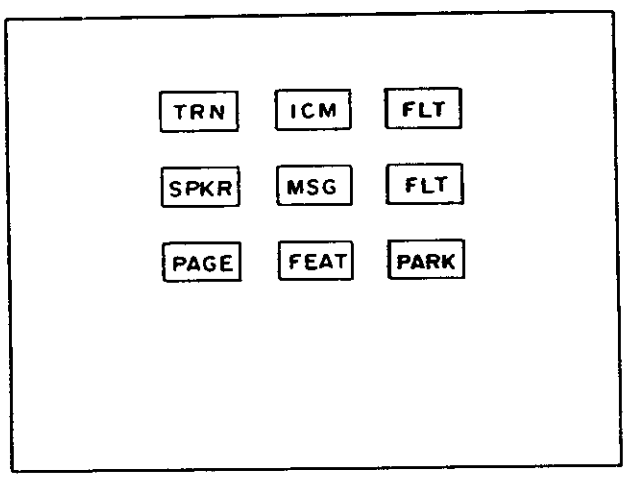


Figure 4.2.2.5.1.B VP Default Key Assignment

6) Key No. Positions on a key telephone and Versa Phones are shown in the following:

- KT key No. position

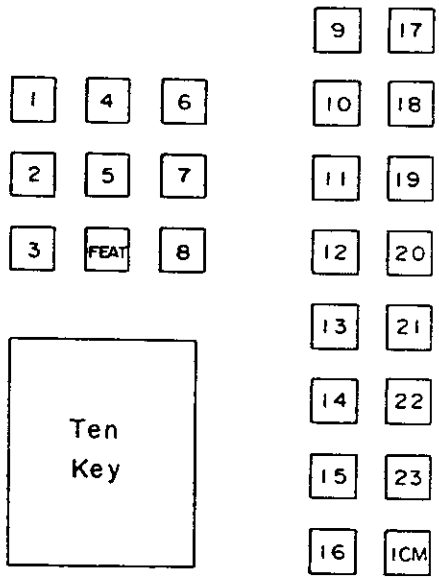


Figure 4.2.2.5.1.C

- Versa phone key No. position

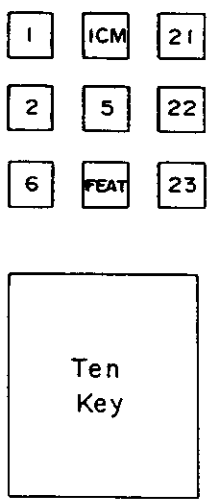


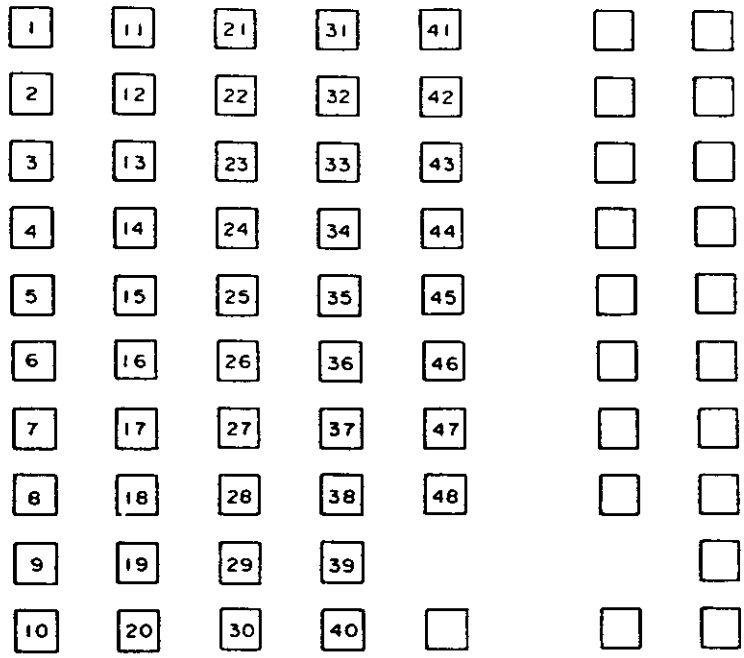
Figure 4.2.2.5.1.D

4.2.2.5.2 Attendant Key Assignment

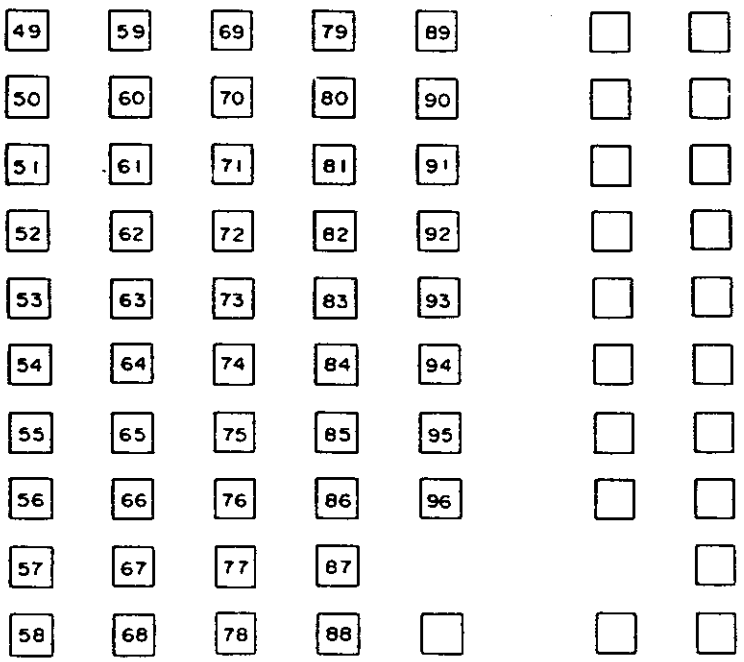
1) Those keys that can be assigned to the DSS keys on an Attendant and their corresponding key code numbers used for setting are shown in the following:

   - DSS mm Direct Station Select Key 3
   - HNT n Direct Master Hunt Group Key 5
   - SPD nn Direct Speed Dial Key 6

2) Setting is made by Class 1 System Constants Item 18 Attendant Key Assignment.
3) Figure 4.2.2.5.2.A shows the Key Position numbers on the Attendant.
   Normal-side mode: 1 to 48
   Reverse-side mode: 49 to 96
4) Default DSS Key assignments on an Attendant are as shown below.
   Normal-side mode: Keys 1 to 48, DSS #20 to #67
   Reverse-side mode: Keys 1 to 16, DSS #68 to #83
   Keys 17 to 48, SPD #00 to #31



Normal-Mode



Reverse-Mode

Figure 4.2.2.5.2.A

4.2.2.5.3 Key Assignment Method

Assignment of key telephone, Versa Phone, and DSS keys on an Attendant are made in the following manner.

1) Specify the Extension or Attendant number.
2) Specify the key position.
   Key telephone, Versa Phone: Refer to section 4.2.2.5.1 6)
   Attendant: Refer to section 4.2.2.4.2 4)
3) Depress Clear key to clear the present key assignments.
4) Input the key code number of the key to be assigned for the ten keys of the Input Data Keys.
   Key telephone, Versa Phone: Refer to section 4.2.2.5.1 1)
   Attendant: Refer to section 4.2.2.5.2 2)
5) Input various numbers for the assigned keys, if necessary.

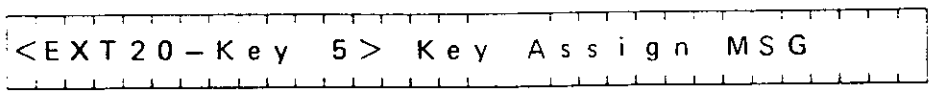
Direct COL Key	CO 1 to CO 24
Direct Station Select	EXT20 to EXT83
Direct Page Key	0 to 9
Direct Master Hunt Group Key	1 to 4
Direct Speed Dial Key	00 to 99

Direct Paging numbers are as shown below:

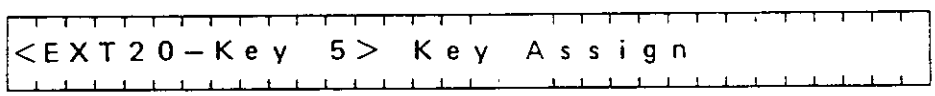
0	All
1	Zone 1
2	Zone 2
3	Zone 3
4	All Zone
5	All Group
6	Group 1
7	Group 2
8	Group 3
9	Group 4

4.2.2.5.3.1 **Explained in the following are some examples of actual key assignment procedures.**

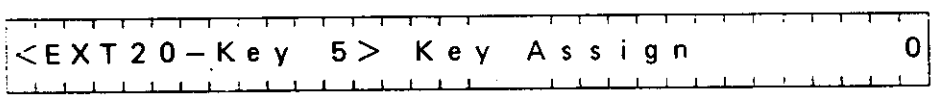
a. Assignment of the ADD key (MSG → ADD)



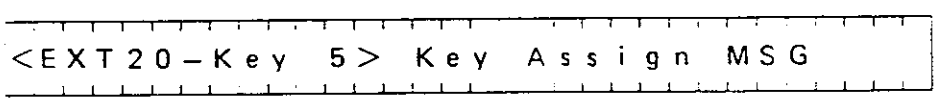
1. Depress the [CLR] key.
   Key Message on the display is cleared.



2. Depress the ten key [0] of the Input Data Keys.
   0 appears on the display.



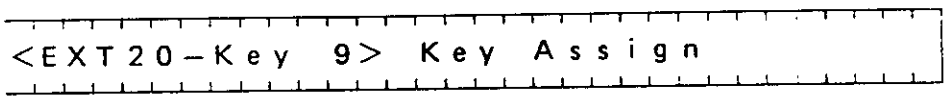
3. Depress the ten key [0] of the Input Data Keys.
   Key Message ADD appears on the display.



4. Depress the [ENTER] key.
   Registration has been completed.

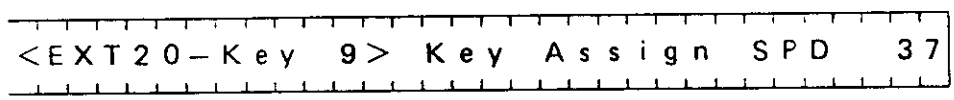
b. Key assignment of SPD (Speed Dial) #37. (CO #1 → SPD #37)

1. Depress the [CLR] key.
   Key Message on the display is cleared.



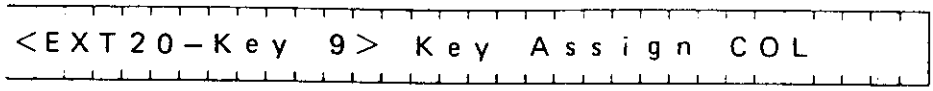
2. Depress the ten key [6] of the Input Data Keys.
   Key Message SPD appears on the display.

3. Depress the ten keys [3] and [7] of the Input Data Keys to register Speed Dial #37.



4. Depress the [ENTER] key.
   Registration has been completed.

c. Key assignment of DSS (Direct Station Select) #25. (CO #1 → DSS #25)



1. Depress the [CLR] key.
   Key Message on the display is cleared.

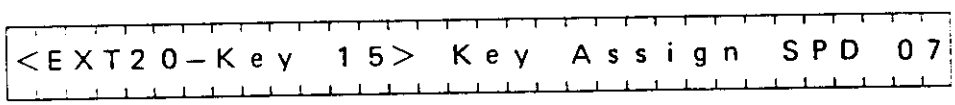
2. Depress the ten key [3] of the Input Data Keys.
   Key Message DSS appears on the display.

3. Depress the extension key [25] of the Input Data Keys to register DSS #25.
   Extension #25 lamp blinks.
4. Depress the [ENTER] key.
   Registration has been completed.

d. Changing the key assignment from DSS #25 to DSS #35.

1. Depress the extension key [35] of the Input Data Keys. Extension #25 lamp changes from flashing to steady lighting and extension #35 lamp begins flashing.
2. Depress the [ENTER] key.
   Registration has been completed.

e. Changing the key assignment from SPD #07 to SPD #91.



1. Depress the ten [9] of the Input Data Keys.
   The display changes into the following:

2. Depress the ten key [1] of the Input Data Keys.

3. Depress the [ENTER] key.
   Registration has been completed.

4.2.2.5.4 Restriction on key assignments

1. No duplicated assignment of the following keys are permitted.
   When changing these key assignments, clear the preset key assigment first, and then make a new assignment once.

ADD	Add on Conference Key
FLSH	Flash Key
FWD	Call Forward Key
HOLD	Hold/DND Key
MSG	Message Key
PARK	Call Park Key
SPKR	Speaker Key
TRN	Transfer Key
P. PAG	Place Page Key
COL nn	Direct COL keys on stations which terminate a COL No. nn
DSS mm	Direct station select keys on stations which terminate a DSS No. mm.

4.2.2.6 Optimized Call Routing

4.2.2.6.1 General Description

This feature analyzes dial data related to CO access, and seizes the lowest-cost CO/PBX Line in accordance with traffic and time at the moment of CO access. In the case of a tie line, for example, a special code may be added or the unnecessary area code deleted to adapt the CO access dial to the optimum CO/PBX Line. Because the optimum CO/PBX Line depends on traffic at the time of CO access, there may be up to four groups of CO/PBX Lines that can be seized to raise the probability of seizure. The system can automatically select the optimum CO/PBX Line in these groups. All extensions may use this selective feature, with different groups within which the optimum line is selected being assigned to extensions according to the positions of extension users. This group assignment can be made as described in No. (24) "Route Advance Step" in the Station Class of Service for KT/VP, and single line telephones of paragraph 3.3.2, System Planning.
This feature also enables the user to effect a rational toll restriction, suited to the desired toll plan, by means of floating toll restriction.

4.2.2.6.2 Basic Operation of Optimized Call Routing

The basic operation of optimized call routing is described below.

Note: Understanding the basic operation of optimized call routing helps the installer in preparing plans because the functions and uses of many assignment tables used in planning are described in detail in this paragraph. Never attempt planning without understanding this paragraph.

1. The subscriber presses the OPT key on the extension, or dials the optimized routing special number, 90. (The extension used by this subscriber must have "allow." assigend for Optimized Call Routing.)
2. The subscriber then dials the telephone number of the opposite party. (Depending on the area, the prefix code 1 may have to be added before the area code or office code.)

3. From the area code and office code (or from only the office code if no area code is used), the CO group best suited to that time is selected from the registration location called the Route Table No. The process of selecting this CO group is described in detail by dial data type.

Example 1: Area code – Office code – Customer code

(1) The dial data generated by the subscriber is analyzed according to the North American Dial Number Plan. The area code is first entered in the area called the input dial table (mentioned for purposes of explanation here, though it does not come up at the time of preparing the planning sheet), followed by the office code and customer code (subscriber number). This process is illustrated in Figure 4.2.2.6.2.1.

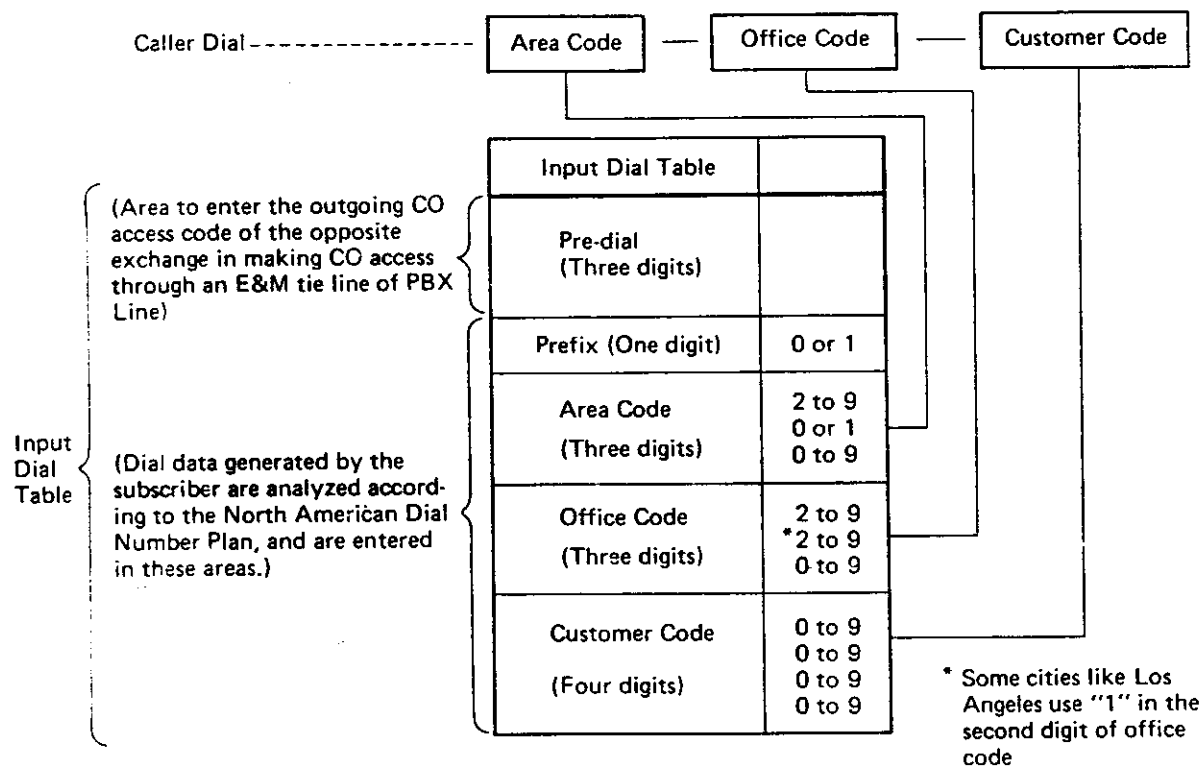
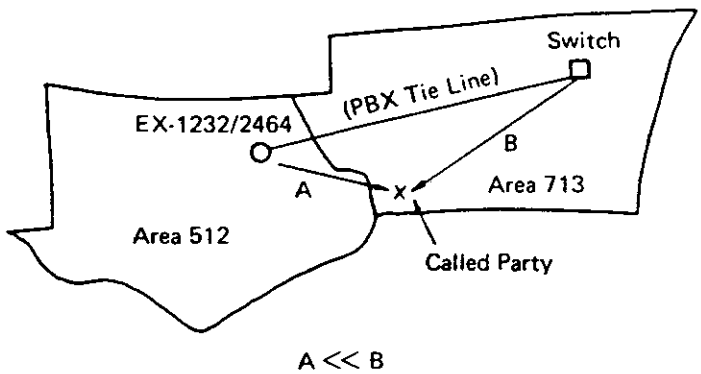


Figure 4.2.2.6.2.1 Entering Dial Data in Input Dial Table

If an E&M line or PBX Line is available between the areas to which these area codes are allocated and the EX-1232/2464 system, Co access through the switch to which the tie line or PBX line is connected is generally considered cheaper. In a case such as shown below, however, calls not routed through the tie line cost less because the actual CO line length is shorter. It is necessary, therefore, to identify the geographic positions of office codes belonging to an area code.



(2) The system refers to the table in which are registered the area codes for areas covered by PBX tie lines or E&M tie lines. This table is called the E&M Area Code Table. If the dialed area code is not in this table, system refers to the table in which are registered the area codes for lines other than PBX tie lines or E&M tie lines. The two tables are shown in Figures 4.2.2.6.2.2(A) and (B).

Area Code P1 P2 P3	Office Group No. Tenant A	Tenant B
200 ~ 219		
300 ~ 319		
400 ~ 419		
500 ~ 519		
700 ~ 719		
800 ~ 819		
900 ~ 919		

Figure 4.2.2.6.2.2(A) E&M Area Code Table Format

Area Code P1 P2 P3	Route Table No. Tenant A	Tenant B
200 ~ 219		
300 ~ 319		
400 ~ 419		
500 ~ 519		
700 ~ 719		
800 ~ 819		
900 ~ 919		

Figure 4.2.2.6.2.2(B) Area Code Table Format

Note: In the E&M Area Code Table, an E&M Office Group No. (not described in detail here because its meaning is classified in subsequent descriptions) must be registered for each of the area codes 200 to 919.
In the Area Code Table, a Route Table No. (not described in detail here because its meaning is clarified in subsequent descriptions) must be entered for each tenant and each of the area codes 200 to 919 (not necessarily consecutively). See Figure 4.2.2.6.2.2(B).
Both tables must be filled out during planning by the installer.

(3) If the dialed area code is in the E&M Area Code Table (Figure 4.2.2.6.2.2 A), one of the tables called the E&M Office Group Tables, where PBX or E&M tie line office codes are entered in four groups, is selected according to the E&M Office Group No. registered for that area code and tenant. E&M Office Group Tables are shown in Figure 4.2.2.6.2.3.

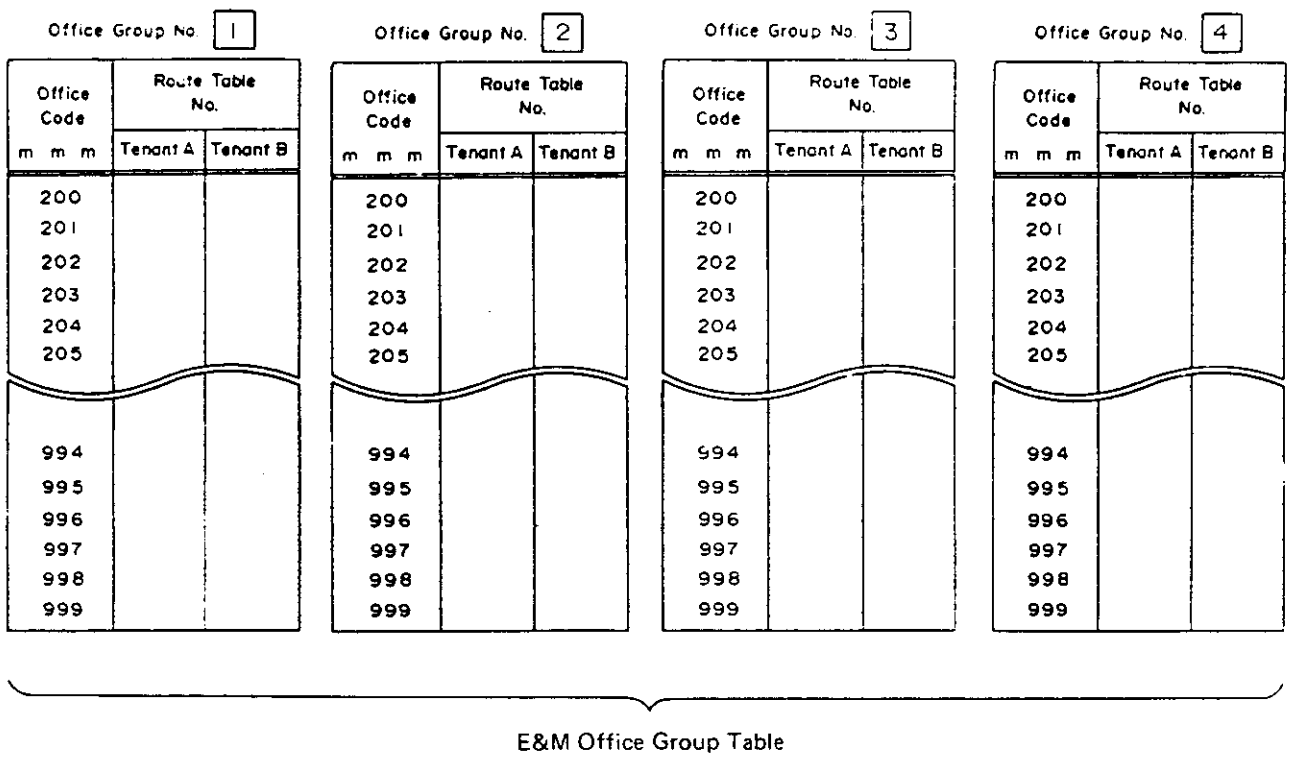
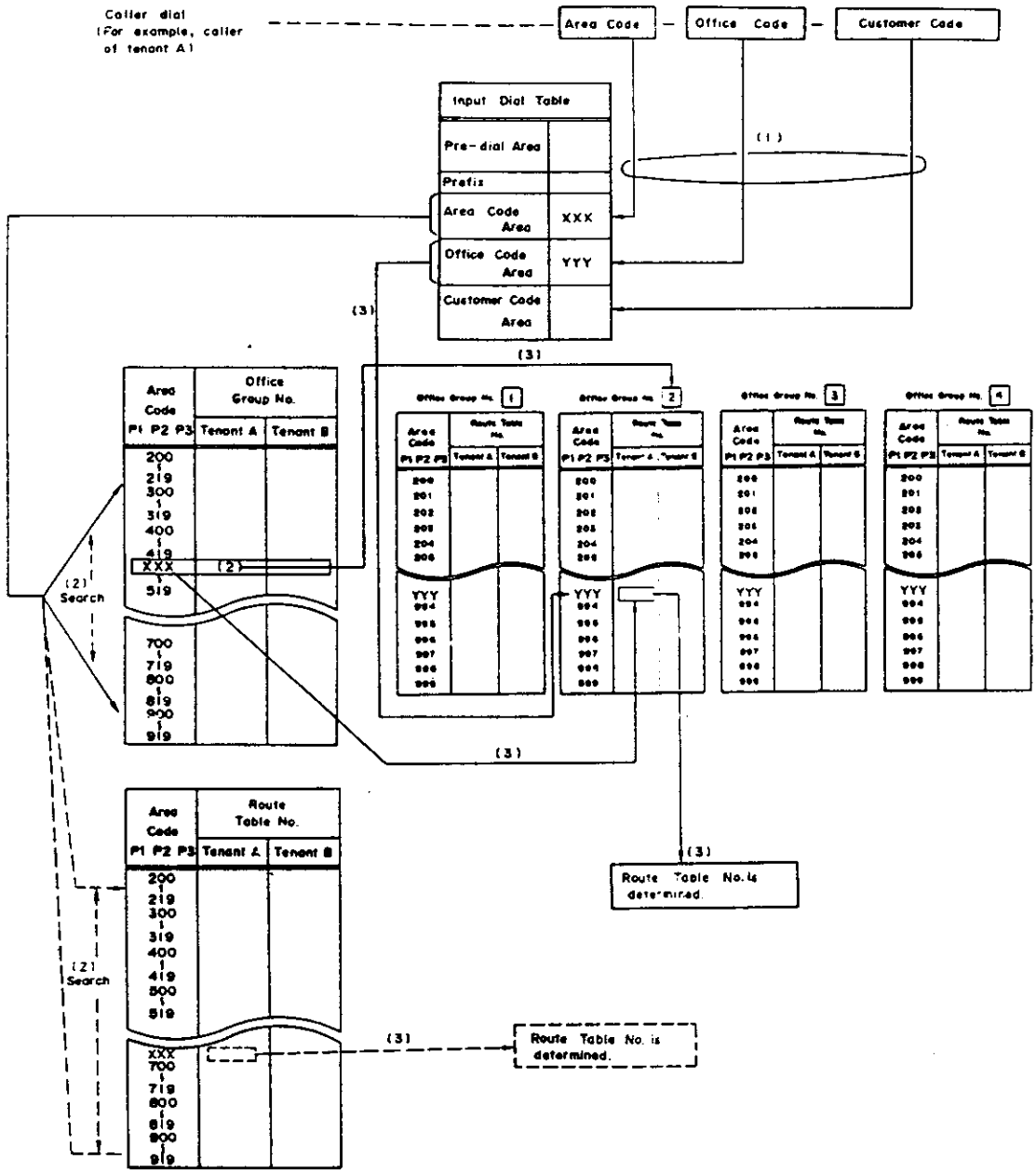


Figure 4.2.2.6.2.3 E&M Office Group Table Format

Note: In the E&M Office Group Tables, a Route Table No. must be registered for each of tenants A and B according to the office code (any codes from 200 through 999 can be registered consecutively) in the dial data. The reason that there are four E&M office groups is to make each E&M office group correspond to an E&M area code.
This table must also be filled out by the installer during planning.

The system refers to the office code registered in the selected E&M office group, and selects a Route Table No. from the location where the office code agrees with the office code registered in the input dial table (Figure 4.2.2.6.2.1) according to the type of tenant to which the caller belongs.
If the area code is not in the E&M Area Code Table, the system refers to the Area Code Table as described in item (2), example 1, and obtains the Route Table No. registered for that area code and type of tenant.
The Route Table No. is obtained by going through items (1), (2), and (3). The difference in system processing between a case in which PBX or E&M tie lines are available and other cases is described in item (3) above. That is, if PBX or E&M tie lines are available, the Route Table No. is determined by the area code and office code, whereas if PBX or E&M tie lines are not available, the Route Table No. is determined by the area code only. The process up to this point is shown in Figure 4.2.2.6.2.4.



Note: (1) in this figure means item (1), example 1.
(2) in this figure means item (2), example 1.
(3) in this figure means item (3), example 1.
Solid lines apply if PBX or E&M tie lines are available (area codes are registered in the E&M Area Code Table). Dash lines apply if no tie lines are available (area codes are not registered in the E&M Area Code Table).

Figure 4.2.2.6.2.4 **Process Through Selecting a Route Table No. (Where Area Code is Used)**

As the process up to this point shows, the system first searches for a PBX or E&M tie line in the E&M Area Code Table. If there is no tie line in the E&M Area Code Table, the system refers to the Area Code Table to select the least-cost route. The Time Zones of the Route Tables can be set according to Time Schedule.

The Schedule and Route Tables are described in detail below.

A Route Table No. is an index showing the location of the Route Table that must be referred to. There are three Route Tables, 0 through 2, which differ by access time zone and each is divided into eight parts. In each part, CO group numbers are registered in order to preference. The installler must fill out these tables during planning. The Time Schedule and the Route Tables are shown in Figures 4.2.2.6.2.5(A) and 4.2.2.6.2.5(B).

Time Zone Hour	Condition			
	1 Weekday	2 Saturday	3 Sunday	4 Holiday
0. 0:00 to 0:59				
1. 1:00 to 1:59				
2. 2:00 to 2:59				
3. 3:00 to 3:59				
4. 4:00 to 4:59				
5. 5:00 to 5:59				
6. 6:00 to 6:59				
7. 7:00 to 7:59				
8. 8:00 to 8:59				
9. 9:00 to 9:59				
10. 10:00 to 10:59				
11. 11:00 to 11:59				
12. 12:00 to 12:59				
13. 13:00 to 13:59				
14. 14:00 to 14:59				
15. 15:00 to 15:59				
16. 16:00 to 16:59				
17. 17:00 to 17:59				
18. 18:00 to 18:59				
19. 19:00 to 19:59				
20. 20.00 to 20:59				
21. 21:00 to 21:59				
22. 22:00 to 22:59				
23. 23:00 to 23:59				

Note: Set Time Zone 0 to 2 according to conditions 1 to 4 and Time Zone Hour 0:00 to 23:59

Figure 4.2.2.6.2.5(A)1 Time Schedule

Time Zone Hour	Condition			
	1 Weekday	2 Saturday	3 Sunday	4 Holiday
0. 0:00 to 0:59	2	2	2	2
1. 1:00 to 1:59	2	2	2	2
2. 2:00 to 2:59	2	2	2	2
3. 3:00 to 3:59	2	2	2	2
4. 4:00 to 4:59	2	2	2	2
5. 5:00 to 5:59	2	2	2	2
6. 6:00 to 6:59	2	2	2	2
7. 7:00 to 7:59	2	2	2	2
8. 8:00 to 8:59	0	0	0	0
9. 9:00 to 9:59	0	0	0	0
10. 10:00 to 10:59	0	0	0	0
11. 11:00 to 11:59	0	0	0	0
12. 12:00 to 12:59	0	0	0	0
13. 13:00 to 13:59	0	0	0	0
14. 14:00 to 14:59	0	0	0	0
15. 15:00 to 15:59	0	0	0	0
16. 16:00 to 16:59	0	0	0	0
17. 17:00 to 17:59	1	1	1	1
18. 18:00 to 18:59	1	1	1	1
19. 19:00 to 19:59	1	1	1	1
20. 20.00 to 20:59	1	1	1	1
21. 21:00 to 21:59	1	1	1	1
22. 22:00 to 22:59	1	1	1	1
23. 23:00 to 23:59	2	2	2	2

Figure 4.2.2.6.2.5(A)2 Time Schedule (Default Value)

Time Zone 0

	Route Table No. 1				Route Table No. 2				Route Table No. 3				Route Table No. 4				Route Table No. 5				Route Table No. 6				Route Table No. 7				Route Table No. 8			
Advance Step	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Tenant A																																
Tenant B																																

Time Zone 1

	Route Table No. 1				Route Table No. 2				Route Table No. 3				Route Table No. 4				Route Table No. 5				Route Table No. 6				Route Table No. 7				Route Table No. 8			
Advance Step	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Tenant A																																
Tenant B																																

Time Zone 2

	Route Table No. 1				Route Table No. 2				Route Table No. 3				Route Table No. 4				Route Table No. 5				Route Table No. 6				Route Table No. 7				Route Table No. 8			
Advance Step	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Tenant A																																
Tenant B																																

Note 1. CO Outgoing Group Nos. shall be set in accordance with the setting of the Tenant A/B, Time Zone, Route Table Nos. and Advance Steps.

2. CO Outgoing Group Nos. are 1 to 7.

3. The default value is 0, and it has no function.

Figure 4.2.2.6.2.5(B) Route Table

(4) Assign a Time Zone (0 to 2) first according to Time Zone Hour.
The system selects group 0, 1, or 2, according to the Time Zone Hour set by the user. The system then selects a CO group in the Advance No. 1 column from the location corresponding to the type of tenant to which the caller belongs and the Route Table No., determined as described in item (3), example 1, and selects an idle CO/PBX Line in that CO group. If all the CO/PBX Lines in that CO group are busy, the system proceeds to search for an idle CO/PBX Line until it reaches the Route Advance Step, the extension class-of-service of the caller.
Suppose, for example, that the caller's extension belongs to tenant B and that the Route Advance Step is 2. Also, suppose that the caller originates a call at 06:30 on Weekday and that the system selects Route Table No. 0 (Time Zone 0) as a result of analyzing the dial data. In this case, the system operates in the order of (a), (b), (c), (d), (e), and (f) in Figure 4.2.2.6.2.6(B).

Time Zone Hour	Condition			
	1 Weekday	2 Saturday	3 Sunday	4 Holiday
0. 0:00 to 0:59	2	2	1	1
1. 1:00 to 1:59	2	2	1	1
2. 2:00 to 2:59	2	2	1	1
3. 3:00 to 3:59	2	2	1	1
4. 4:00 to 4:59	2	2	1	1
5. 5:00 to 5:59	0	0	1	1
6. 6:00 to 6:59	0	0	1	1

Assign Time Zone 0

Figure 4.2.2.6.2.6(A) Time Schedule Planning Sheet

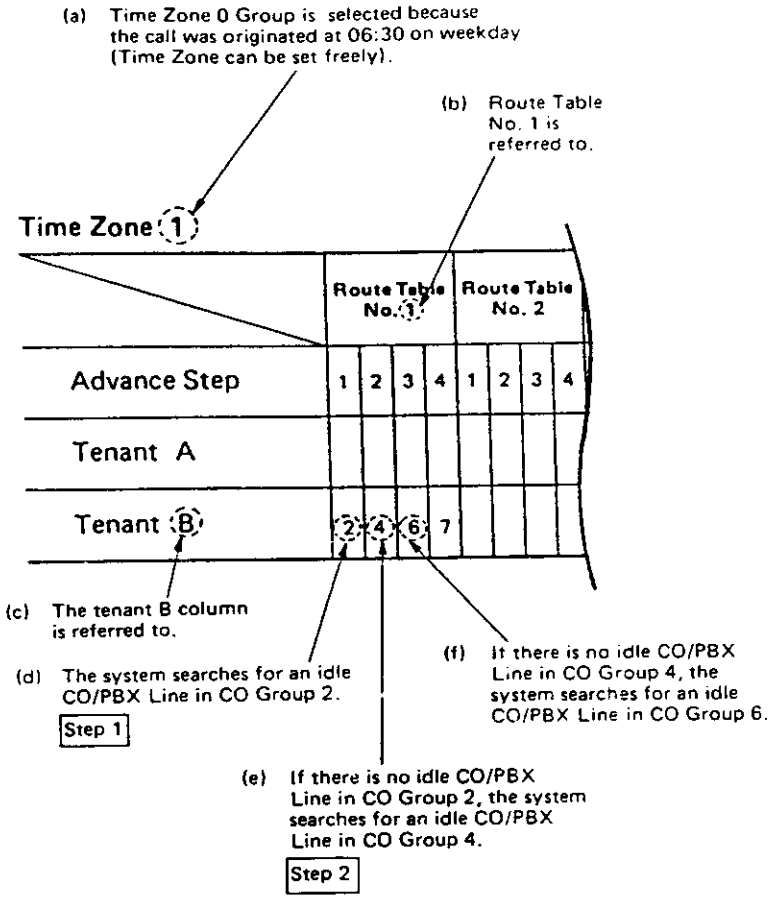


Figure 4.2.2.6.2.6(B) CO Group No. Selection

In the above example, the caller's extension was assigned Route Advance Step 2. Thus, if all the CO/PBX Lines in CO Groups 2, 4, and 6 are busy, the system will not proceed to CO Group 7, which is registered at Advance No. 4. In a case like this, the system sends a busy tone to the caller, signifying that there are no idle CO/PBX Lines. If the Route Advance Step is 0, the system searches for an idle CO/PBX Line only in the CO group of Advance No. 1.

The above process applies to selection of a CO group when the dial data include an area code, office code, and customer code. Another example of CO group selection, when dial data cover only an office and customer code, is explained next.

Example 2: Office – Customer code

(1) The office code and customer code are registered in the input dial table. (See Figure 4.2.2.6.2.1.)
(2) The system refers to the Office Code Table, and locates a Route Table No. from the office code registered in the input dial table and the type of tenant of the caller. The Office Code Table must be filled out by the installer during planning. Figure 4.2.2.6.2.7 shows the Office Code Table.

Office Code	Route Table No.	
m m m	Tenant A	Tenant B
200		
201		
202		
996		
997		
998		
999		

Figure 4.2.2.6.2.7 Office Code Table Format

(3) The system then refers to the Time Scedule and Route Table, shown in Figure 4.2.2.6.2.5(A) and (B), on the basis of the Time Scedule and Route Table No. found in item (2). Thereafter, the system selects a CO group by going through the same process as in item (4), example 1.

The process of CO group selection by type of dial data has already been described. After CO group selection, the dial data to be sent to an idle CO/PBX Line in that group may have to be modified by adding a special code or deleting an unnecessary area code. The necessity of modifying dial data is now explained in a little more detail.
Suppose the dial data generated by the caller consists of an area code, office code, and customer code; that the system has seized a PBX tie line in the optimum CO group as a result of analyzing the dial data; and that the caller originated a local call that would go through the PBX tie line is connected. The user does not know that the CO/PBX Line seized is a PBX tie line, and does not dial specially to seize a PBX tie line.
It is then necessary to output one of the PBX's CO line trunk group numbers before the telephone number. Because the call is a local call as viewed from the PBX, it is not necessary to dial the area code.

Even if the EX1232/2464 system user dials the area code, that area code must be deleted. It is for this reason that the system must modify the dial data.
The process of automatically modifying dial data is explained below as part of the system processing flow. (The optimum CO group has been selected by the process up to item 3, so this explanation starts with item 4.)

4. After CO group selection, the system locates the Deleting Data Table No. (which is clarified below) corresponding to the selected CO group by referring to a table called the Deleting Index Table. Figure 4.2.2.6.2.8 shows the Deleting Index Table format. The installer must fill out this table during planning.

CO Outgoing Group No.	Delete Data Table No.	
	Tenant A	Tenant B
1		
2		
3		
4		
5		
6		
7		

Figure 4.2.2.6.2.8 Deleting Index Table Format

If there is no Deleting Data Table No. in the location corresponding to the selected CO group, there is no data to be deleted from the dial data generated by the caller. If an addition to the dial data is necessary, the system proceeds to that step.

5. The following explanation is based on the assumption that there is a Deleting Data Table No. registered for the selected CO group. In this case again, the process is explained by the type of caller dial data.

Example 1: Area code – Office code – Customer code

(1) The system refers to a table called the Deleting Data Table, and locates the area code in the location corresponding to the Deleting Data Table No. selected in item 4. When the area code in the input dial table (Figure 4.2.2.6.2.1) agrees with the area code from the Deleting Data Table, the area code dialed by the caller is deleted.
Figure 4.2.2.6.2.9 shows the Deleting Data Table format. This table must be filled out by the installer during planning.

Delete Data Table No.	Area Code (P1, P2, P3)	
	Tenant A	Tenant B
1	□□□	□□□
2	□□□	□□□
3	□□□	□□□
4	□□□	□□□

Figure 4.2.2.6.2.9 Deleting Data Table Format

(2) If the area code in the input dial table does not agree with the area code from the Deleting Data Table, the area code dialed by the caller is not deleted, and the system proceeds to making an addition to the dial data if necessary.

Example 2: Office code – Customer code

(1) Because no area code is entered in the input dial table (Figure 4.2.2.6.2.3), the system does not delete anything from the dial data, but proceeds to making an addition to the dial data if necessary.

6. Upon completion of dial data deletion (where necessary), the system refers to a table called Adding Index Table, and locates the Adding Data Area/Office Table No. clarified below corresponding to the CO group selected in item 3.
Figure 4.2.2.6.2.10 shows the Adding Index Table format. The installer must fill out this table during planning.

CO Outgoing Group No.	Delete Data Table No.	
	Tenant A	Tenant B
1		
2		
3		
4		
5		
6		
7		

Figure 4.2.2.6.2.10 Adding Index Table Format

If there is no Adding Data Area/Office Table No. for the selected CO group, there is nothing to be added to the dial data generated by the caller.

7. It is assumed that an Adding Data Area/Office Table No. corresponding to the CO group selected in item 3 has been registered. Here again, the process is explained by the type of dial data.

Example 1: Area code – Office code – Customer code

(1) In this case, there is an area code so the system proceeds to referring to a table called the Addition Data Area Table. (In example 2 that follows, the dial data consists of an office code and customer code only, so the system proceeds to referring to an Adding Data Office Table. That is, the table referred to differs depending on whether the dial data includes an area code.)

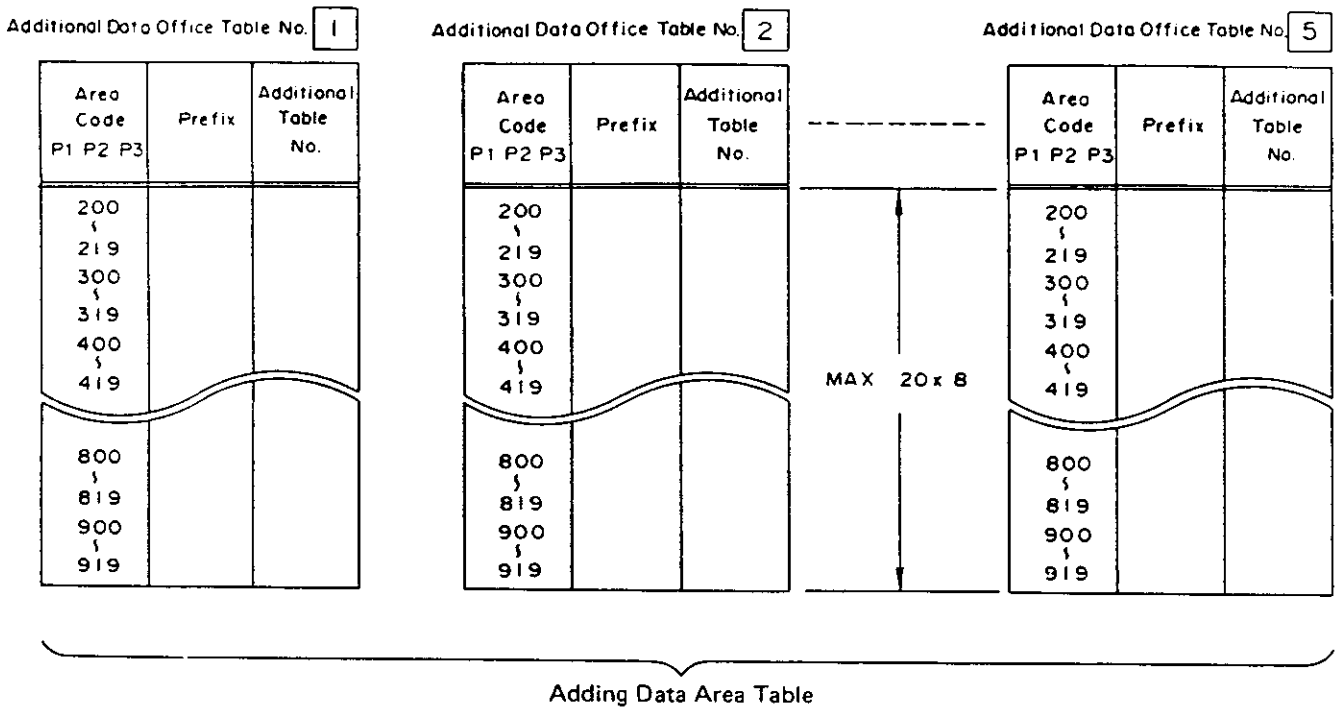


Figure 4.2.2.6.2.11 Adding Data Area Table Format

Note: There are five Adding Data Area Tables, each of which is so formatted that a prefix may be registered for each area code, and an index number may be entered in the adding table column (clarified below). The index number points the adding table where data to be added to the dial data area stored. Area codes are not consecutive, but are broken down into 20 by 8 blocks, as shown in Figure 4.2.2.6.2.11. These tables must be filled out by the installer during planning.

The system selects one of the tables shown in Figure 4.2.2.6.2.11 from the Adding Data Area/Office Table No. selected in item 6.

(2) The system searches the Adding Data Area Table selected in item (1), example 1, for the area code registered in the input dial table (Figure 4.2.2.6.2.1) and selects the prefix and Adding Table No. registered there. The system stores in memory whether to add a "1" to the dial data to be sent, depending on whether the prefix "1" has been entered. The system then proceeds to referring to the Adding Table indicated by the selected Adding Table No.

(3) The Adding Table has the actual dial data to be added for each Adding Table No. and a flag showing whether the adding dial data should be placed before or after the normal dial number. Figure 4.2.2.6.2.12 shows the Adding Table format.

Additional Table No.	Additional Flag	Dial
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Figure 4.2.2.6.2.12 Adding Table Format

Note: There are 10 Adding Tables, each of which can register up to 18 digits of adding dial data. Flag 0 must be entered if the adding dial data must be placed before the normal dial number, and flag 1, if the adding dial data must follow the normal dial number. These tables must be filled out by the installer during planning.

The dial data consisting of an area code, office code, and customer code is modified by the above process. The factors that are determined by the system in the process of modifying the dial data to be sent after CO group selection can be summarized as follows:

- Whether to delete the area code
- Whether a prefix is necessary
- If additional dial data are necessary, data value and their position.

Example2: Office code — Customer code

(1) In this case, the system proceeds to referring to a table called Adding Data Office Table. Figure 4.2.2.6.2.13 shows the Adding Data Office Table format.
The system selects one of the tables shown in Figure 4.2.2.6.2.13 from the Adding Data Area/Office Table No. selected in item 6.

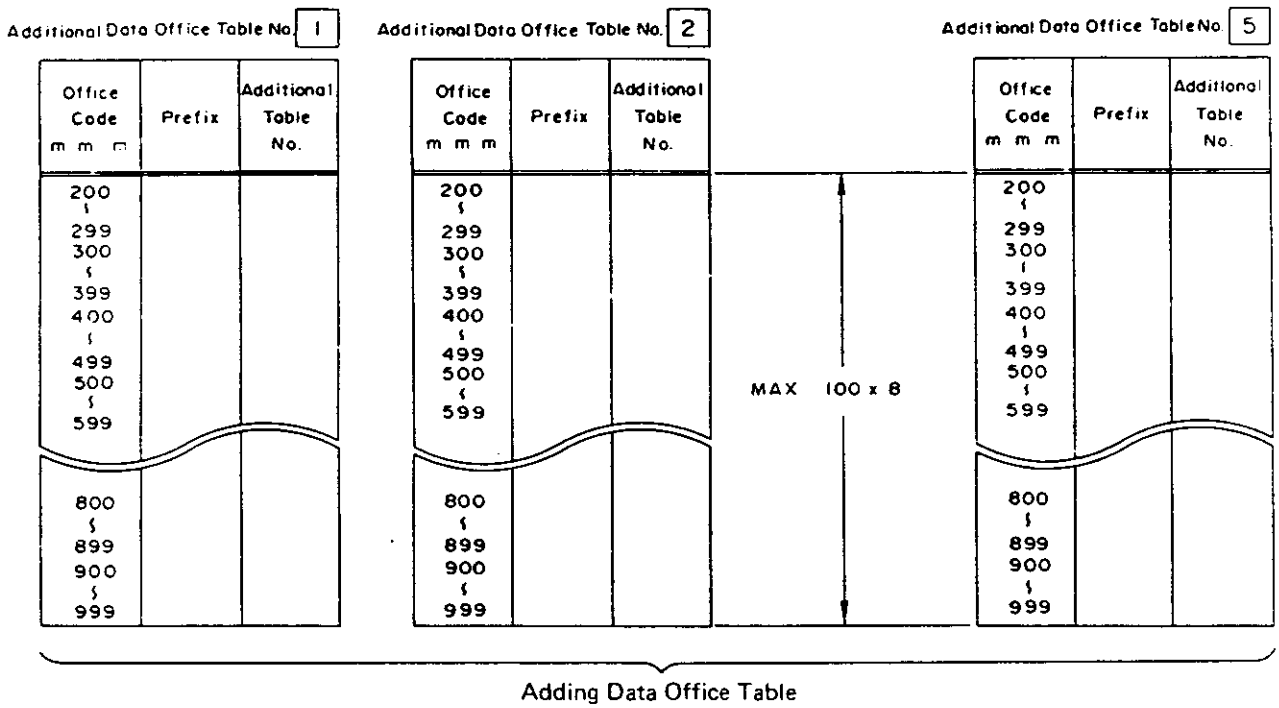


Figure 4.2.2.6.2.13 Adding Data Office Table Format

Note: There are five Adding Data Office Tables, each of which is so formatted that a prefix may be registered for each office code, and an index number may be entered in the adding table column. The index number points the adding table where the dial data to be added are stored. Office codes are consecutive, and are broken down into 100 by 8 blocks, as shown in Figure 4.2.2.6.2.13. These table must be filled out by the installer during planning.

(2) The system searches the Adding Data Office Table selected in item (1), example 2, for the office code registered in the input dial table (Figure 4.2.2.6.2.1) and selects the prefix and Adding Table No. that are registered there. The system stores in memory whether to add a "1" to the dial data to be sent, depending on whether the prefix "1" has been entered. The system then proceeds to referring to the Adding Table indicated by the selected Adding Table No.

(3) The Adding Table is the same as the one referred to in item 7, example 1. (See Figure 4.2.2.6.2.12). The system refers to this table, and selects dial data to be added and their position (before or after the normal dial data).
Thus, the dial data, consisting of an office code and customer code, is modified. The factors that are determined by the system in the process of modifying the dial data to be sent after CO group selection can be summarized as follows:

- ○ Whether a prefix is necessary
- ○ If additional dial data are necessary, data value and their position

Refer to Figures 4.2.2.6.2.14 and 4.2.2.6.2.15 again to review the process of dial data modification by the system after CO group selection. Both figures show the process of dial data modification after CO group selection with reference to the tables concerned. Figure 4.2.2.6.2.14 applies to dial data consisting of an area code, office code, and customer code, and Figure 4.2.2.6.2.15, to dial data consisting of an office code and customer code.
No. in these figures indicates the applicable item number and should be followed in numeric sequence to understand the modification process.

8. When the dial data to be output in originating an outgoing call are determined after selection of the optimum CO group, the system proceeds to processing for toll call restriction. (The flow processing toll call restriction is described in detail in paragraph 4.3.7 Programming Toll Restriction.) The system makes the following analysis in this process:
   (1) The system obtains the value of "Toll Restriction" that has been set for the calling extension. (KT/VP and SLT)
   (2) The system analyzes the toll plan according to the value of toll-restriction (assumed to be other than "0" because "0" signifies unconditional toll access) and the selected CO group.
   (3) The system analyzes the caller's dial data according to the North American Dial Number Plan, and determines whether to restrict or permit toll calls by referring to the toll plan.
9. If toll calls are permitted, the modified dial data are sent to the CO/PBX Line. If toll calls are restricted a warning tone is sent to the caller. This completes all Optimized Call Routing service.

4.2.2.6.3 CO/PBX Lines Selectable by Optimized Call Routing

Because effective operation of the Optimized Call Routing feature is a great advantage to the user, its planning by the installer is a very important factor. The installer must, first of all, know the types of CO/PBX Lines connected to the system in planning this feature. As described in paragraph 4.2.2.6.2, the CO groups selectable by the Optimized Call Routing feature are any of groups 1 through 7. Refer to Item No. 12, "CO Outgoing Group", in paragraph 4.1 System Planning.

The CO/PBX Lines in groups 1 through 7 that are subject to the Optimized Call Routing feature are as follows:

- o D.D.D. lines
- o FX lines
- o OUTWATS
- o Tie lines (E&M tie lines and PBX tie lines other than the tie lines connected from the S.C.C. office)

4.2.2.6.4. Optimized Call Routing Data Planning Procedure

Optimized Call Routing data can be planned as described below. This planning is to prepare the various tables mentioned in paragraph 4.2.2.6.2. These tables are available as planning sheets. The installer must prepare plans for Optimized Call Routing after becoming familiar with the types and purposes of CO/PBX Lines to be connected to the system.
This paragraph describes the actual planning procedure, showing a system example.

1. Figure 4.2.2.6.4.1 shows the assumed location of the EX-1232/2464 system and the network of CO/PBX Lines connected to it.

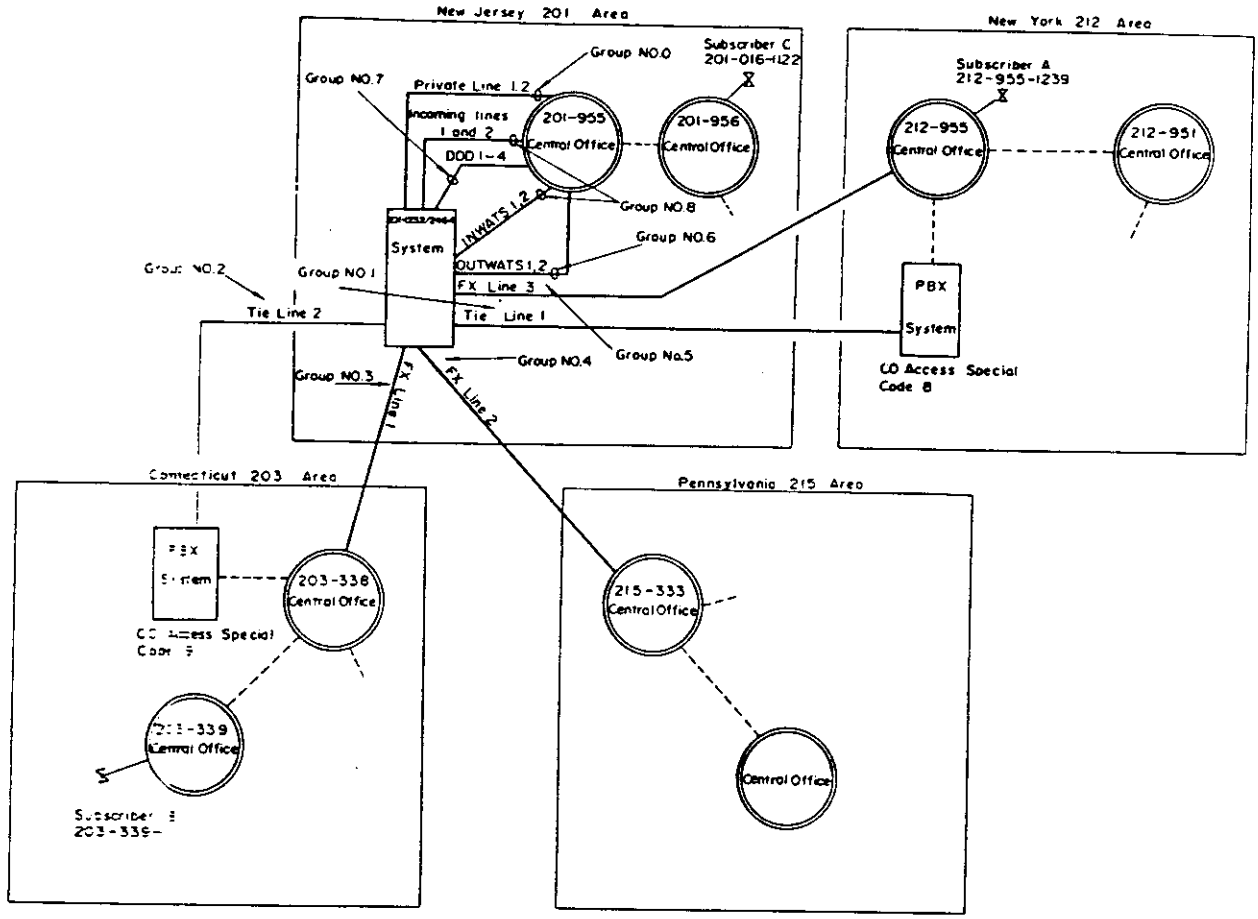


Figure 4.2.2.6.4.1. Assumed CO/PBX Line Network

Planning Procedure

1. The CO/PBX Lines that are subject to Optimized Call Routing are those in groups 1 through 7.
2. Pay special attention to the PBX tie lines in groups 1 through 7. Enter the area codes for the PBXs to which these tie lines are connected in the E&M Area Code Table. In this example, the area code for tie line 1 is 212, and that for tie line 2 is 203. (See the network diagram in Figure 4.2.2.6.4.1). Enter these area codes and corresponding E&M office group numbers 1 and 2 as shown in Figure 4.2.2.6.4.2.

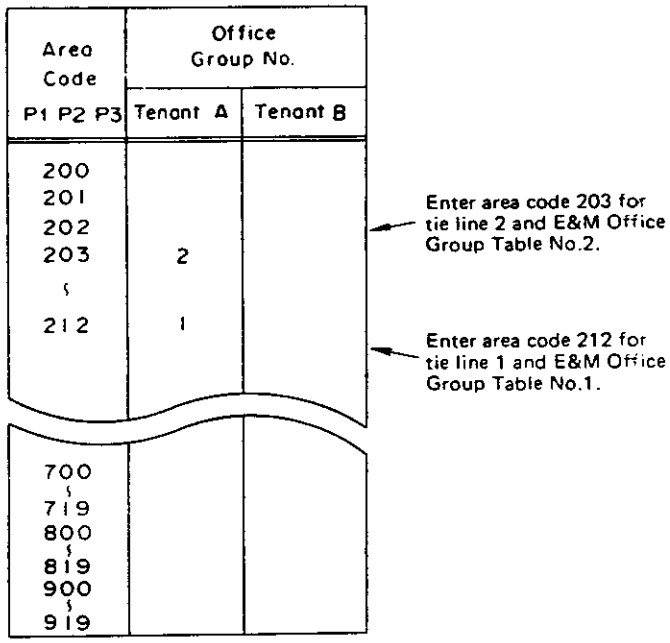


Figure 4.2.2.6.4.2. Example of E&M Area Code Table

Note: If all outgoing calls to the above areas are cheaper than being routed through other lines, it is not necessary to use either the E&M Area Code Table or the E&M Office Group Table. In this case, enter the Route Table Nos. in the General Area Code Table in the part corresponding to the above area codes.

3. To determine a Route Table No. for entry in the E&M Office Group Table and Area Code Table that are discussed later, the optimum (least-cost) route to be connected in a specific time zone is now considered. In other words, a Route Table is prepared.
   (a) Outgoing toll calls in the time zone of 08:00 to 16:59 on weekday to New York, Connecticut, and Pennsylvania (When Time Zone is default. Time Zone can be set freely).
   Refer to the network diagram in Figure 4.2.2.6.4.1.
      (i) A PBX tie line is connected to New York and Connecticut, so this route is the cheapest. Pennsylvania can be accessed through OUTWATS, FX line 2, and D.D.D. line; the least-cost route in this time zone would be OUTWATS .
      The cheapest connecting routes, that is, CO group numbers to be registered at Advance No.1 to the different destinations in the specified time zone is determined.
      If outgoing dial data in this time zone are 212-955-☐☐☐☐ (New York) And 203-338-☐☐☐☐ (Connecticut), let the system select PBX tie line groups Nos. 1 and 2 respectively as CO groups.
      If outgoing dial data are 215-333-☐☐☐☐ (Pennsylvania), let the system select OUTWATS CO group No. 6 as the CO group.
      Then fill in the Route Table for Time Zone 0 Group. Enter the CO group numbers for these destinations in the order of Route Tables Nos. In the entry example shown in Figure 4.2.2.6.4.3, the CO group numbes for New York, Connecticut, and Pennsylvania are entered in the order of Route Table Nos.
      (ii) CO groups to be registered at Advance No. 2 are the next least-cost routes, considered when all the least-cost CO/PBX Lines are busy. In accessing New York or Connecticut OUTWATS is the second least-cost route in the specified time zone. Thus, OUTWATS CO group No. 6 should be entered at Advance No. 2. In accessing Pennsylvania, FX line 2 is the second leastcost route, so CO group No. 4 to which FX line 2 belongs should be registered at Advance No. 2.

      (iii) CO groups to be registered at Advance No. 3 are considered when all the CO groups registered at Advance Nos. 1 and 2 are busy. In accessing New York and Connecticut, FX line 3 and FX line 1 are the third least-cost routes, so enter group No. 5 for FX line 3 and group No.3 for FX line 1 at Advance No. 3. In accessing Pennsylvania, the route through D.D.D. line is the third least-cost, so enter group No. 7 for D.D.D. line at Advance No.3.

      (iv) CO groups to be registered at Advance No.4 are considered when all the CO groups at Advance Nos. 1, 2, and 3 are busy. In accessing New York and Connecticut, the D.D.D. line is the fourth least-cost route, so enter group No. 7 for the D.D.D. line at Advance No. 4. In this example, there is no CO group to be entered as the fourth least-cost route to Pennsylvania.

The Route Table for Time 0 Group (08:00 to 16:59) has now been prepared by steps (i) through (iv), as shown in Figure 4.2.2.6.4.3. (When Time Zone is default. Time Zaone can be set freely).

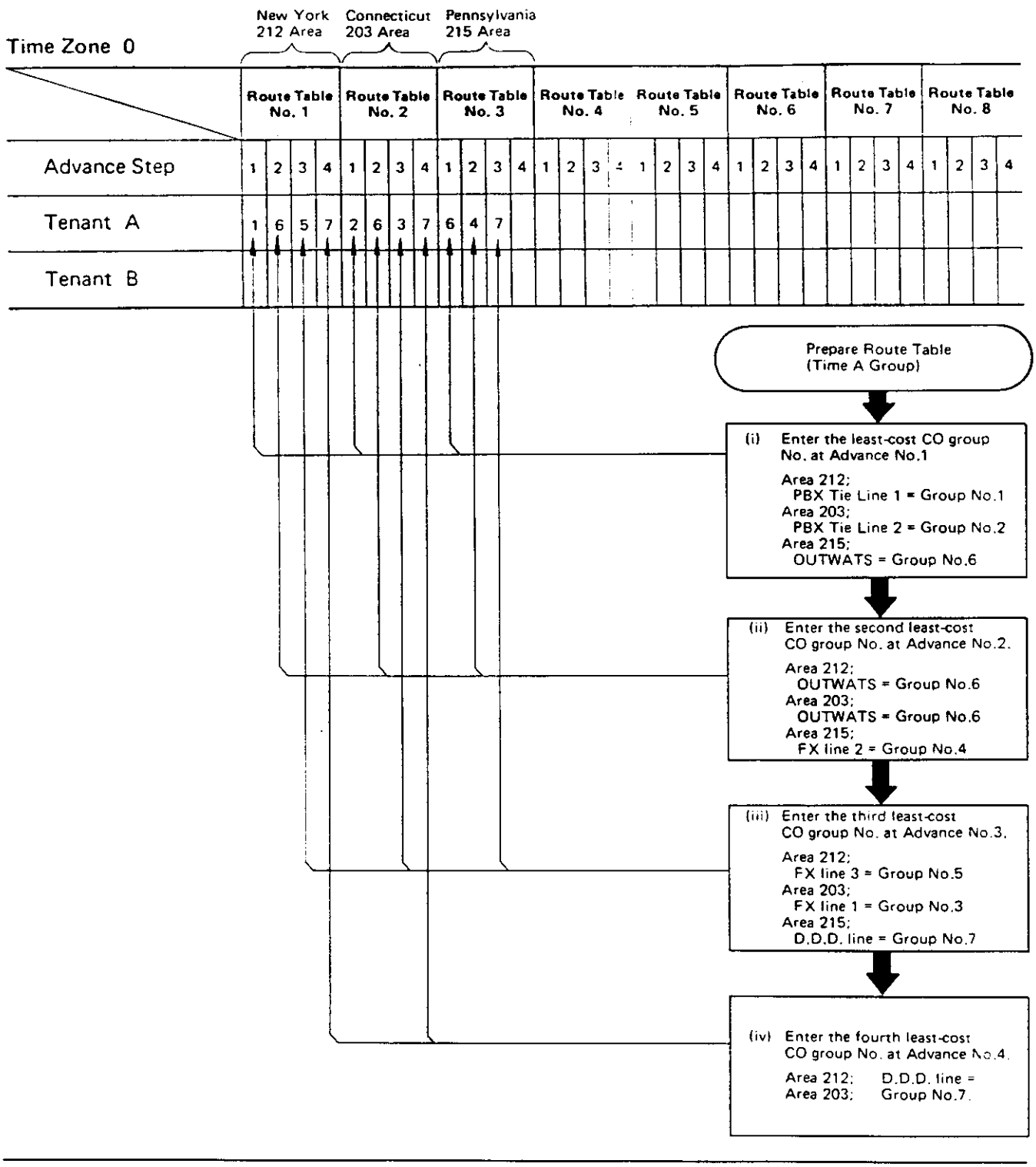


Figure 4.2.2.6.4.3 Example of Preparing Route Table for Time Zone 0

(b) Outgoing toll calls in the time zone if 17:00 to 22:59 on weekday to New Work, Connecticut, and Pennsylvania (When Time Zone is default. Time Zone can be set freely).

(i) As in the case of item (a) above, PBX tie lines are the least-cost access routes to New York and Connecticut. Enter groups Nos. 1 and 2 for PBX tie lines 1 and 2 at Advance No. 1. In accessing Pennsylvania in this time zone, the least-cost route is FX line 2, unlike the case of item (a) above. Enter group No. 4 for FX line 2 at Advance No. 1.

(ii) The second least-cost routes to New York and Connecticut are FX line 3 and FX line 1 respectively. Enter groups Nos. 5 and 3 at Advance No. 2. OUTWATS is the second least-cost route to Pennsylvania in this time zone, so enter CO group No.6 for OUTWATS at Advance No. 2

(iii) The third least-cost route to New York and Connecticut is OUTWATS line, so enter CO group No. 6 for OUTWATS at Advance No. 3 The D.D.D. line is the third least-cost access route to Pennsylvania, so enter CO group No. 7 for the D.D.D. line at Advance No. 3.

(iv) The fourth least-cost route to New York and Connecticut is D.D.D. line, so enter CO group No. 7 for the D.D.D. line at Advance No. 4. There is no CO group number to be entered at Advance No. 4 as the fourth least-cost route to access Pennsylvania.

Figure 4.2.2.6.4.4 shows a Route Table prepared by going through steps (i) to (iv).

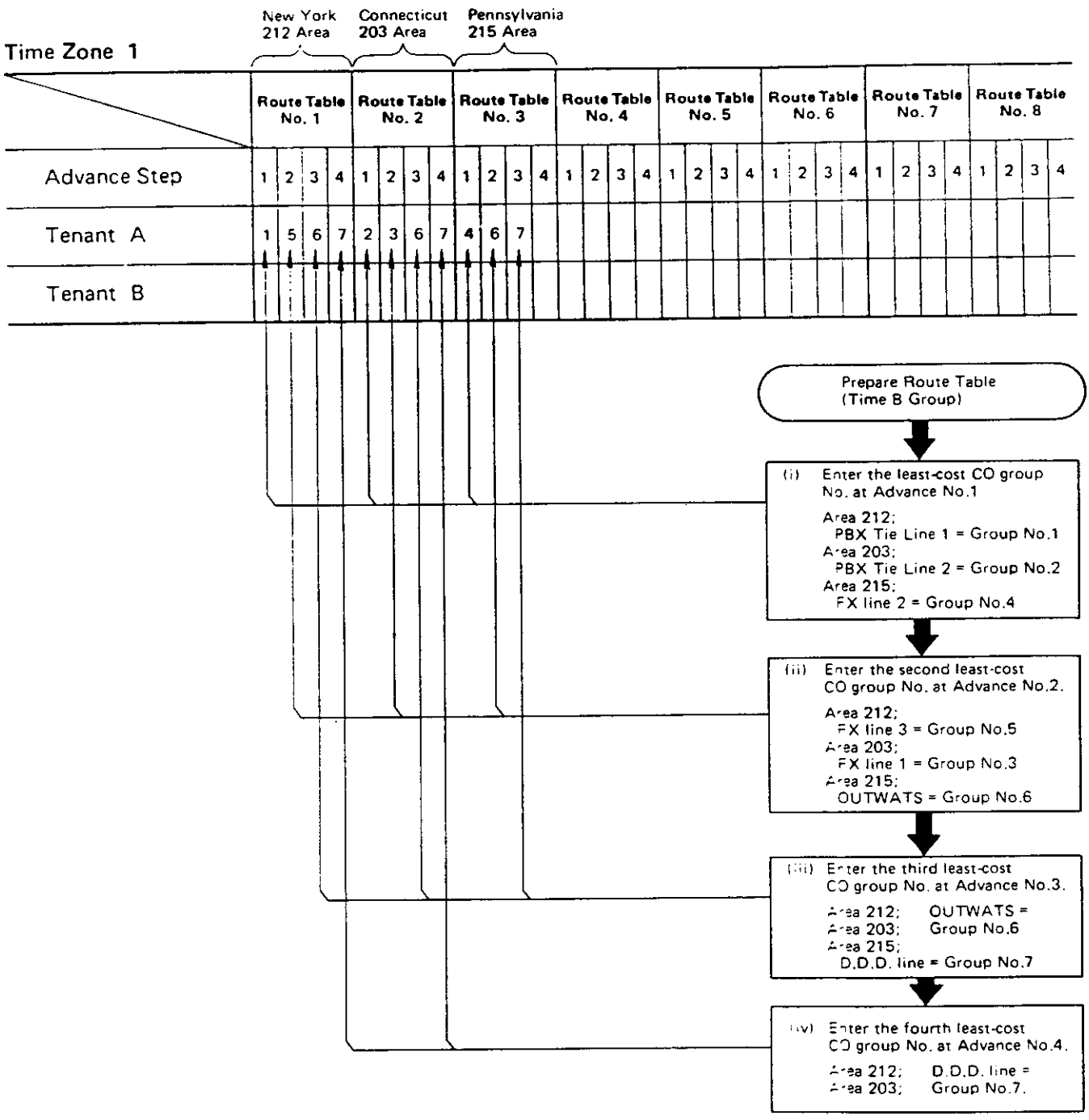


Figure 4.2.2.6.4.4 Example of Preparing Route Table for Time Zone 1

(c) Outgoing toll calls in the time zone of 23:00 to 07:59 on weekday to New York, Connecticut, and Pennsylvania (When Time Zone is default. Time Zone can be set freely).

Figure 4.2.2.6.4.5 shows a Route Table prepared in the same way as described in 3 (a) and 3 (b) Only the table is shown, with no explanation.

Time Zone 2

	New York 212 Area				Connecticut 203 Area				Pennsylvania 215 Area																			
	Route Table No. 1				Route Table No. 2				Route Table No. 3				Route Table No. 4				Route Table No. 5				Route Table No. 6				Route Table No. 7				Route Table No. 8			
Advance Step	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Tenant A	1	5	7	6	2	3	7	6	4	7	5																					
Tenant B																																

Figure 4.2.2.6.4.5 **Example of Preparing Route Table for Time Zone 2**

(d) Outgoing local calls to Office 955 in Area 201

D.D.D. lines (CO group No.7) are the cheapest for outgoing Local calls in any time zone. Therefore, the Route Tables are as Figure 4.2.2.6.4.6.

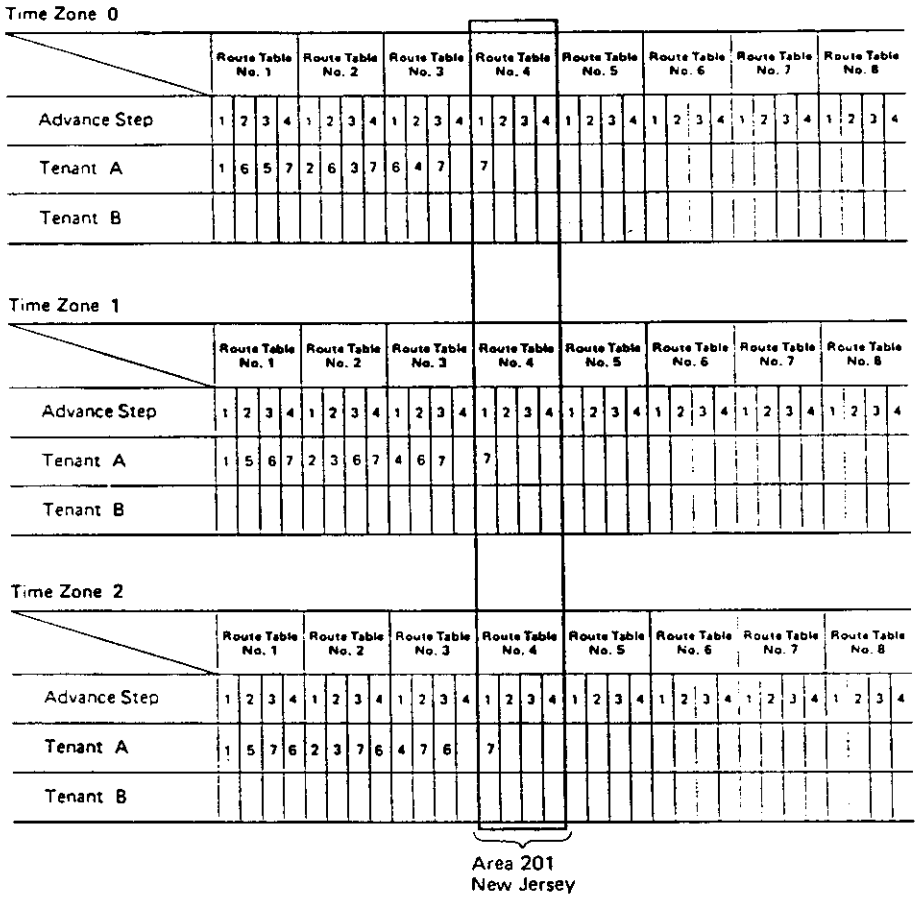


Figure 4.2.2.6.4.6 Example of Route Table for Outgoing Local Calls to Office 955 in Area 201

4. After preparing Route Tables, enter Route Tables Nos. corresponding to the office codes in the tables of E&M Office Groups No. 1 and No.2. (In this example, the areas where PBX tie lines are availab e are New York and Connecticut.) The entry procedure is shown in Figure 4.2.2.6.4.7.

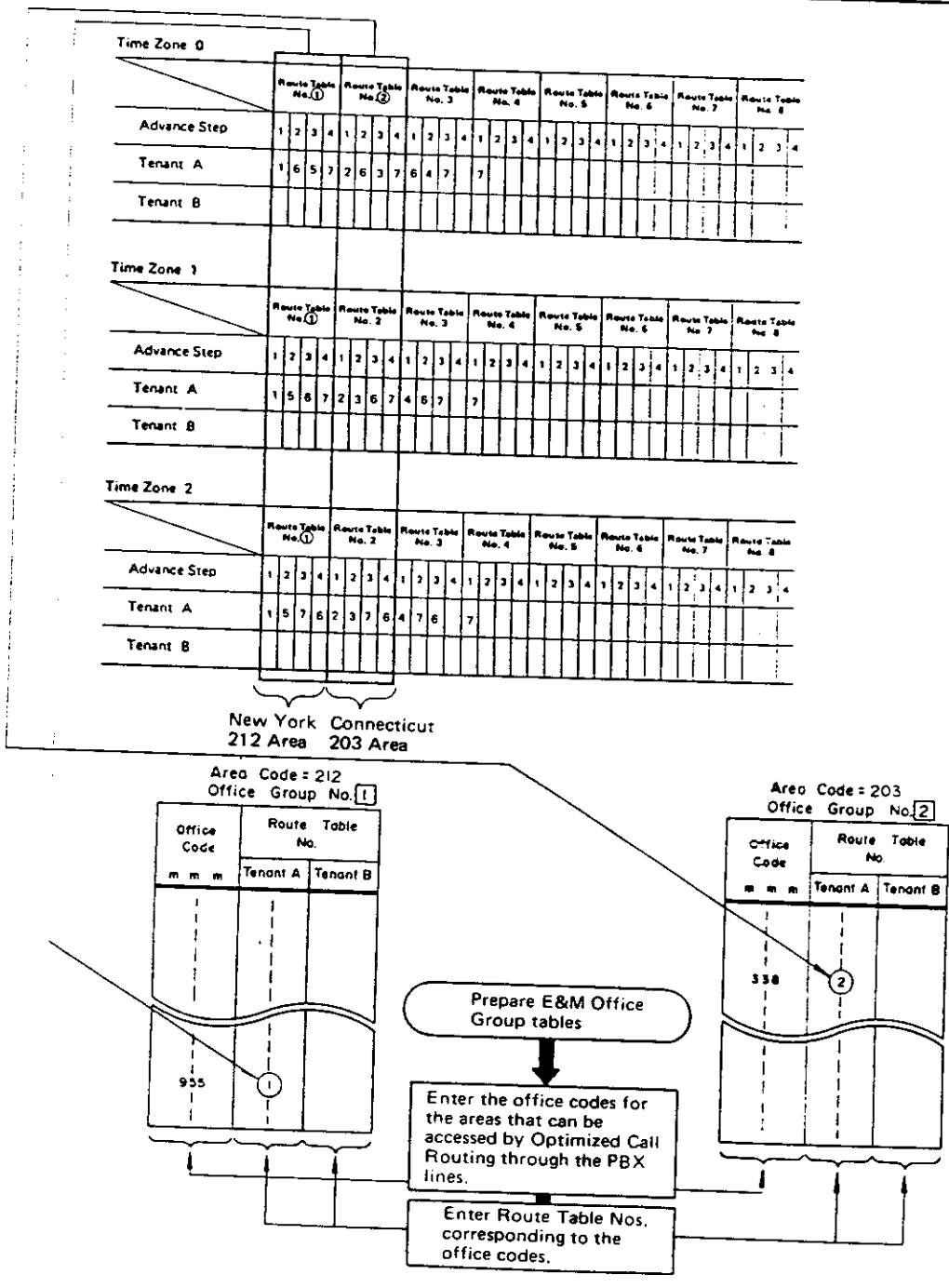


Figure 4.2.2.6.4.7 Example of Preparing E&M Office Group Table

5. Proceed to preparing an Area Code Table. This table is only for the areas where tie lines are not available (Pennsylvania in this example). The entry procedure is shown in Figure 4.2.2.6.4.8.

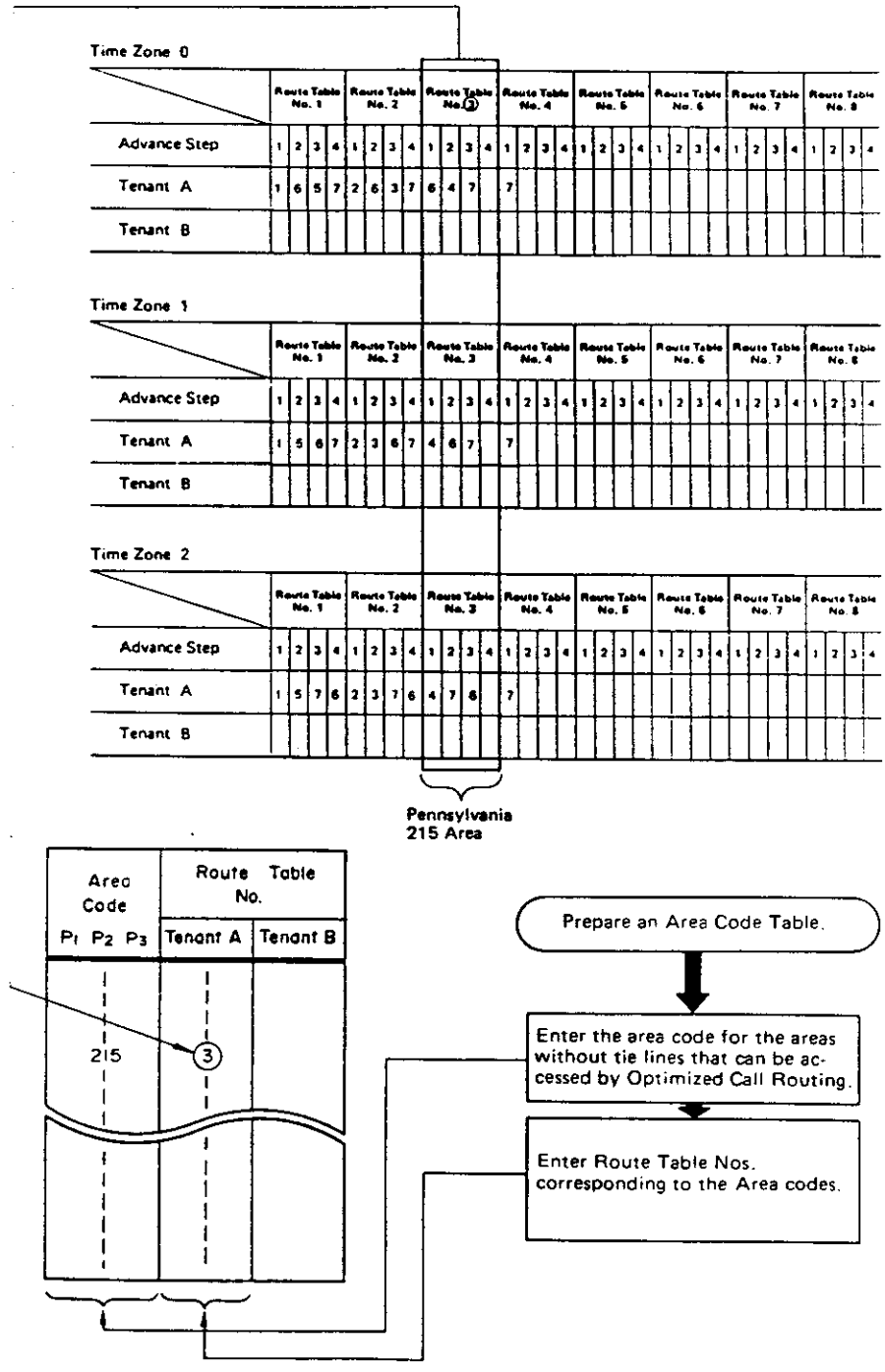


Figure 4.2.2.6.4.8 Example of Preparing Area Code Table

6. Proceed to preparing an Office Code Table. This table is referred to when dial data are for local ca ls. In this example, the system refers to it when a local call is originated in area 201, New Jersey. An example of preparing an Office Code Table is shown in Figure 4.2.2.6.4.9.

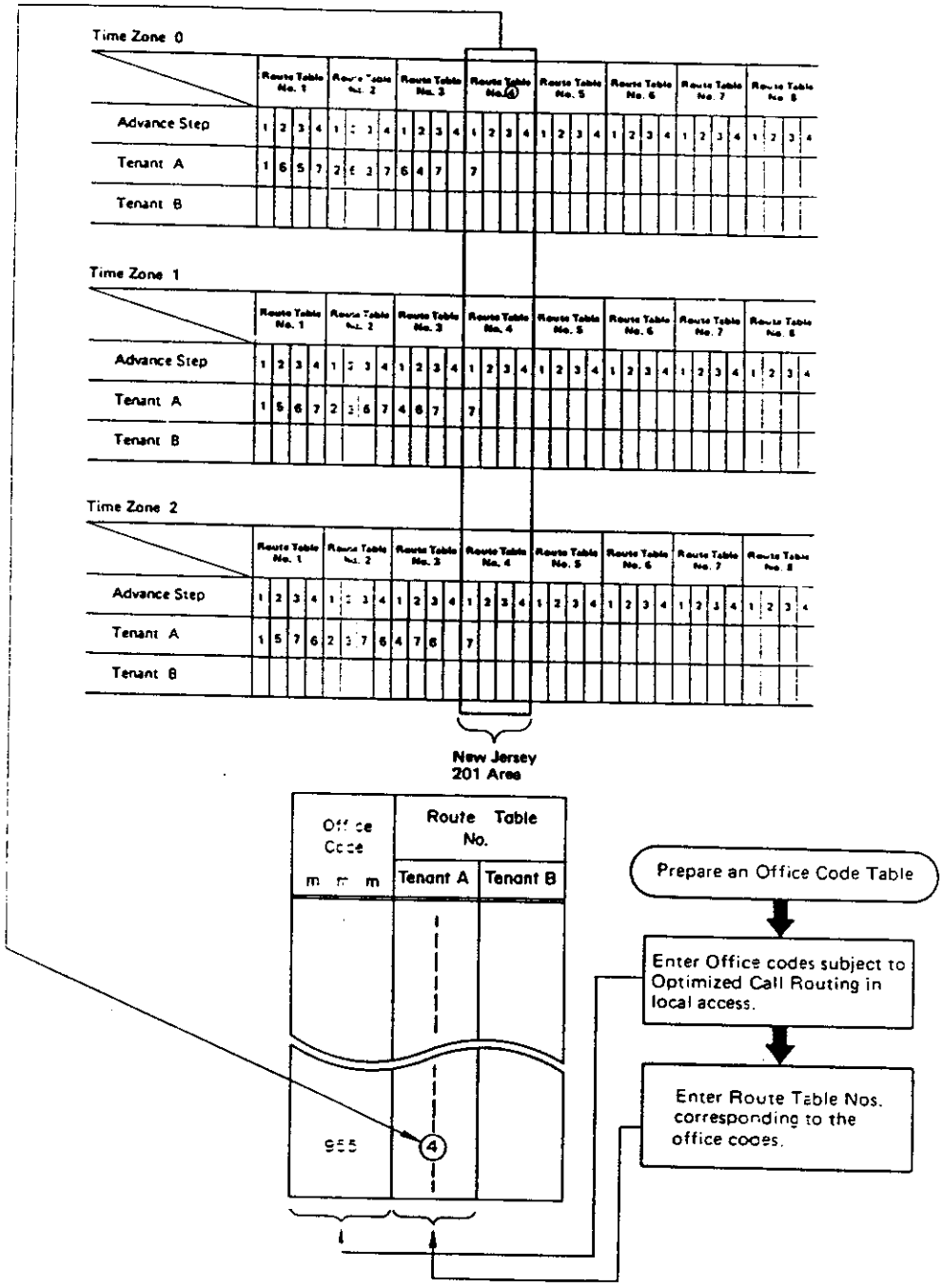


Figure 4.2.2.6.4.9 **Example of Preparing Office Code Table**

7. The optimum CO groups for the time zones wherein calls are originated can be determined from previously prepared tables. It is necessary, therefore, to prepare dial data to be sent to these CO groups. The procedure for preparing tables for this purpose is explained below, referring to examples.

Example 1: An outgoing toll call placed by pressing the OPT key, or dialing Optimized Call Routing special code 90 and 212-955-1234 (Subscriber A in the network diagram of Figure 4.2.2.6.4.1). The following description proceeds in the order of Advance Nos. in Table No. 1 (Area 212, New York), Route Table (Time 0 Group).

(a) CO group No. 1 (PBX tie line 1) selected (See Advance No. 1, Figure 4.2.2.6.4.10)

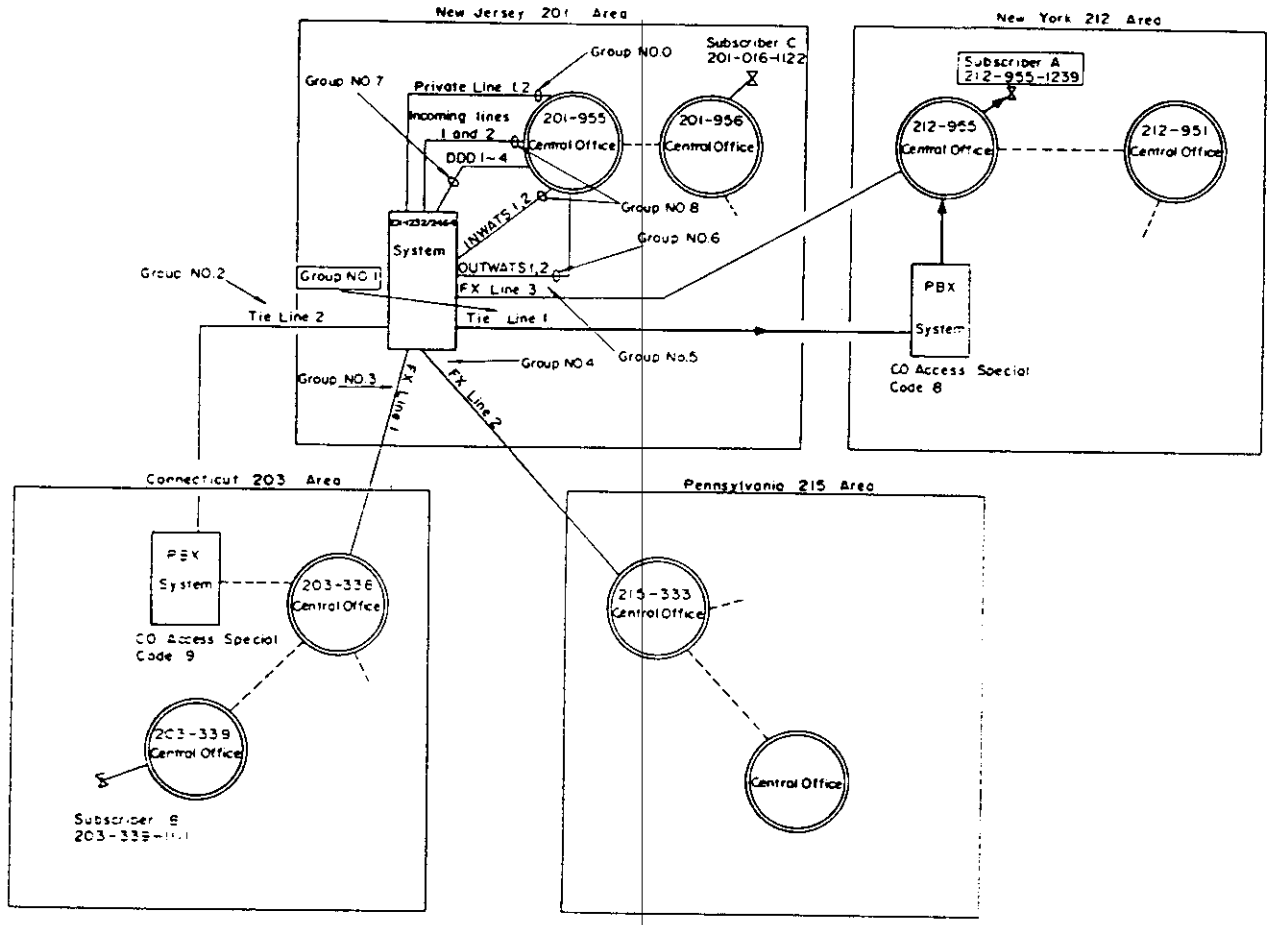


Figure 4.2.2.6.4.10 Example of Outgoing Toll Call via CO Group No. 1 (Caller dialing 212-955-1234)

The dial data to be sent through the PBX tie line must be modified as follows:

- Delete area code 212.
- Add a special code ("8" in this example) before the office code to seize the CO/PBX Line through the PBX.
- Add pause data between special code "8" and the office code to generate a 2-second pause between dialing the special code and receiving the dial tone.

The modified dial data will be:

8 – (Pause data: 2 seconds) – 955 – 1234

An example of entering the above modified dial data in a Planning Sheet is shown in Figure 4.2.2.6.4.11.

(b) CO group No. 6 (OUTWATS) selected (Advance No. 2)

In this case, it is not necessary to modify dial data. Thus, no planning is necessary.

(c) CO group No. 5 (FX line 3) selected (Advance No. 3) (See Figure 4.2.2.6.4.12.)

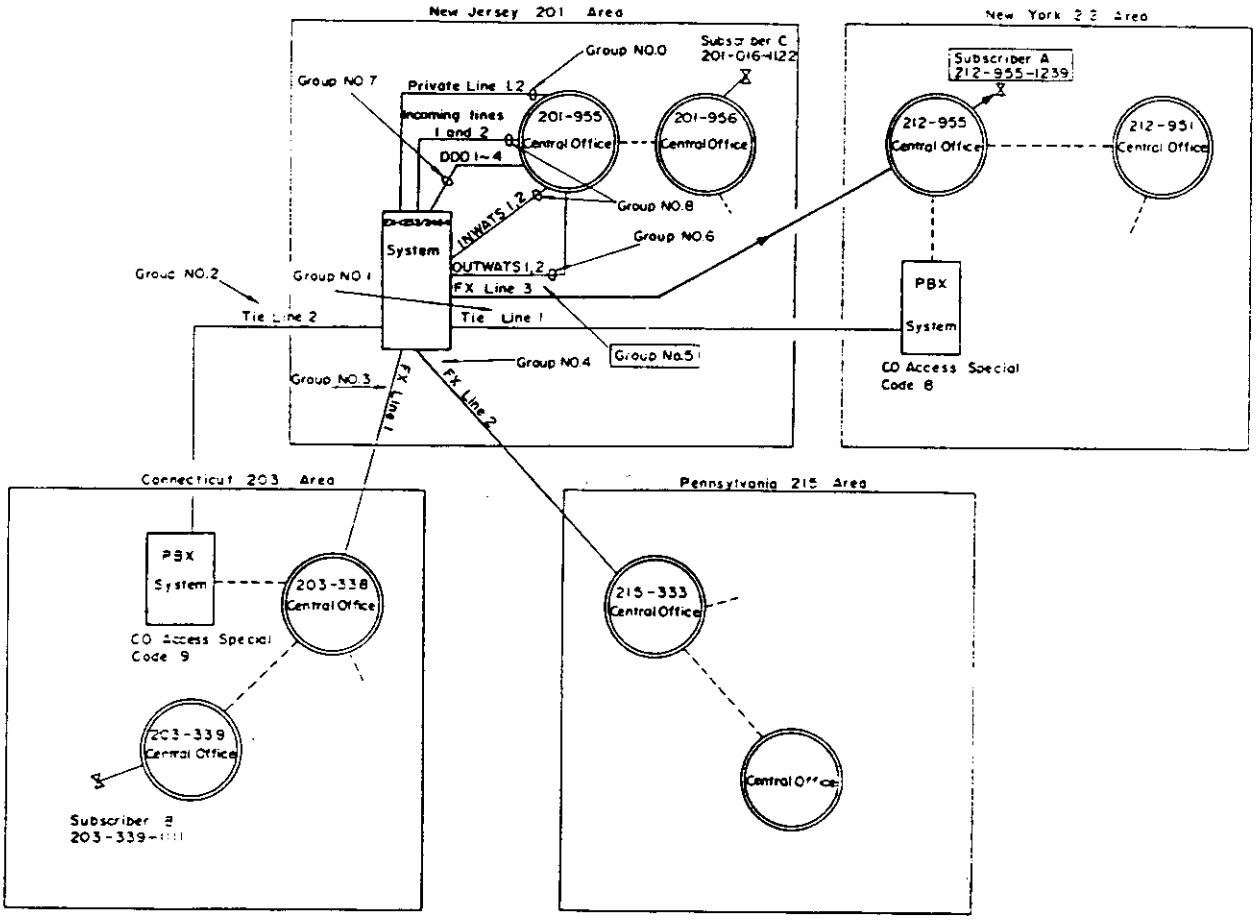


Figure 4.2.2.6.4.12 Example of Outgoing Toll Call Through CO Group No. 5 (Caller dialing 212-955-1234)

The dial data to be sent through the FX line must be modified as follows:

- Delete area code 212.

This makes the dial data: 955-1234
This planning example is illustrated in Figure 4.2.2.6.4.13

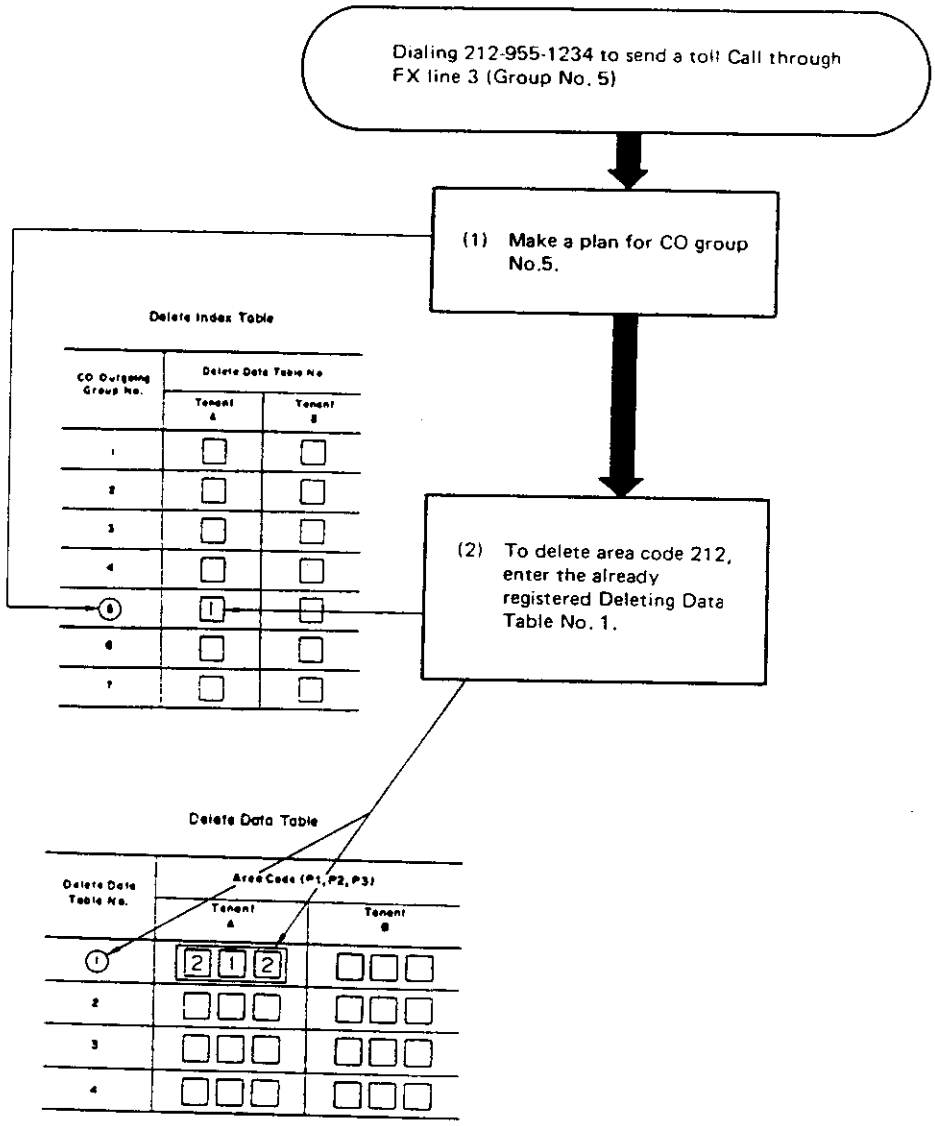


Figure 4.2.2.6.4.13 Planning Example for Dial Data Modification (FX line 3)

(d) CO group No. 7 (D.D.D. line) selected (Advance No. 4)

In this case, it is not necessary to modify dial data. Thus, no planning is necessary.

Example 2: An outgoing toll call by pressing the OPT key, or dialing Optimized Call Routing special code 90 and 203-339-1111. (Subscriber B in the network diagram of Figure 4.2.2.6.4.1). The following description proceeds in the order of Advance Nos. in Table No. 2 (Area 203, Connecticut), Route Table (Time Zone 0 Group).

(a) CO group No. 2 (PBX tie line 2) selected (See Advance No. 1, Figure 4.2.2.6.4.14.)

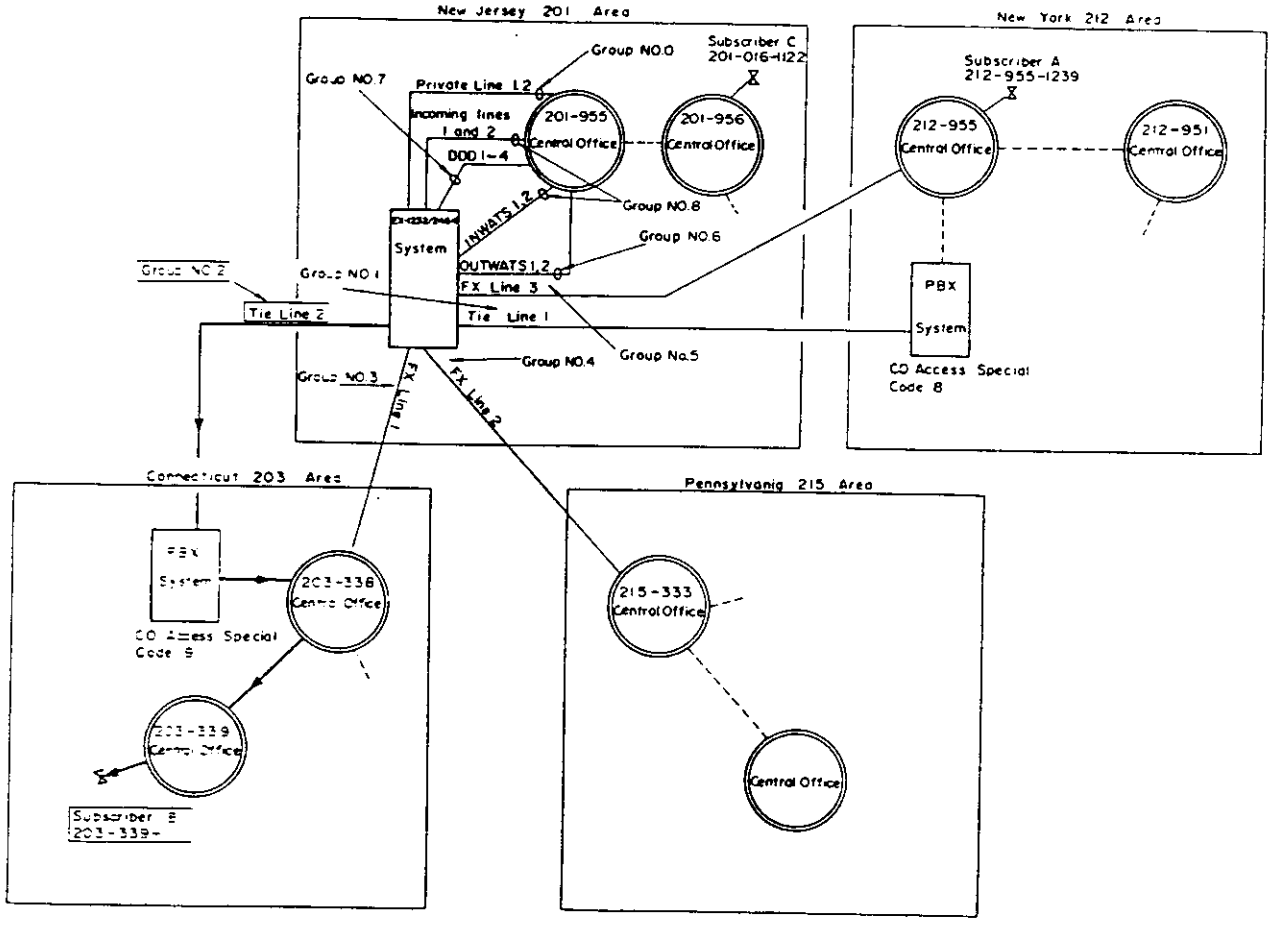


Figure 4.2.2.6.4.14 **Example of Outgoing Toll Call Through CO Group No. 2 (Caller dialing 203-339-1111)**

The dial data to be sent through the PBX tie line must be modified as follows:

- Delete area code 203.
- Add prefix 1 before the office code.
- Add the special code ("9" in this example) to seize the opposite PBX system before prefix 1.
- Add pause data of 2 seconds (to wait for the dial tone) between the special code and prefix 1. The modified dial data will be:

  9 – (Pause data: 2 seconds) – 1 – 339 – 1111

An example of actually entering the above modified dial data in a Planning Sheet is shown in Figure 4.2.2.6.4.15.

(b) CO Group No. 6 (OUTWATS) selected (Advance No. 2)

In this case, it is not necessary to modify dial data. Thus, no planning is necessary.

(c) CO group No. 3 (FX line 1) selected (Advance No. 3) (See Figure 4.2.2.6.4.16.)

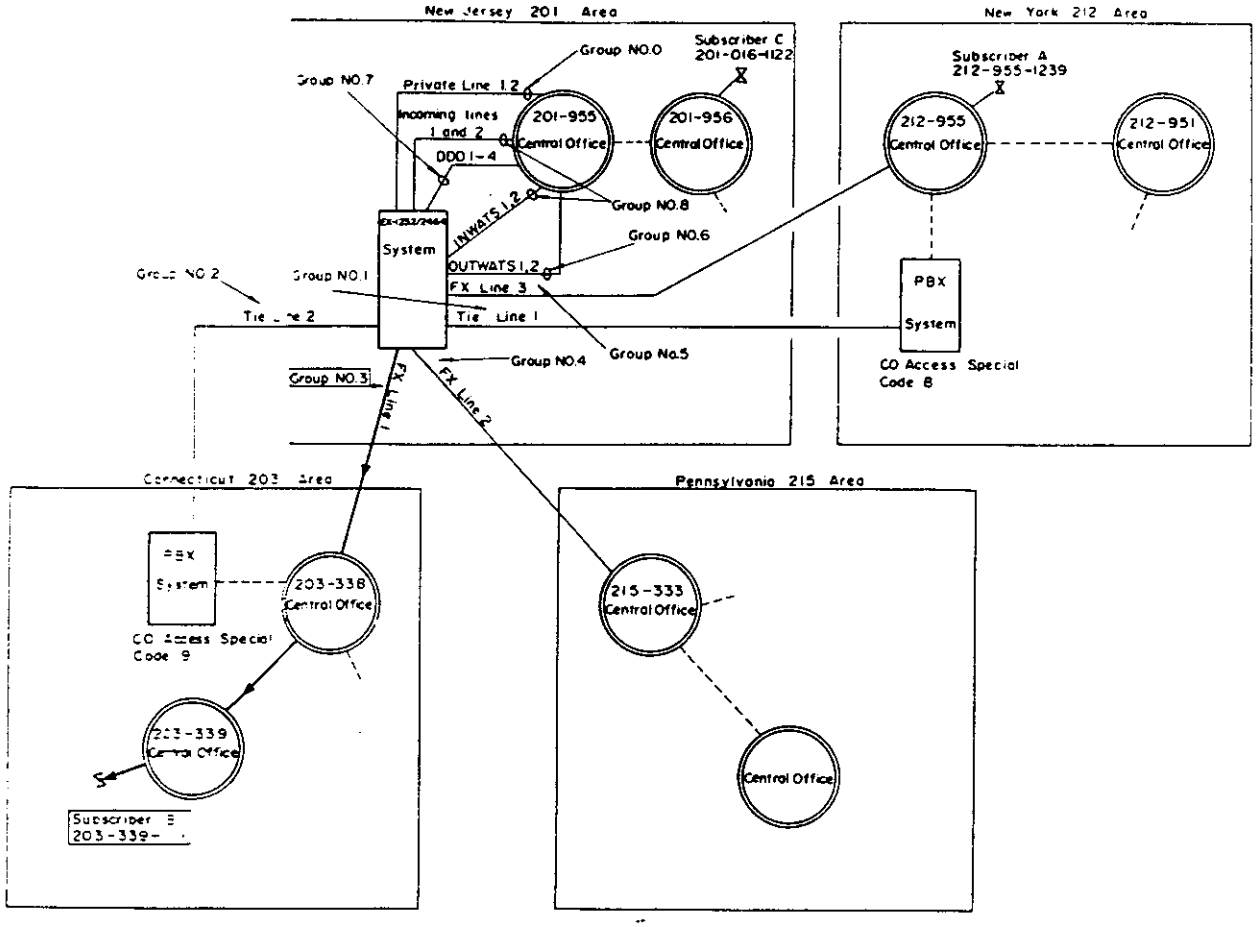


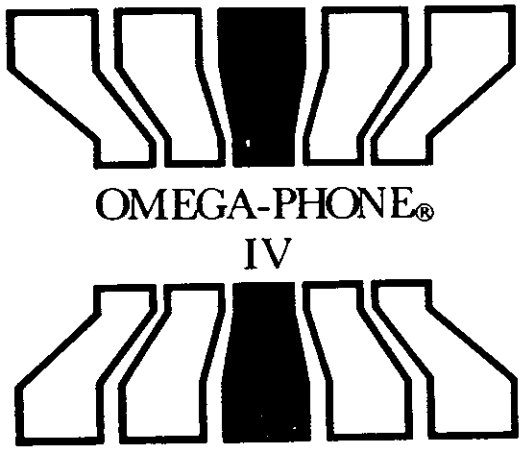
Figure 4.2.2.6.4.16 Example of Outgoing Toll Call Through CO Group No.3 (Caller dialing 203-339-1111)

The dial data to be sent through the FX line must be modified as follows:

- Delete the area code 203.
- Add prefix 1 before the office code.

This makes the dial data: 1-339-1111
This planning example is illustrated in Figure 4.2.2.6.4.17.

EX-1232/2464
ELECTRONIC KEY TELEPHONE SYSTEM
INSTRUCTION MANUAL



4.2 GENERAL DESCRIPTION OF PROGRAMMING

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OMEGA-PHONE®
IV

4.2 GENERAL DESCRIPTION OF PROGRAMMING

4.2.1 System Programming Terminal

When the mode changes from Ordinary Mode to Programming Mode, the functions of the Attendant Console keys all change and the Attendant Console becomes a System Programming Terminal.
In Programming Mode, the operator is notified with the following when changing states or items:

- Key lamps
- LCD indications
- Prompts

These are described in this section.

4.2.1.1 Key Assignments of Terminal

The assignments of System Programming Terminal's Function Keys are as follows:

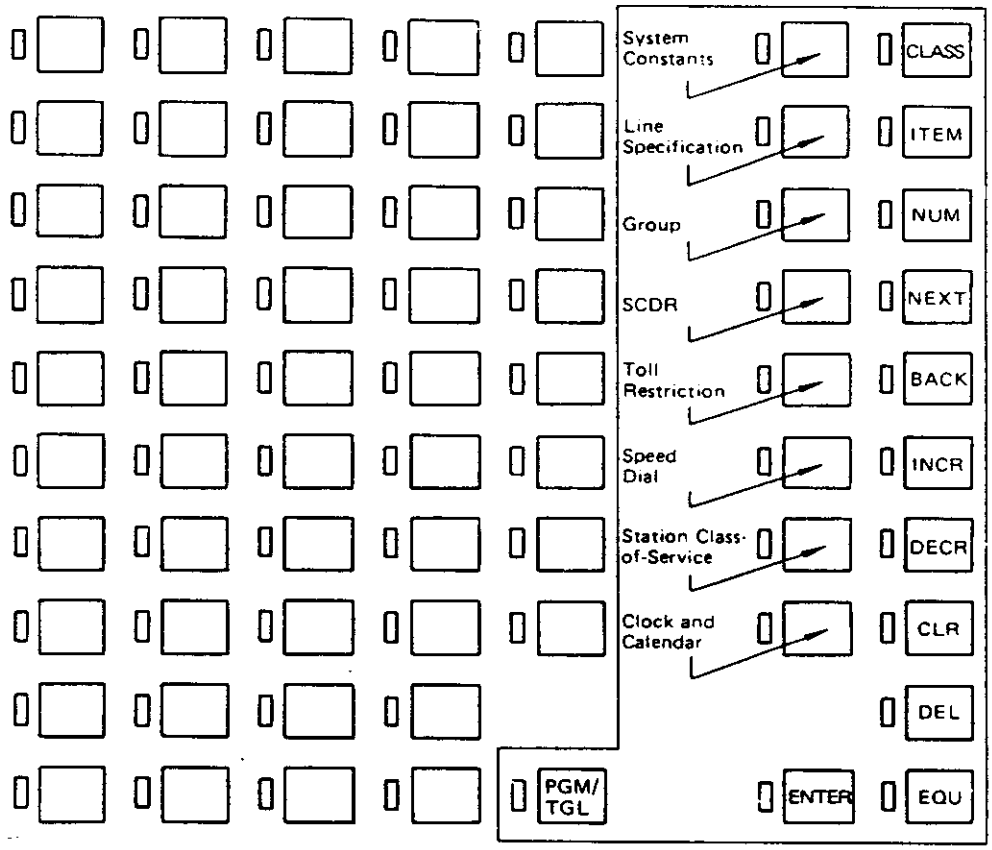


Figure 4.2.1.1.1 Function Keys

Keys that are not Function Keys are Input Data Keys.
The assignments of Input Data Keys differ according to data; Keys are assigned the following functions:

○ EXT Keys

- The Input Data Keys can be switched over to two modes using a toggle key.
- Extension key are assigned as follows:
  Normal-side mode: EXT 20 to EXT 67
  Reverse-side mode: EXT 68 to EXT 83
- Depress the PGM/TGL key to switch over the Input Data Key mode.

- When the Input Data Keys are in the reverse-side mode, the PGM/TGL lamp blinks in the I-USE pattern. In the case of the normal-side mode, it indicates BUSY indication.
- Refer to Figure 4.2.1.1.2.a and 4.2.1.1.2.b.

○ CO and ICM Keys

- Refer to Figure 4.2.1.1.3.

○ Ten-Key Pad

- In addition to numbers 0 to 9 and characters * and #, the ten-key on the System Programming terminal includes PAUSE and NULL.
- Refer to Figure 4.2.1.1.4.

Note: In whichever mode (either normal- or reverse-side) of the Data Input Key mode, you can enter CO key, ICM key, or Ten key pad.

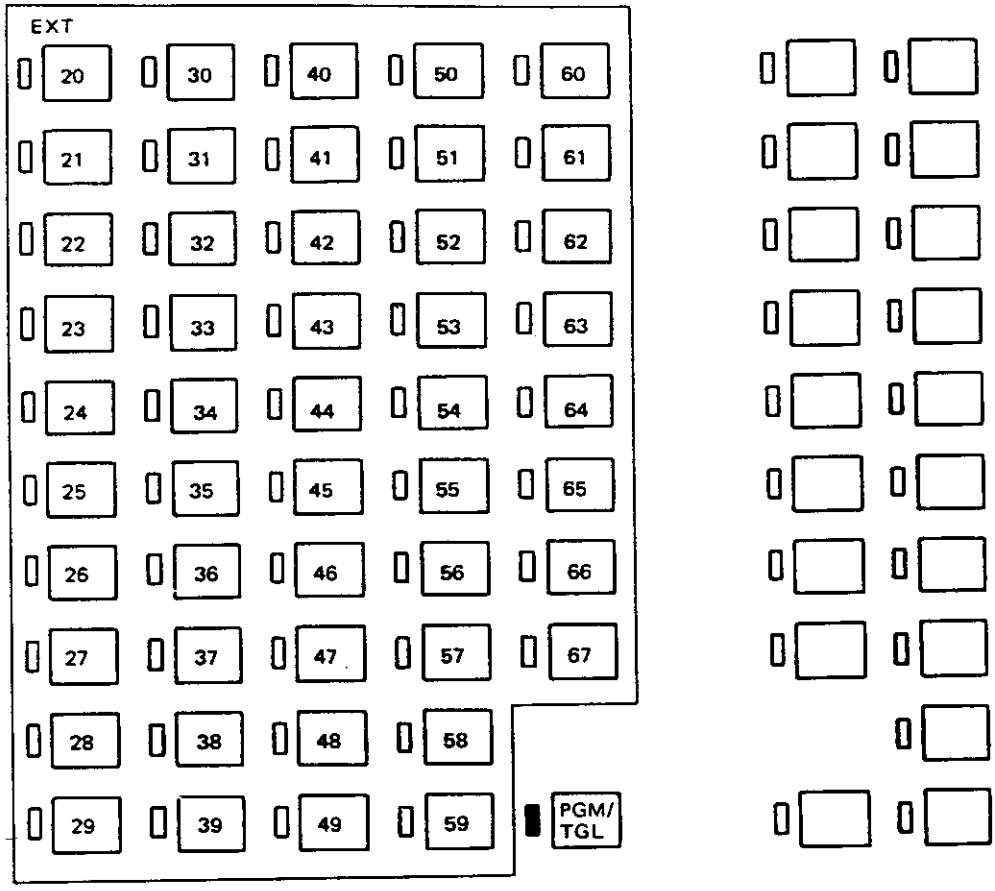


Figure 4.2.1.1.2.a Normal-side Mode of EXT Key

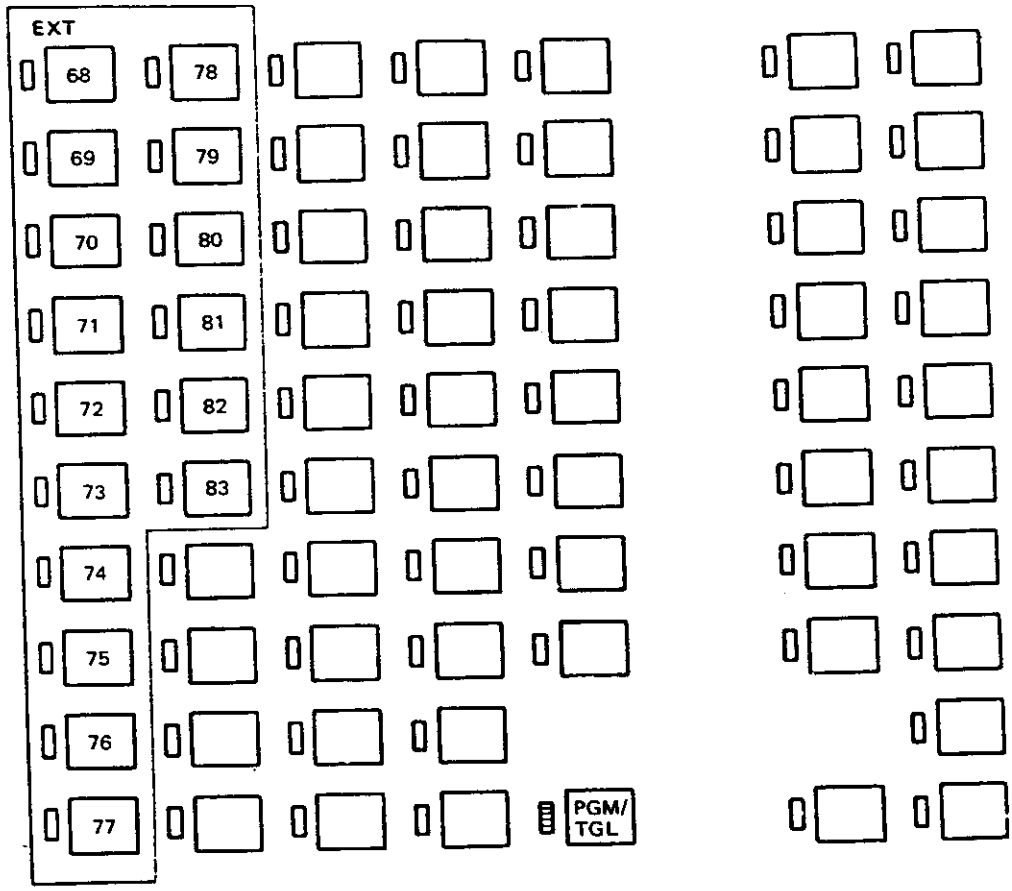


Figure 4.2.1.1.2.b Reverse-side Mode of EXT Key

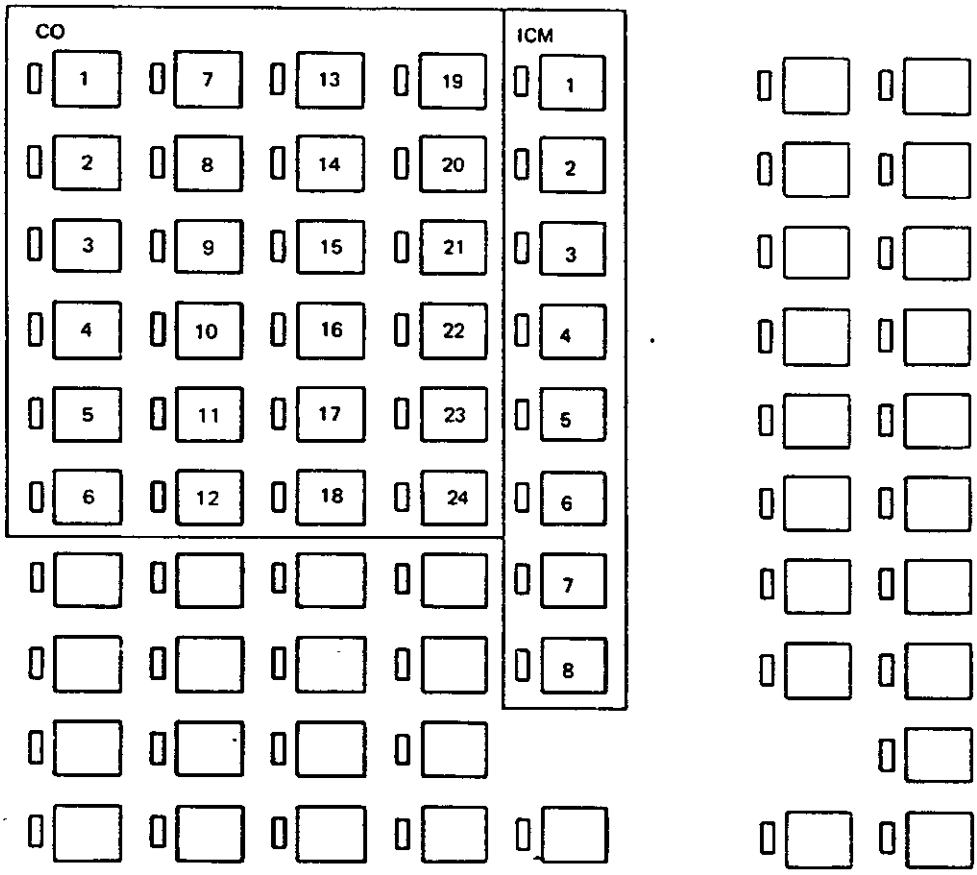


Figure 4.2.1.1.3 CO and ICM Keys

4.2.2.1 Searching for Data

The NEXT and BACK Function Keys are useful when searching for items or verifying the content after selecting the data class.
The NEXT and BACK keys change the item in the class. The NEXT key changes to larger items and the BACK key changes to smaller items.

Example: When the NEXT key is depressed while the Hold Timeout (Item 1) data is displayed on the LCD, as shown in Figure 4.2.2.1.1 in System Constants Class, the display changes to the Sender Timeout setting, shown in Figure 4.2.2.1.2, which is the next item.

Figure 4.2.2.1.1

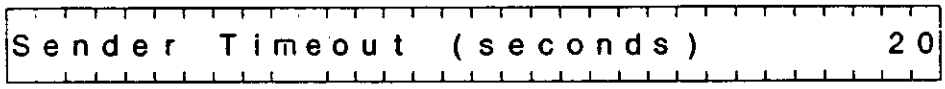


Figure 4.2.2.1.2

The display returns to Figure 4.2.2.1.1 when the BACK is depressed while Figure 4.2.2.1.2 is displayed.

The INCR and DECR keys change the Number within items in the same manner as the NEXT and BACK keys change items within a Class. These keys allow the display to be changed within the range of Numbers within an item and enable to verify the data.

Example: When the INCR key is depressed while data for EXT 25 is displayed, as shown in Figure 4.2.2.1.3, when setting the Toll Dial Class of Restriction (Item 22) of Station Class-of-Service Class, the data changes to the next Number, EXT 26, as shown in Figure 4.2.2.1.4.

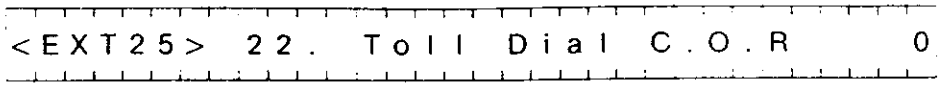


Figure 4.2.2.1.3

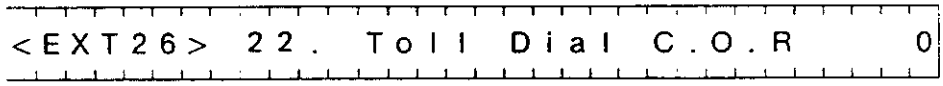


Figure 4.2.2.1.4

The display returns to Figure 4.2.2.1.3 if the [DECR] key is depressed while Figure 4.2.2.1.4 is displayed.

4.2.2.2 Modifying Data

When an incorrect data is entered, it can be canceled. Also a portion of displayed data can be changed. The method of modification differs according to the data displayed. The following are modification examples according to data display.

1) When data is displayed on LCD

Data is displayed on the LCD when it is entred. To cancel the "4" in Figure 4.2.2.2.1, just depress the [DEL] key. The display changes to Figure 4.2.2.2.2 and new data can be reentered.

Figure 4.2.2.2.1

```
Hold Timeout (seconds)          12
```

Figure 4.2.2.2.2

The [DEL] key is depressed as many times as there are displayed digits to cancel the numbers. This function can be used to cancel part of a number and reenter new digits.
To change the SCC Office Code data "0P52019558500" shown in Figure 4.2.2.2.3 to "0P52019558589", depress the [DEL] key twice to change the display to Figure 4.2.2.2.4 and reenter the last two digits.

```
1. SPD<TNT  -  >      0P52019558500
```

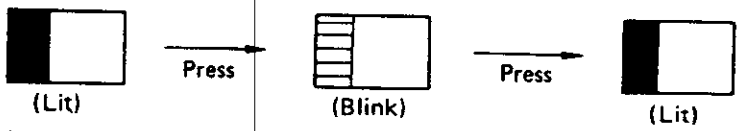
Figure 4.2.2.2.3

```
1. SPD<TNT  -  >      0P520195585
```

Figure 4.2.2.2.4

2) When displaying data on Input Data Key lamps

When an incorrect Input Data Key is depressed, just depress the key again to return to the previous data indication.
A key lamp that is lit changes to blinking when depressed once and back to steadily lit when depressed again. See Figure 4.2.2.3.4.



See and Not See of data are indicated by blinking and lighting of the key lamps.
Data is changed by depressing a key and changing the status of the key lamp.
For some items, if an error is made, the key need not be depressed once again. The previous key lamp lights (not set) automatically when a new key is depressed.

4.2.2.3 Deletion of Data

Data on the display can be cleared by depressing the Clear key. When the data is indicated on the display.

1) Data indication on the Display

When the [DLR] key is depressed while the Speed Dial Class is Station Speed Dial.

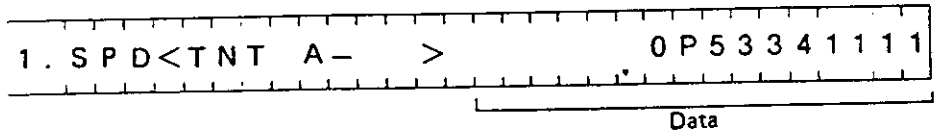


Figure 4.2.2.3.1

is displayed, then the following initial value (no function) is displayed.

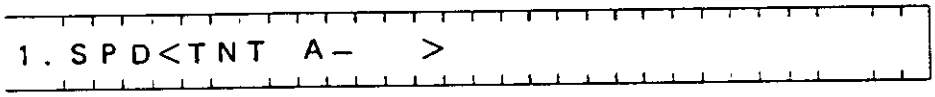


Figure 4.2.2.3.2

For a setting that displays data on the LCD, clear the data with the [DEL] key and register. This is the same as depressing the [CLR] key.

2) Data indication on the Input Data Key lamps.

All the Input Data Key lamps light (not set) even when data is blinking (set):
Some items differ from the default.
For example, when the [CLR] key is depressed while the data indication is for SCDR Data Class Print Out CO default data, as in Figure 4.2.2.3.3, the data indication is as shown in Figure 4.2.2.3.4.

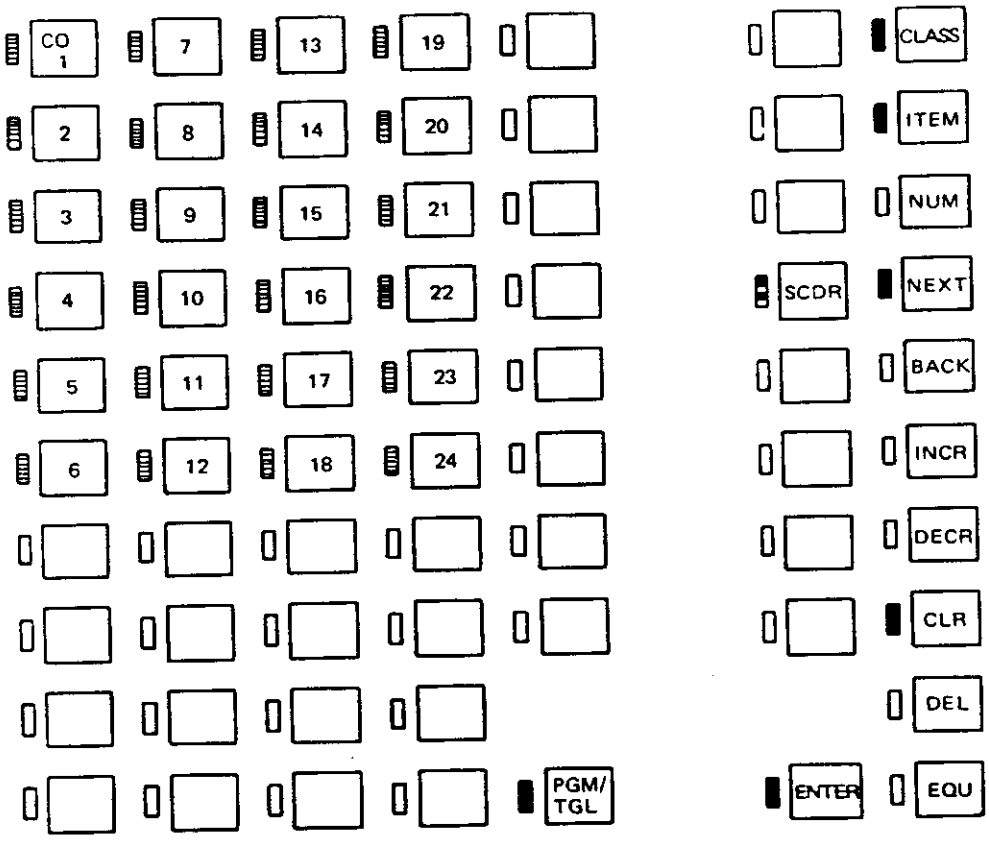


Figure 4.2.2.3.3

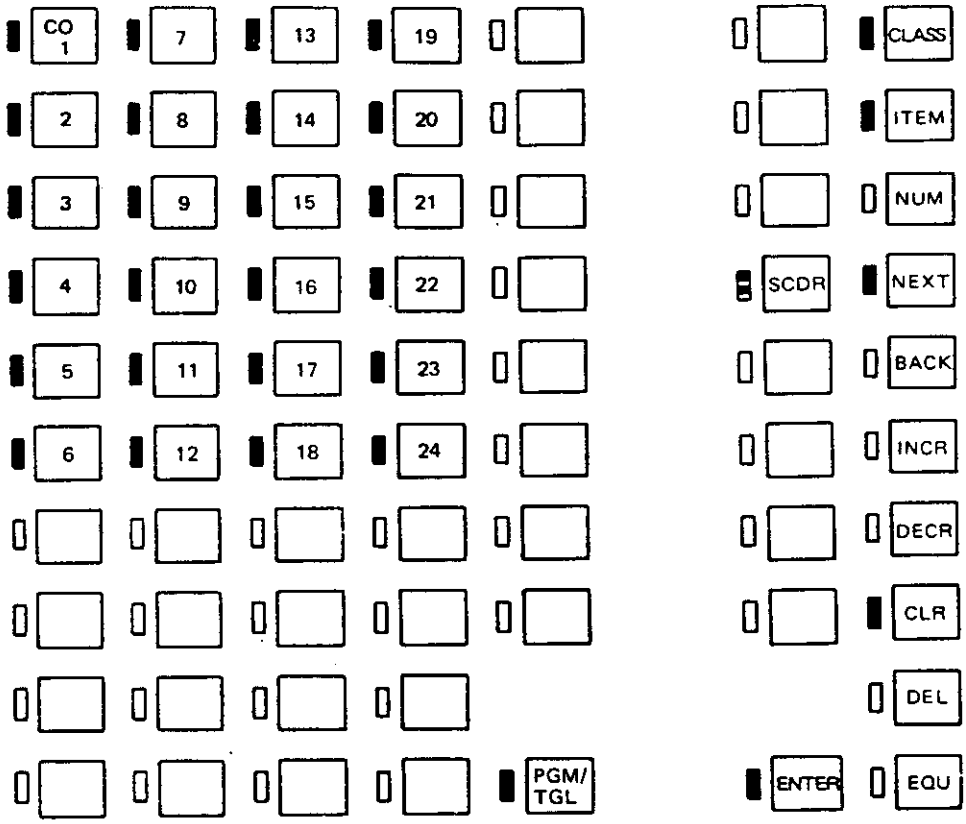


Figure 4.2.2.3.4

4.2.2.4 Modifying Data in Sequence

For items with Numbers, the same data can be input continuously. Also, Numbers can be kept constant while item is changed.

1) Registering the same data continuously

For example, to enter the Line Class (Item 1) of Line Specification Class, proceed as follows:
Depress the [INCR] key when the data for CO 2 is as shown in Figure 4.2.2.4.1 to display CO 3, shown in Figure 4.2.2.4.2.
Then depress the [EQU] key to display the CO 2 data (Figure 4.2.2.4.3).
Repeat this operation to continuously register the same data.

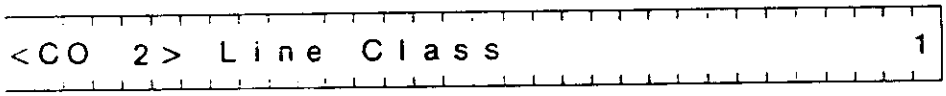


Figure 4.2.2.4.1

Figure 4.2.2.4.2

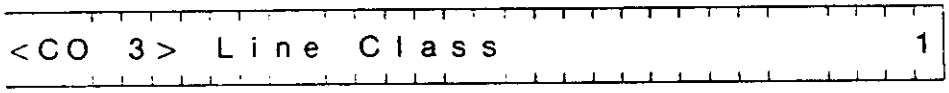


Figure 4.2.2.4.3

2) Registering the same Number while changing the item

Some Numbers are common among items as with Line Specification. With Class, the items can be changed without changing the Number. For example, if the [NEXT] key is depressed when setting Line Class (Figure 4.2.2.4.4), the item changes to Tenant Group (Figure 4.2.2.4.5) but the Number, CO 1, does not change.
The same Number for each item can be easily entered in this manner.
This method can be applied to Line Specification and Station Class of service.

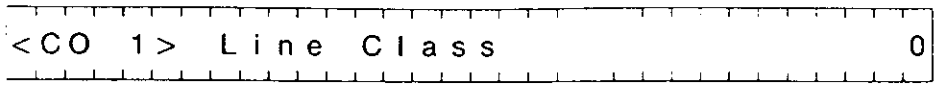


Figure 4.2.2.4.4

Figure 4.2.2.4.5

If the Number changes when NEXT or BACK is depressed, then there is not the same Number as next or previous item.

Example: For Line Specification Class Tenant Group setting, if the NEXT key is depressed when the Number is ICM 2 (Figure 4.2.2.4.6), the display changes to Universal Night Assignment setting (Figure 4.2.2.4.7); for this setting, however, the Numbers are from CO 1 to 24 and there is no ICM, so the data for CO 1 is displayed.

Figure 4.2.2.4.6

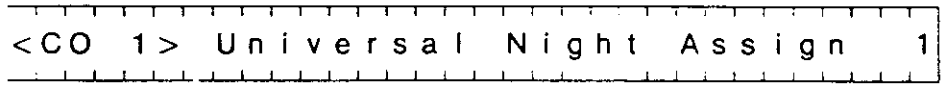


Figure 4.2.2.4.7

4.2.3 System Data Printout

4.2.3.1 Printout Condition

The content of each system data item can be displayed on the Programming Terminal in Programming Mode. To view all system data at once, however, print the system data from the SCDR.
Printing the system data from the SCDR enables verificaton of the contents and retention of a data history for future changes.
Note that all system functions halt when system data is printed.
Refer to Section 2.3.S.12, System Data Printout, for operation.

4.2.3.2 Printout Format

A part of the printed system data format is shown in the following page.

• EX - 1232/2464 System Software V1.0 - - - system Data Listing •

86/ 5/21/3 12 : 30

• System Constants •

1. Hold Timeout (seconds) 30
2. Sender Timeaut (seconds) 20
3. Page Timeout (seconds) 10
4. Hold Recall Timeout (seconds) 20
5. Camp On Timeout (seconds) 30
6. Callback Timeeout (seconds) 20
7. Automatic Answer Time (seconds) 12
8. Attendant Intercept Time (seconds) 20
9. Master Group Hunt Timeout (seconds) 20
10. PBX Outgoing Specification Code

Code No	
1	23
2	234
3	123
4	235
5	1111

11. Overflow Transfer Minimum

Attendant	
1	3

12. Overflow Transfer Extension

Attendant	
1	23
2	20

13. ICM Call Mode

Tenant	
A	1
B	1

14. External Paging Speakers

Tenant	
A	2
B	3

15. System Prefix 1
16. Automatic Pause Length 5
17. Timed Trunk Queuing Interval 10
18. Attendant Key Assignment

Attendant 1

Key	1	2	3	4	5	6	7	8	9	10
0	DSS 1	DSS 2	DSS 3	DSS 4	DSS 5	DSS 6	DSS 7	DSS 8	DSS 9	DSS10
1	DSS11	DSS12	DSS13	DSS14	DSS15	DSS16	DSS17	DSS18	DSS19	DSS20
2	DSS21	DSS22	DSS23	DSS24	DSS25	DSS26	DSS27	DSS28	DSS29	DSS30
3	DSS31	DSS32	DSS33	DSS34	DSS35	DSS36	DSS37	DSS38	DSS39	DSS40
4	DSS41	DSS42	DSS43	DSS44	DSS45	DSS46	DSS47	DSS48	DSS49	DSS50
5	DSS51	DSS52	DSS53	DSS54	DSS55	DSS56	DSS57	DSS58	DSS59	DSS60
6	DSS61	DSS62	DSS63	DSS64	SPD 0	SPD 1	SPD 2	SPD 3	SPD 4	SPD 5
7	SPD 6	SPD 7	SPD 8	SPD 9	SPD10	SPD11	SPD12	SPD13	SPD14	SPD15
8	SPD16	SPD17	SPD18	SPD19	SPD20	SPD21	SPD22	SPD23	SPD24	SPD25
9	SPD26	SPD27	SPD28	SPD29	SPD30	SPD31				

19. Attendant EXT Assignment

Attendant	
1	20
2	21

Figure 4.2.3.2.1 System Data Format (1/4)

4.2.2.5 Key Assignment

Keys on a key telephone or Versa Phone and DSS keys on an Attendant can be freely assigned by setting from the programming terminal.

4.2.2.5.1 Key Telephone/Versa Phone Key Assignment

1) Table 4.2.2.5.1.A shows the keys that can be assigned to a key telephone or Versa Phone and their corresponding key code numbers used for setting.
2) The ICM and FEAT keys are fixed keys.
3) When assigning the PAGE (Press Page) key, the key position is fixed to Key No. 6. It cannot be assigned to a key in another position.
4) Setting is made by Class 7 Station Class of Service Item 27 key telephone Key Assignment.
5) Figure 4.2.2.5.1.A and 4.2.2.5.1.B show the default key assignment for key telephones and Versa Phones respectively.

Table 4.2.2.5.1.A

Key Message	Key	Key Code No.
ADD	Add On Conference Key	00
FLSH	Flash Key	01
FWD	Call Forward Key	02
HOLD	Hold/DND Key	03
MSG	Message Key	04
PARK	Call Park Key	05
SPKR	Speaker Key	06
TRN	Transfer Key	07
P. PAG	Press Page Key	08
CO nn	Direct COL Key	1
FLT	Floating COL Group Access Key	20
FLT 1	Floating COL Group 1 Direct Access Key	21
FLT 2	Floating COL Group 2 Direct Access Key	22
FLT 3	Floating COL Group 3 Direct Access Key	23
FLT 4	Floating COL Group 4 Direct Access Key	24
FLT 5	Floating COL Group 5 Direct Access Key	25
FLT 6	Floating COL Group 6 Direct Access Key	26
FLT 7	Floating COL Group 7 Direct Access Key	27
OPT	Optimized Routing Access Key	28
DSS mm	Direct Station Select Key	3
D. PAG n	Direct Page Key	4
HNT n	Direct Master Hunt Group Key	5
SPD nn	Direct Speed Dial Key	6
DSP	Display Key	70
CALC	Calculator Key	71

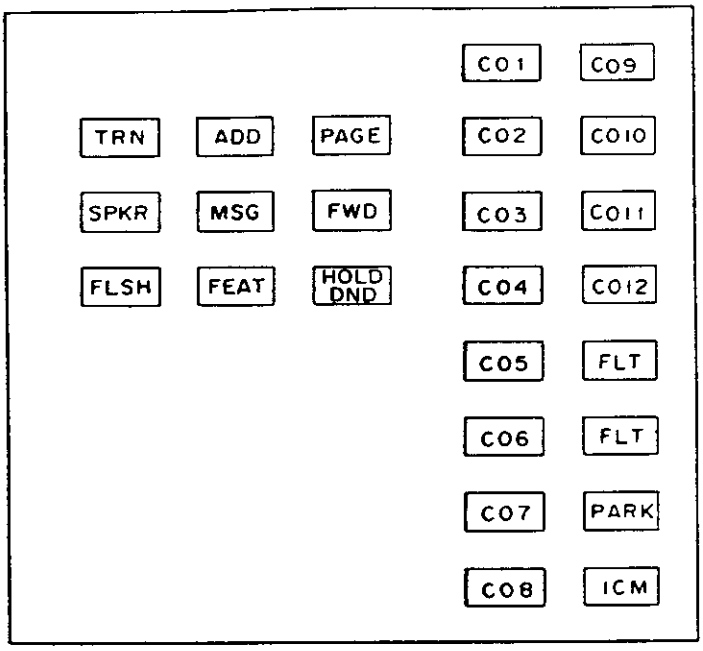


Figure 4.2.2.5.1.A KT Default Key Assignment

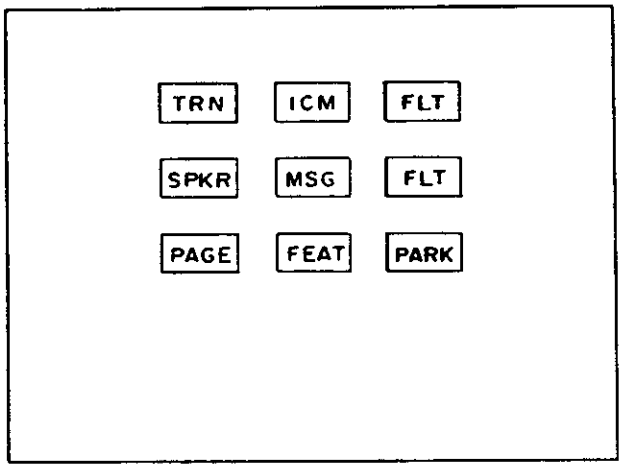


Figure 4.2.2.5.1.B VP Default Key Assignment

6) Key No. Positions on a key telephone and Versa Phones are shown in the following:

- KT key No. position

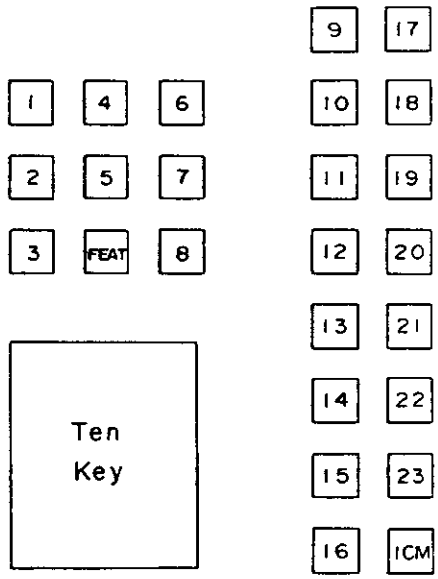


Figure 4.2.2.5.1.C

- Versa phone key No. position

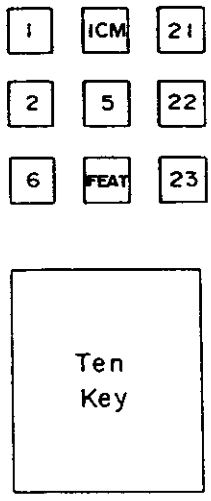


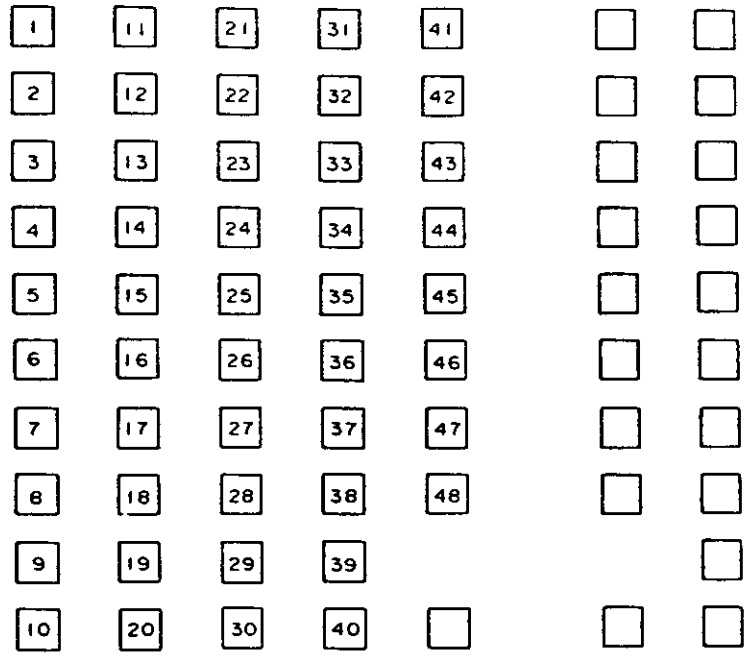
Figure 4.2.2.5.1.D

4.2.2.5.2 Attendant Key Assignment

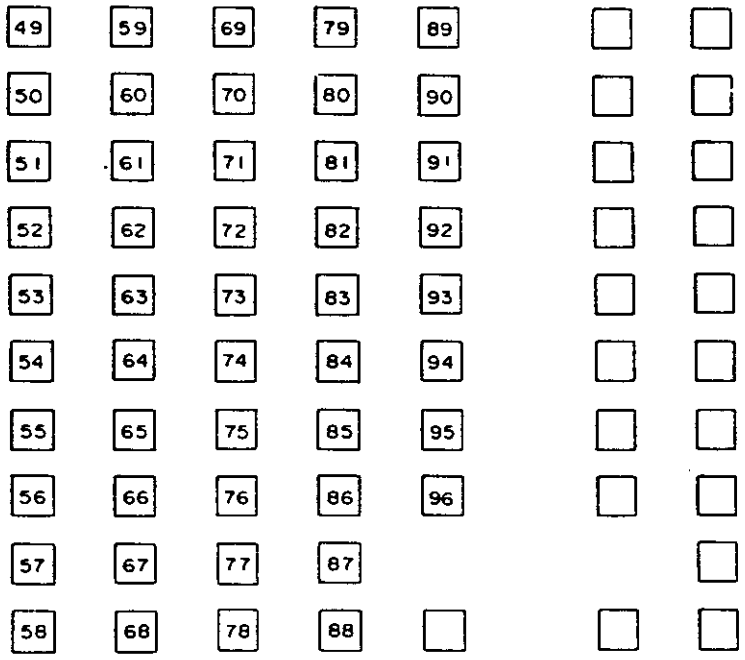
1) Those keys that can be assigned to the DSS keys on an Attendant and their corresponding key code numbers used for setting are shown in the following:

- DSS mm Direct Station Select Key 3
- HNT n Direct Master Hunt Group Key 5
- SPD nn Direct Speed Dial Key 6

2) Setting is made by Class 1 System Constants Item 18 Attendant Key Assignment.
3) Figure 4.2.2.5.2.A shows the Key Position numbers on the Attendant.
   Normal-side mode: 1 to 48
   Reverse-side mode: 49 to 96
4) Default DSS Key assignments on an Attendant are as shown below.
   Normal-side mode: Keys 1 to 48, DSS #20 to #67
   Reverse-side mode: Keys 1 to 16, DSS #68 to #83
   Keys 17 to 48, SPD #00 to #31



Normal-Mode



Reverse-Mode

Figure 4.2.2.5.2.A

4.2.2.5.3 Key Assignment Method

Assignment of key telephone, Versa Phone, and DSS keys on an Attendant are made in the following manner.

1) Specify the Extension or Attendant number.
2) Specify the key position.
   Key telephone, Versa Phone: Refer to section 4.2.2.5.1 6)
   Attendant: Refer to section 4.2.2.4.2 4)
3) Depress Clear key to clear the present key assignments.
4) Input the key code number of the key to be assigned for the ten keys of the Input Data Keys.
   Key telephone, Versa Phone: Refer to section 4.2.2.5.1 1)
   Attendant: Refer to section 4.2.2.5.2 2)
5) Input various numbers for the assigned keys, if necessary.

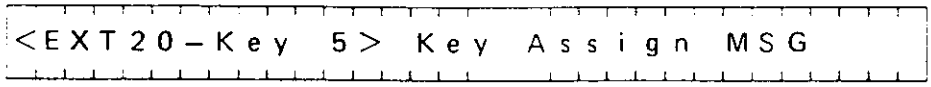
Direct COL Key	CO 1 to CO 24
Direct Station Select	EXT20 to EXT83
Direct Page Key	0 to 9
Direct Master Hunt Group Key	1 to 4
Direct Speed Dial Key	00 to 99

Direct Paging numbers are as shown below:

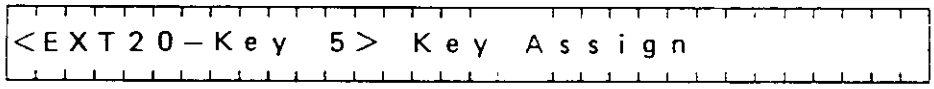
0	All
1	Zone 1
2	Zone 2
3	Zone 3
4	All Zone
5	All Group
6	Group 1
7	Group 2
8	Group 3
9	Group 4

4.2.2.5.3.1 Explained in the following are some examples of actual key assignment procedures.

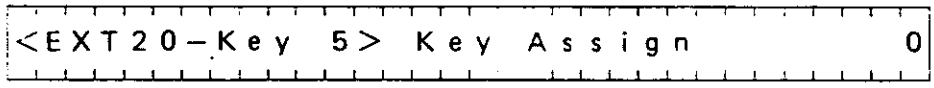
a. Assignment of the ADD key (MSG → ADD)



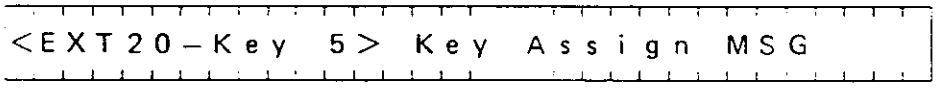
1. Depress the [CLR] key.
   Key Message on the display is cleared.



2. Depress the ten key [0] of the Input Data Keys.
   0 appears on the display.



3. Depress the ten key [0] of the Input Data Keys.
   Key Message ADD appears on the display.



4. Depress the [ENTER] key.
   Registration has been completed.

b. Key assignment of SPD (Speed Dial) #37. (CO #1 → SPD #37)

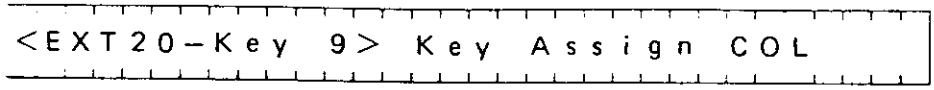
1. Depress the [CLR] key.
   Key Message on the display is cleared.

2. Depress the ten key [6] of the Input Data Keys.
   Key Message SPD appears on the display.

3. Depress the ten keys [3] and [7] of the Input Data Keys to register Speed Dial #37.

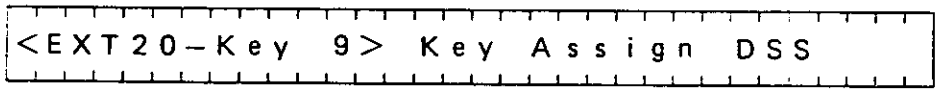
4. Depress the [ENTER] key.
   Registration has been completed.

c. Key assignment of DSS (Direct Station Select) #25. (CO #1 → DSS #25)



1. Depress the [CLR] key.
   Key Message on the display is cleared.

2. Depress the ten key [3] of the Input Data Keys.
   Key Message DSS appears on the display.

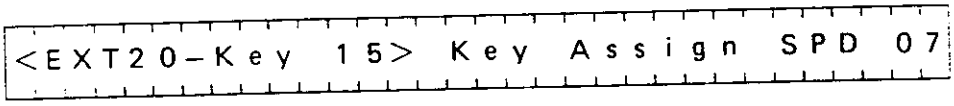


3. Depress the extension key [25] of the Input Data Keys to register DSS #25.
   Extension #25 lamp blinks.
4. Depress the [ENTER] key.
   Registration has been completed.

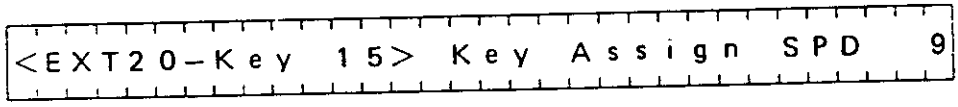
d. Changing the key assignment from DSS #25 to DSS #35.

1. Depress the extension key [35] of the Input Data Keys. Extension #25 lamp changes from flashing to steady lighting and extension #35 lamp begins flashing.
2. Depress the [ENTER] key.
   Registration has been completed.

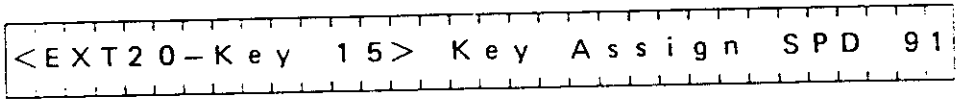
e. Changing the key assignment from SPD #07 to SPD #91.



1. Depress the ten [9] of the Input Data Keys.
   The display changes into the following:



2. Depress the ten key [1] of the Input Data Keys.



3. Depress the [ENTER] key.
   Registration has been completed.

4.2.2.5.4 Restriction on key assignments

1. No duplicated assignment of the following keys are permitted.
   When changing these key assignments, clear the preset key assigment first, and then make a new assignment once.

ADD	Add on Conference Key
FLSH	Flash Key
FWD	Call Forward Key
HOLD	Hold/DND Key
MSG	Message Key
PARK	Call Park Key
SPKR	Speaker Key
TRN	Transfer Key
P. PAG	Place Page Key
COL nn	Direct COL keys on stations which terminate a COL No. nn
DSS mm	Direct station select keys on stations which terminate a DSS No. mm.

4.2.2.6 Optimized Call Routing

4.2.2.6.1 General Description

This feature analyzes dial data related to CO access, and seizes the lowest-cost CO/PBX Line in accordance with traffic and time at the moment of CO access. In the case of a tie line, for example, a special code may be added or the unnecessary area code deleted to adapt the CO access dial to the optimum CO/PBX Line. Because the optimum CO/PBX Line depends on traffic at the time of CO access, there may be up to four groups of CO/PBX Lines that can be seized to raise the probability of seizure. The system can automatically select the optimum CO/PBX Line in these groups. All extensions may use this selective feature, with different groups within which the optimum line is selected being assigned to extensions according to the positions of extension users. This group assignment can be made as described in No. (24) "Route Advance Step" in the Station Class of Service for KT/VP, and single line telephones of paragraph 3.3.2, System Planning.
This feature also enables the user to effect a rational toll restriction, suited to the desired toll plan, by means of floating toll restriction.

4.2.2.6.2 Basic Operation of Optimized Call Routing

The basic operation of optimized call routing is described below.

Note: Understanding the basic operation of optimized call routing helps the installer in preparing plans because the functions and uses of many assignment tables used in planning are described in detail in this paragraph. Never attempt planning without understanding this paragraph.

1. The subscriber presses the OPT key on the extension, or dials the optimized routing special number, 90. (The extension used by this subscriber must have "allow." assigend for Optimized Call Routing.)
2. The subscriber then dials the telephone number of the opposite party. (Depending on the area, the prefix code 1 may have to be added before the area code or office code.)

3. From the area code and office code (or from only the office code if no area code is used), the CO group best suited to that time is selected from the registration location called the Route Table No. The process of selecting this CO group is described in detail by dial data type.

Example 1: Area code – Office code – Customer code

(1) The dial data generated by the subscriber is analyzed according to the North American Dial Number Plan. The area code is first entered in the area called the input dial table (mentioned for purposes of explanation here, though it does not come up at the time of preparing the planning sheet), followed by the office code and customer code (subscriber number). This process is illustrated in Figure 4.2.2.6.2.1.

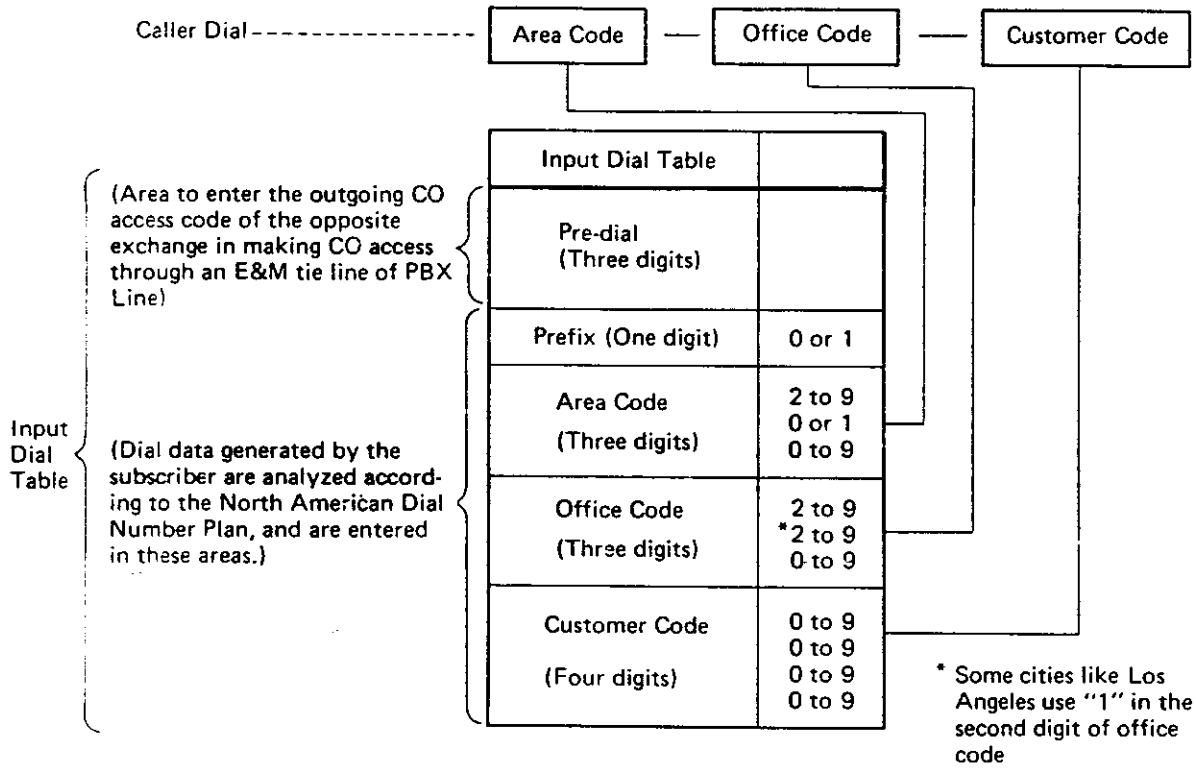
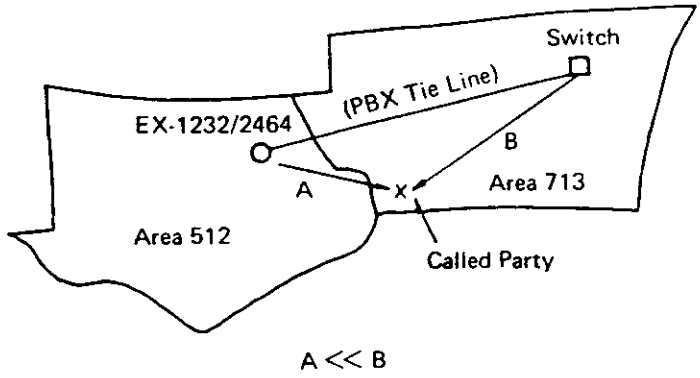


Figure 4.2.2.6.2.1 Entering Dial Data in Input Dial Table

If an E&M line or PBX Line is available between the areas to which these area codes are allocated and the EX-1232/2464 system, Co access through the switch to which the tie line or PBX line is connected is generally considered cheaper. In a case such as shown below, however, calls not routed through the tie line cost less because the actual CO line length is shorter. It is necessary, therefore, to identify the geographic positions of office codes belonging to an area code.



(2) The system refers to the table in which are registered the area codes for areas covered by PBX tie lines or E&M tie lines. This table is called the E&M Area Code Table. If the dialed area code is not in this table, system refers to the table in which are registered the area codes for lines other than PBX tie lines or E&M tie lines. The two tables are shown in Figures 4.2.2.6.2.2(A) and (B).

Area Code P1 P2 P3	Office Group No. Tenant A	Tenant B
200 ~ 219		
300 ~ 319		
400 ~ 419		
500 ~ 519		
700 ~ 719		
800 ~ 819		
900 ~ 919		

Figure 4.2.2.6.2.2(A) E&M Area Code Table Format

Area Code P1 P2 P3	Route Table No. Tenant A	Tenant B
200 ~ 219		
300 ~ 319		
400 ~ 419		
500 ~ 519		
700 ~ 719		
800 ~ 819		
900 ~ 919		

Figure 4.2.2.6.2.2(B) Area Code Table Format

Note: In the E&M Area Code Table, an E&M Office Group No. (not described in detail here because its meaning is classified in subsequent descriptions) must be registered for each of the area codes 200 to 919.
In the Area Code Table, a Route Table No. (not described in detail here because its meaning is clarified in subsequent descriptions) must be entered for each tenant and each of the area codes 200 to 919 (not necessarily consecutively). See Figure 4.2.2.6.2.2(B).
Both tables must be filled out during planning by the installer.

(3) If the dialed area code is in the E&M Area Code Table (Figure 4.2.2.6.2.2 A), one of the tables called the E&M Office Group Tables, where PBX or E&M tie line office codes are entered in four groups, is selected according to the E&M Office Group No. registered for that area code and tenant. E&M Office Group Tables are shown in Figure 4.2.2.6.2.3.

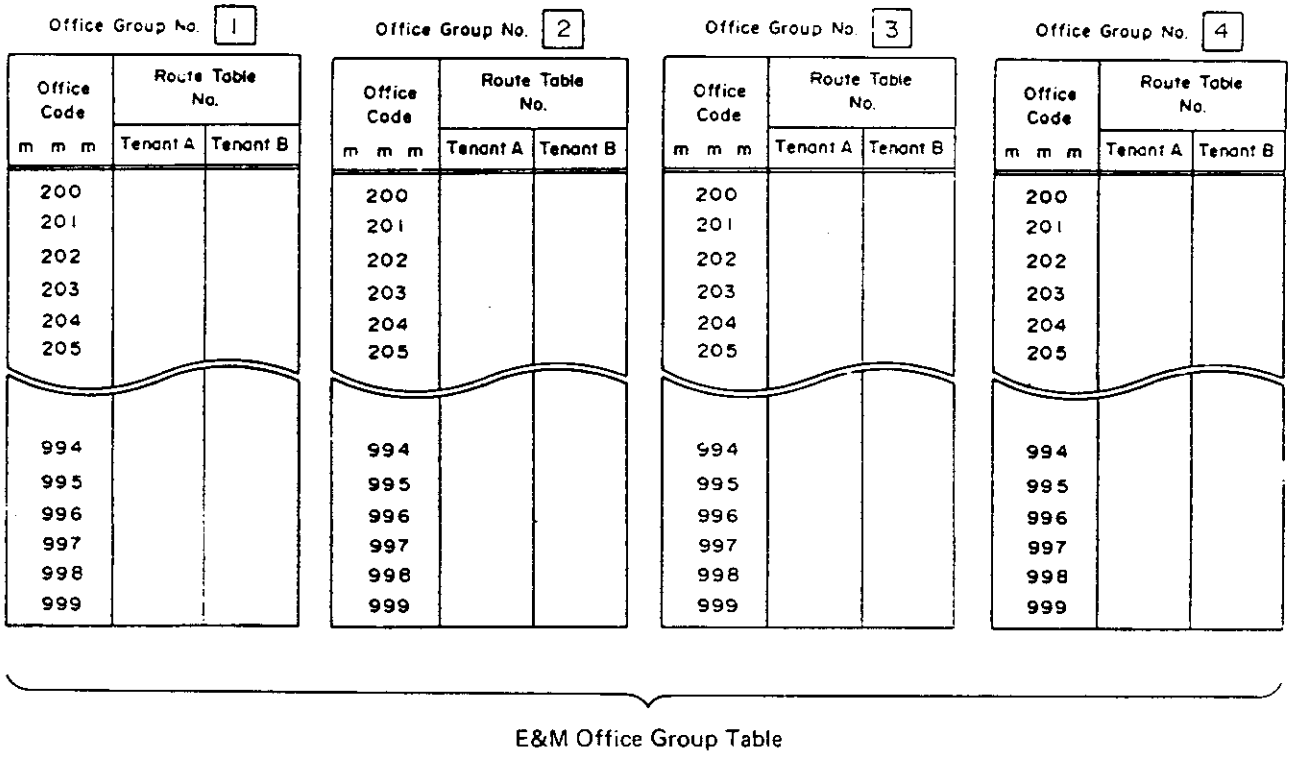
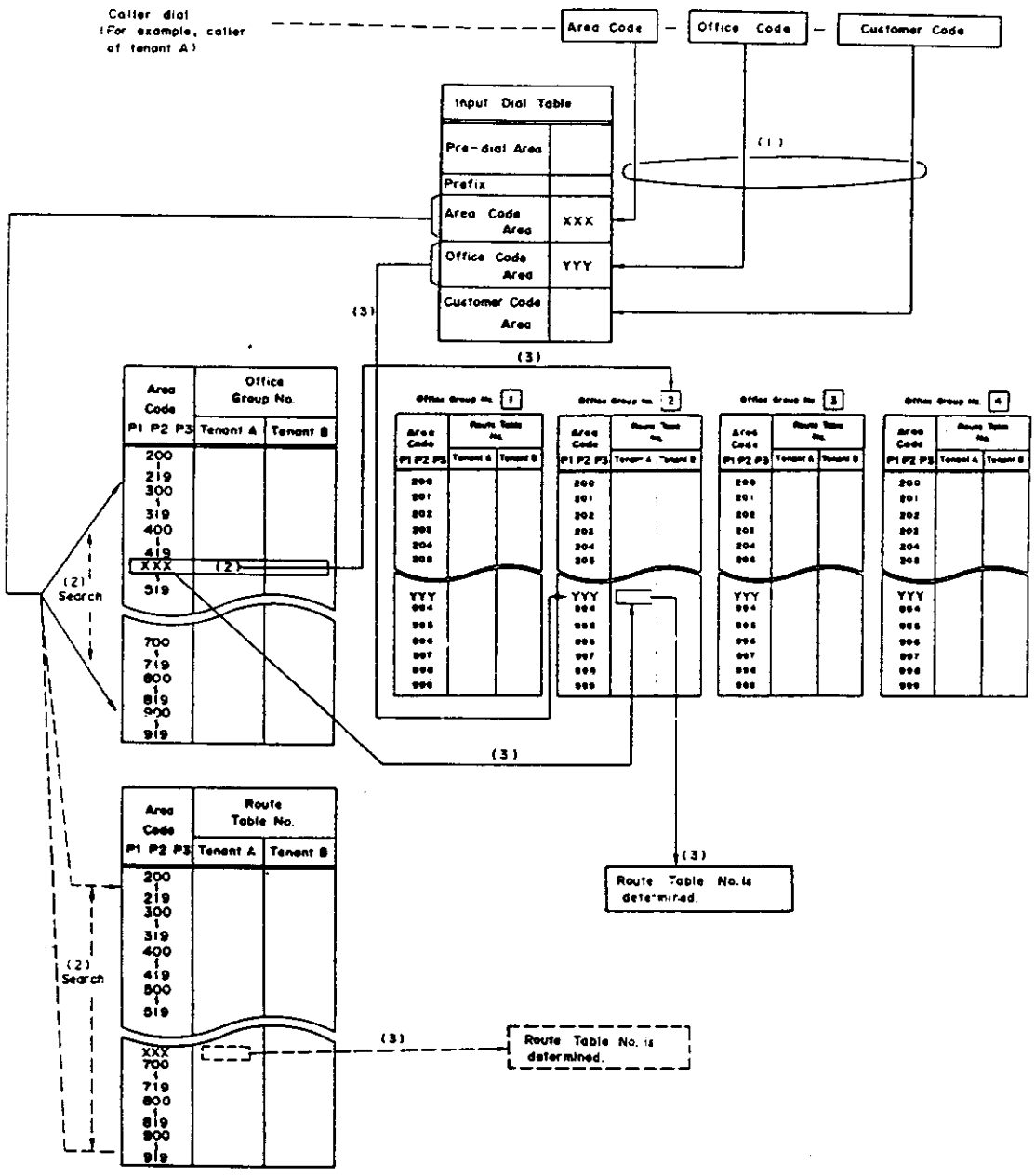


Figure 4.2.2.6.2.3 E&M Office Group Table Format

Note: In the E&M Office Group Tables, a Route Table No. must be registered for each of tenants A and B according to the office code (any codes from 200 through 999 can be registered consecutively) in the dial data. The reason that there are four E&M office groups is to make each E&M office group correspond to an E&M area code.
This table must also be filled out by the installer during planning.

The system refers to the office code registered in the selected E&M office group, and selects a Route Table No. from the location where the office code agrees with the office code registered in the input dial table (Figure 4.2.2.6.2.1) according to the type of tenant to which the caller belongs.
If the area code is not in the E&M Area Code Table, the system refers to the Area Code Table as described in item (2), example 1, and obtains the Route Table No. registered for that area code and type of tenant.
The Route Table No. is obtained by going through items (1), (2), and (3). The difference in system processing between a case in which PBX or E&M tie lines are available and other cases is described in item (3) above. That is, if PBX or E&M tie lines are available, the Route Table No. is determined by the area code and office code, whereas if PBX or E&M tie lines are not available, the Route Table No. is determined by the area code only. The process up to this point is shown in Figure 4.2.2.6.2.4.



Note: (1) in this figure means item (1), example 1.
(2) in this figure means item (2), example 1.
(3) in this figure means item (3), example 1.
Solid lines apply if PBX or E&M tie lines are available (area codes are registered in the E&M Area Code Table). Dash lines apply if no tie lines are available (area codes are not registered in the E&M Area Code Table).

Figure 4.2.2.6.2.4 Process Through Selecting a Route Table No. (Where Area Code is Used)

As the process up to this point shows, the system first searches for a PBX or E&M tie line in the E&M Area Code Table. If there is no tie line in the E&M Area Code Table, the system refers to the Area Code Table to select the least-cost route. The Time Zones of the Route Tables can be set according to Time Schedule.
The Schedule and Route Tables are described in detail below.
A Route Table No. is an index showing the location of the Route Table that must be referred to. There are three Route Tables, 0 through 2, which differ by access time zone and each is divided into eight parts. In each part, CO group numbers are registered in order to preference. The installler must fill out these tables during planning. The Time Schedule and the Route Tables are shown in Figures 4.2.2.6.2.5(A) and 4.2.2.6.2.5(B).

Time Zone Hour	Condition			
	1 Weekday	2 Saturday	3 Sunday	4 Holiday
0. 0:00 to 0:59				
1. 1:00 to 1:59				
2. 2:00 to 2:59				
3. 3:00 to 3:59				
4. 4:00 to 4:59				
5. 5:00 to 5:59				
6. 6:00 to 6:59				
7. 7:00 to 7:59				
8. 8:00 to 8:59				
9. 9:00 to 9:59				
10. 10:00 to 10:59				
11. 11:00 to 11:59				
12. 12:00 to 12:59				
13. 13:00 to 13:59				
14. 14:00 to 14:59				
15. 15:00 to 15:59				
16. 16:00 to 16:59				
17. 17:00 to 17:59				
18. 18:00 to 18:59				
19. 19:00 to 19:59				
20. 20.00 to 20:59				
21. 21:00 to 21:59				
22. 22:00 to 22:59				
23. 23:00 to 23:59				

Note: Set Time Zone 0 to 2 according to conditions 1 to 4 and Time Zone Hour 0:00 to 23:59

Figure 4.2.2.6.2.5(A)1 Time Schedule

Time Zone Hour	Condition			
	1 Weekday	2 Saturday	3 Sunday	4 Holiday
0. 0:00 to 0:59	2	2	2	2
1. 1:00 to 1:59	2	2	2	2
2. 2:00 to 2:59	2	2	2	2
3. 3:00 to 3:59	2	2	2	2
4. 4:00 to 4:59	2	2	2	2
5. 5:00 to 5:59	2	2	2	2
6. 6:00 to 6:59	2	2	2	2
7. 7:00 to 7:59	2	2	2	2
8. 8:00 to 8:59	0	0	0	0
9. 9:00 to 9:59	0	0	0	0
10. 10:00 to 10:59	0	0	0	0
11. 11:00 to 11:59	0	0	0	0
12. 12:00 to 12:59	0	0	0	0
13. 13:00 to 13:59	0	0	0	0
14. 14:00 to 14:59	0	0	0	0
15. 15:00 to 15:59	0	0	0	0
16. 16:00 to 16:59	0	0	0	0
17. 17:00 to 17:59	1	1	1	1
18. 18:00 to 18:59	1	1	1	1
19. 19:00 to 19:59	1	1	1	1
20. 20.00 to 20:59	1	1	1	1
21. 21:00 to 21:59	1	1	1	1
22. 22:00 to 22:59	1	1	1	1
23. 23:00 to 23:59	2	2	2	2

Figure 4.2.2.6.2.5(A)2 Time Schedule (Default Value)

Time Zone 0

	Route Table No. 1				Route Table No. 2				Route Table No. 3				Route Table No. 4				Route Table No. 5				Route Table No. 6				Route Table No. 7				Route Table No. 8			
Advance Step	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Tenant A																																
Tenant B																																

Time Zone 1

	Route Table No. 1				Route Table No. 2				Route Table No. 3				Route Table No. 4				Route Table No. 5				Route Table No. 6				Route Table No. 7				Route Table No. 8			
Advance Step	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Tenant A																																
Tenant B																																

Time Zone 2

	Route Table No. 1				Route Table No. 2				Route Table No. 3				Route Table No. 4				Route Table No. 5				Route Table No. 6				Route Table No. 7				Route Table No. 8			
Advance Step	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Tenant A																																
Tenant B																																

Note 1. CO Outgoing Group Nos. shall be set in accordance with the setting of the Tenant A/B, Time Zone, Route Table Nos. and Advance Steps.
2. CO Outgoing Group Nos. are 1 to 7.
3. The default value is 0, and it has no function.

Figure 4.2.2.6.2.5(B) Route Table

(4) Assign a Time Zone (0 to 2) first according to Time Zone Hour.
The system selects group 0, 1, or 2, according to the Time Zone Hour set by the user. The system then selects a CO group in the Advance No. 1 column from the location corresponding to the type of tenant to which the caller belongs and the Route Table No., determined as described in item (3), example 1, and selects an idle CO/PBX Line in that CO group. If all the CO/PBX Lines in that CO group are busy, the system proceeds to search for an idle CO/PBX Line until it reaches the Route Advance Step, the extension class-of-service of the caller.
Suppose, for example, that the caller's extension belongs to tenant B and that the Route Advance Step is 2. Also, suppose that the caller originates a call at 06:30 on Weekday and that the system selects Route Table No. 0 (Time Zone 0) as a result of analyzing the dial data. In this case, the system operates in the order of (a), (b), (c), (d), (e), and (f) in Figure 4.2.2.6.2.6(B).

Time Zone Hour	Condition			
	1 Weekday	2 Saturday	3 Sunday	4 Holiday
0. 0:00 to 0:59	2	2	1	1
1. 1:00 to 1:59	2	2	1	1
2. 2:00 to 2:59	2	2	1	1
3. 3:00 to 3:59	2	2	1	1
4. 4:00 to 4:59	2	2	1	1
5. 5:00 to 5:59	0	0	1	1
6. 6:00 to 6:59	0	0	1	1

Assign Time Zone 0

Figure 4.2.2.6.2.6(A) Time Schedule Planning Sheet

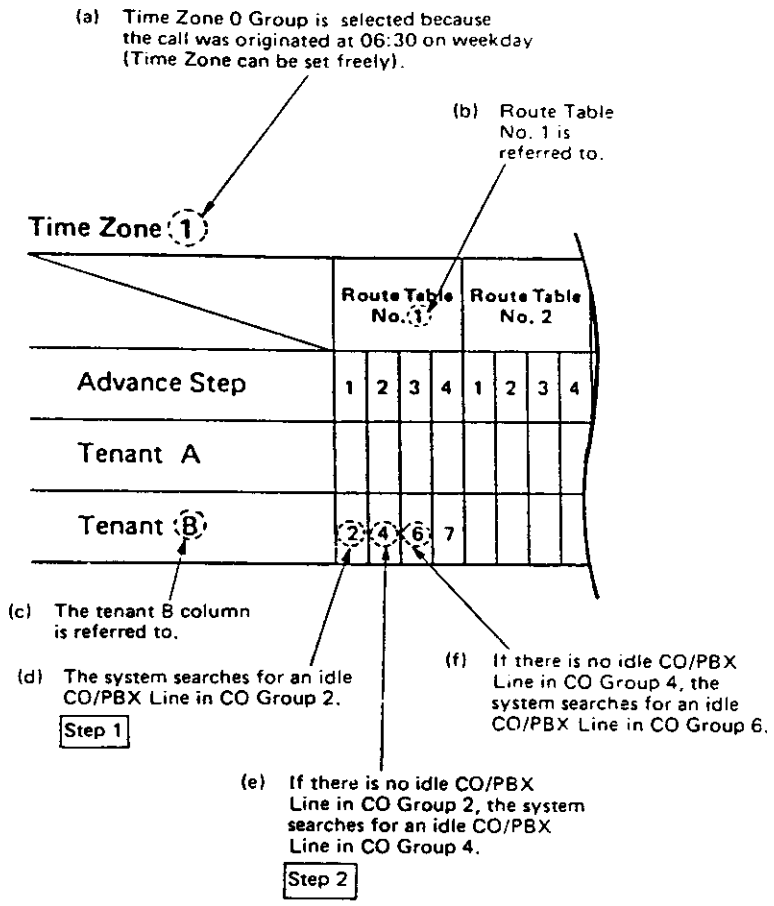


Figure 4.2.2.6.2.6(B) CO Group No. Selection

In the above example, the caller's extension was assigned Route Advance Step 2. Thus, if all the CO/PBX Lines in CO Groups 2, 4, and 6 are busy, the system will not proceed to CO Group 7, which is registered at Advance No. 4. In a case like this, the system sends a busy tone to the caller, signifying that there are no idle CO/PBX Lines. If the Route Advance Step is 0, the system searches for an idle CO/PBX Line only in the CO group of Advance No. 1.

The above process applies to selection of a CO group when the dial data include an area code, office code, and customer code. Another example of CO group selection, when dial data cover only an office and customer code, is explained next.

Example 2: Office – Customer code

(1) The office code and customer code are registered in the input dial table. (See Figure 4.2.2.6.2.1.)
(2) The system refers to the Office Code Table, and locates a Route Table No. from the office code registered in the input dial table and the type of tenant of the caller. The Office Code Table must be filled out by the installer during planning. Figure 4.2.2.6.2.7 shows the Office Code Table.

Office Code	Route Table No.	
m m m	Tenant A	Tenant B
200		
201		
202		
996		
997		
998		
999		

Figure 4.2.2.6.2.7 Office Code Table Format

(3) The system then refers to the Time Scedule and Route Table, shown in Figure 4.2.2.6.2.5(A) and (B), on the basis of the Time Scedule and Route Table No. found in item (2). Thereafter, the system selects a CO group by going through the same process as in item (4), example 1.

The process of CO group selection by type of dial data has already been described. After CO group selection, the dial data to be sent to an idle CO/PBX Line in that group may have to be modified by adding a special code or deleting an unnecessary area code. The necessity of modifying dial data is now explained in a little more detail.
Suppose the dial data generated by the caller consists of an area code, office code, and customer code; that the system has seized a PBX tie line in the optimum CO group as a result of analyzing the dial data; and that the caller originated a local call that would go through the PBX tie line is connected. The user does not know that the CO/PBX Line seized is a PBX tie line, and does not dial specially to seize a PBX tie line.
It is then necessary to output one of the PBX's CO line trunk group numbers before the telephone number. Because the call is a local call as viewed from the PBX, it is not necessary to dial the area code.

Even if the EX1232/2464 system user dials the area code, that area code must be deleted. It is for this reason that the system must modify the dial data.
The process of automatically modifying dial data is explained below as part of the system processing flow. (The optimum CO group has been selected by the process up to item 3, so this explanation starts with item 4.)

4. After CO group selection, the system locates the Deleting Data Table No. (which is clarified below) corresponding to the selected CO group by referring to a table called the Deleting Index Table. Figure 4.2.2.6.2.8 shows the Deleting Index Table format. The installer must fill out this table during planning.

CO Outgoing Group No.	Delete Data Table No.	
	Tenant A	Tenant B
1		
2		
3		
4		
5		
6		
7		

Figure 4.2.2.6.2.8 Deleting Index Table Format

If there is no Deleting Data Table No. in the location corresponding to the selected CO group, there is no data to be deleted from the dial data generated by the caller. If an addition to the dial data is necessary, the system proceeds to that step.

5. The following explanation is based on the assumption that there is a Deleting Data Table No. registered for the selected CO group. In this case again, the process is explained by the type of caller dial data.

Example 1: Area code – Office code – Customer code

(1) The system refers to a table called the Deleting Data Table, and locates the area code in the location corresponding to the Deleting Data Table No. selected in item 4. When the area code in the input dial table (Figure 4.2.2.6.2.1) agrees with the area code from the Deleting Data Table, the area code dialed by the caller is deleted.
Figure 4.2.2.6.2.9 shows the Deleting Data Table format. This table must be filled out by the installer during planning.

Delete Data Table No.	Area Code (P1, P2, P3)	
	Tenant A	Tenant B
1	□□□	□□□
2	□□□	□□□
3	□□□	□□□
4	□□□	□□□

Figure 4.2.2.6.2.9 Deleting Data Table Format

(2) If the area code in the input dial table does not agree with the area code from the Deleting Data Table, the area code dialed by the caller is not deleted, and the system proceeds to making an addition to the dial data if necessary.

Example 2: Office code – Customer code

(1) Because no area code is entered in the input dial table (Figure 4.2.2.6.2.3), the system does not delete anything from the dial data, but proceeds to making an addition to the dial data if necessary.

6. Upon completion of dial data deletion (where necessary), the system refers to a table called Adding Index Table, and locates the Adding Data Area/Office Table No. clarified below corresponding to the CO group selected in item 3.
Figure 4.2.2.6.2.10 shows the Adding Index Table format. The installer must fill out this table during planning.

CO Outgoing Group No.	Delete Data Table No.	
	Tenant A	Tenant B
1		
2		
3		
4		
5		
6		
7		

Figure 4.2.2.6.2.10 Adding Index Table Format

If there is no Adding Data Area/Office Table No. for the selected CO group, there is nothing to be added to the dial data generated by the caller.

7. It is assumed that an Adding Data Area/Office Table No. corresponding to the CO group selected in item 3 has been registered. Here again, the process is explained by the type of dial data.

Example 1: Area code – Office code – Customer code

(1) In this case, there is an area code so the system proceeds to referring to a table called the Addition Data Area Table. (In example 2 that follows, the dial data consists of an office code and customer code only, so the system proceeds to referring to an Adding Data Office Table. That is, the table referred to differs depending on whether the dial data includes an area code.)

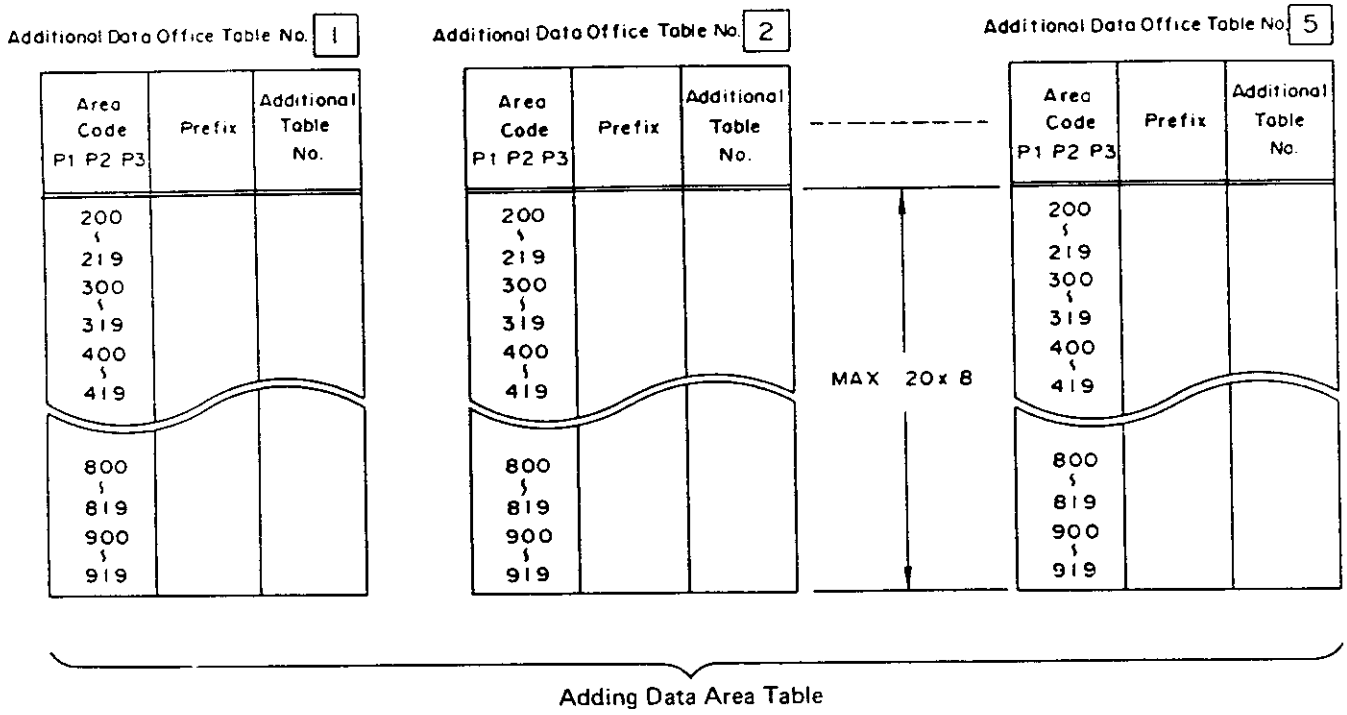


Figure 4.2.2.6.2.11 Adding Data Area Table Format

Note: There are five Adding Data Area Tables, each of which is so formatted that a prefix may be registered for each area code, and an index number may be entered in the adding table column (clarified below). The index number points the adding table where data to be added to the dial data area stored. Area codes are not consecutive, but are broken down into 20 by 8 blocks, as shown in Figure 4.2.2.6.2.11. These tables must be filled out by the installer during planning.

The system selects one of the tables shown in Figure 4.2.2.6.2.11 from the Adding Data Area/Office Table No. selected in item 6.

(2) The system searches the Adding Data Area Table selected in item (1), example 1, for the area code registered in the input dial table (Figure 4.2.2.6.2.1) and selects the prefix and Adding Table No. registered there. The system stores in memory whether to add a "1" to the dial data to be sent, depending on whether the prefix "1" has been entered. The system then proceeds to referring to the Adding Table indicated by the selected Adding Table No.

(3) The Adding Table has the actual dial data to be added for each Adding Table No. and a flag showing whether the adding dial data should be placed before or after the normal dial number. Figure 4.2.2.6.2.12 shows the Adding Table format.

Additional Table No.	Additional Flag	Dial
1	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
2	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
3	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
4	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
5	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
6	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
7	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
8	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
9	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
10	☐	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Figure 4.2.2.6.2.12 Adding Table Format

Note: There are 10 Adding Tables, each of which can register up to 18 digits of adding dial data. Flag 0 must be entered if the adding dial data must be placed before the normal dial number, and flag 1, if the adding dial data must follow the normal dial number. These tables must be filled out by the installer during planning.

The dial data consisting of an area code, office code, and customer code is modified by the above process. The factors that are determined by the system in the process of modifying the dial data to be sent after CO group selection can be summarized as follows:

- Whether to delete the area code
- Whether a prefix is necessary
- If additional dial data are necessary, data value and their position.

Example2: Office code – Customer code

(1) In this case, the system proceeds to referring to a table called Adding Data Office Table. Figure 4.2.2.6.2.13 shows the Adding Data Office Table format.
The system selects one of the tables shown in Figure 4.2.2.6.2.13 from the Adding Data Area/Office Table No. selected in item 6.

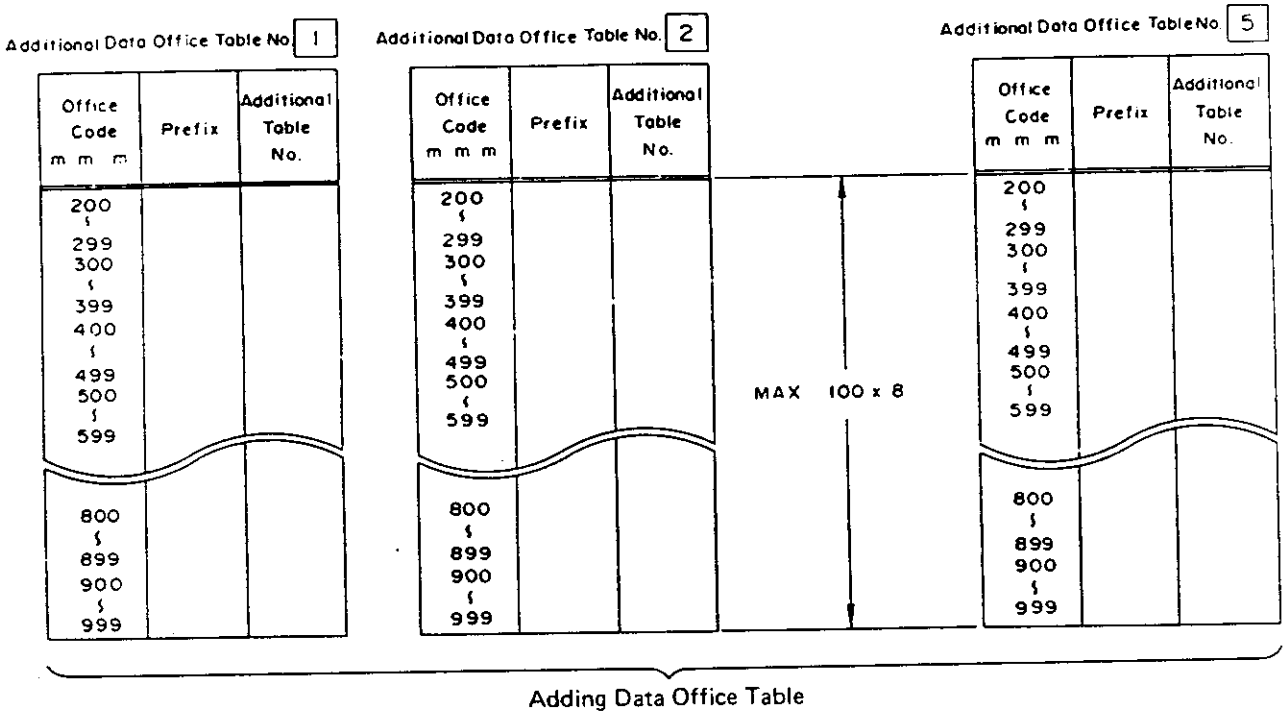


Figure 4.2.2.6.2.13 Adding Data Office Table Format

Note: There are five Adding Data Office Tables, each of which is so formatted that a prefix may be registered for each office code, and an index number may be entered in the adding table column. The index number points the adding table where the dial data to be added are stored. Office codes are consecutive, and are broken down into 100 by 8 blocks, as shown in Figure 4.2.2.6.2.13. These table must be filled out by the installer during planning.

(2) The system searches the Adding Data Office Table selected in item (1), example 2, for the office code registered in the input dial table (Figure 4.2.2.6.2.1) and selects the prefix and Adding Table No. that are registered there. The system stores in memory whether to add a "1" to the dial data to be sent, depending on whether the prefix "1" has been entered. The system then proceeds to referring to the Adding Table indicated by the selected Adding Table No.

(3) The Adding Table is the same as the one referred to in item 7, example 1. (See Figure 4.2.2.6.2.12). The system refers to this table, and selects dial data to be added and their position (before or after the normal dial data).
Thus, the dial data, consisting of an office code and customer code, is modified. The factors that are determined by the system in the process of modifying the dial data to be sent after CO group selection can be summarized as follows:

- ○ Whether a prefix is necessary
- ○ If additional dial data are necessary, data value and their position

Refer to Figures 4.2.2.6.2.14 and 4.2.2.6.2.15 again to review the process of dial data modification by the system after CO group selection. Both figures show the process of dial data modification after CO group selection with reference to the tables concerned. Figure 4.2.2.6.2.14 applies to dial data consisting of an area code, office code, and customer code, and Figure 4.2.2.6.2.15, to dial data consisting of an office code and customer code.

No. in these figures indicates the applicable item number and should be followed in numeric sequence to understand the modification process.

8. When the dial data to be output in originating an outgoing call are determined after selection of the optimum CO group, the system proceeds to processing for toll call restriction. (The flow processing toll call restriction is described in detail in paragraph 4.3.7 Programming Toll Restriction.) The system makes the following analysis in this process:
   (1) The system obtains the value of "Toll Restriction" that has been set for the calling extension. (KT/VP and SLT)
   (2) The system analyzes the toll plan according to the value of toll-restriction (assumed to be other than "0" because "0" signifies unconditional toll access) and the selected CO group.
   (3) The system analyzes the caller's dial data according to the North American Dial Number Plan, and determines whether to restrict or permit toll calls by referring to the toll plan.
9. If toll calls are permitted, the modified dial data are sent to the CO/PBX Line. If toll calls are restricted a warning tone is sent to the caller. This completes all Optimized Call Routing service.

4.2.2.6.3 CO/PBX Lines Selectable by Optimized Call Routing

Because effective operation of the Optimized Call Routing feature is a great advantage to the user, its planning by the installer is a very important factor. The installer must, first of all, know the types of CO/PBX Lines connected to the system in planning this feature. As described in paragraph 4.2.2.6.2, the CO groups selectable by the Optimized Call Routing feature are any of groups 1 through 7. Refer to Item No. 12, "CO Outgoing Group", in paragraph 4.1 System Planning.

The CO/PBX Lines in groups 1 through 7 that are subject to the Optimized Call Routing feature are as follows:

- o D.D.D. lines
- o FX lines
- o OUTWATS
- o Tie lines (E&M tie lines and PBX tie lines other than the tie lines connected from the S.C.C. office)

4.2.2.6.4. Optimized Call Routing Data Planning Procedure

Optimized Call Routing data can be planned as described below. This planning is to prepare the various tables mentioned in paragraph 4.2.2.6.2. These tables are available as planning sheets. The installer must prepare plans for Optimized Call Routing after becoming familiar with the types and purposes of CO/PBX Lines to be connected to the system.
This paragraph describes the actual planning procedure, showing a system example.

1. Figure 4.2.2.6.4.1 shows the assumed location of the EX-1232/2464 system and the network of CO/PBX Lines connected to it.

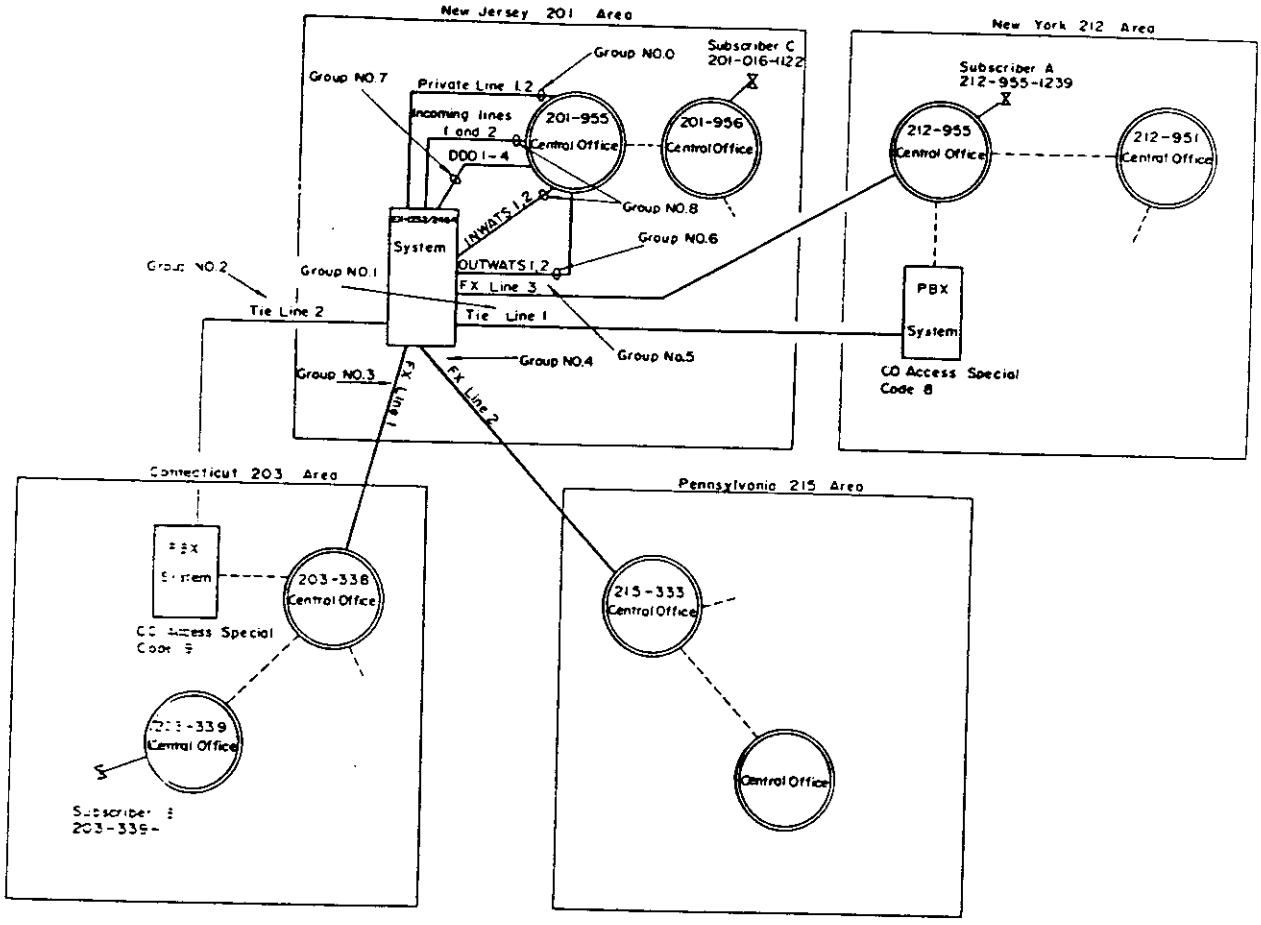


Figure 4.2.2.6.4.1. Assumed CO/PBX Line Network

Planning Procedure

1. The CO/PBX Lines that are subject to Optimized Call Routing are those in groups 1 through 7.
2. Pay special attention to the PBX tie lines in groups 1 through 7. Enter the area codes for the PBXs to which these tie lines are connected in the E&M Area Code Table. In this example, the area code for tie line 1 is 212, and that for tie line 2 is 203. (See the network diagram in Figure 4.2.2.6.4.1). Enter these area codes and corresponding E&M office group numbers 1 and 2 as shown in Figure 4.2.2.6.4.2.

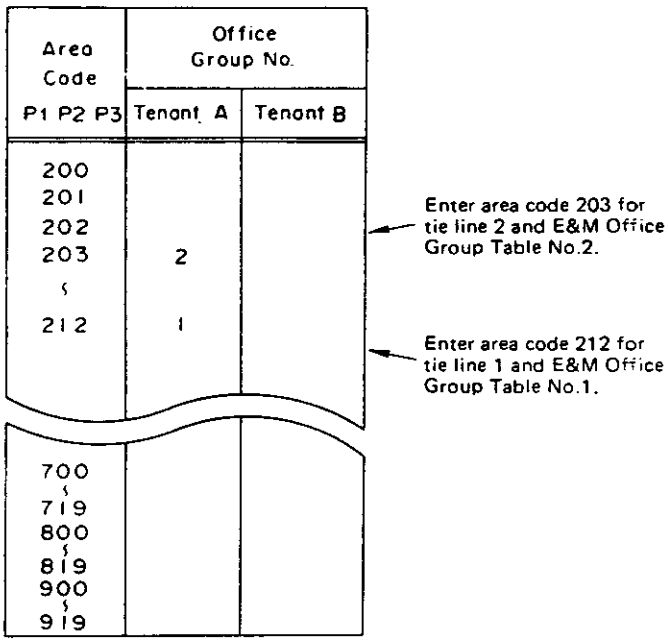


Figure 4.2.2.6.4.2. Example of E&M Area Code Table

Note: If all outgoing calls to the above areas are cheaper than being routed through other lines, it is not necessary to use either the E&M Area Code Table or the E&M Office Group Table. In this case, enter the Route Table Nos. in the General Area Code Table in the part corresponding to the above area codes.

3. To determine a Route Table No. for entry in the E&M Office Group Table and Area Code Table that are discussed later, the optimum (least-cost) route to be connected in a specific time zone is now considered. In other words, a Route Table is prepared.
   (a) Outgoing toll calls in the time zone of 08:00 to 16:59 on weekday to New York, Connecticut, and Pennsylvania (When Time Zone is default. Time Zone can be set freely).
   Refer to the network diagram in Figure 4.2.2.6.4.1.
   (i) A PBX tie line is connected to New York and Connecticut, so this route is the cheapest. Pennsylvania can be accessed through OUTWATS, FX line 2, and D.D.D. line; the least-cost route in this time zone would be OUTWATS .
   The cheapest connecting routes, that is, CO group numbers to be registered at Advance No.1, to the different destinations in the specified time zone is determined.
   If outgoing dial data in this time zone are 212-955-☐☐☐☐ (New York) And 203-338-☐☐☐☐ (Connecticut), let the system select PBX tie line groups Nos. 1 and 2 respectively as CO groups.
   If outgoing dial data are 215-333-☐☐☐☐ (Pennsylvania), let the system select OUTWATS CO group No. 6 as the CO group.
   Then fill in the Route Table for Time Zone 0 Group. Enter the CO group numbers for these destinations in the order of Route Tables Nos. In the entry example shown in Figure 4.2.2.6.4.3 the CO group numbes for New York, Connecticut, and Pennsylvania are entered in the order of Route Table Nos.
   (ii) CO groups to be registered at Advance No. 2 are the next least-cost routes, considered when all the least-cost CO/PBX Lines are busy. In accessing New York or Connecticut OUTWATS is the second least-cost route in the specified time zone. Thus, OUTWATS CO group No. 6 should be entered at Advance No. 2. In accessing Pennsylvania, FX line 2 is the second leastcost route, so CO group No. 4 to which FX line 2 belongs should be registered at Advance No. 2.

   (iii) CO groups to be registered at Advance No. 3 are considered when all the CO groups registered at Advance Nos. 1 and 2 are busy. In accessing New York and Connecticut, FX line 3 and FX line 1 are the third least-cost routes, so enter group No. 5 for FX line 3 and group No.3 for FX line 1 at Advance No. 3. In accessing Pennsylvania, the route through D.D.D. line is the third least-cost, so enter group No. 7 for D.D.D. line at Advance No.3.

   (iv) CO groups to be registered at Advance No.4 are considered when all the CO groups at Advance Nos. 1, 2, and 3 are busy. In accessing New York and Connecticut, the D.D.D. line is the fourth least-cost route, so enter group No. 7 for the D.D.D. line at Advance No. 4. In this example, there is no CO group to be entered as the fourth least-cost route to Pennsylvania.

The Route Table for Time 0 Group (08:00 to 16:59) has now been prepared by steps (i) through (iv), as shown in Figure 4.2.2.6.4.3. (When Time Zone is default. Time Zaone can be set freely).

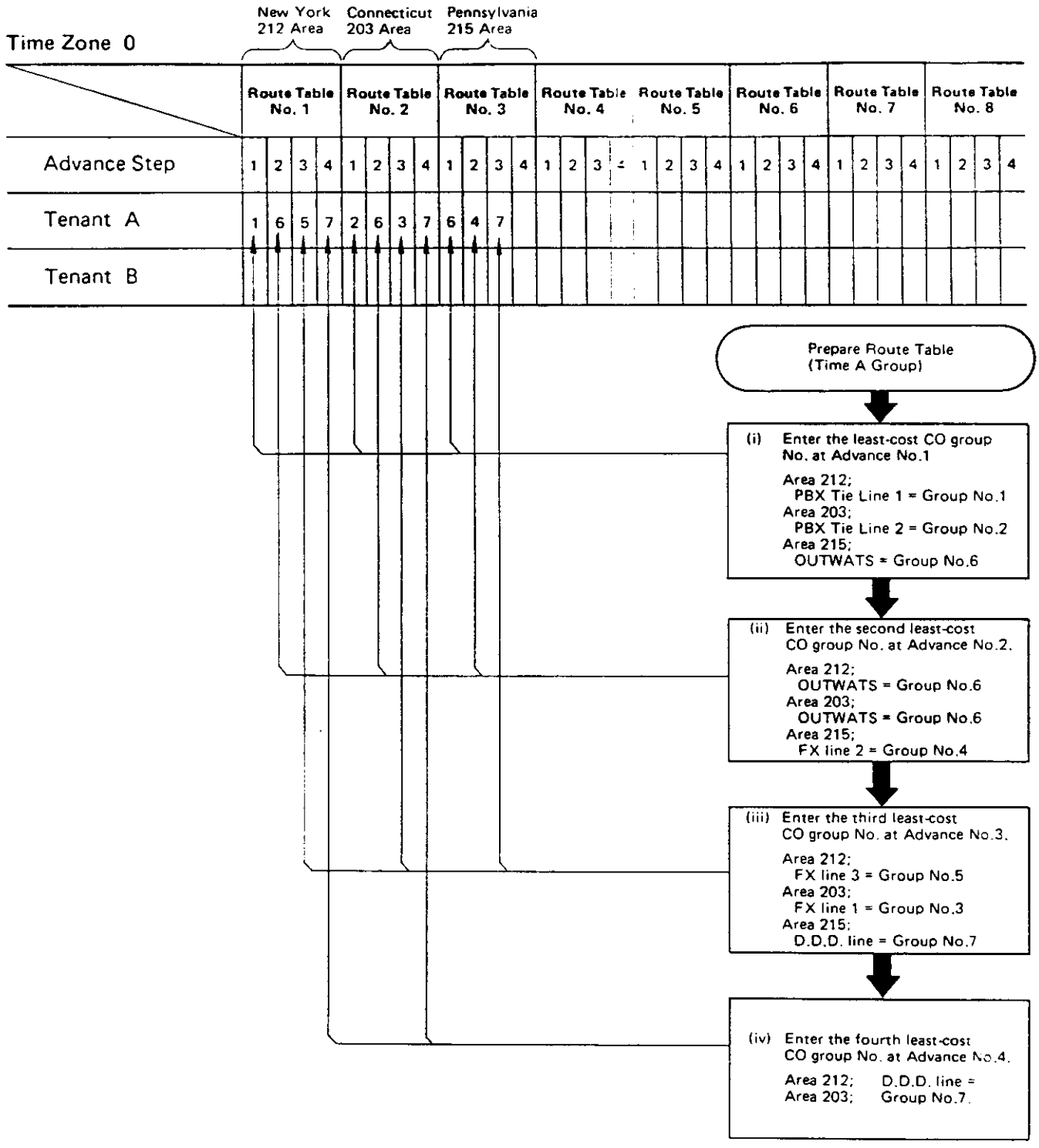


Figure 4.2.2.6.4.3 Example of Preparing Route Table for Time Zone 0

(b) Outgoing toll calls in the time zone if 17:00 to 22:59 on weekday to New Work, Connecticut, and Pennsylvania (When Time Zone is default. Time Zone can be set freely).

(i) As in the case of item (a) above, PBX tie lines are the least-cost access routes to New York and Connecticut. Enter groups Nos. 1 and 2 for PBX tie lines 1 and 2 at Advance No. 1. In accessing Pennsylvania in this time zone, the least-cost route is FX line 2, unlike the case of item (a) above. Enter group No. 4 for FX line 2 at Advance No. 1.

(ii) The second least-cost routes to New York and Connecticut are FX line 3 and FX line 1 respectively. Enter groups Nos. 5 and 3 at Advance No. 2. OUTWATS is the second least-cost route to Pennsylvania in this time zone, so enter CO group No.6 for OUTWATS at Advance No. 2

(iii) The third least-cost route to New York and Connecticut is OUTWATS line, so enter CO group No. 6 for OUTWATS at Advance No. 3 The D.D.D. line is the third least-cost access route to Pennsylvania, so enter CO group No. 7 for the D.D.D. line at Advance No. 3.

(iv) The fourth least-cost route to New York and Connecticut is D.D.D. line, so enter CO group No. 7 for the D.D.D. line at Advance No. 4. There is no CO group number to be entered at Advance No. 4 as the fourth least-cost route to access Pennsylvania.

Figure 4.2.2.6.4.4 shows a Route Table prepared by going through steps (i) to (iv).

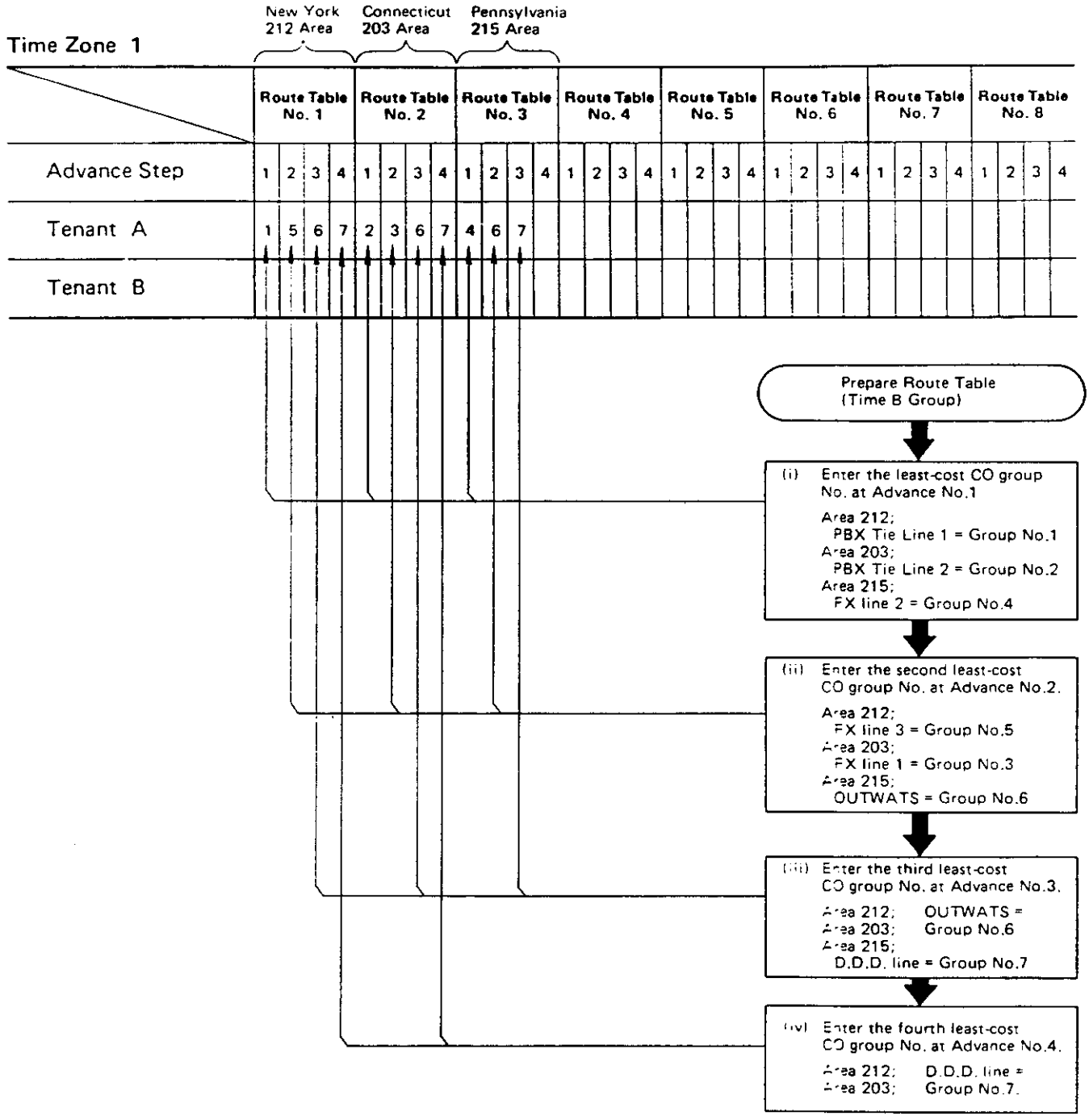


Figure 4.2.2.6.4.4 Example of Preparing Route Table for Time Zone 1

(c) Outgoing toll calls in the time zone of 23:00 to 07:59 on weekday to New York, Connecticut and Pennsylvania (When Time Zone is default. Time Zone can be set freely).

Figure 4.2.2.6.4.5 shows a Route Table prepared in the same way as described in 3 (a) and 3 (b). Only the table is shown, with no explanation.

Time Zone 2

New York 212 Area | Connecticut 203 Area | Pennsylvania 215 Area

	Route Table No. 1				Route Table No. 2				Route Table No. 3				Route Table No. 4				Route Table No. 5				Route Table No. 6				Route Table No. 7				Route Table No. 8			
Advance Step	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Tenant A	1	5	7	6	2	3	7	6	4	7	5																					
Tenant B																																

Figure 4.2.2.6.4.5 Example of Preparing Route Table for Time Zone 2

(d) Outgoing local calls to Office 955 in Area 201

D.D.D. lines (CO group No.7) are the cheapest for outgoing Local calls in any time zone. Therefore, the Route Tables are as Figure 4.2.2.6.4.6.

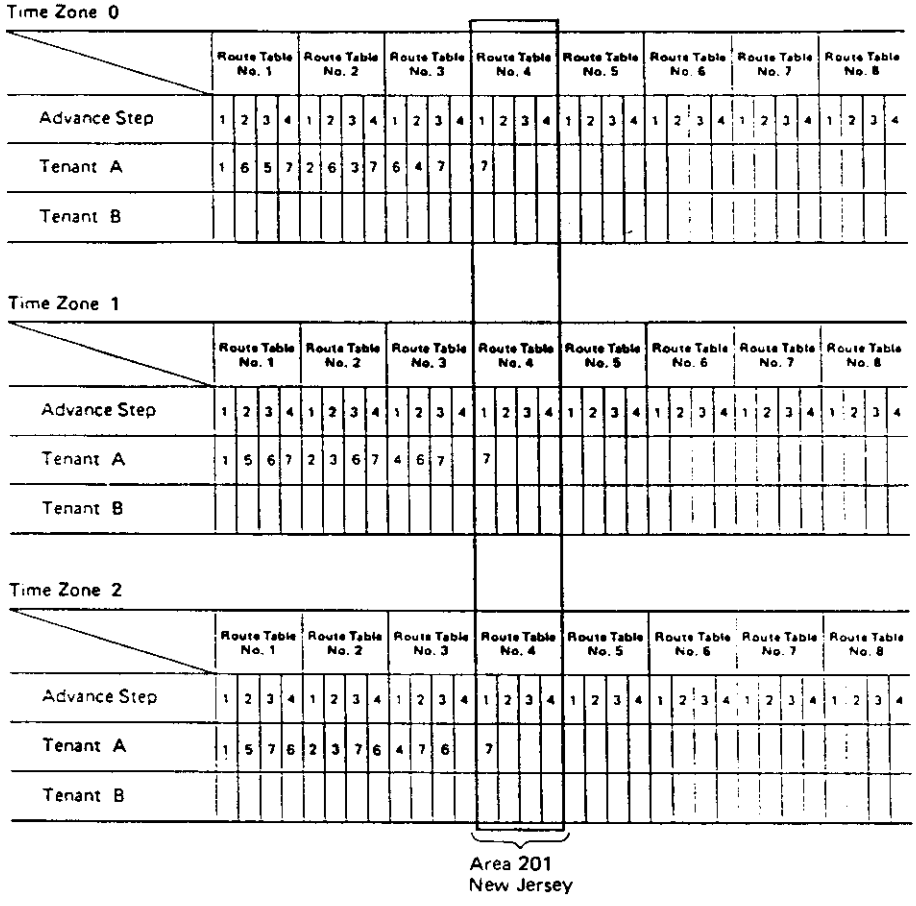


Figure 4.2.2.6.4.6 Example of Route Table for Outgoing Local Calls to Office 955 in Area 201

4. After preparing Route Tables, enter Route Tables Nos. corresponding to the office codes in the tables of E&M Office Groups No. 1 and No.2. (In this example, the areas where PBX tie lines are availab e are New York and Connecticut.) The entry procedure is shown in Figure 4.2.2.6.4.7.

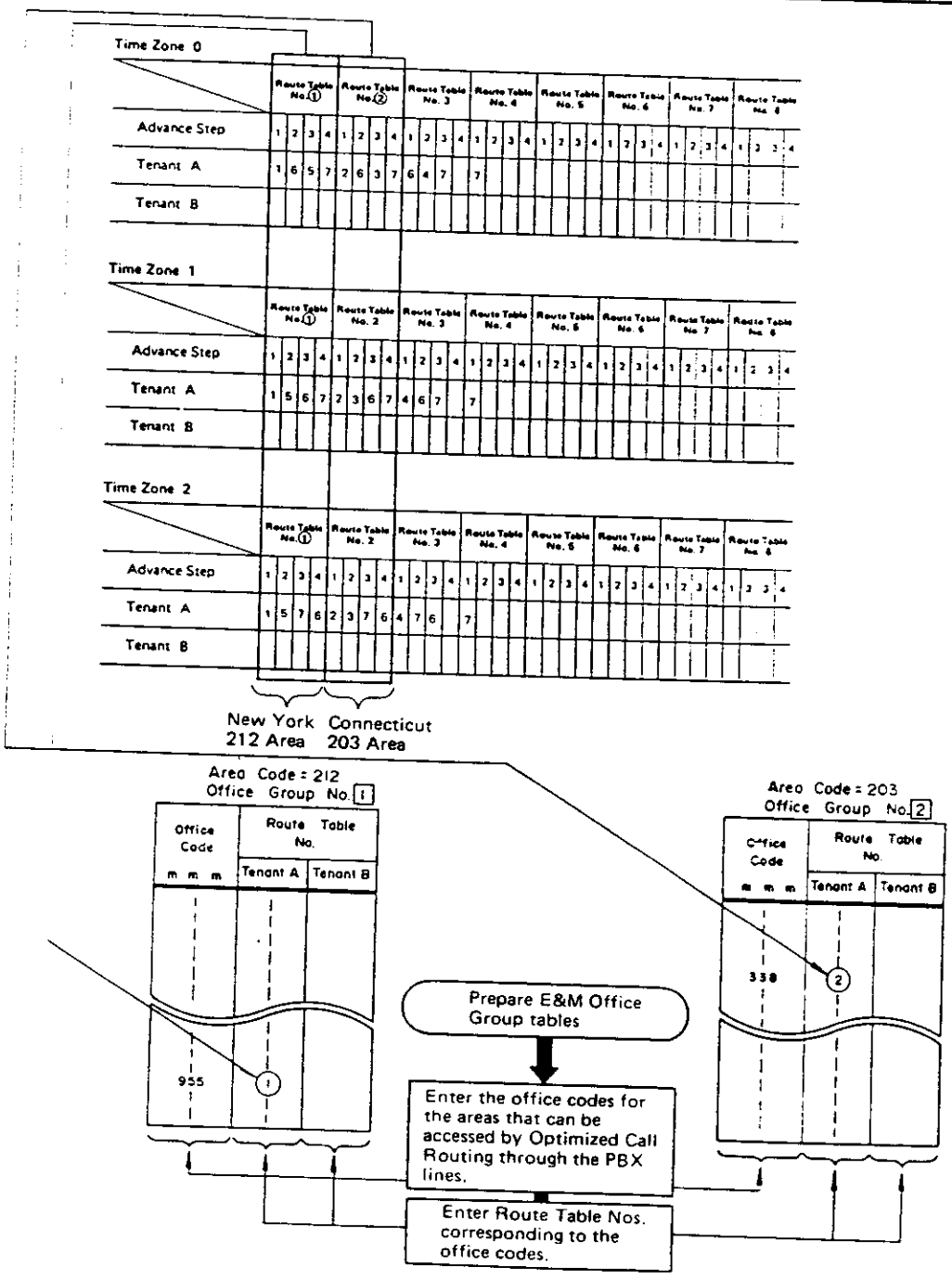


Figure 4.2.2.6.4.7 Example of Preparing E&M Office Group Table

5. Proceed to preparing an Area Code Table. This table is only for the areas where tie lines are not available (Pennsylvania in this example). The entry procedure is shown in Figure 4.2.2.6.4.8.

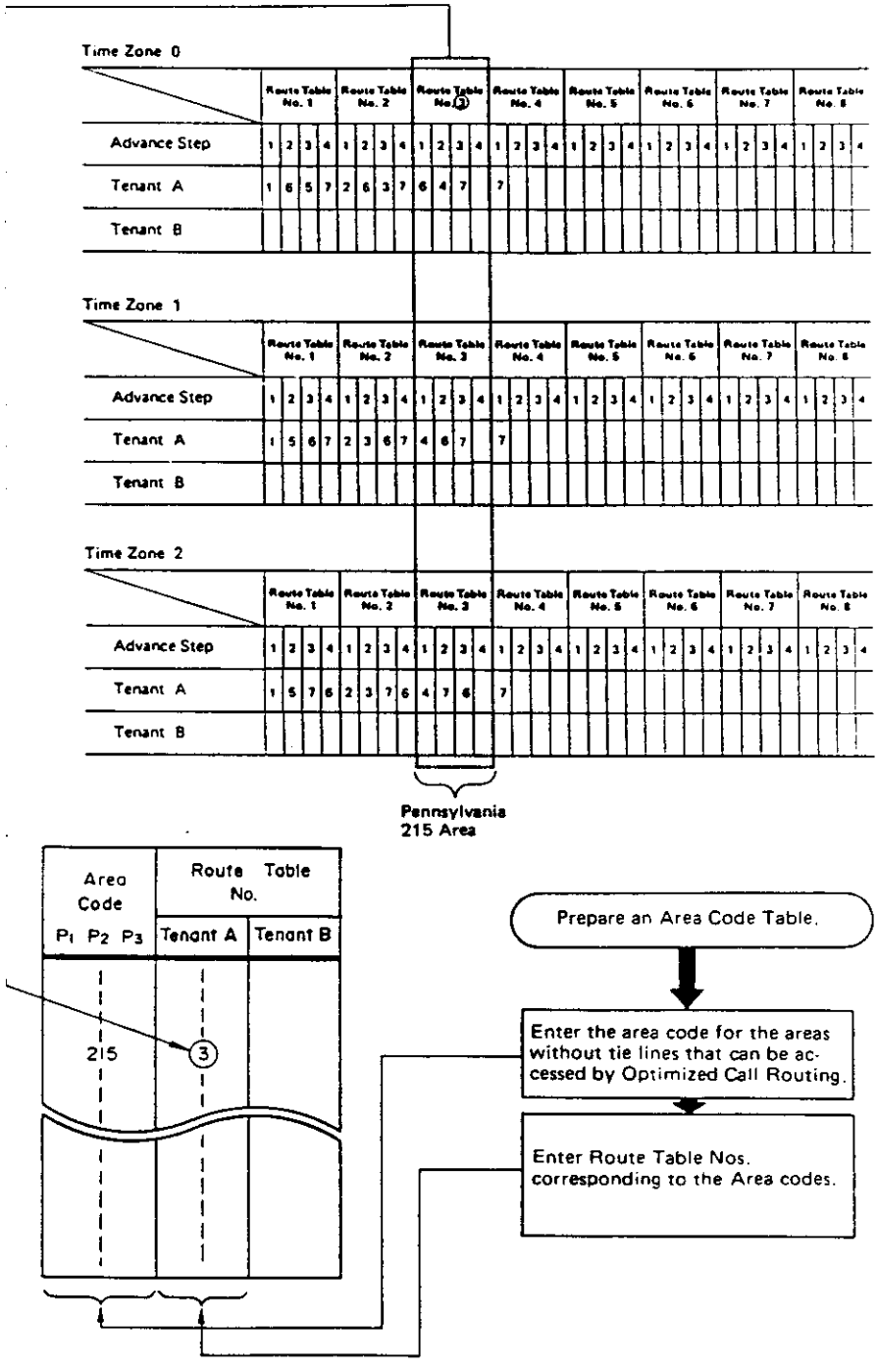


Figure 4.2.2.6.4.8 **Example of Preparing Area Code Table**

6. Proceed to preparing an Office Code Table. This table is referred to when dial data are for local cal s. In this example, the system refers to it when a local call is originated in area 201, New Jersey. An example of preparing an Office Code Table is shown in Figure 4.2.2.6.4.9.

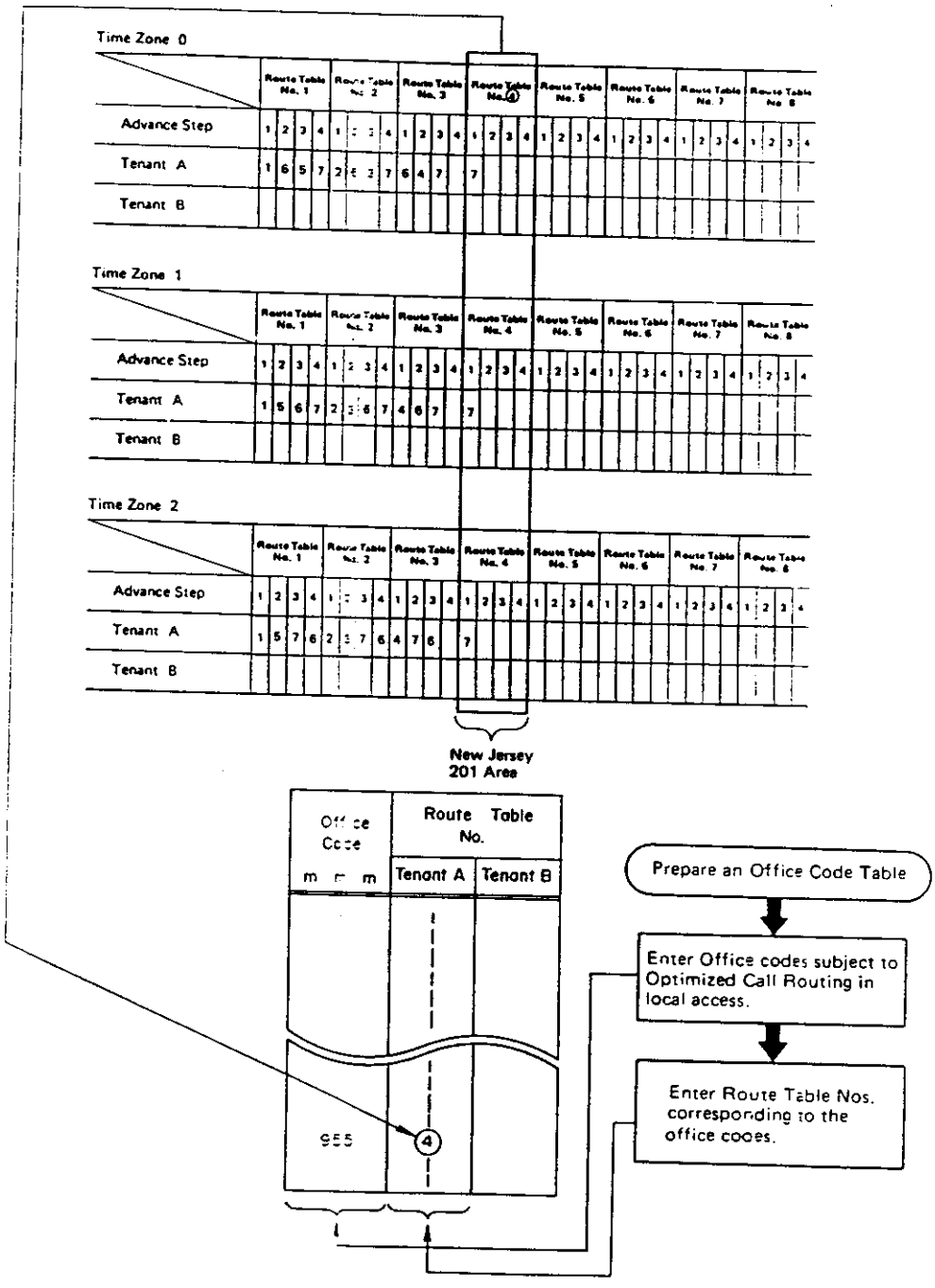


Figure 4.2.2.6.4.9 Example of Preparing Office Code Table

7. The optimum CO groups for the time zones wherein calls are originated can be determined from previously prepared tables. It is necessary, therefore, to prepare dial data to be sent to these CO groups. The procedure for preparing tables for this purpose is explained below, referring to examples.

Example 1: An outgoing toll call placed by pressing the OPT key, or dialing Optimized Call Routing special code 90 and 212-955-1234 (Subscriber A in the network diagram of Figure 4.2.2.6.4.1). The following description proceeds in the order of Advance Nos. in Table No. 1 (Area 212, New York), Route Table (Time 0 Group).

(a) CO group No. 1 (PBX tie line 1) selected (See Advance No. 1, Figure 4.2.2.6.4.10)

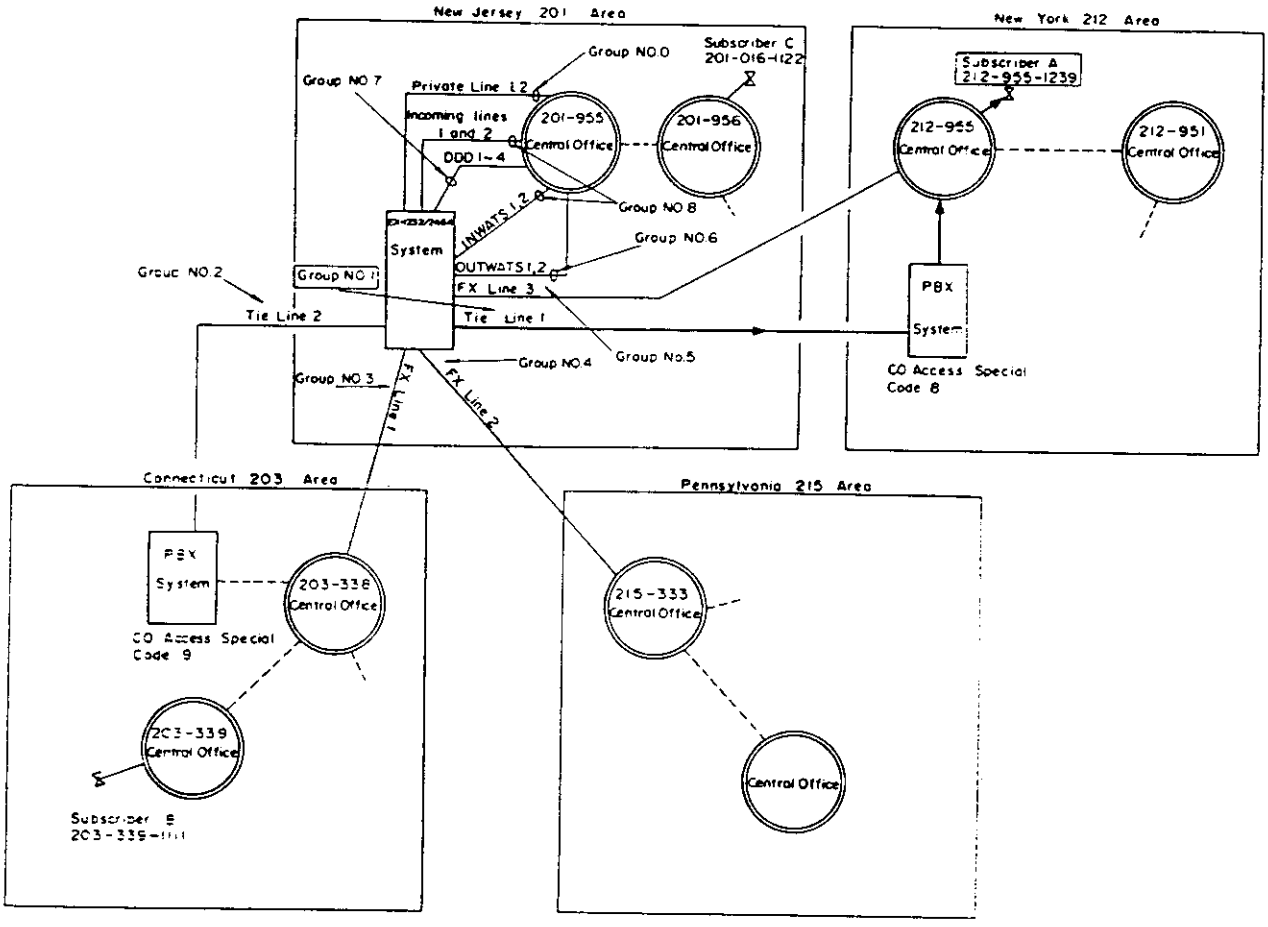


Figure 4.2.2.6.4.10 Example of Outgoing Toll Call via CO Group No. 1 (Caller dialing 212-955-1234)

The dial data to be sent through the PBX tie line must be modified as follows:

- Delete area code 212.
- Add a special code ("8" in this example) before the office code to seize the CO/PBX Line through the PBX.
- Add pause data between special code "8" and the office code to generate a 2-second pause between dialing the special code and receiving the dial tone.

The modified dial data will be:

8 – (Pause data: 2 seconds) – 955 – 1234

An example of entering the above modified dial data in a Planning Sheet is shown in Figure 4.2.2.6.4.11.

(b) CO group No. 6 (OUTWATS) selected (Advance No. 2)

In this case, it is not necessary to modify dial data. Thus, no planning is necessary.

(c) CO group No. 5 (FX line 3) selected (Advance No. 3) (See Figure 4.2.2.6.4.12.)

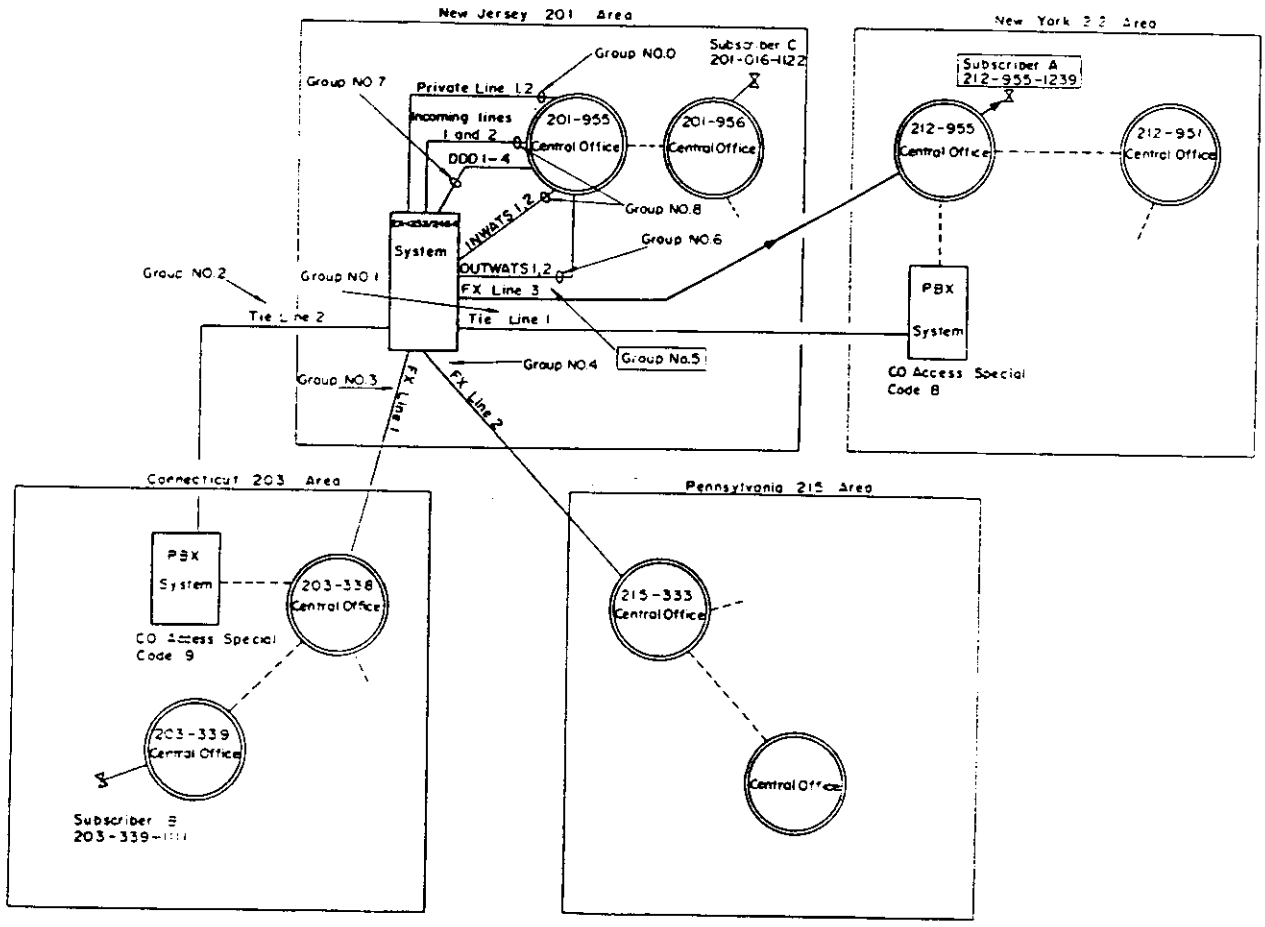


Figure 4.2.2.6.4.12 **Example of Outgoing Toll Call Through CO Group No. 5 (Caller dialing 212-955-1234)**

The dial data to be sent through the FX line must be modified as follows:

- Delete area code 212.

This makes the dial data: 955-1234
This planning example is illustrated in Figure 4.2.2.6.4.13

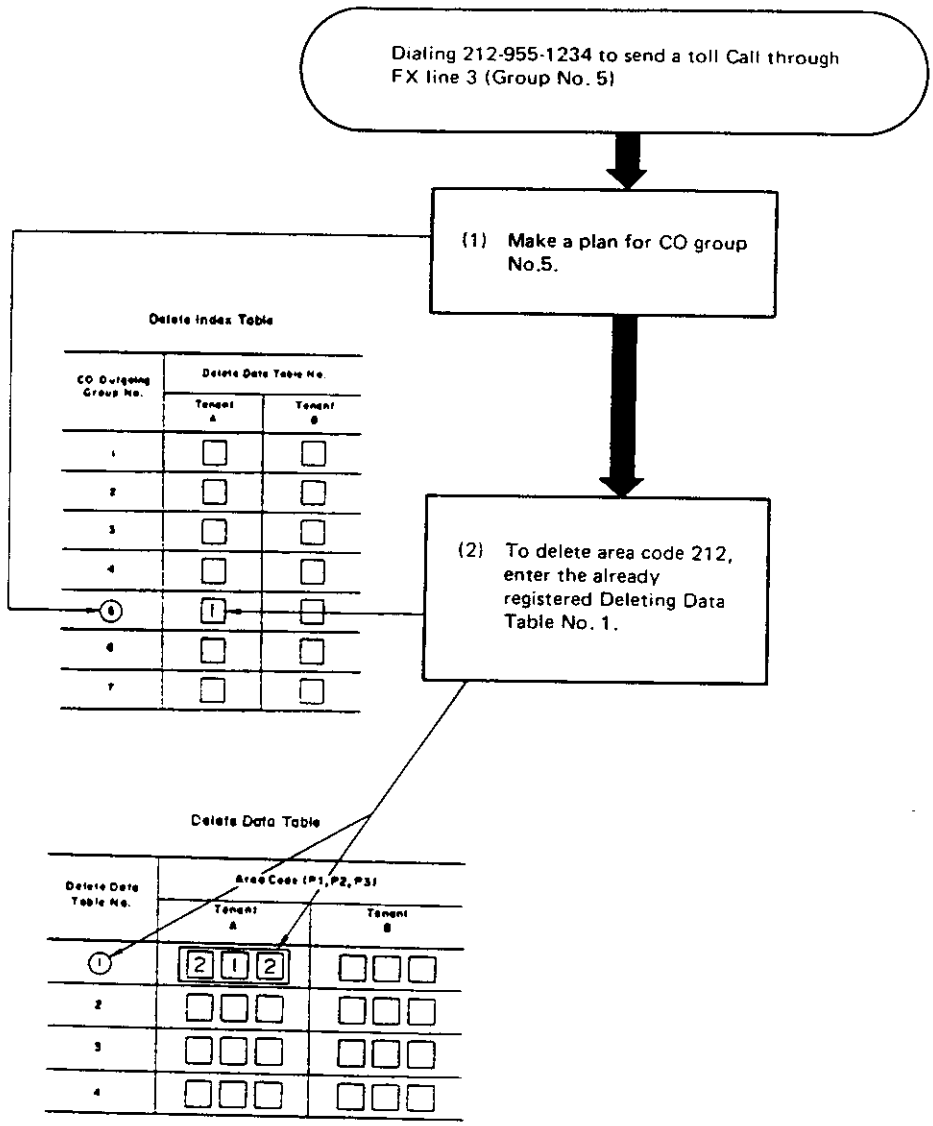


Figure 4.2.2.6.4.13 Planning Example for Dial Data Modification (FX line 3)

(d) CO group No. 7 (D.D.D. line) selected (Advance No. 4)

In this case, it is not necessary to modify dial data. Thus, no planning is necessary.

Example 2: An outgoing toll call by pressing the OPT key, or dialing Optimized Call Routing special code 90 and 203-339-1111. (Subscriber B in the network diagram of Figure 4.2.2.6.4.1). The following description proceeds in the order of Advance Nos. in Table No. 2 (Area 203, Connecticut), Route Table (Time Zone 0 Group).

(a) CO group No. 2 (PBX tie line 2) selected (See Advance No. 1, Figure 4.2.2.6.4.14.)

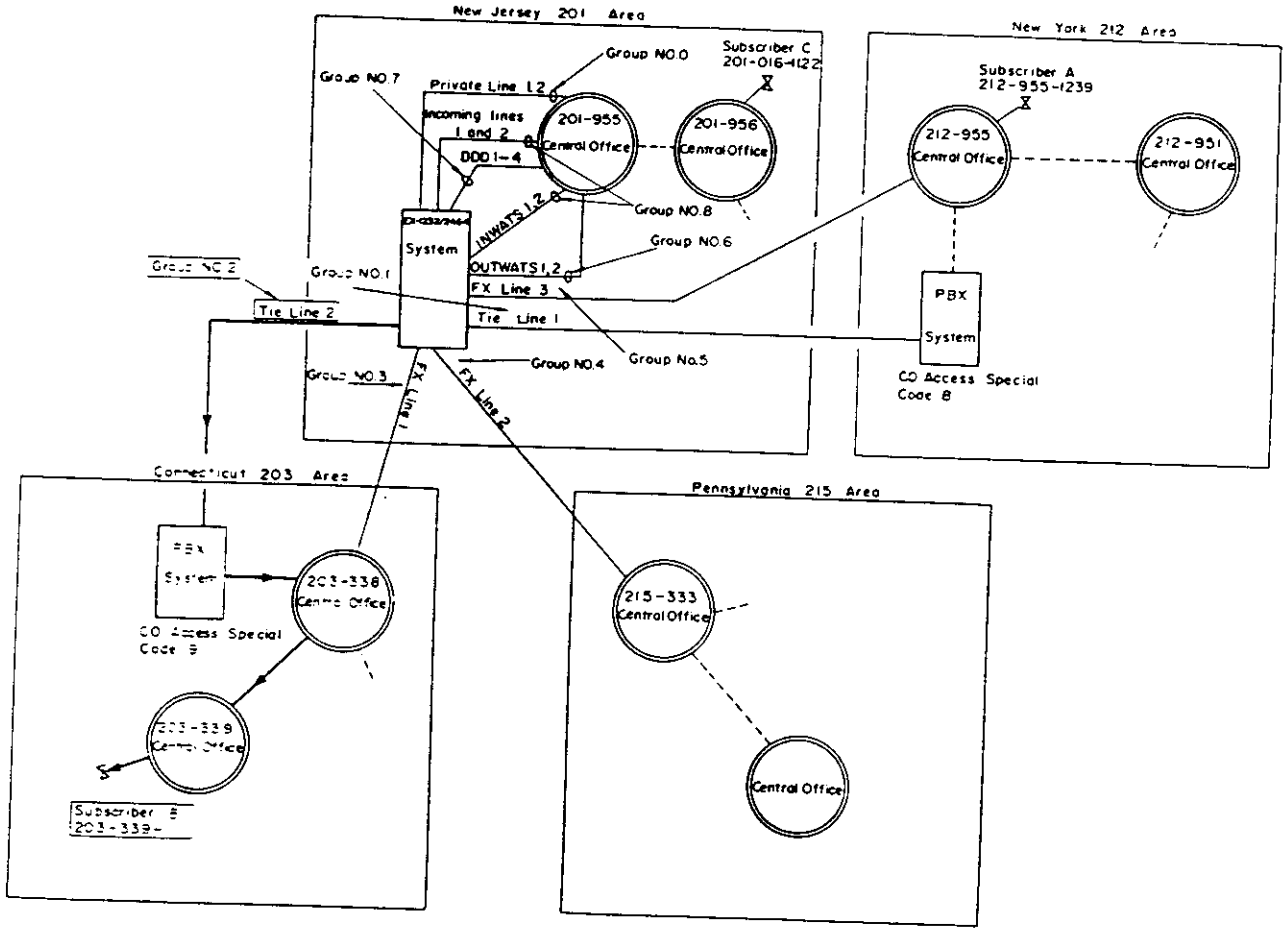


Figure 4.2.2.6.4.14 **Example of Outgoing Toll Call Through CO Group No. 2 (Caller dialing 203-339-1111)**

The dial data to be sent through the PBX tie line must be modified as follows:

- Delete area code 203.
- Add prefix 1 before the office code.
- Add the special code ("9" in this example) to seize the opposite PBX system before prefix '.
- Add pause data of 2 seconds (to wait for the dial tone) between the special code and prefix '. The modified dial data will be:

  9 – (Pause data: 2 seconds) – 1 – 339 – 1111

An example of actually entering the above modified dial data in a Planning Sheet is shown in Figure 4.2.2.6.4.15.

(b) CO Group No. 6 (OUTWATS) selected (Advance No. 2)

In this case, it is not necessary to modify dial data. Thus, no planning is necessary.

(c) CO group No. 3 (FX line 1) selected (Advance No. 3) (See Figure 4.2.2.6.4.16.)

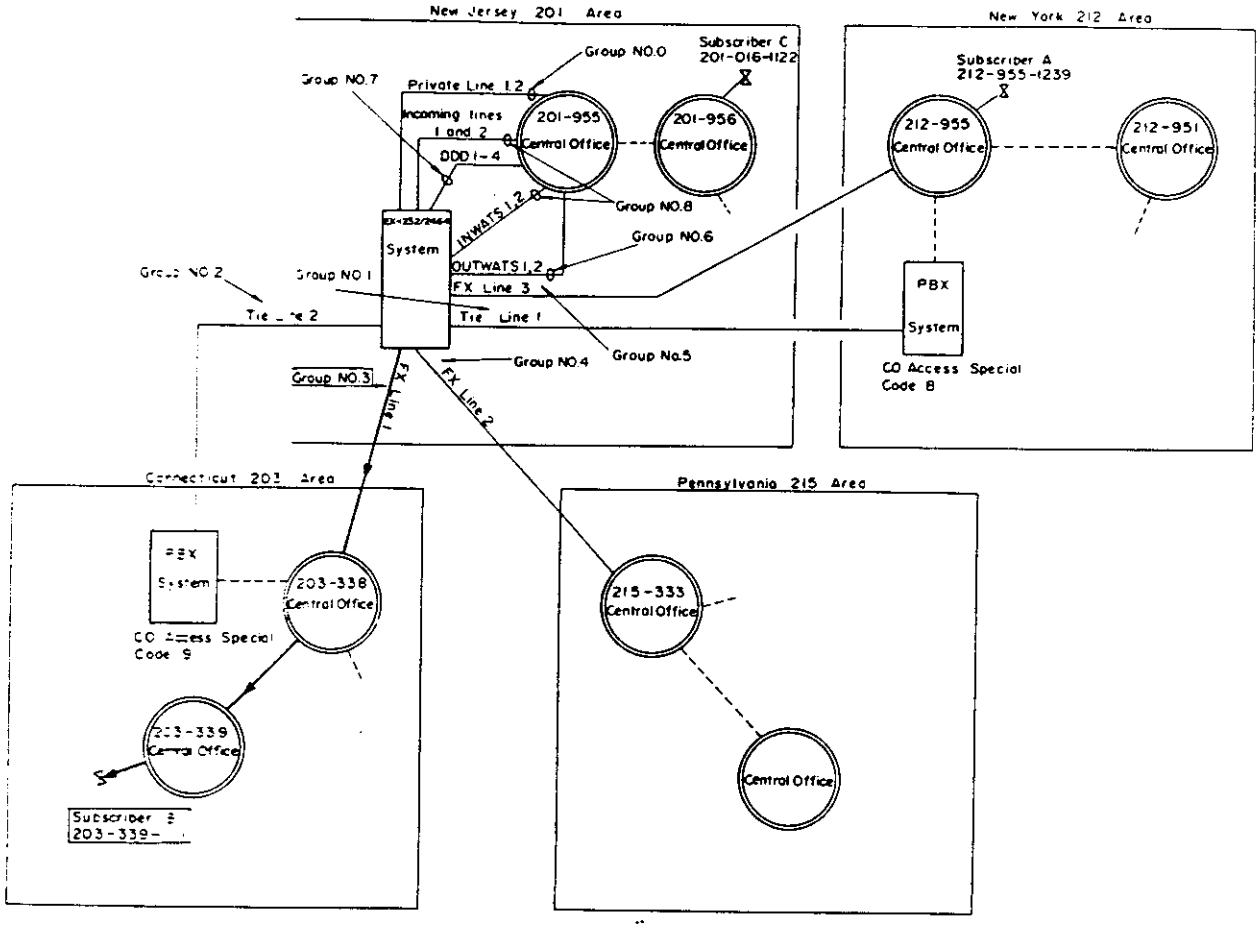


Figure 4.2.2.6.4.16 Example of Outgoing Toll Call Through CO Group No.3 (Caller dialing 203-339-1111)

The dial data to be sent through the FX line must be modified as follows:

- Delete the area code 203.
- Add prefix 1 before the office code.

This makes the dial data: 1-339-1111
This planning example is illustrated in Figure 4.2.2.6.4.17.

2.3 SYSTEM FEATURES AND THEIR OPERATIONS

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IV

2.3 SYSTEM FEATURES AND THEIR OPERATIONS

Service features provided by the system are arranged in the alphabetical order and each of them is described in details. Programming functions are described in Section 2.4 EX-1232/2464 Programming Functions.

List of EX-1232/2464 Service Features

Feature	Package	Feature	Package
A. 1 Attendant		C. 1 Calculator	A
1. Attendant Call Priority		2 Call Abbreviation	
2. Attendant Dedicated ICM Line		3 Call Back Queuing	
3. Attendant DSS Calling		4 Call Forward	
4. Attendant Intercept		1. Call Foward	
5. Attendant Recall		2. Busy Call Forward	
6. Serial Call		5 Call Monitor	
7. Chain Call		6 Call Park	
8. Call Release		1. Call Park	
9. Through Dialing		2. Call Park Pickup	
10. Overflow Transfer		3. Call Park Split	
11. Dual Attendant		7 Call Pickup Group	
12. Trunk Forced Release		8 Camp On	
13. Station Forced Release		1. COL Camp On	
14 Call Forward Forced Release		2. ICM Camp On	
15. Busy Call Forward Forced Release		3. Camp On Pickup	
		4. Camp On Recall	
2 Automatic COL Release		9 Clock Adjustment	
3 Automatic ICM Termination		10 COL Selection	
4 Automatic Line Answer		11 Conference	
5 Automatic Trunk/Station Release		1. Add On Conference	
B. 1 Back Ground Music		2. Automatic Add On	
2 Busy Lamp Field		3. Conference Hold	

List of EX-1232/2464 Service Features (con.)

Feature	Package
C.1 4. Multi Line Conference	
5. Trunk to Trunk Conference	
6. Conference Camp On	
D. 1 Direct Call Pickup	
2 Direct COL Assignment	
3 Disconnect	
4 Display Mode Change	
5 Do Not Disturb	
1. Do Not Disturb	
2. Do Not Disturb Forced Release	
E. 1 Equal Access Dialing	A
2 E&M Tie Line Service	A
F. 1 Flash (/Dial Tone Reorder)	
2 Flexible Key Assignment	
3 Floating COL Group Access	A
4 Follow Me	
H. 1 Hands Free Stations	
2 Holding	
1. Exclusive Hold	
2. System Hold	
3. Consultation Hold	
4. Consultation Hold Recall	
5. Automatic Hold	
6. Music On Hold	
7. Hold Recall	
8. Ring Back Tone On Hold	
I. 1 ICM Calling	
1. Calling Mode Change	
2. Establishment of ICM Calling Method	
2 ICM Path Termination	
3 Incoming COL Calling	
M. 1 Master Group Hunt Call	
2 Meet Me	
3 Message	
1. Absense Message	ΔB
2. Memo of Call	B
3. Message Waiting	
4. Night Automatic Answering	B
5. Reminder	B
6. Voice Message Waiting	B
7. Voice Mail	B
8. Electronic Mail	B
4 Microphone Cut Off	
5 Multi Level Toll Restriction	A
N. 1 Night Service	
1. Switching Night Mode	
2. Night Relay	
3. Automatic Night Assign	
4. Universal Night Assign	
5. Universal Night Assign Pick-Up	
O. 1 On-Hook Dialing	
2 Optimized Call Routing	A
3 Optional Equipments	
1. Station Hard Hearing Handset/ Station Noise Cancelling Handset	
2. Head Set Adapter	
3. External Station Loud Ringer	
4. External Alarm Signal	
4 Outgoing Address Signal Outpulsing	
5 Outgoing Restriction	
6 Override	
1. Busy Override	
2. Do Not Disturb Override	
3. Executive Override	
4. Call Waiting	
P. 1 Paging Call	
1. All Call with Meet Me	
2. All Zone Call with Meet Me	
3. All Group Call with Meet Me	
4. Zone Call with Meet Me	
5. Group Call with Meet Me	
6. Attendant Paging Call with Meet Me	
2 Pickup Restriction	
3 Preselection	
4 Prime Station	
5 Privacy	
6 Private Line	
7 Programming	
1. System Programming Terminal	
2. Dynamic Programming	
3. Programming COL Lines	
4. Programming from KT/VP	
5. Remote Programming	B
Q. 1 Quick Mode Operation	
R. 1 Redialing	
S. 1 SCDR	ΔA
2 Secretarial Hot Line Termination	
3 Sender Time Out	
4 Soft Ringer	
5 Speed Dialing	
6 Station Class of Service	
7 Station Lock Out	
8 System Alarm Indications	

Feature	Package	Feature	Package
S. 9 System Initialization T. 1 Tenant Service		T. 2 Timed Trunk Queuing 3 Transfer	

Note: *A/B:* *Either package A or B is necessary.*
Balnk: *Standard feature.*
Δ: *Package is necessary depending on the feature.*

2.3.A.1 Attendant

The attendant console has many features that are not available from other stations.

- Conditions

Typical features of the attendant console is as shown below.

A.1.1 Attendant Call Priority
A.1.2 Attendant Dedicated ICM Line
A.1.3 Attendant DSS Calling
A.1.4 Attendant Intercept
A.1.5 Attendant Recall
A.1.6 Serial Call
A.1.7 Chain Call
A.1.8 Call Release
A.1.9 Through Dialing
A.1.10 Overflow Transfer
A.1.11 Dual Attendant
A.1.12 Trunk Forced Release
A.1.13 Station Forced Release
A.1.14 Call Foward Forced Release
A.1.15 Busy Call Foward Forced Release

(See Section 2.3.D.5.2 Do not Disturb Forced Release.)
(See Section 2.3.O.6.2 Do not Disturb Override.)
(See Section 2.3.O.6.1 Busy Override.)
(See Section 2.3.C.6.4 Call Waiting.)
(See Section 2.3.C.8 Camp On.)
(See Section 2.3.P.7 Programming.)
(See Section 2.3.C.11.2 Automatic Add On.)
(See Section 2.3.N.1 Night Service.)
(See Section 2.3.P.1 Attendant Page Call with Meet Me.)
(See Section 2.3.S.6 Station Class of Service.)
(See Section 2.3.B.2 Busy Lamp Field.)
(See Section 2.3.C.9 Clock Adjustment.)
(See Section 2.3.C.6.2 Call Park Pickup.)

Refer to each paragraph for other features of the attendant console.

A

2.3.A.1.1 Attendant Call Priority

This function provides Attendants with call priority to make effective use of individual calls and Paging calls.

2.3.A.1.1.1 Attendant Call Override

An Attendant can call a station user being called on an ICM line by an ordinary station (other than an Attendant, or Executive KT/VP) user. When an Attendant call arrives, the former call is overridden and the calling party receives a Busy Tone. (See Section 2.3.O.6.4 Call Waiting.)

- Conditions

  - o A call from an Executive station or another Attendant cannot be overridden by the Attendant.

  - o When a call is overridden, an Interrupt Tone is applied to the called KT station instead of a Voice Call Burst.

2.3.A.1.1.2 Attendant Paging Override

An Attendant can originate a paging call even when a station user other than Attendant's is engaged in a paging call. In this case, the preceding paging call is stopped and a Busy Tone is connected to the caller.

- Conditions

  - o A paging call from an Attendant cannot be overridden by another Attendant in the same tenant.

  - o An overridden paging call is never reconnected.

2.3.A.1.1.3 Attendant Priority Call

A call from an Attendant rings in precedence to any other call.

- Conditions

  - o Except for the case that the called party has already received a call from another Attendant or an Executive station.

  - o An Attendant can call a Off-hook Signal Denied KT/VP even while off-hook.

A

2.3.A.1.2 Attendant Dedicated ICM Lines

This facility always assures the availability of an ICM Line for Attendant use.

- Conditions

  - o If an Attendant Dedicated ICM Line is idle when an Attendant originates an ICM call, the Attendant's station seizes the line.

  - o Stations other than Attendants' cannot seize the Attendant Dedicated ICM Lines to originate calls.

  - o A non-attendant station user can perform an Add-On Conference or a Transfer operation on an Attendant Dedicated ICM Line. (See Sections 2.3.C.11.1 Add On Conference and 2.3.T.3 Transfer.)

- **Programming**

  Line Specification Item 1 Line Class (ICM No.): 17 (ATTND Dedicated)

  If an station user other than the Attendant operates Dial Tone Reorder while conversing on the Attendant Dedicated ICM Line, the ICM call is disconnected and he may seize a new idle ICM. (See Section 2.3.F.1.2 Dial Tone Reorder.)

A

2.3.A.1.3 Attendant DSS Calling

Attendants can originate a DSS (Direct Station Select) call by depressing the DSS key associated with the desired station.

- Conditions

  - o If an Attendant extension is idle, the Attendant can directly originate a DSS call by depressing the DSS key on the Attendant Console.

  - o If the Attendant depresses the DSS key while conversing on an ICM line or calling on ICM, the ICM is disconnected and a new ICM call is initiated.

  - o If the Attendant depresses the DSS key while conversing on a COL, the COL is automatically placed on Consultation Hold and a new ICM call is initiated. (See Section 2.3.H.2.5 Automatic Hold.)

  - o If the Attendant depresses the DSS key while participating in a COL conference, the COL is automatically placed on Conference Hold and a new ICM call is initiated. (See Section 2.3.H.2.5 Automatic Hold.)

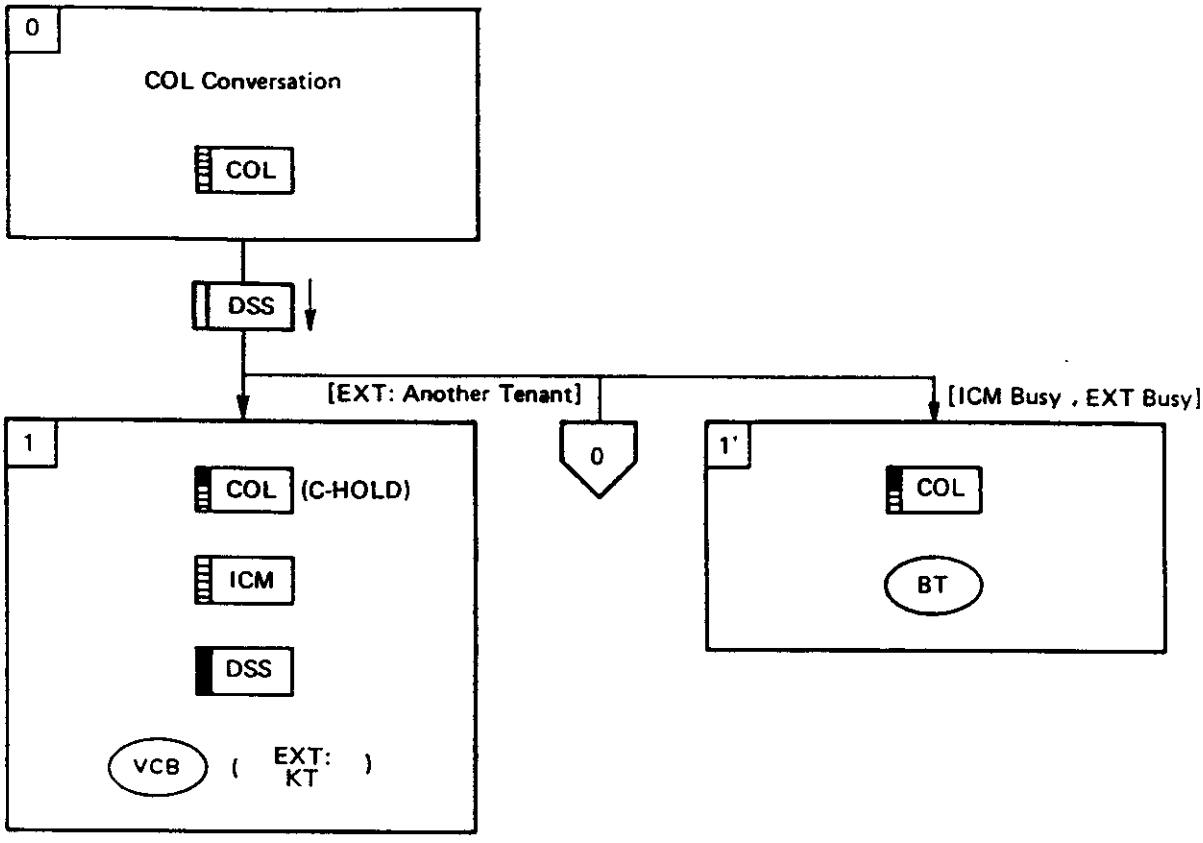
  - o A DSS call during Multi-line Conference is ignored.

  - o If the Attendant depresses the DSS key while conversing on a COL line that is placed on Conference Hold, the depression is ignored. (See Section 2.3.C.11.3 Conference Hold.)

- Operation Guide

  (Off-hook or SPKR on) [DSS]

- Operation Flow



A

2.3.A.1.4 Attendant Intercept

Various Attendant Intercept features are provided for COL and E&M Tie Line. For calls that cannot be completed under a certain condition, automatic routing takes place to the attendant.

2.3.A.1.4.1 COL Attendant Intercept

The Attendant Intercept feature is provided for COLs.

- Conditions
  - o Attendant intercept occurs when a COL incoming call rings for a certain time (10 to 255 seconds).
  - o Attendant intercept occurs when all stations called on the COL incoming call are busy.
  - o Attendant Intercept terminates on the Recall key. (See Section 2.3.A.1.5 Attendant Recall.)
  - o Attendant Intercept does not occur in the Night Mode.
  - o Attendant Intercept does not occur on an Attendant Pickup Restricted COL.
  - o Attendant Intercept does not occur when there is no Attendant.
  - o This feature is allowed to be preprogrammed on each COL basis.
- Programming
  - o Line Specification Item 10

    COL Attendant Intercept (CO NO.)

    0: Not Assigned
    1: Assigned

  - o Station Class of Service Item 25

    Pickup Restriction (EXT NO.)

    Each CO — Lit: No Function
    Blink: Pickup Restriction

  - o System Constants Item 8

    Attendant Intercept (no Answer)
    10 to 255 seconds

2.3.A.1.4.2 E&M Attendant Intercept

The Attendant Intercept feature is provided for E&M Tie Lines.

- Conditions

  - o Attendant Intercept occurs when a station user does not answer a call thru E&M Tie Line for a certain time. (10 to 255 seconds).
  - o Attendant intercept occurs when a call thru E&M tie line accesses busy station.
  - o Attendant Intercept occurs if the COL group is busy or pickup restricted when the E&M accesses COL Group.
  - o This feature is allowed to be preprogrammed on each E&M tie line basis. (See Section 2.3.A.1.4.1 COL Attendant Intercept.)
  - o Attendant Intercept terminates on the Recall key. (See Section 2.3.A.1.5 Attendant Recall)
  - o Attendant Intercept does not occur in the Night Mode.
  - o Attendant Intercept does not occur on an Attendant Pickup Restricted E&M tie line.
  - o Attendant Intercept does not occur when there is no Attendant.

A

2.3.A.1.5 Attendant Recall

This facility automatically alerts the Attendant after a prescribed period of time. A camped-on call, a COL held call, or an unanswered COL incoming call is terminated on the Attendant recall key (RC _) under this condition.

- **Conditions**
  - o The RCL key lamp on the Attendant Console flashes in the I-USE pattern during Attendant Recall.
  - o Hold Recalls to and from the Attendant are terminated as Attendant Recalls.
  - o If no Attendant is connected, an Attendant Recall other than the Attendant Intercept terminates on the Prime Station as a COL Recall. (See Section 2.3.P.4 Prime Station.)
- **Programming**
  - o System Constants Item 4, Hold Recall Timeout (1 to 255 seconds)
  - o System Constants Item 5, Camp On Timeout (1 to 255 seconds)
  - o System Constants Item 8, Attendant Intercept (10 to 255 seconds)

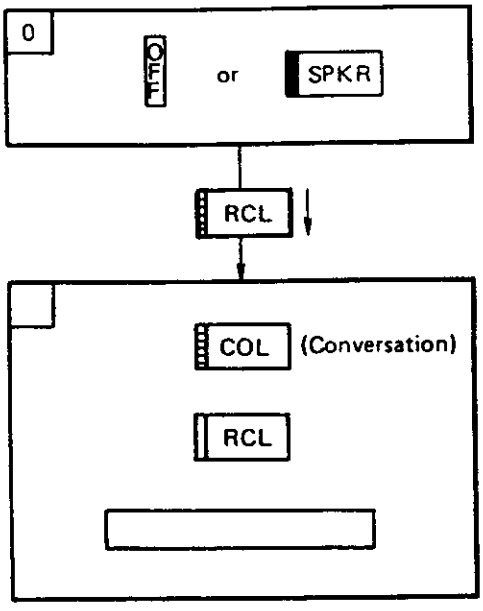
2.3.A.1.5.1 Attendant Recall Pickup

An Attendant can pick up an Attendant Recall by depressing the RCL key on the Attendant Console.

- Conditions
  - o If Attendant has two or more Attendant Recalls, he picks up recalls on a first-come-first-answered basis.
  - o If Attendant performs this operation while conversing on a CO or ICM line, the conversing call is automatically disconnected and the recall is answered.
  - o When Attendant picks up the recall the Hold EXT No. or Camp On called EXT No. is displayed on the Attendant display.
- Operation Guide

  (Off-hook or SPKR) on) [RCL]

- Operation Flow



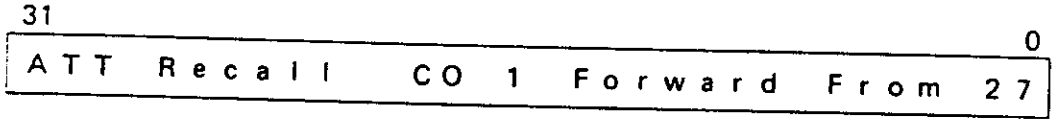
(nn: Hold EXT number of Camp-On called EXT No.)

A

- Conditions

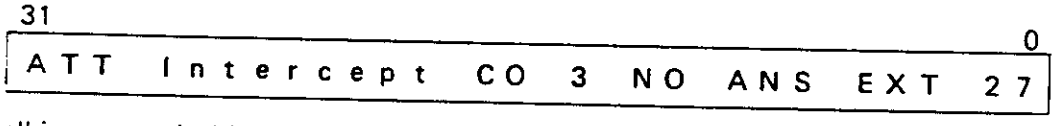
o When the Attendant answers the Attendant Recall, the following contents are displayed on the Attendant display.

1. When a call is answered after a COL Hold Recall or COL Camp On Recall continues for a preprogrammed period of time.



2. COL Attendant Intercept.

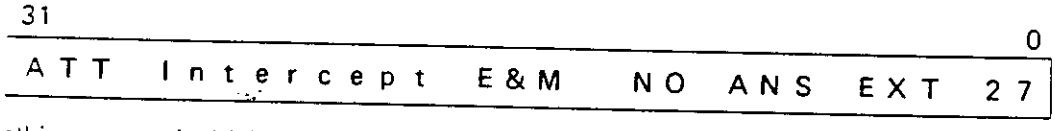
o When Attendant answers a COL incoming call which is not answered for a certain time.



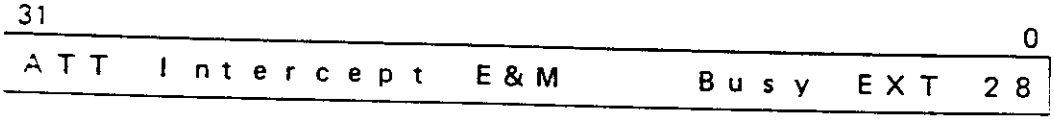
o When a call is answered which all the station called on a COL incoming call are busy.

3. E&M Attendant Intercept

o When a call is answered which a station user does not answer a call thru the E&M tie line for a certain time.



o When a call is answered which a Station called thru the E&M tie line is busy.



o When a call is answered which the COL Group Accessed thru the E&M tie line is busy.

31																																0
A	T	T		I	n	t	e	r	c	e	p	t		E	&	M			B	u	s	y		C	O	G	=		1		

o When a call is answered which the COL Group accessed from the E&M tie line is restricted.

31																																0
A	T	T		I	n	t	e	r	c	e	p	t		E	&	M			D	e	n	y		C	O	G	=		2		

A

2.3.A.1.6 Serial Call

Once a serial call is set by an Attendant, the call returns to the Attendant after it is disconnected by a transferred station.

- Conditions

  - o Under serial call condition, the COL is kept held after the transferred call is disconnected by a station and an Attendant Recall rings.
  - o RBT is sent to the COL during Attendant Recall.
  - o Even though Serial Call is set, COL is disconnected and Attendant Recall is canceled when a disconnect signal from the COL is detected.

- Operation Guide

  (COL Conversation) [SER] + Transfer Operation (See Section 2.3.T.3 Transfer.)

2.3.A.1.7 Chain Call

When an Attendant depresses the DSS, ALL, ZONEn, GRPn, ALL ZONE, or ALL GRP key while ICM calling, the call is interrupted and a new call is automatically initiated.

- Conditions
  - o WT is accessed if Attendant depresses one of these keys corresponding to another tenant's station or an uninstalled station.
  - o This feature is available during BT or WT connection.
- Operation Guide

(ICM Calling) [DSS] ([ALL], [ZONEn], [GRPn] [ALL ZONE], [ALL GRP])

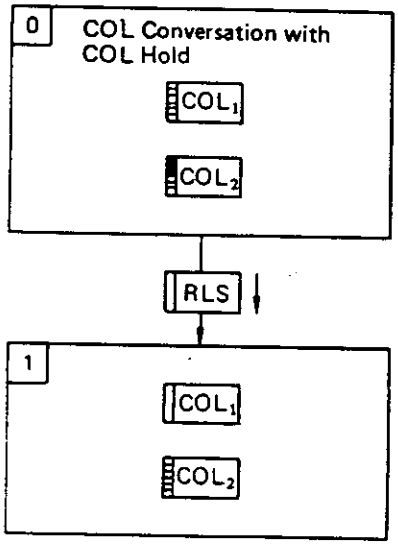
A

2.3.A.1.8 Call Release

While conversing on a COL/ICM call or being idle, this feature allows an Attendant to return automatically to the newest held COL call except Call Park.

- Conditions
  - o When conversing on a COL/ICM line, the call is automatically disconnected.
  - o If there is no held COL call, an ICM held call may be answered.
- Operation Guide

  (Off-hook or SPKR on) [RLS]
- Operation Flow



2.3.A.1.9 Through Dialing

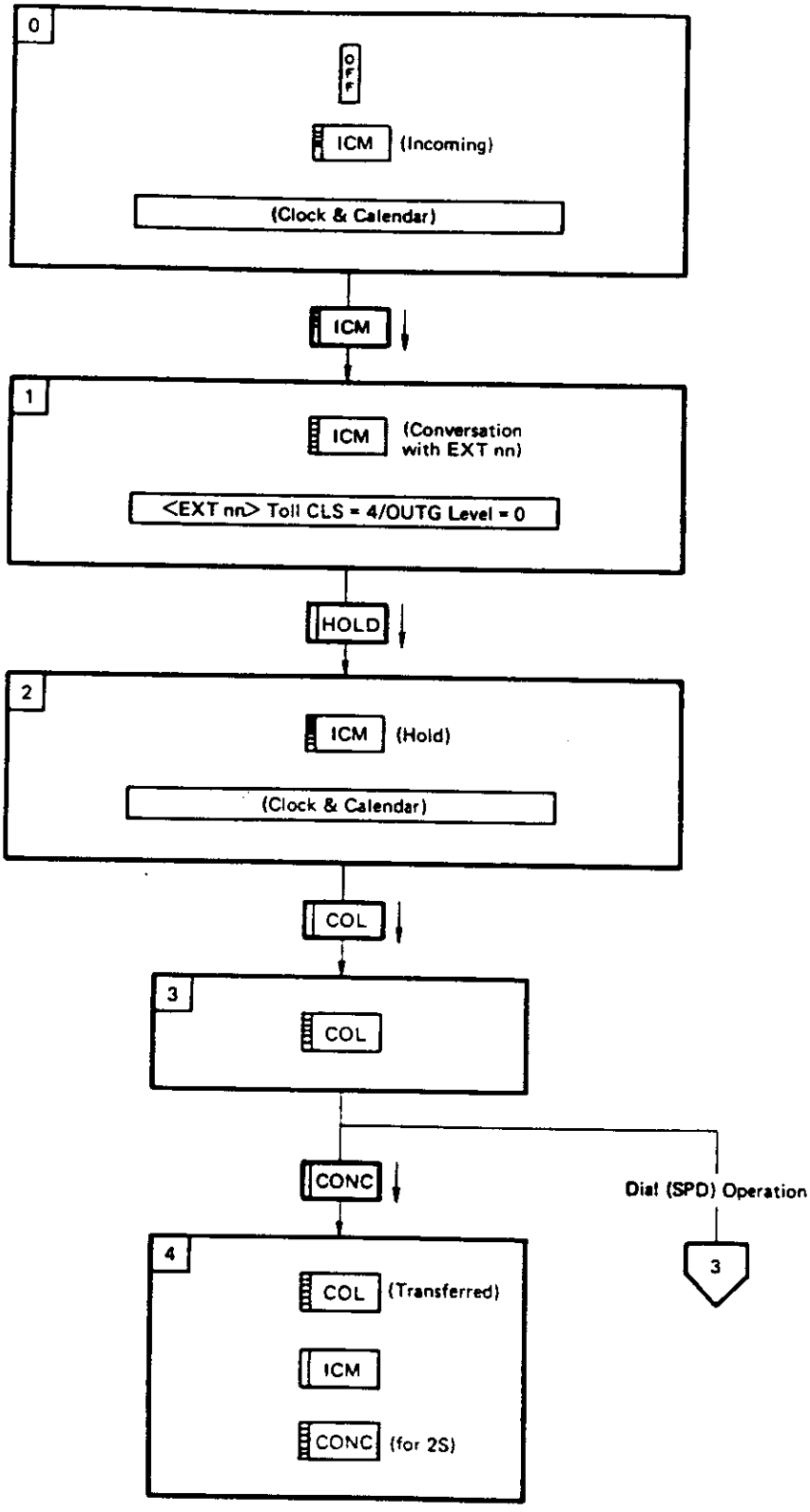
When station users desire or are required to use Attendant assistance in the completion of outgoing Central Office calls, this feature allows the attendant to select the trunk facility and Pass to the station user so that he may directly dial the call.

- Conditions
  - o An Attendant can choose whether to transfer the COL immediately after seizing it or to transfer it after dial out.
  - o Outgoing level and class-of-restriction of the station are displayed on the Attendant display before the operation is completed.
  - o Even if the COL is transferred by Through Dialing facility, the dials are subject to Toll Restriction when the transferred station user originates outgoing dials.
  - o Impossible after ICM hold time out.
- Operation Guide

(ATTND ICM Called) answer + [HOLD / DND] + [COL] + (dial) + [CONC]

A

■ Operation Flow



2.3.A.1.10 Overflow Transfer

This feature enables the Attendant to transfer the surplus incoming calls automatically when the Attendant has many incoming calls or held calls.

- Conditions

  - o To activate this feature, the threshold number of held or incoming calls and the destination station number should be specified in the system data.
  - o Camped-on calls are not included in the count.
  - o Attendant Recall, Consultation Hold Recall, and COL/ICM Callback are not transferred.
  - o The threshold number and the destination number are programmed for each Attendant.

- Programming

  System Constants Item 11, Overflow Transfer Minimum (Attendant 1 or 2)
  3 to 9 (lines)

  System Constants Item 12, Overflow Transfer Station (Attendant 1 or 2)
  EXT No. (destination)

A

2.3.A.1.11 Dual Attendant

Up to two Attendants can be connected to one system and they can work independently and simultaneously.

- Conditions
  - o A KT/VP with an DSS console works as an Attendant.
  - o If there is only one Attendant in a tenant, the Operator No. is '0'.
  - o If there are two Attendants within the same tenant, operator numbers '01' and '02' are assigned to the respective Attendants.
  - o Each Attendant can be used as a programming terminal non-simultaneously.
  - o No Attendant can be used as a programming terminal while remote programming with the Personal
- Programming

  System Constants Item 19 Attendant EXT Assignment (Attendant 1 or 2).
  EXT NO (destination)

2.3.A.1.12 Trunk Forced Release

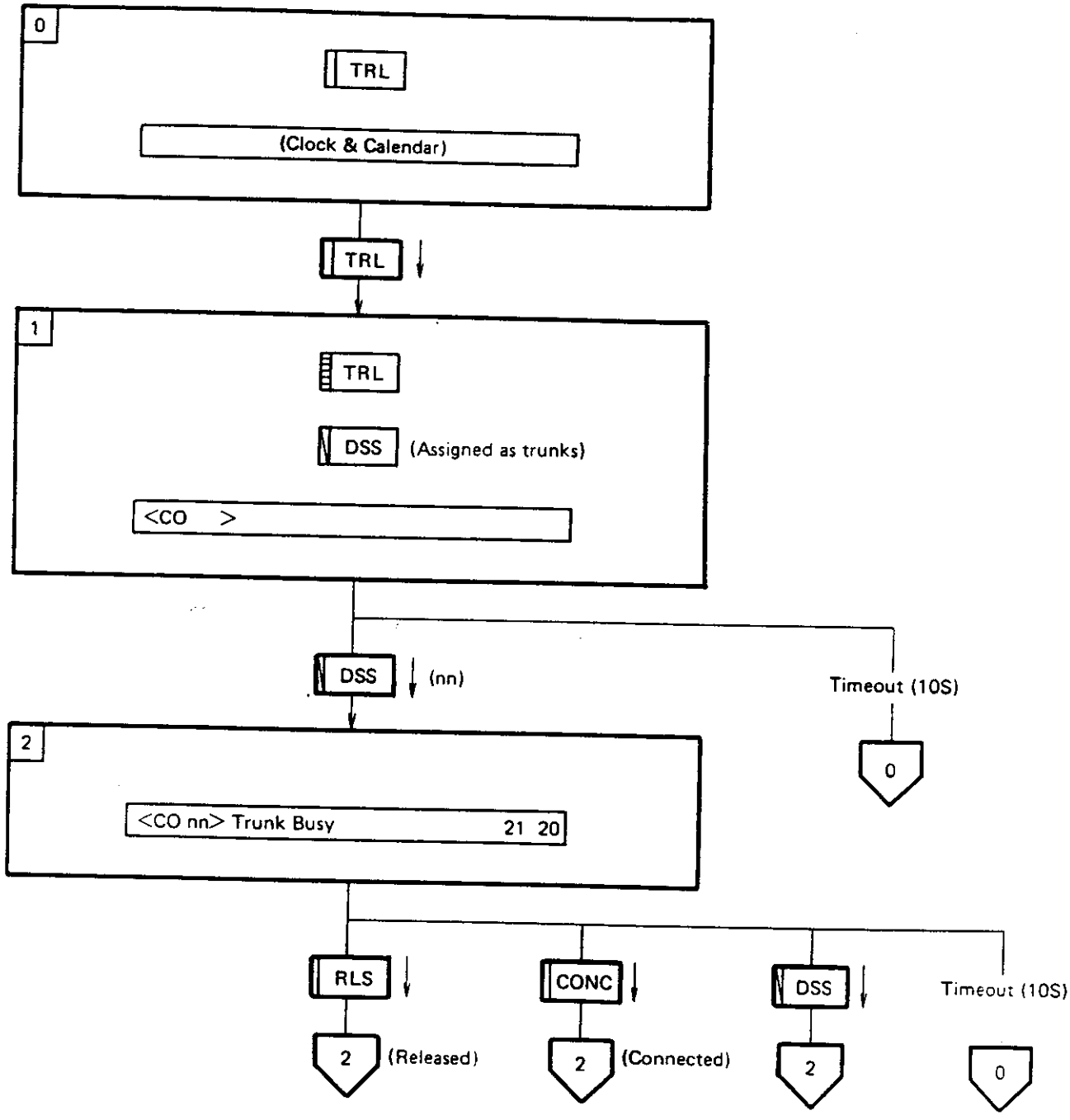
This feature allows an Attendant to display each COL or ICM trunk status on its display or to release the trunks.

- Conditions
  - o Valid only for trunks assigned to the same tenant as Attendant.
  - o This feature is allowed only when the ATTND KT/VP is off-hook.
  - o The status of trunks is classified as follows:
    - i) Trunk Idle: Idle
    - ii) Trunk Busy: Incoming, conversing or held
    - iii) Trunk Released: Forced Released
    - iv) No Trunk: Not Installed
  - o If the trunk is busy, the conversing station number is also displayed.
  - o While a trunk is released, all resources connected to the trunk are kept idle and the trunk becomes unavailable.
  - o An ICM call during Consultation hold cannot be released.
  - o A released trunk becomes available when the connect operation is done, to depress the connect key (CONC), after trunk selection.
  - o When the Attendant depresses the TRL key, the BLF indications are interrupted and the status of each trunk is displayed with lamps. A trunk is specified by depressing the corresponding key. (See Section 2.2.3.1.1 KT/VP Key Lamp.)
- Operation Guide

  (ATTND KT/VP Off-hook) [TRL] + [DSS] + [RLS] ([CONC])

A

- Operation Flow



2.3.A.1.13 Station Forced Release

This feature allows an Attendant to display each station status on its display or to release stations.

- Conditions
  - o Valid only for extensions assigned to the same tenant as Attendant.
  - o This feature is valid only when the ATTND KT/VP is off-hook.
  - o Station status is classified as follows:
    - i) Station Busy: COL/ICM conversing
    - ii) Station Idle: Idle
    - iii) Lock Out: During station lockout
    - iv) Released: Forced released
    - v) No Station: Not installed
  - o An extension that is forced released cannot be used until restored by the Attendant.
  - o An station that is forced released is indicated on the busy lamp field. (See Section 2.3.B.2 Busy Lamp Field.)
  - o If an station that is originating a COL/ICM call or is receiving a call is forced released, the following is performed:
    - i) COL Originating/conversing: COL is disconnected
    - ii) COL Conference: COL changes to conversing/Conference
    - iii) Trunk-to-Trunk operation EXT: changes to Attendant Recall
    - iv) COL Hold operating station: changes to Attendant Recall
    - v) COL Conference Hold operating station: COL changes to conversing/Conference
    - vi) COL Recall called station: changes to Attendant Recall
    - vii) COL Ca back called station: Callback terminates
    - viii) COL RGT called station: Ringing continues.

A

ix) ICM Originating/Conversing: ICM is disconnected

x) ICM Conference: ICM changes to conversing/Conference

xi) ICM Hold operating station: ICM is disconnected

xii) Consultation Hold operating station: ICM is disconnected

xiii) ICM Hold Recall called station: : Ringing continues.

xiv) ICM Callback called station: Ringing continues.

xv) ICM Voice/Tone called station: Ringing continues.

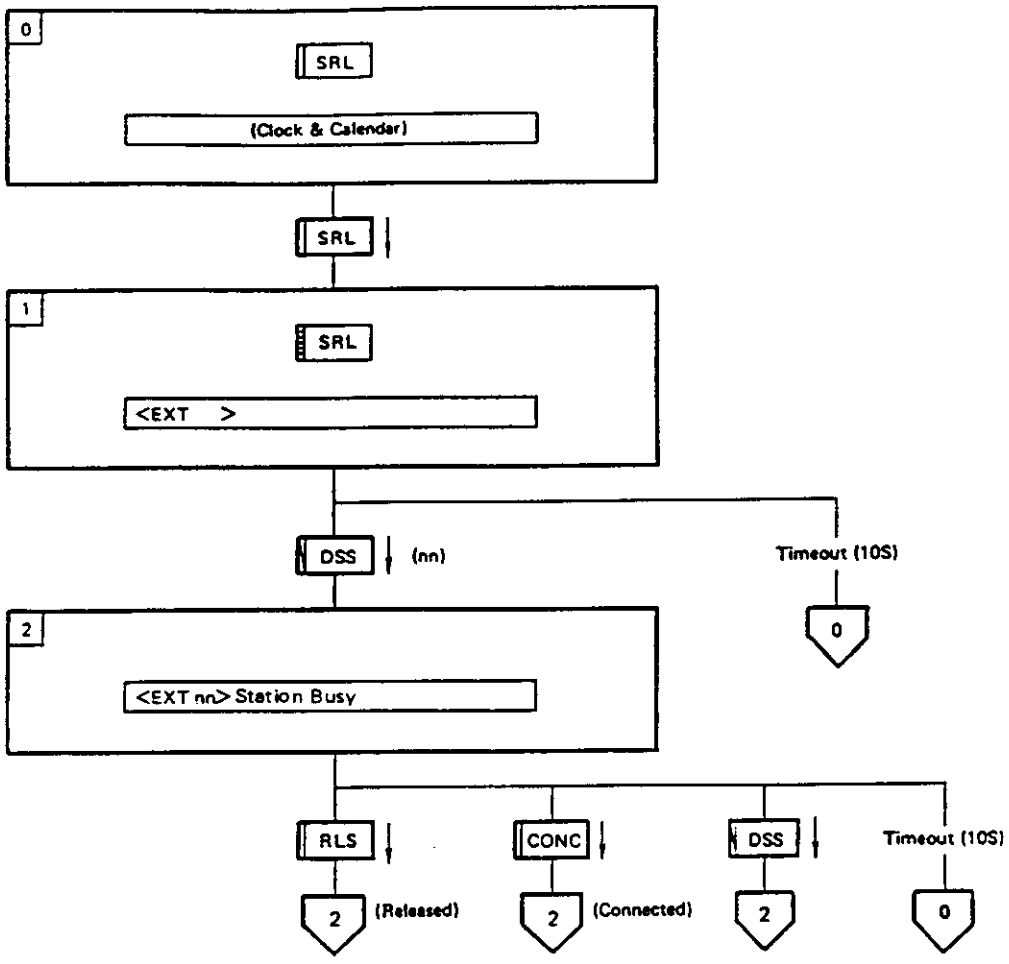
xvi) Master Group Hunt called station: Ringing continues.

xvii) (All) Group Call called station: Ringing continues.
(See Section 2.3.S.7 Station Lock Out.)

- Operation Guide

(ATTND KT VP Off-hook) [SRL] + [DSS] + [RLS] ([CONC])

■ Operation Flow



A

2.3.A.2 Automatic COL Release (From COL)

This Feature provides disconnection of COL conversation by a disconnect signal from the COL.

- **Conditions**

  - o Feature is permitted only when a station user is engaged in a COL conversation. If a call is being originated, the disconnect signal can be detected but is ignored until Sender Timeout.

  - o During a Trunk to Trunk Conference, if the disconnect signal from either COL is detected, both COLs are immediately disconnected.

  - o The length of the Disconnect Signal can be selected independently for each COL among from 90 ms, 150 ms, 500 ms, 600 ms, and 1.5 s. Only those Disconnect Signals exceeding the selected length are detected. (See Section 3.6.2.4.2.2 CTRK-ME.)

  - o Disconnect signals are valid when detected from COLs which are programmed as disconnect signal enable.

- **Programming**

  Line Specification Item 9 Disconnect signal (COL No.): 1 (enable)
  0 (disable)

A

2.3.A.3 Automatic ICM Termination

This feature allows a KT/VP user to assign DSS key for Stations, Master Group Hunt, or Paging by Flexible Key Assignment. A KT/VP user is permitted to initiate ICM calls only by depressing the assigned key.

- Condition

  Refer to Section 2.3.F.2 for Flexible Key Assignment.

  - o When this operation is made while conversing on a COL, the COL is automatically placed on Exclusive Hold, the TRN key lamp indicates I-USE, and an ICM call is initiated (when a station or Master Group Hunt is specified.)
  - o When a key on which Paging is assigned is depressed while conversing on a COL, the COL is automatically placed on System Hold.
  - o When this operation is made while conversing on an ICM, the ICM is disconnected and a new call is initiated.
  - o If ICM busy BT (busy tone) is connected.
  - o The Automatic ICM key can be used for Preselection (for stations only).
  - o An incoming call from a station predetermined as a destination of an Automatic ICM Termination is indicated on the Automatic ICM key lamp. In this case, the incoming call can be answered by depressing the Automatic ICM key (for stations only).
  - o A busy indication is made on the Automatic ICM key lamp when the station predetermined as a destination of Automatic ICM Termination is off-hook (for stations only). (See Section 2.3.A.3.1 Key Lamp.)

- Programming

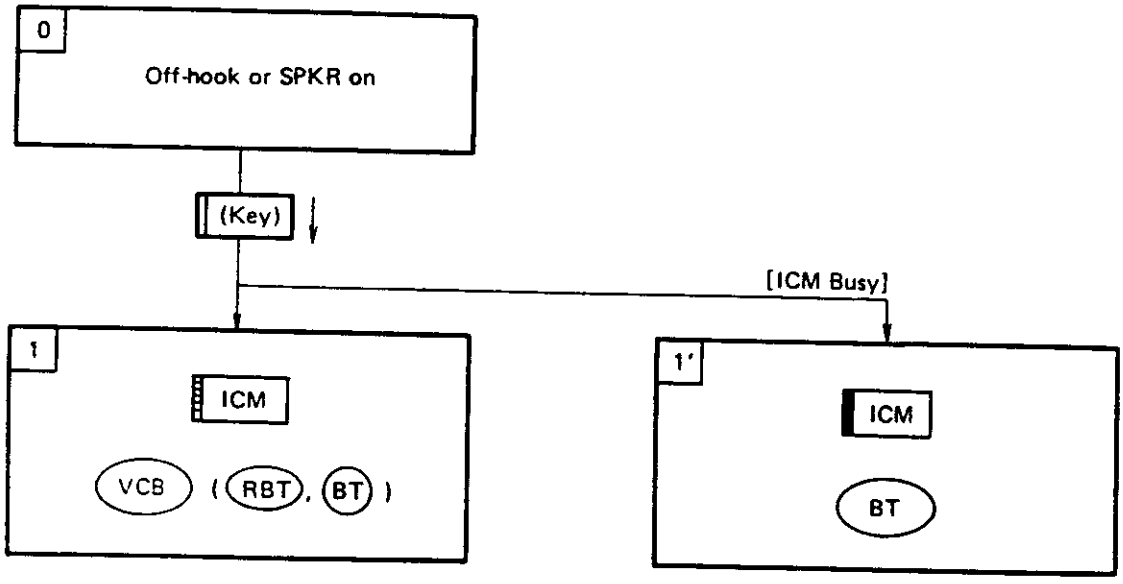
  Station Class of Service Item 26: KT Key Assignment (EXT. No. – Key No.)

A

- Operation Guide

  (Off-Hook or SPKR on) [(Key)]↓

- Operation Flow



A

2.3.A.3.1 Key Lamp

A key lamp which assigned as an automatic ICM key indicates the status of destination station.

- Conditions
  - o Status of off-hook or speaker on is indicated as busy; any other status is indicated as idle.
  - o A call from destination station of an automatic ICM is indicated on the automatic ICM key lamp.

A

2.3.A.4 Automatic Line Answer

This feature provides a KT/VP user with automatic response by lifting the handset or depressing the SPKR key.

- **Condition**

  - o COL auto-answer deny and/or ICM auto-answer deny may be programmed for each station.
  - o If two or more incoming calls can be automatically answered at the same time, the priority order of audible indications is applied. If they are the same in priority order, they are answered on a first-come-first-answered basis.
  - o Paging calls are excepted.

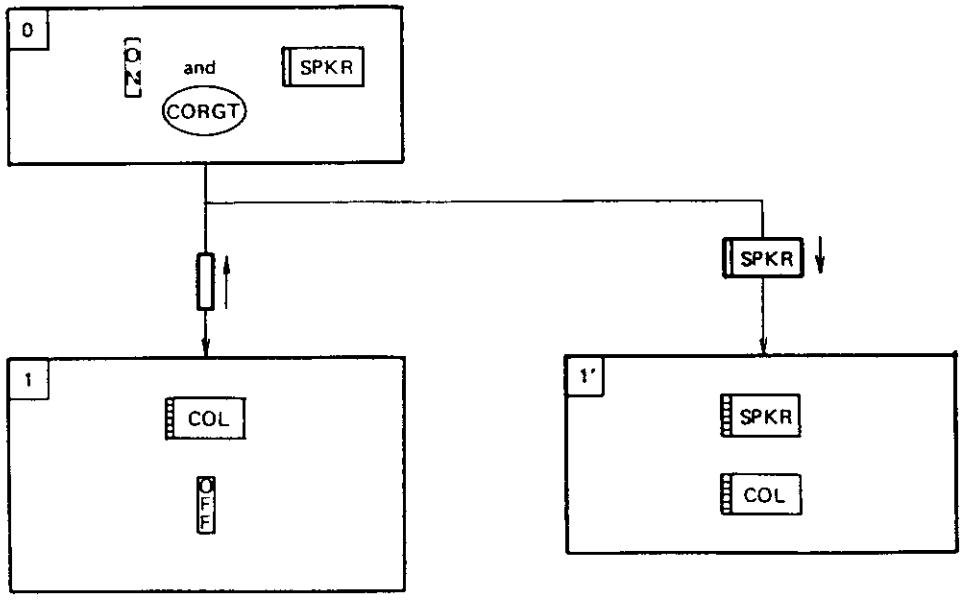
- **Programming**

Station Class-of-Service	Item 15	CO Auto-Answer Deny	
		Each EXT	{ allow (lit) / deny (blink)
	Item 16	ICM Auto-Answer Deny	
		Each EXT	{ allow (lit) / deny (blink)

- **Operation Guide**

(On-hook and SPKR off) [ ] ↑ ([SPKR] ↓)

- **Operation Flow**



A

2.3.A.5 Automatic Trunk/Station Release

System resources, such as trunks and stations, are automatically released upon timeout to facilitate effective use.

2.3.A.5.1 Permanent Signal Timeout

If a station user does not dial for 10 seconds after seizing ICM line, the line is released and a warning tone is connected to the station.

2.3.A.5.2 Partial Dial Timeout (COL)

If a station user does not dial for 10 seconds after seizing COL, the outgoing address signals are regarded as being finished and the system dial sender, if connected, is disconnected.

- Conditions

  o The system dial sender is not used when a DTMF-SLT sends address signals to a DTMF COL.

2.3.A.5.3 Partial Dial Timeout (ICM)

If a station user inputs the first digit of a dial number after seizing an ICM line and does not input the next digit within 10 seconds, the ICM is released and a Warning Tone is connected to the station.

- Conditions

  o If the first digit of the number dialed is invalid, a Warning Tone is immediately connected.

2.3.A.5.4 Partial Dial Timeout (Registration/Cancellation)

In registering or canceling features, operating intervals of input keys or dial must be less than 10 seconds. Registration or cancellation operation is complete in some cases, or invalid in others, upon timeout.

- Conditions

  o For details, refer to the pertinent sections.

A

2.3.A.5.5 Overall Timeout

Registration or cancellation of a feature must be completed within a specific time. Upon timeout, the operation is complete in some cases or invalid in others.

- **Conditions**

  - o The maximum time allowed for operating input keys and dial is as follows:

Up to three digits:	10 seconds
Four to eight digits:	20 seconds
Nine digits or more:	30 seconds

  - o For details, refer to the pertinent sections.

2.3.A.5.6 CPT Timeout

A Warning Tone or Busy Tone connected to a station continues for 10 seconds.

- **Conditions**

  - o If a station that is calling a station is overridden or if an Attendant that is calling on an ICM line finds the called party busy, a Busy Tone is connected without time limits. The former case the station may return to the call and the later case the Attendant may use busy override facility. (See Section 2.3.O.6.1 Busy Override.)

2.3.B.1 Background Music

2.3.B.1.1 BGM From KT/VP

Background music can be heard thru the speaker of KT/VP while no other audible indication exists.

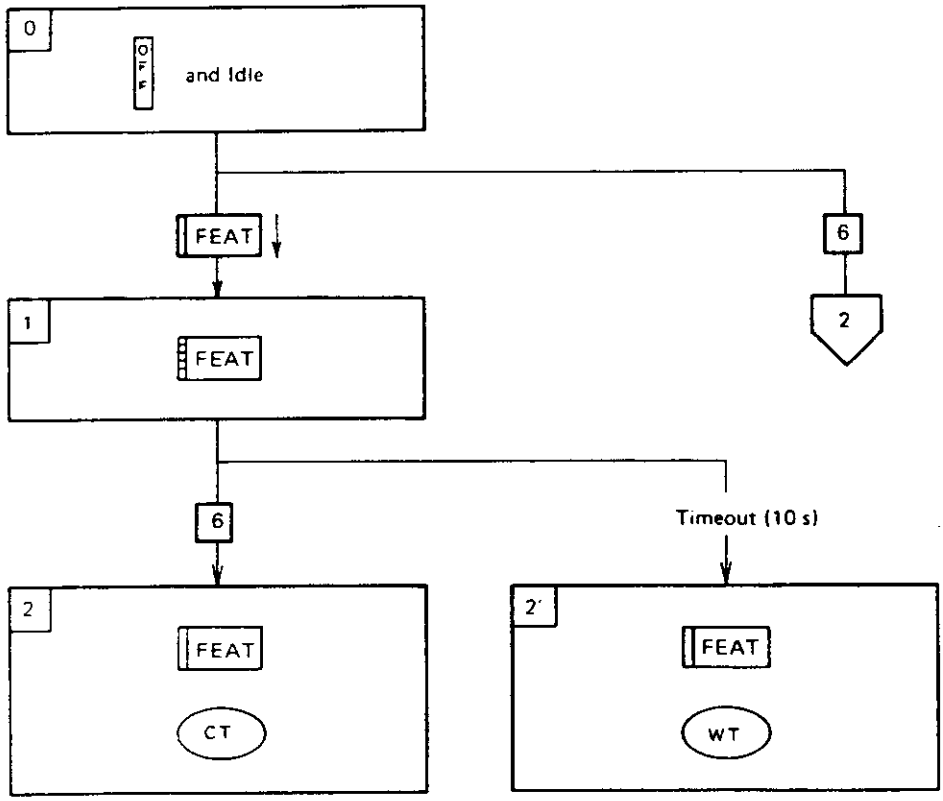
- **Conditions**
  - o A KT/VP user is allowed to change BGM on/off.
  - o The BGM is disconnected when the handset is lifted or the SPKR key is on.
  - o Source of background music needs to be connected to the system. (See Section 3.4.6, Installation of External Devices.)

2.3.B.1.1.1 BGM On

- **Operation Guide**

  (Off-hook and Idle) (FEAT) + 6

- **Operation Flow**



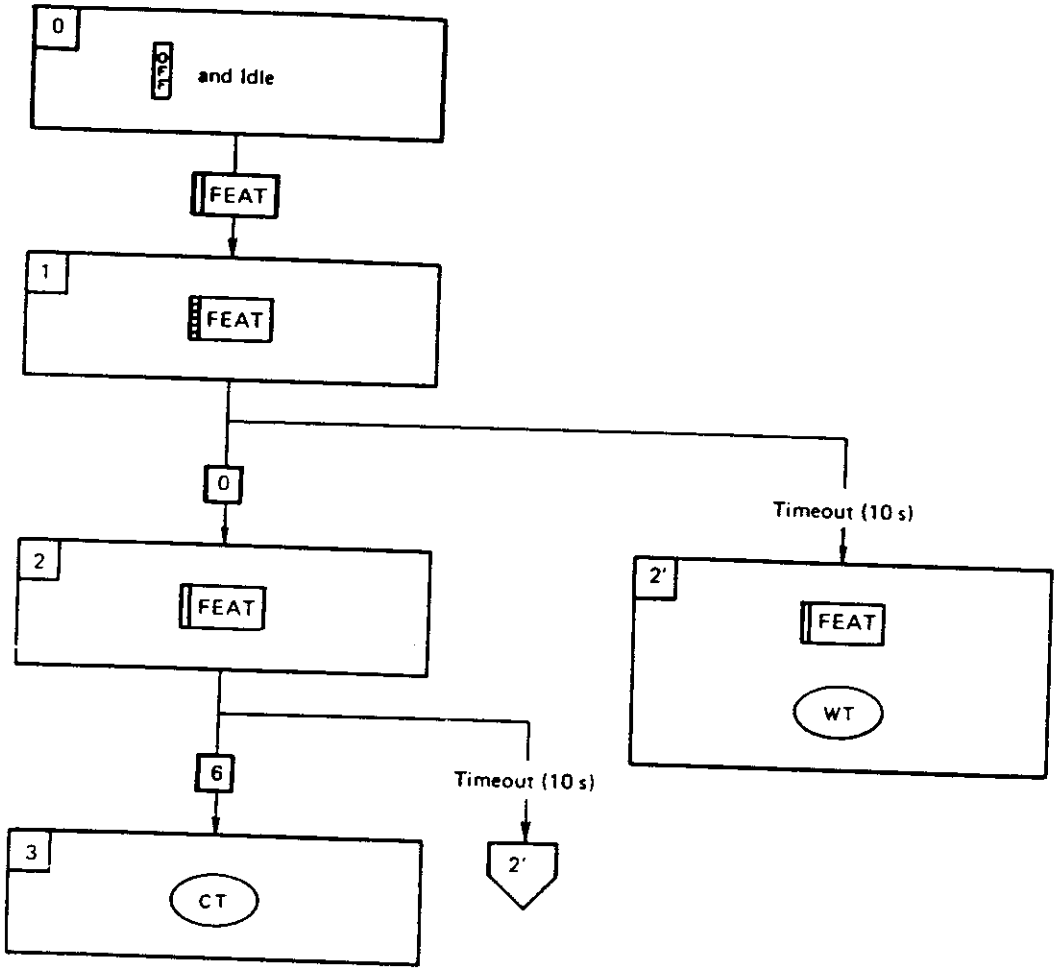
2.3.B.1.1.2 BGM Off

B

- **Operation Guide**

  (Off-hook and Idle) FEAT + 0 + 6

- **Operation Flow**



2.3.B.1.2 BGM From Zone Speaker

While zone speakers are idle, Background Music may be heard thru them.

- **Conditions**

  o Set BGM on off with Strapping Jack (See Sections 3.4.6.7 to 3.4.6.9 on instructions for external devices.)

  o Background Music Source and Amplifier are required.

B

2.3.B.2 Busy Lamp Field

2.3.B.2.1 Attendant Busy Lamp Field

An Attendant has 48 busy lamps on DSS console.

- Conditions

  - o DSS key lamps on the DSS-M/N indicate as a Busy Lamp Field unless performing Trunk Forced Release or Programming Terminal features.
  - o See Table 2.2.3.1.3 for type and content of BLF indication.
  - o The No. in Table 2.2.3.1.3 shows the indication priority (1 to 6) of indication.
  - o State of stations of the same tenant as the Attendant can be indicated on the BLF.

2.3.B.2.2 Busy Lamp Field Unit

In addition to an Attendant BLF, up to two Ex-Busy Lamp Field Unit-Ms can be connected to the system. (See Section 3.11.2 BLF-M Installation.)

- Conditions

  - o They have 12 DSS lamps which indicate the same information as those on ATTND1 or ATTND2.
  - o These 12 lamps can be assigned freely to any station.
  - o Up to 2 BLF-Ms may be connected as a subset of ATTND1 and of ATTND2, so up to 4 BLF-Ms connected in total.
  - o When the Attendant is used as Programming Terminal, all lamps on BLF-M blink out in pattern No. 8 (Programming) (Table 2.2.3.1).

2.3.C.1.3 Input Keys

[0] ~ [9] Ten Keys

[+] [−] [X] [÷] [=] [.] Arithmetic Operation Keys, Equal Key, 0-Point Key

C

[EXP]	Exponent	Used for entering a value as an exponent.
[AC]	All Clear	Clears all entries except the contents in the memory.
[MR]	Memory Recall	Load the contents of the memory.
[M+]	Memory +	Add some value to the memory. (m is displayed when a value except 0 is stored.)
[MC]	Memory Clear	Clears the contents of the memory.
[CE]	Clear Entry	Clears the immediately preceding entry. Used for correction or deletion of a value that has been entered by mistake.
[±]	Sign Reversing	Used for entering a negative value (including exponents)
[%]	Percent	Used in together with arithmetic operation keys for calculation of ratio, premium, reduction, or change ratio.

C

2.3.C.1.4 Calculation Example

o $12.3 - 45.6 + 78 \times 10^2 =$

12.3 [−] 45.6 [+] 78 [EXP] 2 [=]

o $12 \div (-3) + 45 =$

12 [÷] 3 [±] [+] 45 [=]

o $2 \times 3 =$
$+) 4 \div 5 =$
total

2 [x] 3 [=] [M+] 4 [÷] 5 [=] [M+] [MR]

o $2 + 2 + 3 + (6 \times 3) + (5 \div 4) =$

2 [M+] [M+] 3 [M+] 6 x 3 [M+] 5 ÷ 4 [M+] [MR]

o What percentage is 20 of 50?

$\frac{20}{50} \times 100 =$ 20 [÷] 50 [%]

o What value is 17% of 1500?

$1500 \times \frac{17}{100} =$ 1500 [x] 17 [%]

o What percentage is the sum of 85 and 20 of 85?

$\frac{85 + 20}{85} \times 100 =$ 20 [+] 50 [%]

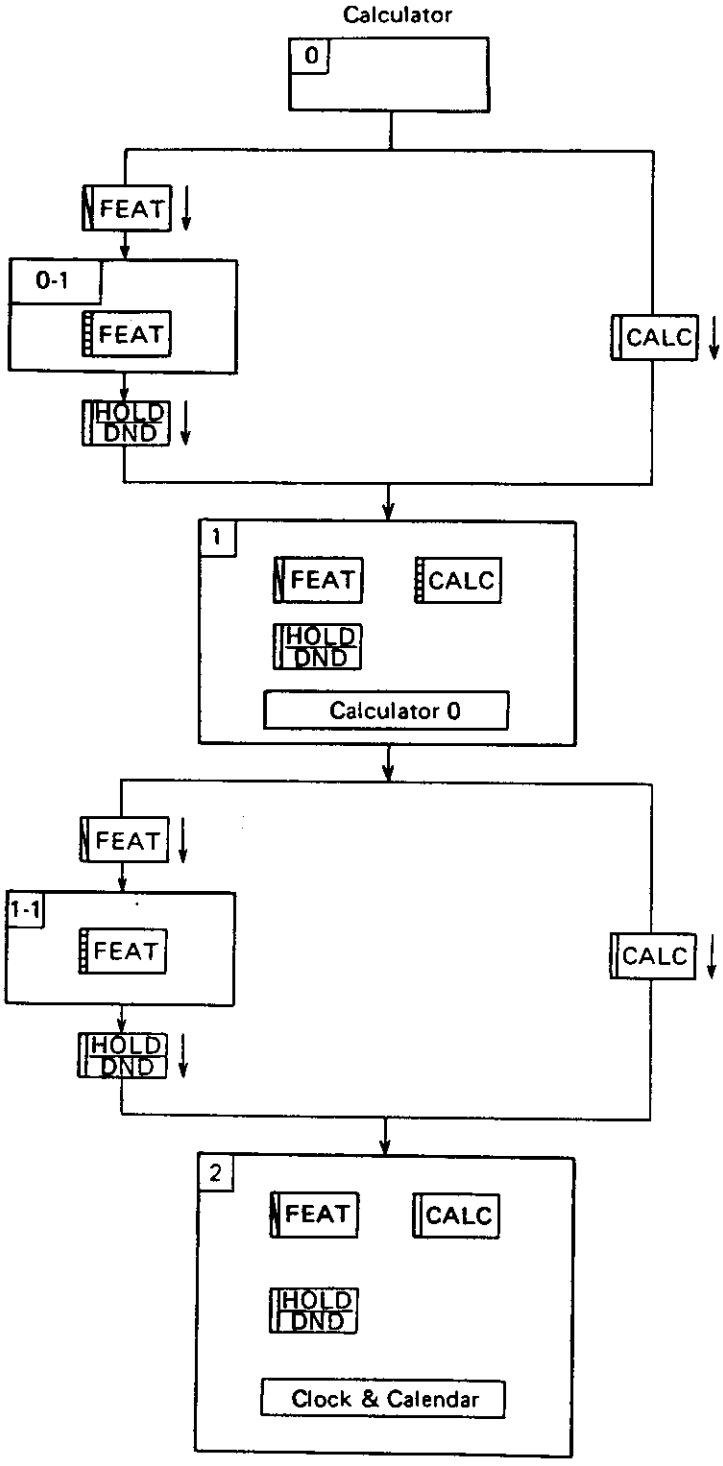
o By what percentage is 46 larger than 40?

$\frac{46 - 40}{40} \times 100 =$ 46 [−] 40 [%]

o By what percentage is 55 smaller than 63?

$\frac{55 - 63}{63} \times 100 =$ 55 [−] 63 [%]

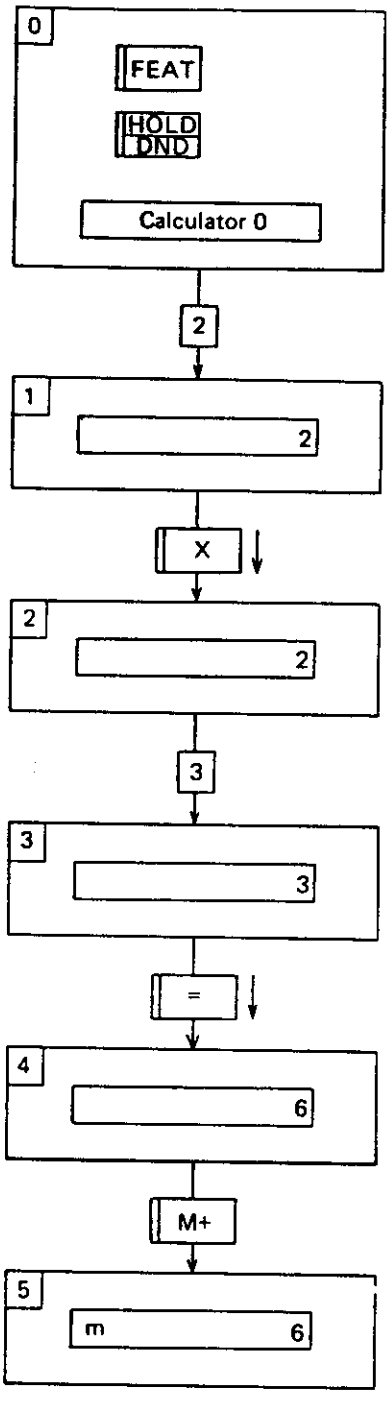
- Operation Flow



C

- Operation Flow

Calculator Operation Sample 2 x 3 = 6 Memory In



2.3.C.2 Call Abbreviation (Abbreviated Ringing)

Ringing is abbreviated in some kind of call when the called KT/VP is busy.

- Conditions

  - o This feature is applied to COL Recall, COL Callback, COL Camp On, ICM Hold Recall, and ICM Callback.

  - o Busy condition is defined as the receiver being off-hook or the speaker being on.

  - o The system gives only a single audible ring of short duration at the called station.

  - o An Abbreviated Ringing returns to normal when KT/VP becomes idle.

  - o When there is an abbreviated call (A) and an unabbreviated call (B), and the priority of A is higher than B, then A is rung the usual pattern, but while KT/VP is busy, A is rung for the first period and then B is rung continuously.
    (Example: A: COL Recall, B: COL RGT)

  - o Valid with KT/VP which has the class-of-service 'Off-hook Signal Deny'.

2.3.C.3 Callback Queuing

Callback queuing is valid on busy COLs or busy COL groups.

2.3.C.3.1 COL Call Back Queuing

A KT/VP user can register a queuing on a COL or a COL group while the COL or the COL group is busy so that an alert with Callback Tone is made when it becomes idle. If he registers telephone number together, that telephone number is automatically dialed when he responds to the Callback.

- Conditions

  - o This feature is not available on outgoing restricted COL.
  - o Multiple reservations on the same COL are called back in the order the reservations are made.
  - o Only one newest registration (including Timed Trunk Queuing) is valid for one KT/VP.
  - o A Callback Tone continues for certain duration of time and then automatically released if it is not responded. (Duration of time can be set freely by Programming System Constants item 6 to between 10 and 255 seconds. Default value is 20 seconds.)
  - o When COL call incomes while Callback Tone is ringing, the Callback is interrupted and COL RGT ringing replaces it. Callback restores after the conversation on the COL has completed.
  - o Callback Queued COL cannot be picked up by other station than called party.
  - o Abbreviated Ringing is applied to the Callback Tone. (See Section 2.3.C.2 Abbreviated Ringing.)
  - o The Callback Tone is prior to Call Forward/Busy Call Forward and DND. (See Section 2.3.T.2 Timed Trunk Queuing.)

2.3.C.3.1.1 Registration

A KT/VP user can set a Callback Queuing at the moment a COL/COL group outgoing call becomes busy.

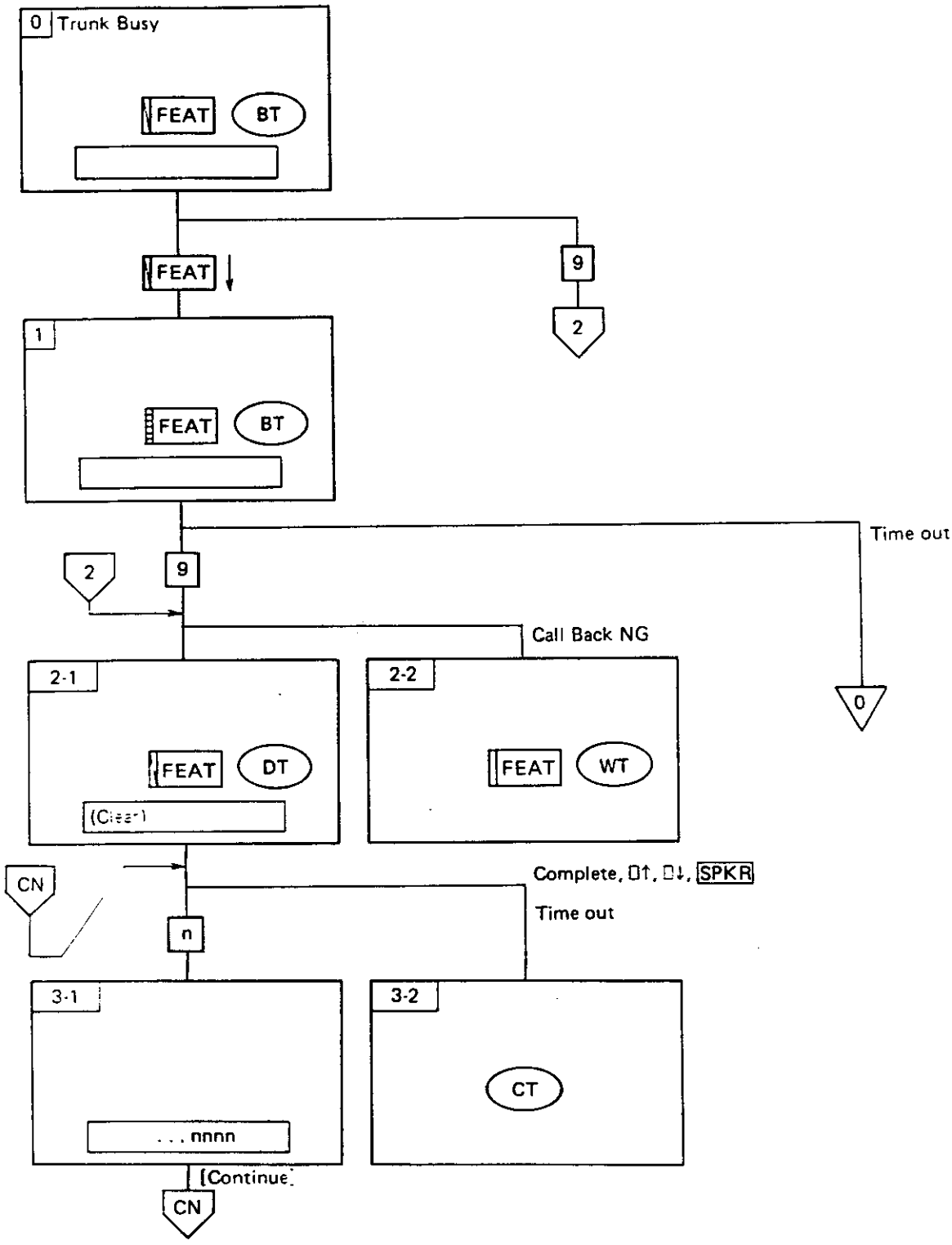
C

- Conditions
  - o A maximum of 32 digits can be registered for automatic dialing.
  - o Automatic dialing number '*n' means 'for n-seconds pause' and '**' means dial '*'. They are counted as two digits.
  - o A KT/VP users may save a Speed Dial or Redialing number as the telephone number of automatic call origination.
- Operation Guide

(Off-hook and BT) [FEAT] + [9] + ([d_1] + [d_2] + . . . + [d_n])
$(1 \leq n \leq 32)$

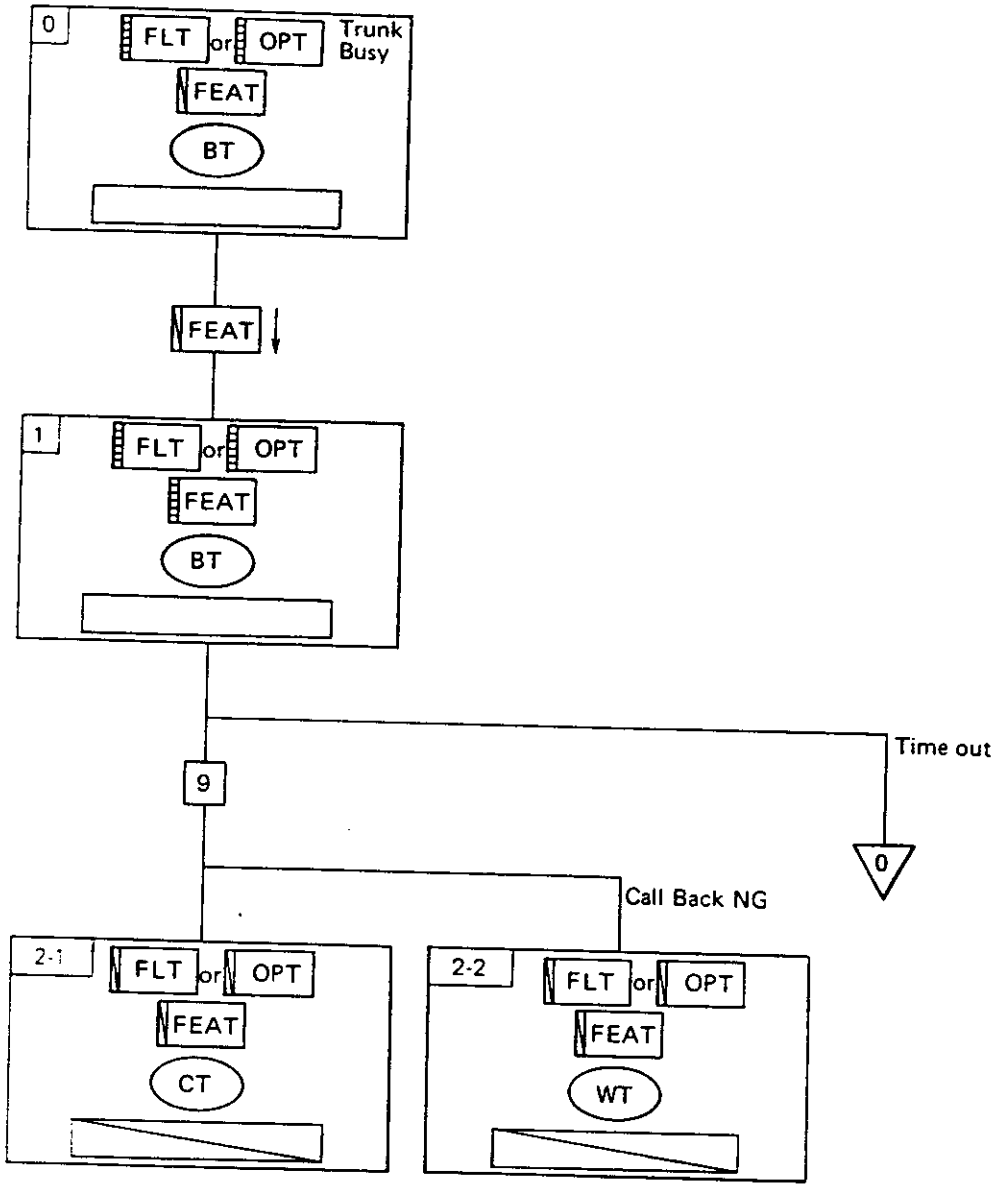
- Operation Flow

i) COL Group Access



ii) Optimized Call Routing Access

C



2.3.C.3.1.2 Cancellation

A KT/VP user can cancel the registration of a Callback Queuing.

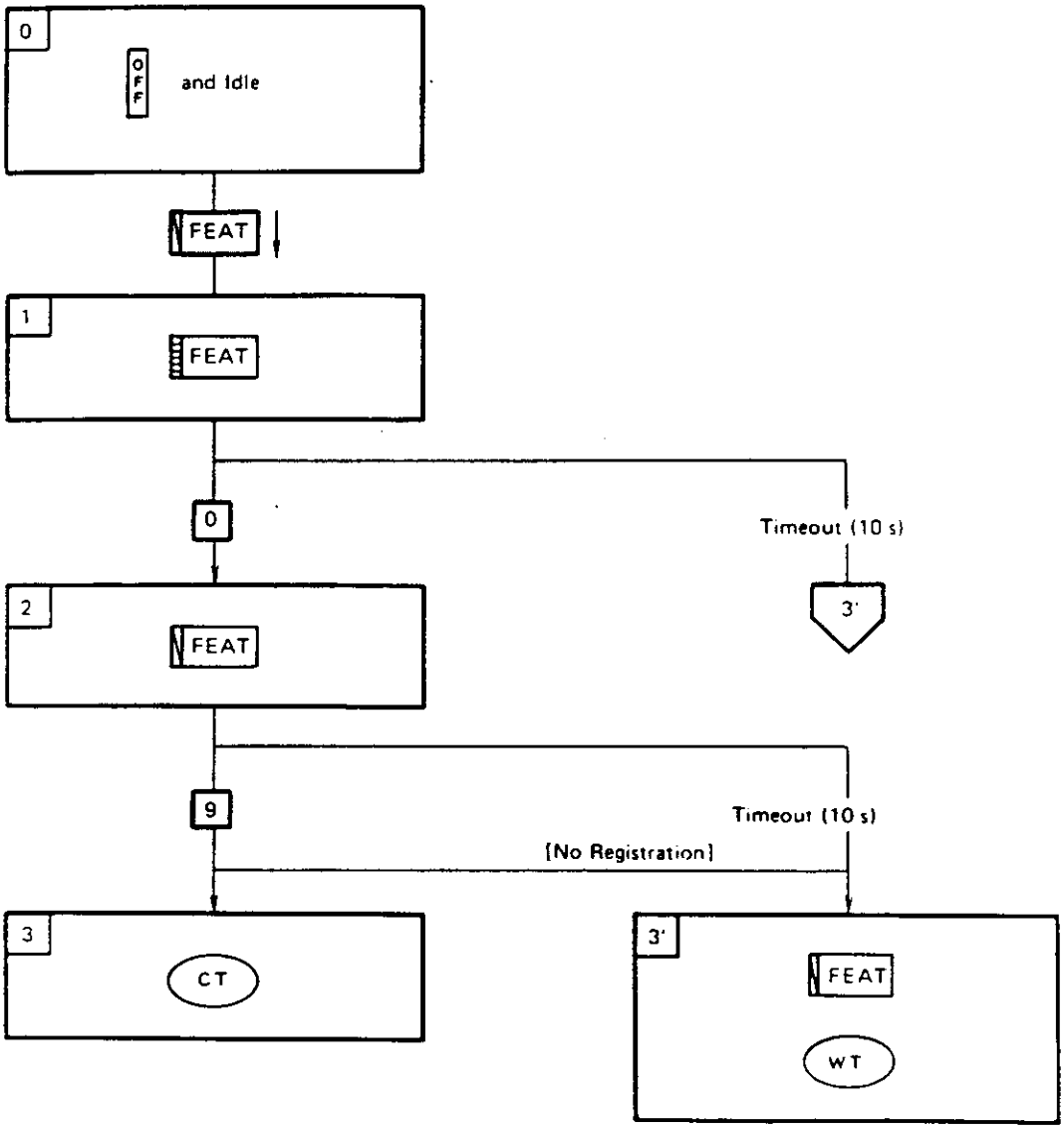
- **Condition**

  Callback queuing cancel and timed trunk queuing cancel are done by the same operation.

- **Operation Guide**

  (Off-hook and Idle) FEAT + 0 + 9

- **Operation Flow**



2.3.C.3.2 ICM Automatic Callback

C

If a KT/VP user registers an Automatic Callback when the called party is busy or does not respond an ICM call, an ICM Callback Tone is returned to the station when called party and caller becomes idle. An ICM call then automatically is connected to the called party as soon as the caller respond to the Callback.

- Condition

  - o Callback is activated only when the station of the called party is not in DND status, on-hook status, and not receiving another call.

  - o A Callback Tone continues for certain duration of time and then automatically released if it is not responded. (Duration of time can be set freely by Programming System Constants item 6 to between 10 and 255 seconds. Default is 20 seconds.)

  - o When all the available ICM are busy, no Callback is made even if the called station goes idle.

  - o Only one Automatic Callback can be registered per station.

  - o If a station that has already registered an Automatic Callback registers new one, the former registration is automatically canceled.

  - o If two or more registration are set to a station, the earlier one is activated when the station goes idle.

  - o When a KT/VP user completes registration/Cancellation, he receives a CT.

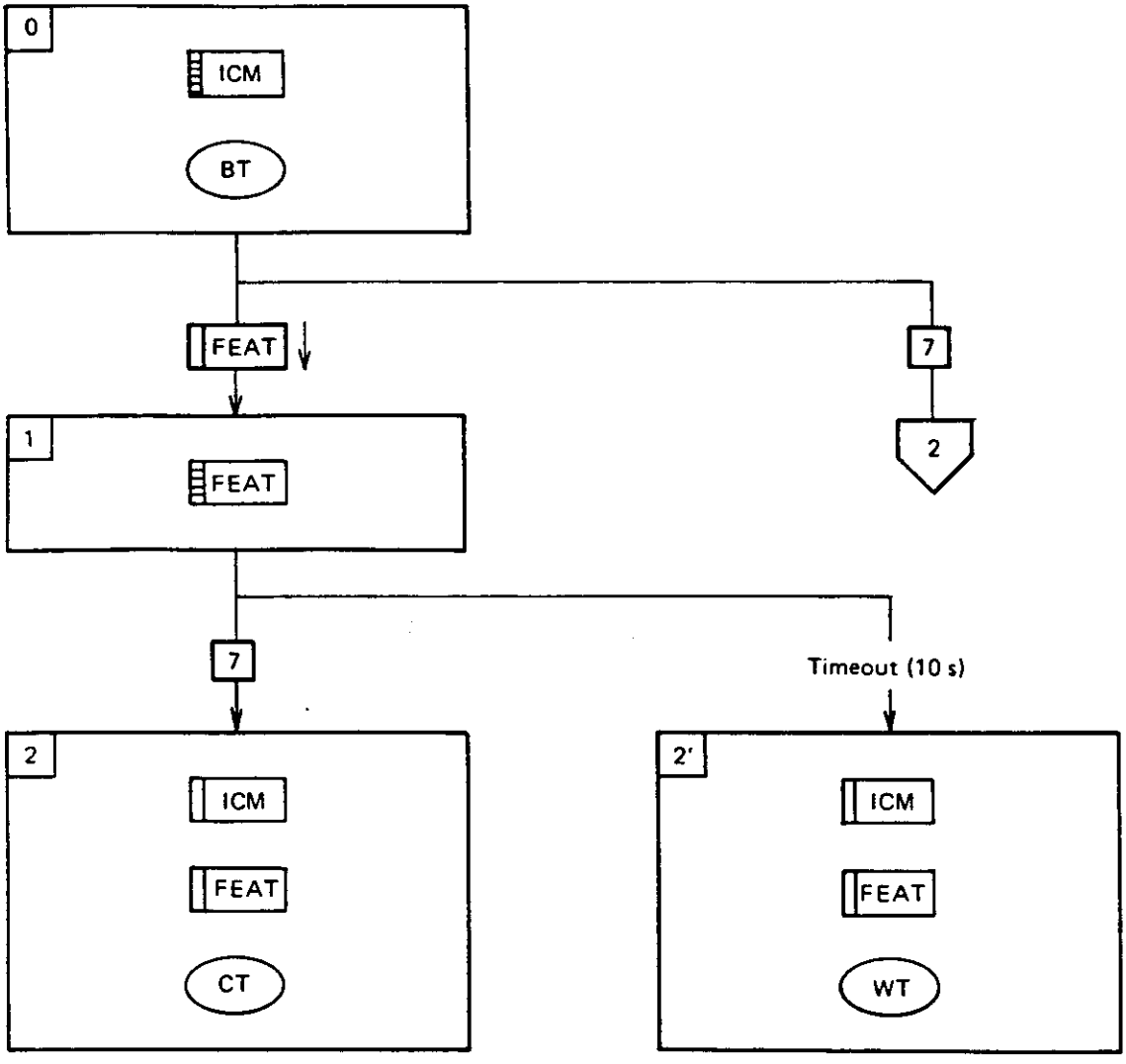
  - o If he cancels inspite of no registration, he receives a WT.

2.3.C.3.2.1 Registration From Key Telephone/Versa Phone

- Operation Guide

(ICM BT) (FEAT) + 7

- Operation Flow



2.3.C.3.2.2 Registration From Single-Line Telephone

- Operation Guide

(ICM BT) ↓↑+ [1] + [7]

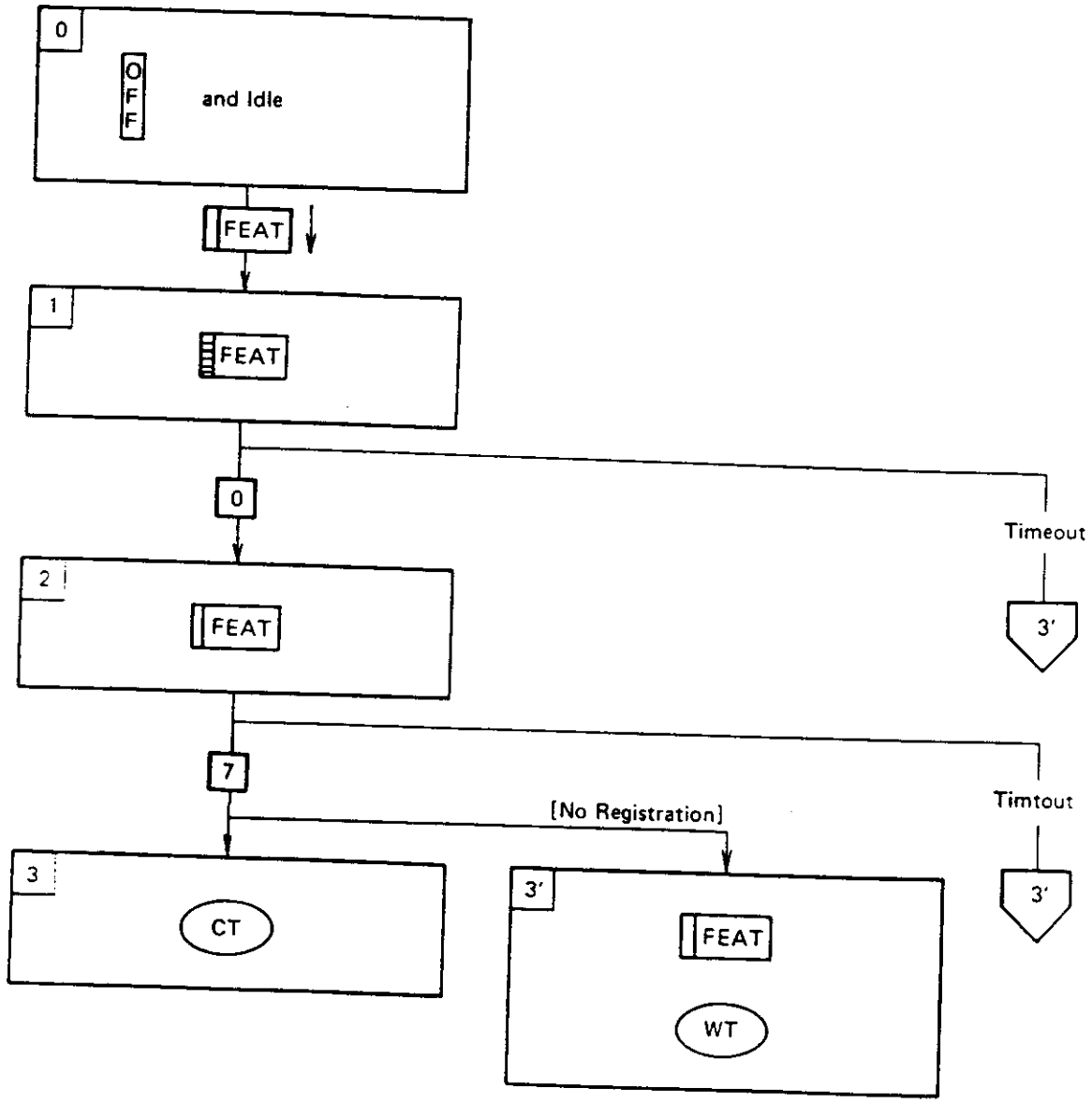
C

2.3.C.3.2.3 Cancellation From Key Telephone/Versa Phone

- Operation Guide

Off-hook and Idle) [FEAT] + [0] + [7]

- Operation Flow



2.3.C.3.2.4 Cancellation From Single-Line Telephone

- Operation Guide

  (DT and Registration On) [1]+[0]+[7]

C

2.3.C.4 Call Forward

This feature allows a station user to register call forward destination number, and while call forward is activated by the station user, all incoming calls except callback and recall to this station will be automatically rerouted to that registered destination station.

Call Forward functions are classified as follows:

2.3.C.4.1 Call Forward

2.3.C.4.2 Busy Call Forward

See Section 2.3.A.1.14 Call Forward Forced Release.
See Section 2.3.A.1.15 Busy Call Forward Release.

2.3.C.4.1 Call Forward

Certain kinds of call is automatically rerouted to a destination station while call forward is activated.

- Conditions

C

  - o Destination station number is required to be registered.
  - o Calls which may be forwarded are showed below.
    - i) COL RGT
    - ii) ICM Voice Call
    - iii) ICM Tone Call (excluding Master Group Hunt Call)
  - o If the destination of Call Forward is engaged in Call Forward, the call is rerouted again, but it cannot be rerouted any further.
  - o A COL call is not rerouted to a station which is restricted to pickup the COL.
  - o Recursive call forward may be registered. In this case rerouting is executed as described below.

    (Example 1) A: Call Forward to B

    A rings when B calls A.

    (Example 2) A: Call Forward to B, B: Call Forward to C

    B rings when C calls A.

  - o Once call forward is registered, station user can activate or inactivate the Call Forward function. Calls are not forwarded when inactivated.
  - o Call forward registration can be denied according to station class of service.

- Programming

Station Class-of-Service

Item 6	Busy Call Forward	Lit:	Call Forward
Item 18	Call Forward Deny	Lit:	Allow