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## INTRODUCTION

This manual provides the information required to install and maintain the PRO-XL 1032 Electronic Key Telephone System. Areas covered include standard precautions relating to lightning and proper handling of electronic circuit boards, technical specifications, site selections, hardware installation and programming.

It is necessary that the installer read this document prior to beginning installation.

A User's Guide is provided with each phone.

Special care has been taken during the design of the PRO-XL 1032 to reduce the time required to install the system. Through careful quality manufacturing, many steps have been eliminated from installation and programming.

The KSU is shipped with the MAU card, the POWU card, and 8STU card and a 6COU card in place. This basic equipment will accommodate six C.O. lines and eight stations using any combination of basic handsfree phones and speakerphones.

There are five options:

1. SMDRU Card - which provides station message detail recording (SMDR).
2. 8STU Card - three additional circuit boards, providing 8 stations each, brings system total to 32 stations.
3. PFTU Unit - Power Failure Transfer Unit is externally mounted.
4. 4COU Card - providing 4 additional C.O. lines, brings system total to 10 C.O. lines.
5. DSS/BLF Console

The programming of system functions, timings and features have been simplified to save additional time. Simple charts provide all the information necessary to program the system from Station 10.

We sincerely believe you will find the PRO-XL 1032 to be the easiest 1032 you have ever installed and that your customers will enjoy years of trouble-free service from this system.

## LIGHTNING

Lightning, static charges in the atmosphere, will always discharge through the strongest available earth ground.

Telephone equipment usually has several entrances through which lightning can enter and damage its electronic components such as AC power, C.O. lines and off premise extensions. Usually all of the protective devices must be grounded to be effective. Additionally, the KSU frame is usually grounded. Often, different earth grounds are used for each type of device.

With several entrances, each grounded to a different earth ground, lightning damage to the equipment is caused by the differences in the potential of each ground. Some of the static charge can jump the protector having a lower ground potential and go through the equipment to a ground having a higher potential.

To prevent problems caused by grounds with different potentials, it is imperative to bond all grounds with size 10 AWG or larger copper wire to balance the potential of all grounds.

Note: A good ground potential is less than 5 ohms.

## HEARING AID COMPATIBILITY

FCC rules prohibit the use of non-hearing-aid-compatible telephones in the following locations:

1. Any public or semi-public location where coin-operated or credit card telephones may be found.
2. Elevators, highways and tunnels (automobile, subway, railroad or pedestrian) where a person with impaired hearing might be isolated in an emergency.
3. Places where telephones are specifically installed to alert emergency authorities such as fire, police or medical assistance personnel.
4. Hospital rooms, residential health care facilities, convalescent homes and prisons, specifically where telephones are used for signaling life-threatening or emergency situations if alternative signaling methods are not available.
5. Work stations for hearing-impaired personnel.
6. Hotel, motel, apartment lobbies; in stores where telephones are used by patrons to order merchandise; in public transportation terminals where telephones are used to call taxis or to reserve lodging or rental automobiles.
7. Hotel and motel rooms. At least ten percent of the rooms must contain hearing-aid-compatible telephones; or contain jacks for plug-in hearing-aid-compatible telephones which will be provided to hearing-impaired customers upon request.

## PARTS LIST

<u>ITEM</u>	<u>QUANTITY</u>	<u>ACCESSORIES PROVIDED</u>
PRO-XL 1032 KSU	1	Fuse; 125V 6.3 AMP (provided in the KSU)
	4	+M4.1 x 32S Wood Screws for mounting KSU
	2	SKB-2M 1032 Cable Tie
	1	PRO-XL 1032 Installation Manual
	1	PRO-XL 1032 User's Guide Directory Card
PRO-XL 1032 HF-EKT	1	PRO-XL 1032 User's Guide Directory card
PRO-XL 1032 SPK-EKT	1	PRO-XL 1032 User's Guide Directory card
PRO-XL 1032 BLF-EKT	1	PRO-XL 1032 User's Guide Directory card
DSS/BLF Console	1	-M3x8S Tapping Screw Directory Card
8STU Card	2	S/C24x90BD (1.25) Flat Cable
	1	Cable Tie
	4	Stand-Offs A
	4	+M3x8S Screw
	2	Stand-Offs D
SMDRU Card	2	LCBS-16N Spacer
	1	S/C13x90BD (1.25) Flat Cable
	2	+M3x8S Screw
	2	PCB-4L Spacer
	1	Cable Tie
4COU Card	1	S/C20x90BD Flat Cable
	1	S/C24x90BD Flat Cable
	1	8x70 Ribbon Cable
	4	Stand-Offs D
	4	+M3x8S Screw
PFTU	1	1-pair PFTU Cord
	4	-M3.1x25S Wood Screw

## TECHNICAL SPECIFICATIONS

### KSU SPECIFICATIONS

Size:	15.7" High, 19.0" Wide, 3.0" Deep (399 mmH x 482 mmW x 76 mmD)
Weight:	10.7 Pounds (4.8 Kg.)
Power:	Input: 117 VAC Output: 24 VDC
Fuses:	4 AAC (125V)
Basic Card:	MAU Main Control Unit 8STU 8-Station Unit 6COU 6-Central Office Interface Unit POWU Power Unit
Optional:	8STU 8-Station Expansion Unit PFTU Power Failure Transfer Unit (mounted externally) 4COU 4-Central Office Interface Unit SMDRU
Terminals:	Female Amphenol Connector for C.O. Lines.  One RS232C Connector for SMDR  Amphenol Connector for Telephone Stations  One RJ14C Modular Jack for Music-On-Hold and External Paging  Screw for KSU Grounding

## TECHNICAL SPECIFICATIONS

### TELEPHONE SPECIFICATIONS

Type:	PRO-XL 1032 HF-EKT Basic Handsfree Telephone PRO-XL 1032 SPK-EKT Speakerphone PRO-XL 1032 BLF-EKT Busy Lamp Telephone
Size:	4.1" High, 7.7" Wide, 8.9" Deep (103mmH x 196 mmW x 225 mmD)
Weight:	2.2 Pounds (1 kg.)
Connection:	4-Conductor RJ14C Modular Jack
Cabling:	4-Conductor, Non-shielded Twisted Pair Cable.
Maximum Cable Run:	900 Feet for 22 AWG Cable 700 Feet for 24 AWG Cable

### DSS/BLF CONSOLE SPECIFICATIONS

Size:	3.15" High, 7.7" Wide, 8.9" Deep (80 mmH x 196 mmW x 225 mmD)
Weight:	1.2 Pounds (0.7 kg.)
Connection:	12 Pin Connector
Cabling:	No Additional Cabling Required

## PRE-SURVEY

The PRO-XL 1032 KSU should be wall mounted. Consider the following factors when selecting a site for the installation of the KSU:

### LOCATION OF THE KSU CABINET

1. An isolated 117 volt AC power outlet with equipment ground, (3rd wire ground), must be within six feet of the KSU.
2. It is recommended that the telco RJ21X jack be placed no more than 25 feet from the KSU.
3. Stations should be located no farther from the KSU than:
  - 900 feet for 22 AWG cable
  - 700 feet for 24 AWG cable
4. Space should be allowed for accessing and servicing the KSU.
5. The KSU should be located in a well ventilated area having a temperature range of from 32 degrees F to 104 degrees F (0 degrees C to 40 degrees C).
6. The site selected should be dry (humidity below 90%) and the KSU should not be located beneath pipes because of the possibility that leaks or condensation may cause damage.
7. The area must be free of corrosive gases, excessive chemical or industrial dust. If possible, the KSU should be away from copying machines, fax machines or large electrical motors.
8. A good cold water pipe ground should be accessible to the KSU.