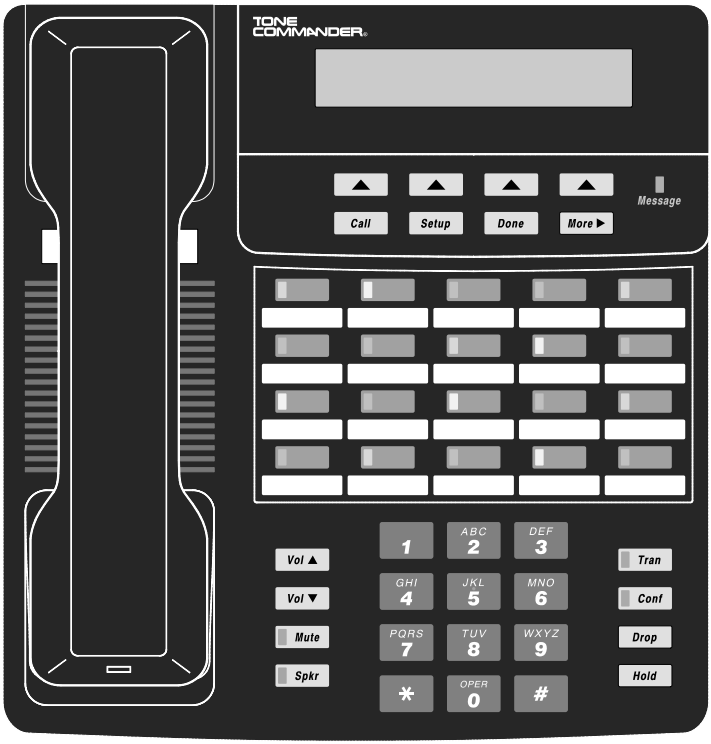
TONE COMMANDER®

6002TA
Analog Port Terminal Adapter
User Manual



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Introduction

The Model 6002TA Analog Port Terminal Adapter adds one POTS (Plain Old Telephone Service) port to a Tone Commander 6210 or 6220 ISDN telephone, for standard telephones, fax machines, or analog modems. Adapter circuitry is housed in a telephone base that replaces the standard base.

POTS port features include independent ring delay settings, call waiting tone and caller ID display support, a privacy option to prevent line access from the 6210/6220 when busy, call transfer and conference, and originating call appearance selection.

Typical Applications

Cordless handset or headset – calls can be originated or answered from a cordless phone or cordless headset phone. Call transfer and conference features are provided. On-hook and off-hook (call waiting) caller ID displays are supported, as well as call waiting tones.

Conference Room Speakerphone – use high-performance analog conference room equipment, such as a Polycom SoundStation® on your ISDN line. Calls can be dialed or answered on either the ISDN phone or the conference room speakerphone and easily switched between devices.

Analog Modem – data rates up to 56Kbps for outgoing calls may be supported, depending on your modem and the connecting party. Call waiting tones may be disabled to ensure data integrity.

Fax – your fax machine can answer and originate calls on your primary directory number, or any other number provisioned on your ISDN line. Privacy options are provided to ensure reliable fax transmission.

Answering Machine – your answering machine can answer calls to any number provisioned on your ISDN line. Separate ring delays may be programmed on the analog port to allow calls to be answered on the ISDN phone before the answering machine picks up.

TTY – the analog port provides a standard non-acoustical connection point for TTY (teletypewriter) devices that meets the accessibility requirements of Section 508 for communication disabled users.

You cannot place a modem or fax call and a voice call at the same time (only one active call is allowed).

See page 6 for modem and fax application settings.

Operation

Placing a Call

Go off-hook on the analog phone, wait for dial tone, then dial the called number. The originating call appearance indicator on the 6210/6220 will light amber while that line is in use by the POTS port.

The call appearance selected for originating POTS calls (see page 13) is used if idle. If this call appearance is in use, another primary originating call appearance will be used if available.

Only one call can be active at a time. Calls cannot be placed on the POTS port if the 6210/6220 is on an active call. When the POTS port is busy, no calls can be placed from the 6210/6220; the display will show “ANALOG PORT IN USE” if you attempt to place a call from the ISDN phone.

Answering a Call

Call appearances will ring at the POTS port after the selected ring delay (see page 10), unless the ring delay is set to NEVER. Go off-hook on the analog phone to answer the call. The originating call appearance indicator on the 6210/6220 will light amber, and no calls can be placed from the 6210/6220 while the POTS port remains in use.

The 6210/6220 has ring delay settings independent from the POTS port. Calls may ring at the 6210/6220 before ringing at the POTS port if the POTS port has a longer ring delay.

If multiple calls are ringing, the first call appearance to ring at the POTS port is answered when going off-hook on the analog phone.

Switching a Call Between the POTS Port and Speakerphone or Handset

Use the 6210/6220 ***Spkr*** key or hookswitch to switch a call from the analog phone to the 6210/6220 speakerphone or handset. The call will be disconnected from the POTS port.

To switch the call back to the analog phone, *hang up the analog phone first*, go off-hook, then press the **#** key on the analog phone. You will not hear dial tone, and the **#** tone will not be sent out over the ISDN line. You can continue to switch the call between the phones regardless of where the call was answered.

This feature is disabled if Privacy is set to ON (see page 11).

Call Waiting

> *Most telephones have a Flash key that sends a timed hookflash. This key is used during call swapping, conferencing, and transferring. If your analog phone does not have a Flash key, you can send a flash by quickly pressing and releasing the hookswitch.*

When the POTS port is in use and another call rings, a call waiting tone and/or a caller ID display may be sent to the analog phone. Press the Flash key on the analog phone to place the current call on hold and answer the incoming call. Swap between the calls by flashing.

Call waiting may be set for caller ID, call waiting tone only, or disabled (see page 12).

Conferencing Calls

Press the Flash key on the analog phone to place the current call on hold and originate a new call. Dial the second party. After the second party answers, flash again to conference all parties together.

If the second party is busy, does not answer, or does not want to join the conference, hang up. Your phone will ring, and you will be reconnected to the first party when you answer.

To add another party to the conference, flash again. Dial another party as above. The number of parties that can be in a conference is determined by your ISDN line provisioning from your service provider (typically 3 or 6).

Transferring Calls

Calls can be transferred by establishing a conference call, then removing yourself from the conference.

After establishing a call, press the Flash key, then dial the second party. Any time after the second party begins to ring, you can flash to conference all parties together, then hang up to remove yourself from the conference. You can wait until the second party answers to announce the call, or flash and hang up immediately for an unscreened transfer.

> *The ISDN conference feature provisioned on your line must support implicit transfer capability. Otherwise, the two remaining parties will be disconnected when you hang up.*

If the second party is busy or you want to abort the transfer, hang up *without* flashing. Your phone will ring, and you will be reconnected to the first party when you answer.

Using an Analog Modem or Fax

An analog modem or fax device may be connected to the POTS port.

For this application:

- If you have a dedicated call appearance (directory number) for incoming modem or fax calls, set ringing control for the POTS port to ALWAYS on that call appearance (page 10) for immediate answer by the fax or modem device. Set all other call appearances to NEVER.
- Set the ringing control for the 6210/6220 to NEVER for the fax/modem call appearance (***Setup*** → USER → RING → CONTROL).
- Set the fax/modem call appearance as the primary originating POTS call appearance (page 13).
- Privacy must be set to ON (page 11).
- Disable POTS port call waiting (page 12).

Using a Text Telephone (TTY)

A text telephone can be connected to the POTS port, allowing you to answer text calls. After answering a call on the ISDN phone, you will hear a TTY alert tone from the calling party. Go off-hook and dial **#** on the text telephone to switch the call from the ISDN phone.

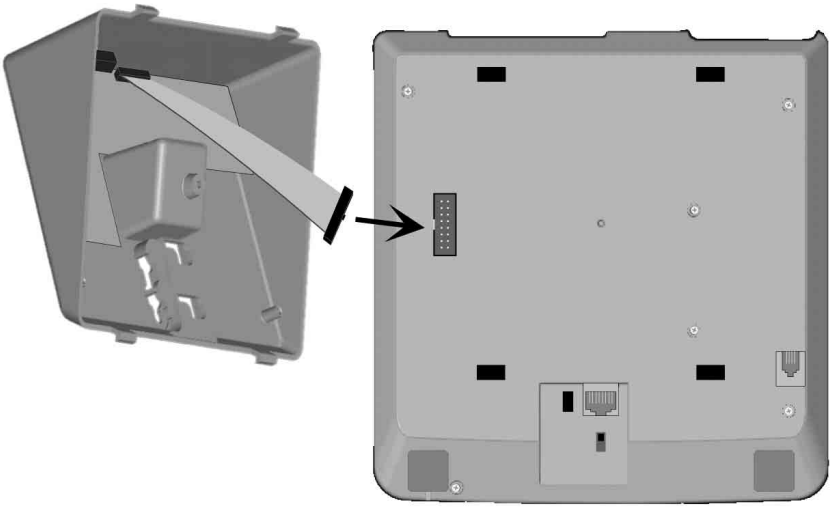
For TTY applications:

- If you have a dedicated call appearance (directory number) for TTY calls, set ringing control for the POTS port to ALWAYS on that call appearance (page 10) for immediate answer by text telephone. Set all other call appearances to NEVER.
- If you do not have a dedicated TTY call appearance, and want to answer calls on the ISDN phone, set ringing control for the POTS port to NEVER or WAIT2-7 for all call appearances.
- Privacy must be set to OFF (page 11).
- Disable POTS port call waiting (page 12).
- You may want to create a phone directory entry on the text telephone to simplify call switching. This entry should contain only the **#** character.

Installation

Telephone operating software must be version 01.05.xx or higher to support the 6002TA. To view the installed software version, select VERS, then S/W from the Administration Options menu (***Setup*** → ADMIN→ VERS→ S/W). If your phone's software version is lower than 01.05.xx, call Tone Commander at (800) 524-0024 to request an update.

Mounting the Base



1. Disconnect the line cord from the telephone.

   Power must be disconnected before installing the 6002TA. Wait 10 seconds after disconnecting power before proceeding.

2. Remove the retaining screw in the center of the base.
3. Press the top of the tall edge of the base to disengage the snap tabs, then lift the original base from the telephone body. Do not touch the expansion connector.

4. Replace the original base with the 6002TA terminal adapter base. Plug the cable from the terminal adapter base into the expansion connector on the telephone. The polarization tab on the plug must fit into the opening on the side of the phone connector.
5. Snap the terminal adapter base onto the phone. The base may be rotated for wall mounting.
6. Replace the retaining screw (required for UL compliance).

Connecting the POTS Device

Connect the analog telephone device to the jack on the back of the base, using a standard 4 or 6-conductor cable.

> ***WARNING:***
>
> The 6002TA is intended to connect to local analog POTS telephone devices via relatively short (less than 300 feet) inside-plant cabling.
>
> Do not connect to wiring that extends outside or between buildings, or that may be subject to electrical hazards, such as lightning or power line crosses.
>
> Do not connect to a telco network telephone line. Damage to the POTS port may occur.

POTS Port Options

The following options can be configured from the POTS Port Options menu:

- Ring Control
- POTS Line Privacy
- Call Waiting
- POTS Originating Call Appearance

POTS Port Options Menu

You can enter the POTS Port Options menu at any time.

Setup Press the ***Setup*** key.

```
        SETUP MENU
INSTL ADMIN  USER  POTS
```

▲ Select POTS.

```
POTS PORT OPTIONS:
RING  PRIV  CALLWT  ORIG
```

POTS Ringing Control

You can control the audible ringing at the analog telephone device for each call appearance. Similar independent settings in the User Options menu (***Setup*** → USER → RING → CONTROL) control ringing at the 6210/6220 telephone – refer to the 6210/6220 User Manual.

Call appearances set to **ALWAYS** will ring immediately at the POTS port.

NEVER completely disables ringing at the POTS port for the call appearance.

WAIT delays ringing at the POTS port for 2 to 7 ringing cycles (6 seconds per cycle).

When using a cordless phone on the analog port, select ALWAYS for primary call appearances, and NEVER for secondary or shared call appearances. You can select a WAIT option on primary call appearances when the analog phone is used as a backup answering position; set the POTS port ring delays longer than the 6210/6220 delays to ensure that calls always ring at the 6210/6220 first.

Note – You cannot answer a call on the POTS port unless it is ringing (ring delays have timed out).

For fax or modem applications, select ALWAYS for the fax call appearance, and NEVER for all other call appearances. Set the 6210/6220 ringing for the call appearance to NEVER; fax/modem calls will only ring at the POTS port.

From the POTS Port Options menu, select RING. (***Setup*** → POTS → RING)

All multifunction keys that are programmed for call appearances or DSS will have a steady green indication.

Press a lit key to view its current POTS ring control setting. The key's indicator will alternately flash red and green.

```
KEY01=ALWAYS RING      →
ALWAYS NEVER WAIT2 WAIT3
```

```
KEY01=ALWAYS RING      →
WAIT4 WAIT5 WAIT6  WAIT7
```

▲ If you want to change the setting for the selected key, select ALWAYS, NEVER, or WAIT2-WAIT7.

Done Press the ***Done*** key to return to the POTS Port Options menu or the ***Setup*** key to exit Setup Mode.

POTS Line Privacy

The Privacy setting determines whether phone and POTS calls are mutually exclusive or if they can be swapped between the handset, POTS port, and speakerphone.

With Privacy **off**, an active call can be freely passed between the handset, speakerphone, or POTS port, by using the hookswitch or ***Spkr*** key.

With Privacy **on**, an active call cannot be passed between the handset/speakerphone and the POTS port.

Set Privacy ON if a fax or modem is connected to the POTS port, and OFF for most other applications.

▲ From the POTS Port Options menu, select PRIV.
(***Setup*** → POTS → PRIV)
The current Privacy setting will be shown in the display.

```
POTS LINE PRIVACY = OFF
ON    OFF
```

▲ Select ON to enable Privacy, or OFF to disable Privacy.

Done When finished, press the ***Done*** key to return to the POTS Port Options menu or the ***Setup*** key to exit Setup Mode.

POTS Line Call Waiting Alert

The Call Waiting option determines whether CIDCW (Calling Identity Delivery on Call Waiting) signaling, Call Waiting tone only, or no signaling will be sent to the POTS port when it is active and another inbound call arrives at the phone.

For fax or modem applications, select DISABLE to prevent interruptions during a call.

Your analog phone must have a caller ID display and support call waiting caller ID (CIDCW) for the CALLID function to work. Call waiting tone may still be available if provided by the ISDN network.

▲ From the POTS Port Options menu, select CALLWT. (***Setup*** → POTS → CALLWT)
The current call waiting alert setting will be shown in the display.

```
CALL WAITING=CALLER ID
CALLID TONE DISABLE
```

▲ Select one of the displayed options.

- CALLID – calling party ID is sent to the analog telephone device, if provided by the ISDN network. Your POTS phone must be CIDCW compatible.
- TONE – waiting calls are indicated by an alert tone.
- DISABLE – call waiting alerting is disabled.

Done When finished, press the ***Done*** key to return to the POTS Port Options menu or the ***Setup*** key to exit Setup Mode.

POTS Line Originating Call Appearance

This option selects the primary call appearance used for outgoing calls from the POTS port. If the selected call appearance is busy when placing a call, another call appearance may be used if available.

For fax or modem applications, you can assign a secondary directory number (if provisioned on your line) for outgoing fax or modem calls.

▲ From the POTS Port Options menu, select ORIG. (***Setup*** → POTS → ORIG)
The current outgoing call appearance will be shown in the display, and the CA/DN key will alternately flash red and green.

```
POTS ORIGINATING CA
CA1
```

▲ If you want to use a different call appearance, press another CA/DN key. Status indicators for available CA/DN keys will be green.

Done When finished, press the ***Done*** key to return to the POTS Port Options menu or the ***Setup*** key to exit Setup Mode.

Appendix A
Warranty and Service

Tone Commander Product Warranty

For a period of one year from date of dealer purchase, but not to exceed 16 months from date of manufacture, Tone Commander Systems, Inc. (Tone Commander) warrants its products to be free from defects in material and workmanship under conditions of normal use and service. Tone Commander shall, at its option, repair or replace any defective product which, in its opinion, has not been misused, damaged, or improperly installed.

Repair or replacement under this warranty will be performed at Tone Commander's factory. Authorization must be obtained from Tone Commander prior to returning a product for repair. Freight must be prepaid for all units returned to Tone Commander. Units repaired under warranty will be shipped UPS Ground (or equivalent), freight prepaid by Tone Commander.

Products that are older than the warranty period, but less than 7 years old, or still manufactured by Tone Commander may be repaired at the factory for a flat rate charge. Repaired out-of-warranty units are warranted for 90 days from the date of repair.

The repair or replacement of a product under this warranty represents the entire obligation of Tone Commander; Tone Commander shall not be liable for any special or consequential damages resulting from or caused by any defect, failure, incapacity or malfunction of any of its products.

> *The foregoing express warranty is in lieu of all other warranties, express or implied, including but not limited to any implied warranty of merchantability, fitness, or adequacy for any purpose or use, quality, productiveness or capacity; Tone Commander, to the extent permitted by law, hereby disclaims all such other warranties.*

Appendix B
Specifications

Contents of Shipping Container

6002TA telephone base
Manual

Compatibility

6210T, 6220T, 6210U, or 6220U ISDN phones (may require firmware upgrade)
May not be used with 6030X 30-Button Expansion Module
or 6001TA Terminal Adapter for TAPI

Capacity

Supports up to 3 standard analog telephone (POTS) devices

Connector Arrangement

One RJ-11 6-position modular jack

Battery Feed

-48 V on-hook, 50 mA maximum off-hook loop current
1000 V minimum isolation from primary (ISDN) power

Ringing

20 Hz, 70 Vrms nominal
Maximum Load: REN=3

Maximum Recommended Loop Length

300 ft (100 M) with 24-26 AWG (inside wiring only)

Transmission Characteristics

0 dB Transmit Loss, 3 dB Receive Loss ± 1 dB, 300-3000 Hz
Echo Return Loss >12 dB @600 or 900 ohms

Power Requirements

24 to 56.5 VDC, powered through 6210 or 6220 ISDN phone
Typical 1.5 W idle, 3.5 W off-hook (including 6220T ISDN phone)

Standards Compliance

FCC Part 15, Part 68
UL, cUL 60950
Section 508 §1194.23(a) non-acoustic connection point for TTYs

Physical Dimensions

6.4” W x 5.7” D x 2.4” H, (replacement base for 6210/6220 ISDN phone)

Weight

0.5 lb.

Environmental

Operating Temperature: 32° to 104° F (0° to 40° C)
Storage Temperature: 32° to 122° F (0° to 50° C)
Humidity: 5% to 95% non-condensing

Factory Default Settings

Parameter	Default Value
Ringing Control	Always Ring (all call appearances)
Privacy	Off
Call Waiting	Disabled
Originating Call Appearance	Call Appearance 1

Appendix C
UL/FCC Statements

Important Safety Instructions

1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

5. Read and understand all instructions.
6. Follow all warnings and instructions marked on the product.
7. Unplug the line cord before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
8. Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
9. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
10. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
11. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
12. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
13. Never push objects of any kind into this product through any openings as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on this product.

14. To reduce the risk of electric shock, do not disassemble this product, but take it to a qualified serviceman when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electric shock when the appliance is subsequently used.

15. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

    A. When the power supply cord or plug is damaged or frayed.

    B. If liquid has been spilled into the product.

    C. If the product has been exposed to rain or water.

    D. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.

    E. If the product has been dropped or the case has been damaged.

    F. If the product exhibits a distinct change in performance.

16. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.

17. Do not use the telephone to report a gas leak in the vicinity of the leak.

SAVE THESE INSTRUCTIONS

FCC Requirements

The Tone Commander Models 6210T, 6210U, 6220T, and 6220U with an attached 6002TA comply with Part 68 of the FCC Rules. The label affixed to this equipment contains, among other information, the FCC Registration for this equipment. You must, upon request, provide this information to your telephone company.

The following jacks must be ordered from the telephone company in order to interconnect this product with the public communication network: RJ49C.

If your 6210, 6220, or 6002TA causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. if possible, they will notify you in advance. But if advance notice is not practical you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

The 6210 and 6220 are hearing-aid compatible (HAC) per Section 68.316, FCC Rules and Regulations.

If you have trouble with the 6210, 6220, or 6002TA, please refer to the Troubleshooting section in the 6210/6220 manual, or contact us at the address listed on the back of this manual for information on obtaining service or repairs. The telephone company may ask that you disconnect the telephone from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

13-102874 Rev. B
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