

6210 / 6220 ISDN Telephone

Installation Instructions



Tone Commander 6210/6220 Installation Instructions

Changes in this revision:

- References to white telephone models have been removed.

This manual applies to 6210/6220 software version 01.07.xx

© 2007, Tone Commander Systems, Inc. All rights reserved.

Printed in USA

Tone Commander is a registered trademark of Tone Commander Systems, Inc.

Contents

Introduction	5
General Features	5
Models/Options	5
Controls and Indicators	7
Installation	9
Ordering ISDN Service.....	9
6210T/6220T Installation.....	9
6210U/6220U Installation.....	12
Wall Mounting.....	14
Configure the Set	15
Label the Set	16
Installation Options	17
Installation Options Menu.....	17
SPID Entry.....	18
Parameter Download	18
Configuring Keys and Indicators	19
Terminal Mode (<i>National ISDN only</i>)	24
Installation Password	25
Reset to Factory Default Settings	26
Voice Announce	27
Administration Options	29
Administration Options Menu	29
Local Inspect	29
Version	32
Test	33
Diagnostic Display.....	35
Restart.....	35
Viewing the Error and Download Logs.....	35
Troubleshooting	37
Inoperable Telephone Recovery Procedures	37
Telephone Configuration Troubleshooting.....	38
Appendix A Ordering ISDN Service	39
Recommended Button Assignments.....	40
Appendix B Setup Menu Tree.....	41
Appendix C Warranty and Service	45
Appendix D Specifications	46
Factory Default Settings.....	47
Appendix E UL/FCC Statements	48

Tone Commander 6210/6220 Installation Instructions

Introduction

For operation instructions and user setup options, please refer to the 6210/6220 User Guide, doc. #14-280194.

General Features

Tone Commander 6210 and 6220 ISDN Telephones are easy to use multiline terminals with advanced automatic setup capabilities. S/T and U interface models are available with 10 or 20 call appearances. The phones support a wide variety of ISDN platforms listed in Appendix D.

Features of the 6210 and 6220 include:

- AutoSPID and Parameter Download
- Call Log
- Call Timer
- Last Number Redial
- Speed Dial
- Hot Key Dialing
- Direct Station Select
- Call Directory
- Flexible Ringing Options
- Automatic Switch Type Detection
- Message Waiting Indication
- Ringing Control for Shared Lines
- Desktop or Wall Mounting
- Tilt Display
- Integrated Speakerphone
- Voice Announce
- Handset or Headset Operation

Models/Options

Several 6200 series ISDN telephone models are available. The models differ in the number of multifunction keys provided and type of ISDN connection.

The S/T models require an external NT1 Network Termination, such as Tone Commander's NT1U-223TC (rack mount) or NT1B-300TC (standalone). Two S/T telephones can share a single ISDN line in a multi-point arrangement.

U models include a built-in NT1, allowing direct connection to the ISDN line. An additional S/T jack allows another terminal device to be connected to the network through the built-in NT1.

Options include the **6030X Button Expansion Module**, which adds 30 multifunction keys to any 6210 or 6220 phone, the **6001TA RS-232 Terminal Adapter** for interfacing the phone with any TAPI-compliant Windows application, and the **6002TA Analog Port Terminal Adapter** for interfacing with any standard analog telephone device.

Basic Model	Multifunction Keys	ISDN Connection
6210T	10 (40 with 6030X)	S/T
6220T	20 (50 with 6030X)	S/T
6210U	10 (40 with 6030X)	U
6220U	20 (50 with 6030X)	U

Tone Commander 6210/6220 Installation Instructions

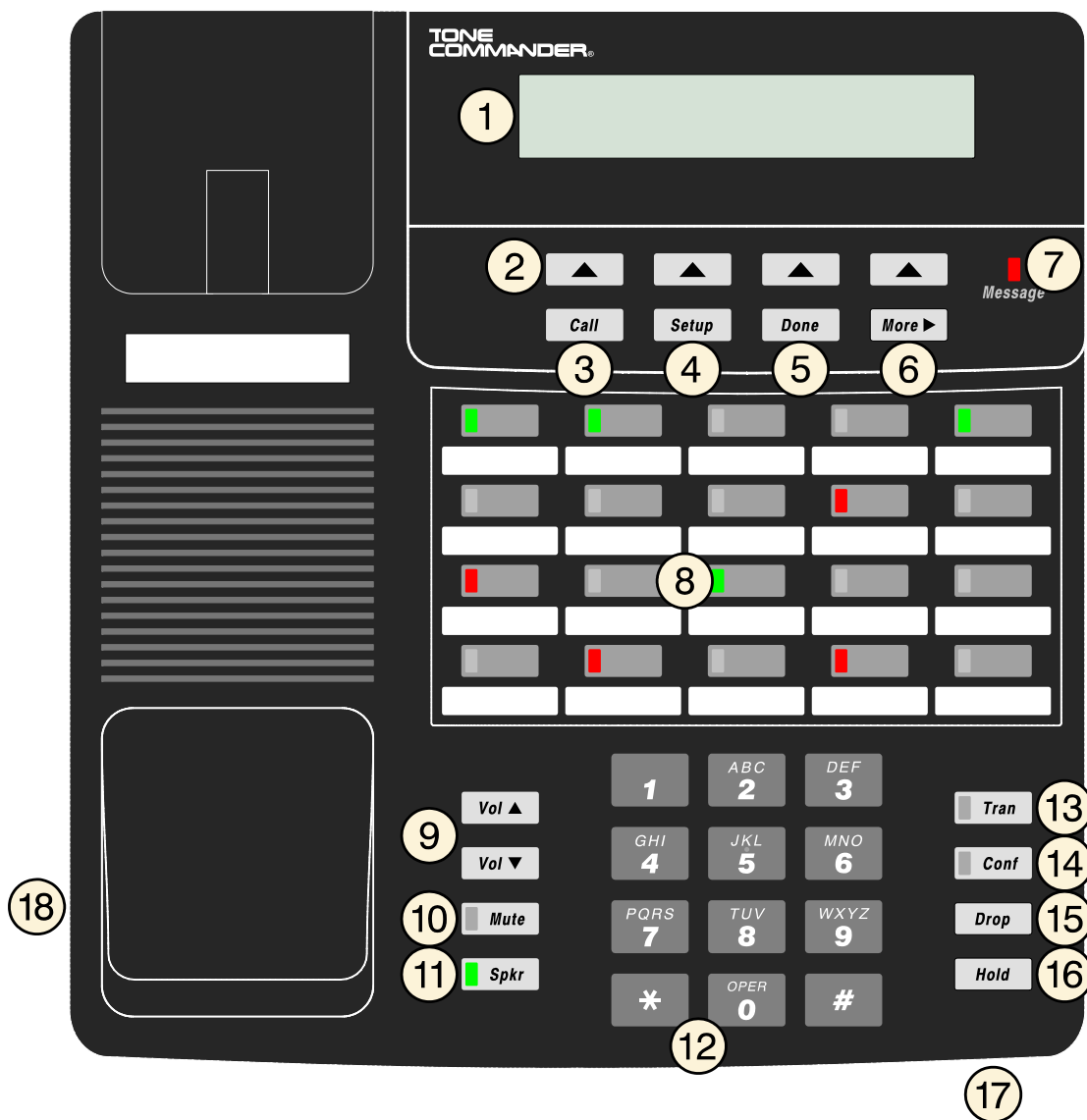


6210



6220 with 6030X Button Expansion Module

Controls and Indicators



- 1) **Display** – shows the call state, caller ID, dialed digits, network call control messages, and elapsed time during calls. When not on a call, the date, time of day, and softkey options are displayed.
The viewing angle can be adjusted by tilting the display, then changing the display contrast.
- 2) **Softkeys** – select the function displayed above the key on the second line of the display.
- 3) **Call Key** – selects the Call Directory, Call Log, and Call Identification Display modes.
- 4) **Setup Key** – enters Setup Mode.
- 5) **Done Key** – exits the current menu, saves any changes made, and returns to the previous menu options.
- 6) **More ► Key** – cycles through the menu option groups in Setup Mode.
- 7) **Message Waiting Indicator** – a bright red indicator is lit when messages are waiting, controlled by the network.

Tone Commander 6210/6220 Installation Instructions

- 8) **Multifunction Keys** – select call appearances, activate network features, or dial personal speed dial numbers. Red and green indicators on the keys show call appearance and feature status. The optional 6030X Button Expansion Module provides 30 additional multifunction keys.

Call Appearance State	Indication
Idle	OFF
Call Ringing	Green – flashing
In Use by You	Green – on steady
On Hold by You	Green – winking
In Use at Another Terminal or an Activated Feature	Red – on steady
On Hold at Another Terminal	Red – winking

- 9) **Vol (Volume) Keys** – adjust the receiver/speaker volume when on a call; adjust the ringer volume when on-hook.
- 10) **Mute Key** – mutes the microphone when using the speakerphone or handset/headset. A red indicator on the key is lit when mute is active.
- 11) **Spkr (Speaker) Key** – activates the speakerphone. A green indicator on the key is lit when the speakerphone is in use.
- 12) **Dial Pad** – dials telephone numbers, and sends DTMF tones to external equipment such as voice mail systems. The dial pad is also used for number entry during setup.
- 13) **Tran (Transfer) Key** – places the current call on hold, and selects an idle call appearance for transferring the call. A second press completes a transfer.
- 14) **Conf (Conference) Key** – adds other parties to a conference call.
- 15) **Drop Key** – removes the last party added to a conference call, or disconnects you from a call and returns new dial tone when not in conference mode.
- 16) **Hold Key** – places a call on hold.
- 17) **Microphone** – used for hands-free (speakerphone) calling; located in front of the Hold key on the bottom of the telephone.
- 18) **Handset/Headset Jack** – a jack on the side of the telephone connects to the handset or a standard headset.

Installation

Ordering ISDN Service

ISDN ordering forms may be supplied by your service provider. You can also print forms using the PC-based Configuration Wizard. Please refer to Appendix A in this manual.

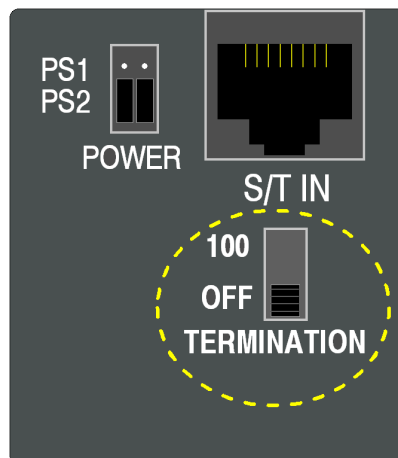
Consult your service provider to plan your service installation. Allow adequate time after cutover for testing of all call appearances and programmed features. Ask your service provider for your SPID numbers, and confirm the installation date.

6210T/6220T Installation

S/T models require an external NT1, such as the Tone Commander NT1U-223TC or NT1B-300TC.

Set the Termination Switches on the Telephone and NT1

Set the termination switches on the bottom of the telephone and on the NT1 to match the termination impedance to your premises wiring configuration. Several typical wiring configurations are shown below, with the appropriate switch setting.



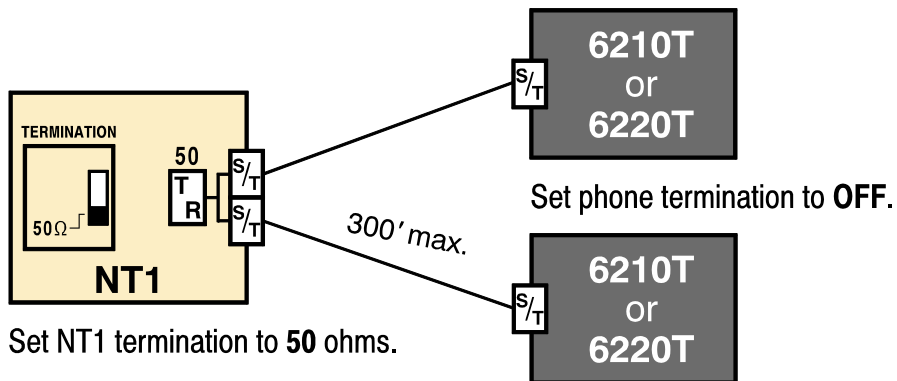
Available switch settings are *OFF* and *100* ohms.

We recommend the use of Category 3 or better unshielded twisted pair cable with T568A or T568B connector wiring. Distances shown are the maximums for 24-gauge cable, and may vary for other cable types.

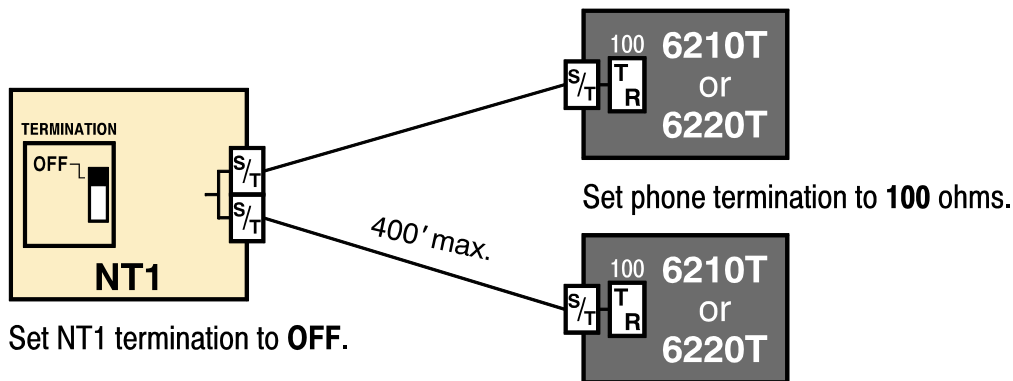
Tone Commander 6210/6220 Installation Instructions

Basic Multipoint:

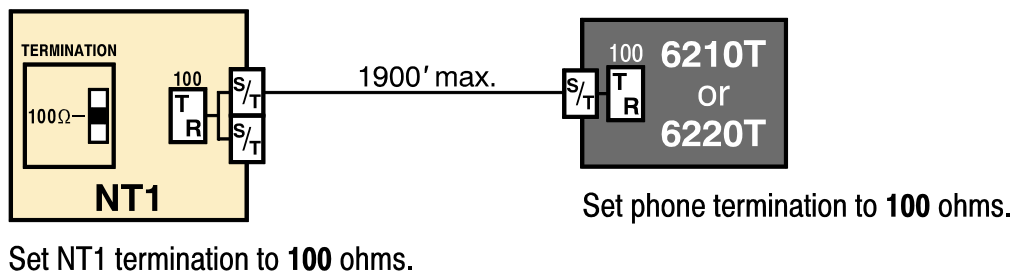
(recommended for most applications)



Short Multipoint:



Extended Point-to-Point:

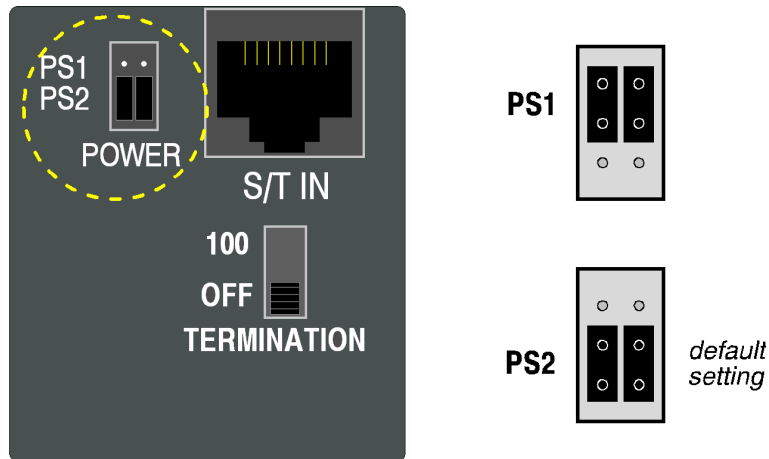


Line and Power Connections

Power for the telephone may be provided on PS1 (phantom power on the transmit and receive pairs from the NT1) or PS2 (power on pins 7 and 8). Tone Commander manufactures NT1 products that supply power on both PS1 and PS2. Contact Tone Commander or visit www.tonecommander.com for more information.

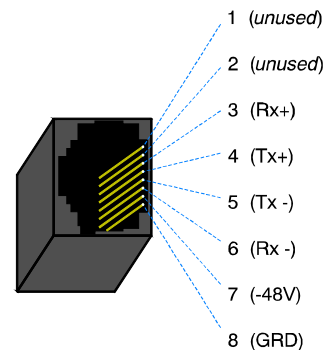
WARNING: If a separate power supply is used to provide PS2 power to the telephone, make sure that the output ground of the NT1 power supply and the PS2 power supply are connected (with the correct polarity) to a common ground reference point or electrical damage to the telephone may occur.

- Set both power jumpers to PS1 or PS2 as required. PS2 powering is used in most applications.



- Using an 8-conductor line cord, connect the **S/T IN** jack on the telephone to the **TERMINAL** jack on the NT1. Route the cord under the guide tabs in the phone base.

Pin #	Signal	Wire Color	
		T568 A	T568 B * (AT&T 258A)
5	Tx-	WHT-BLU	WHT-BLU
4	Tx+	BLU	BLU
1	unused	WHT-GRN	WHT-ORN
2	unused	GRN	ORN
3	Rx+	WHT-ORN	WHT-GRN
6	Rx-	ORN	GRN
7	-48V	WHT-BRN	WHT-BRN
8	GRD	BRN	BRN



Modular Jack Pinout

* **T568 B jacks are recommended;** they allow conventional station pair ordering when connecting to S/T punchdown blocks on NT1 racks.

Handset/Headset

- Plug the supplied handset or a compatible headset into the jack on the left side of the telephone.

Tone Commander 6210/6220 Installation Instructions

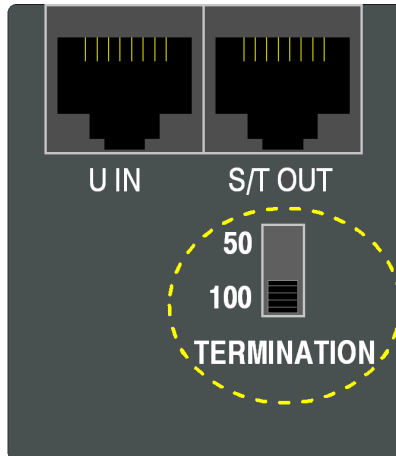
6210U/6220U Installation

U models include a built-in NT1. Optional external ISDN S/T Terminal Equipment may share the telephone's ISDN line by connecting to the S/T jack on the telephone.

If you are not connecting external Terminal Equipment, set the termination switch to 50 ohms.

Set the Termination Switch on the Telephone

If external Terminal Equipment (TE) is connected, set the termination switch on the bottom of the telephone to match the termination impedance to your premises wiring configuration. Two typical wiring configurations for connecting external TE are shown below, with the appropriate switch settings.

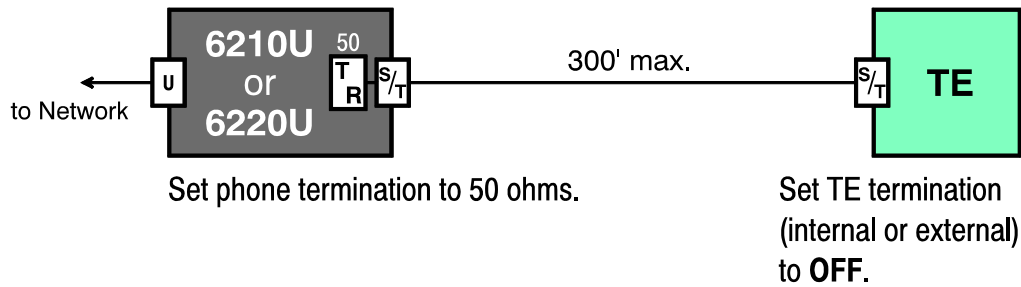


Available switch settings are 50 and 100 ohms.

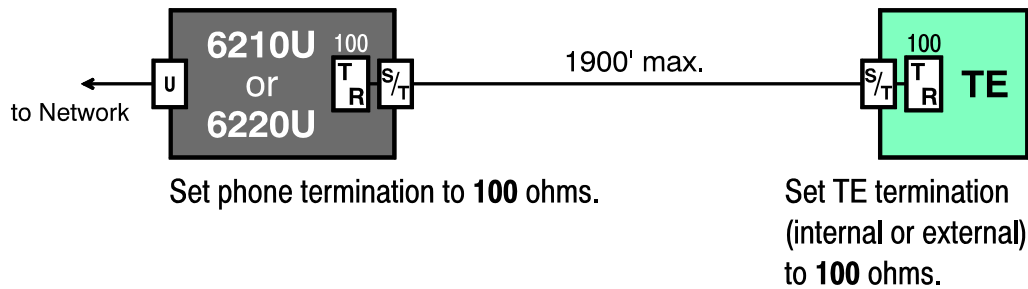
We recommend the use of Category 3 or better unshielded twisted pair cable with T568A or T568B connector wiring. Distances shown are the maximums for 24-gauge cable, and may vary for other cable types.

Basic Multipoint:

(recommended for most applications)



Extended Point-to-Point:



Line and Power Connections

- Using an 8-conductor line cord, connect the **U IN** jack on the telephone to the line jack.

The 6210U and 6220U can be locally powered by a Tone Commander 901034 Desktop Power Supply. This may be ordered with a phone as the -PWR1 Option.

- Plug the power supply barrel connector into the round jack on the back of the phone.
- When all other connections are completed, connect the power supply to a standard 120 VAC, 60 Hz grounded power outlet.

Power can also be provided by an external -48 VDC source, such as a Tone Commander PS-50 ISDN Power Supply, on pin 7 (-) and pin 8 (+) of the **U IN** jack.

Select only one powering method; DO NOT connect the local power supply and power over the line cord simultaneously!

An additional terminal may be connected to the **S/T OUT** jack, which supplies PS1 and PS2 output power.

Handset/Headset

- Plug the supplied handset or a compatible headset into the jack on the left side of the telephone.

Tone Commander 6210/6220 Installation Instructions

Wall Mounting

Robust handset retainer clips for wall mount use are available on request from Tone Commander.

Rotating the Base

The phone base must be rotated for wall mounting.

- Disconnect the line cord.
- Remove the retaining screw in the center of the base.
- Press the top of the tall edge of the base to disengage the snap tabs, then lift the base from the telephone body.
Do not touch the expansion connector. If using the 6030X, 6001TA, or 6002TA, leave the expansion cable plugged into the phone.
- Turn the base 180°, insert the tabs on the short edge of the base into the holes near the display end of the telephone, and then snap the tall side of the base onto the telephone.
- Replace the retaining screw (required for UL compliance).

Attaching to a wall mount jack

- Plug an 8", 8-pin line cord into the **S/T IN** jack (6210/6220T) or the **U IN** jack (6210/6220U) on the telephone. Route the cord under the guide tabs on the base. If you do not have one, you can obtain an 8" line cord by calling Tone Commander Technical Support at **(800) 524-0024**.
- Hold the telephone next to the wall mount jack. Plug the line cord into the jack.
- Hang the telephone on the wall plate mounting studs. Press down firmly to lock in place.
- Push any excess line cord into the base.

Configure the Set

ISDN configuration is performed automatically in many cases. The telephone set will detect the switch type, set the SPID number, and download other setup parameters when these features are available from the Telco central office.

You will be prompted for any required setup information that cannot be set automatically.

Initialization

A self-test is performed upon power up. Press any key to begin initialization with the network. Unattended initialization begins automatically after a short random time interval. This delay prevents multiple terminals at a site from initializing simultaneously after a power outage.

The display will show progress while establishing the communication layers. When all three communication layers are established, the TEI (Terminal Endpoint Identifier) and switch type will be shown for two seconds.

```
L1:OK          L2:OK TEI:123
L3:OK          SWITCH=5ESS NI-X
```

SPID Entry

The SPID number will be assigned automatically if the network supports AutoSPID. If there is more than one SPID available for your terminal, you will be prompted to select your primary telephone number.

If AutoSPID is not supported, you will be prompted to enter the phone's primary telephone number, which is used by the phone to generate a SPID number. Enter the number with the dial pad, then press the **Done** key. ←BKSP (backspace) deletes the previous digit.

- National ISDN* – enter your full 10-digit telephone number
(including area code)
- 5ESS Custom ISDN* – enter your 7-digit telephone number

```
ENTER PRIMARY PHONE #
999-555-1243          ←BKSP
```

Parameter Download (*National ISDN only*)

Parameter Download is a network feature that Identifies Call Appearance and Feature Activator keys that are assigned to your line so that your phone may be configured automatically.

Note: Speed Dial, DSS keys, and other user preference settings are not configured by Parameter Download.

If Parameter Download is not supported, the following screen may appear momentarily, prompting you to manually configure the telephone at a later time (see page 18).

```
NO PARAMETER DOWNLOAD
PRESS SETUP TO CONFIGURE
```

Automatic Button Detection (*5ESS Custom ISDN only*)

Press each multifunction key. The phone will discover the key's network assignment. Keys that have no network assignment may be used for speed dialing – please refer to page 22.

Tone Commander 6210/6220 Installation Instructions

Firmware Updates

Call Tone Commander technical support at **(800) 524-0024** to get information on firmware updates.

Using Local Inspect to Verify Keys

Local Inspect allows you to identify the call appearance or feature assignment of each configured key, directory number bearer capabilities, and the feature indicator assignment for the Message Waiting Indicator. Please refer to page 29.

Label the Set

Label the multifunction keys with the telephone number, feature name, speed dial party name, or other appropriate designation. A perforated label sheet is provided with the telephone.

An ISDN Telephone Setup Wizard for Windows can be downloaded from **www.tonecommander.com**. This program prints key labels and service ordering forms. A Microsoft Word template for key labels only is also available. Please refer to Appendix A on page 39. Label text is on 1" centers, with 0.9" text space for each key.

To install the labels, remove the plastic overlay surrounding the multifunction keys. Peel off the protective strips from the adhesive in the grooves beneath the keys. Insert the label strips in the grooves, then replace the overlay.

Installation Options

Options in this section are typically set at the time of installation. Many options can be set automatically by the AutoSPID, Automatic Switch Detect, and Parameter Download features, if supported on the network.

The following options can be changed from the Installation Options menu:

- SPID
- Parameter Download
- Terminal Mode
- Keys and Indicators
- Installation Password
- Reset to Default Settings
- Voice Announce

Installation Options Menu

You can enter the Installation Options menu when the phone is idle.

Setup

Press the **Setup** key.

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

▲

Select INSTL.

```
INSTALLATION OPTIONS →
SPID PARAM  KEYS  MSG
```

More ▶

When → appears in the top line of the display, you can press the **More ▶** key to see additional menu selections.

```
INSTALLATION OPTIONS →
MODE PASSWD RESET  VA
```

Note: The POTS option is only available when the 6002TA Analog Port Terminal Adapter is installed. The PARAM and MODE options are only available with National ISDN.

A password may be set to prevent unauthorized entry into the Installation Options menu. When prompted for a password, enter your password with the dial pad. Press the **Done** key after entering the password. To change or remove the password, please refer to page 25.

Tone Commander 6210/6220 Installation Instructions

SPID Entry

A unique SPID (Service Profile IDentifier) is required for operation of the 6210/6220. If the network supports AutoSPID, a SPID that is assigned to your ISDN line can be automatically selected. If National ISDN generic SPID assignments are used by your service provider, your SPID will consist of your primary telephone number followed by "0101" (e.g., 42534910000101). Contact your network service provider for your telephone's SPID.

- ▲ From the Installation Options menu, select SPID.
(**Setup** → INSTL → SPID)

```
ID=42534910000101
←BKSP  CLEAR
```

- JKL**
5 Using the dial pad, enter the SPID number supplied by your network service provider.
If you need to make corrections, select ←BKSP (backspace) to delete the previous digit. CLEAR removes all digits, allowing you to start over.

- Done** When digits have been entered, press the **Done** key to return to the Installation Options menu or press the **Setup** key to exit Setup Mode.

Parameter Download

(National ISDN only)

ISDN Parameter Download is an automated feature for configuring Call Appearance and Feature Activator keys. If configured for auto download, a Parameter Download is executed when the phone initializes with a new SPID, or when requested by the network, due to a line configuration change.

Note: Speed Dial and DSS keys are not configured by Parameter Download.

- ▲ From the Installation Options menu, select PARAM.
(**Setup** → INSTL → PARAM)

```
PARAMETER DOWNLOAD
START  AUTO
```

Starting a Download

- ▲ Select START to manually initiate a Parameter Download.

Enabling/Disabling Automatic Download


- ▲ Select AUTO.


```
AUTO DOWNLOAD=ENABLED
ENABLE  DISABLE
```

- ▲ Select ENABLE or DISABLE.

Configuring Keys and Indicators


If the network does not support Parameter Download, you can assign call appearances, directory numbers and feature activators using this option.

-  From the Installation Options menu, select KEYS.
 (**Setup** → INSTL → KEYS)
 The status indicator for each key will indicate the current setting:
 - Green** – Call Appearance or DSS
 - Red** – Feature Activator
 - Off** – Unused or Speed Dial

-  On the phone or Button Expansion Module, press the multifunction key to be programmed.
 The selected key's indicator will alternately flash red and green.


```
12=CA/DN      →
CA/DN   FA   DSS  SPDIAL
```

```
12=CA/DN      →
UNUSED
```

-  Select CA/DN (Call Appearance /Directory Number), FA (Feature Activator), DSS (Direct Station Select), SPDIAL (Speed Dial), or UNUSED from the menu.
 Programming procedures for each key type are described below.

Call Appearance / Directory Number Keys

These “line” keys are used to place and answer calls. If you have BASIC service or are connected to a Nortel Meridian 1 Option Series PBX, each **directory number** key is assigned a unique directory number. If you have CACH EKTS service, one directory number may be assigned to multiple **Call Appearance** keys; multiple calls can be handled on one directory number.

-  Enter the assigned directory number with the dial pad.
 For the Nortel Meridian 1 Option Series PBX, enter the same number of digits used in the PBX dialing plan (2 to 7 digits).

If you need to make corrections while entering numbers, select ←BKSP (backspace) to delete the previous digit.

*You can press the **Done** key to return to key selection.*

```
12=CA/DN# 5559876
+BKSP  ORIG  RESERV
```

Tone Commander 6210/6220 Installation Instructions

Automatic Call Appearance Selection

A call appearance is automatically selected when originating a new call, answering an incoming call, or conferencing or transferring a call. Three configuration options determine how call appearances are selected:

Call Preference (User option) – determines whether a new call is originated when you lift the handset or press the **Spkr** key. If set to NONE, you must manually press a Call Appearance key to originate a call.

Originating DN – only call appearances with this option set to YES will be automatically selected for call origination.

CA Reservation – within the group of originating DNs, call appearances set for NOT RESERVED are selected first, followed by OUTGOING ONLY, followed by OUT/PRIORITY call appearances (OUTGOING ONLY call appearances are selected first for conferencing and transferring). Within each subgroup, call appearances are selected in ascending order. INCOMING ONLY call appearances are never selected for an outgoing call. If an idle CA is not found, “SELECT AN IDLE LINE” is displayed.

To change the Originating DN assignment:

- Select ORIG.
- Select YES or NO from the Originating DN menu.
- Press the **Done** key to return to the CA/DN menu.

To change call appearance reservation:

- Select RESERV.
- Select the call appearance reservation for this CA/DN.
 - OUT** – Originate (outgoing calls) only.
 - IN** – Terminate (incoming calls) only.
 - PRI** – Outgoing or priority incoming calls only.
 - NOT** – Not Reserved - *default value for all keys.*
- Press the **Done** key to return to the CA/DN menu.

Feature Activator Keys

Feature Activator keys must be configured to match network feature activator codes that have been assigned to your line.

JKL
5

Using the dial pad, enter the feature activator code assigned by your network service provider.
If you need to make corrections while entering numbers, select ←BKSP (backspace) to delete the previous digit.

```
10=NETWORK FA#59 (CALL)
+BKSP          CALL
```

▲

Select CALL if a call needs to be originated when the feature is activated. When enabled, (CALL) will appear in the top line of the display as shown above.

With CALL enabled, the feature is always activated within the context of a call. Features that need to originate a call include Call Forward (on Siemens EWSD), ICM intercom (on Nortel DMS-100), and Call Pickup.

If the phone is on-hook when a Feature Activator key with CALL enabled is pressed, a new call will be originated. If the phone is already off-hook when the feature key is pressed, the feature will be activated within the context of the current call.

The CALL feature is not used with Lucent 5ESS Custom ISDN and Avaya Definity Custom ISDN.

Done

Press the **Done** key twice to return to the key selection menu or press the **Setup** key to exit Setup Mode.

DSS Keys

DSS keys are a special type of Call Appearance/Directory Number keys that are programmed with speed dial numbers to provide Direct Station Selection. When the call appearance is idle or busy, DSS keys act like Speed Dial keys, to call a station. When ringing, DSS keys act like CA/DN keys, to answer a call. The LED indicator on the key shows the status of the station's call appearance (idle, ringing, hold, busy).

Shared call appearances for stations you wish to monitor must be configured on your ISDN line. You must program the DSS number to dial the monitored station on your phone (even if Parameter Download is provided).

JKL
5

If the Call Appearance/Directory Number is not shown in the top line of the display, you can enter a reference directory number for the monitored station with the dial pad. This number is not required for operation.

If you need to make corrections while entering numbers, select ←BKSP (backspace) to delete the previous digit.

```
08=DSS/DN# 5559876
+BKSP          DSS#
```

▲

Select DSS#.

```
1001
+BKSP CLEAR PAUSE
```

Tone Commander 6210/6220 Installation Instructions

JKL
5

Using the dial pad, enter the number you would dial to call the monitored station.
CLEAR removes all digits, allowing you to start over.

Done

Press the **Done** key three times to return to the key selection menu or press the **Setup** key to exit Setup Mode.

Speed Dial Keys

Unused keys not assigned for call appearances or feature activators may be used as Speed Dial keys. Dialing strings can include network feature activator codes, to simplify the use of features such as Directed Call Pickup and Call Forwarding. Speed Dial keys may also be programmed from the User Options menu.



←BKSP FA PAUSE

The currently programmed dial string, if any, will be shown in the display.

JKL
5

Enter digits (24 maximum) with the dial pad.

After entering the first digit, pause, or feature activator, the FA softkey will be replaced by CLEAR.



5551234
←BKSP CLEAR PAUSE

If you need to make corrections while entering numbers, select ←BKSP (backspace) to delete the previous digit.

CLEAR removes all digits, allowing you to start over. A Speed Dial key will revert to 'Unused' if saved with a cleared dial string.

“Smart” Pauses

▲

Pauses are entered with the PAUSE softkey, and are shown in the display as a **P** character. The first pause in a dial string will wait until the call is answered; additional pauses delay dialing for one second. Enter multiple pauses to increase the delay time.



5551234P1P12
←BKSP CLEAR PAUSE

Feature Activator Codes

You can use Local Inspect (page 29) to view the codes assigned to Feature Activator keys on your telephone, or consult with your network service provider for the required codes.

- ▲ Feature Activator (FA) numbers are entered with the FA softkey, and are shown in the display as an **F** character. **F** must be the first character in the dialing string; the two numeric digits immediately following the **F** indicate the network feature activator code. The FA softkey is only available when no digits have been entered.

```
←BKSP  FA  PAUSE
```

After entering **F**, the FA softkey will be replaced by CLEAR.

In the example below, the Speed Dial key sends feature code '57' (Call Forward) followed by the directory number '555-1234'.

```
F575551234
←BKSP CLEAR PAUSE
```

- Done When digits have been entered, press the **Done** key twice to return to the key selection menu or press the **Setup** key to exit Setup Mode.

Message Waiting Indicator

The Message Waiting indicator must be configured to match the assigned network feature indicator code.

- ▲ From the Installation Options menu, select MSG.
(**Setup** → INSTL → MSG)

```
MESSAGE=NETWORK FI#63
←BKSP
```

- JKL **5** Using the dial pad, enter the feature indicator code assigned by your network service provider. In most cases, this is set to 63.
If you need to make corrections while entering numbers, select ←BKSP (backspace) to delete the previous digit.

- Done Press the **Done** key twice to return to the Installation Options menu or press the **Setup** key to exit Setup Mode.

Tone Commander 6210/6220 Installation Instructions

Terminal Mode *(National ISDN only)* _____

If the network does not support Parameter Download, you must manually select the terminal mode.

- ▲ From the Installation Options menu, select MODE.
(**Setup** → INSTL → **More** ▶ → MODE)

```
TERMINAL MODE=CACH EKTS
CACH BASIC MERID1
```

- ▲ Select the terminal mode based upon the type of service that was ordered from your network service provider.

CACH – CACH EKTS (*default*).

BASIC – Voice or Basic EKTS.

MERID1 – Nortel Meridian 1 Option Series PBX.

In most cases, your phone service should be configured for CACH EKTS.

- Done** Press the **Done** key to return to the Installation Options menu or press the **Setup** key to exit Setup Mode.

Installation Password

You can set a password to prohibit unauthorized entry into the Installation Options menu.

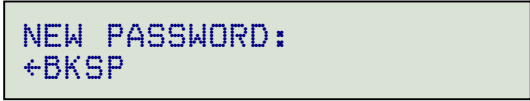
If a password is currently set, the display will prompt you to enter your password prior to making changes.

- ▲ From the Installation Options menu, select PASSWD.
(**Setup** → INSTL → **More** ▶ → PASSWD)



```
INSTALLATION PASSWORD
SET  CLEAR
```

- ▲ Select SET.



```
NEW PASSWORD:
<BKSP
```

- JKL**
5 Enter a new 4 to 11 digit password with the dial pad.
If you need to change a password digit after entering it, select <BKSP (backspace) to delete the previous digit.

- Done** Press the **Done** key.



```
ENTER AGAIN:
<BKSP
```

- JKL**
5 Repeat the password when prompted to verify the new entry.

- Done** Press the **Done** key.

“PASSWORD SET” will be displayed to confirm the new password.



```
PASSWORD SET
```

Record your password for future reference.

- Done** Press the **Done** key to return to the Installation Options menu or press the **Setup** key to exit Setup Mode.

Removing the Password

- ▲ Select CLEAR.
“PASSWORD CLEARED” will be displayed to confirm that the password has been removed.



```
PASSWORD CLEARED
```

- Done** Press the **Done** key to return to Installation Options menu or press the **Setup** key to exit Setup Mode.

Tone Commander 6210/6220 Installation Instructions

What to do if you lose your password

Contact your system administrator or call Tone Commander technical support at **(800) 524-0024** in the event you misplace your password. You will need to report the serial number of your telephone to receive a new password.

You can use the RESET option to remove all passwords. You must have access to the Installation Options menu, which may be password protected, to use this feature. *This option will clear all programmed numbers and settings in your phone.*

Reset to Factory Default Settings

Reset returns all settings to the factory defaults, and clears all speed dial numbers, logs, and passwords. This option is useful when moving the telephone to a new user or location.

Default values are listed in the table on page 47.

- ▲ From the Installation Options menu, select RESET.
(**Setup** → INSTL → **More** ▶ → RESET)

```
RESET ALL SETUP OPTIONS?  
YES  NO
```

- ▲ Select YES to confirm the reset operation.

```
ALL SETTINGS CLEARED  
PHONE WILL BE RESTARTED
```

```
INITIALIZING...
```

- Done** Press the **Done** key to return to Installation Options menu or press the **Setup** key to exit Setup Mode. The phone will restart.

Voice Announce

This option allows certain incoming calls to be answered automatically by the speakerphone. Voice Announce calls are restricted to calls on selected Call Appearance/Directory Number keys. In addition, calls from specified directory numbers, and/or calls of a selected type determined by the ringing pattern can be restricted. The microphone can be automatically disabled for announcing only, or enabled to allow two-way conversations. Voice Announce can be enabled or disabled by the user at any time.

- From the Installation Options menu, select VA.
(**Setup** → INSTL → **More** ▶ → VA)

```
VOICE ANNOUNCE OPTIONS
KEYS  DNs  ALERT  MUTE
```

Selecting CA/DN Keys

- Select KEYS to designate individual call appearances that will accept Voice Announce calls. Use this setting to restrict Voice Announce calls to specific dialed directory numbers (e.g. non-listed private numbers).

```
SELECT VA KEYS
GREEN=VA  RED=AVAILABLE
```

- All available CA/DN keys will light red, Voice Announce enabled keys will light green; all other keys will be off. Press desired call appearance keys to enable or disable the Voice Announce feature for selected keys.

Set all appearances of a directory number to the same Voice Announce setting.

- Done** Press the **Done** key when all Voice Announce keys have been selected.

Voice Announce configuration is not affected by Parameter Download, except when CA/DN key allocations change. The default Voice Announce setting for new CA/DN keys identified in a download is *disabled*.

Selecting Incoming Directory Numbers

CA/DN keys must be configured for Voice Announce before selecting incoming DNs.

- Select DNs to restrict Voice Announce calls to specific callers (or groups of callers). The Calling DN templates are matched to the incoming caller ID to identify Voice Announce calls. You can enter up to three Calling DN templates.

```
CALLING DN#1=9995551*
←BKSP CLEAR  ALL
```

- Select ALL if you want to accept all incoming calls.

- JKL 5** To restrict Voice Announce calls to specific callers or groups, use CLEAR or ←BKSP to delete the current entry, then enter a combination of wildcards (* matches any group of characters, # matches a single character) and numeric digits with the dial pad to allow individual callers or blocks of callers.

Tone Commander 6210/6220 Installation Instructions

For example, 9995551* matches 999-555-1000 through 999-555-1999; 99955510#0 matches 999-555-1010, 999-555-1020, etc. Non-numeric characters (such as hyphens) in the incoming caller ID are ignored. Up to 10 digits (including wild cards) may be programmed in each template.

Enter all digit positions as shown in the display for an incoming call; in most cases, this will include the area code.

More ▶ Press the **More ▶** key to enter additional Calling DN templates.

Done When all Calling DN templates have been entered, press the **Done** key.

Selecting Alerting Patterns

Use the Alert option to allow only specific types of incoming calls (e.g. internal, external, intercom, etc.). CA/DN keys must be configured for Voice Announce before selecting alerting patterns.

▲ Select ALERT to define a specific alerting pattern required to validate incoming Voice Announce calls.

```
ALERTING=ANY →
ANY  NORMAL DIST INTCOM

ALERTING=ANY →
PRI
```

ANY – Accept any type of alerting (default value)

NORMAL – normal alerting (pattern 0); typically used for internal calls.

DIST – distinctive alerting-intergroup (pattern 1); typically used for external calls

INTCOM – EKTS intercom (pattern 3); used for intercom calls

PRI – distinctive alerting-special/priority (pattern 2); used for designated priority calls

Done Press the **Done** key after selecting the alerting pattern.

Automatic Muting

▲ Select MUTE.

```
AUTOMATIC MUTE=ON
ON  OFF
```

▲ Select ON to automatically mute the microphone during a Voice Announce call, or OFF to enable two-way conversations.

Done Press the **Done** key after selecting the muting option.

Administration Options

The following test and diagnostic options are available from the Administration Options menu:

- Local Inspect
- Hardware Version
- Software Version
- Serial Number
- Test Functions
- Diagnostics
- Terminal Restart
- Error Log

Administration Options Menu

You can enter from the Administration Options menu when the phone is idle or during an active call.

Setup Press the **Setup** key.

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

▲ Select ADMIN.

```
ADMINISTRATION OPTIONS →
INSPECT VERS TEST DIAG
```

More ▶ When → appears in the top line of the display, you can press the **More ▶** key to see additional menu selections.

```
ADMINISTRATION OPTIONS →
RESTART LOG
```

Note: The POTS option is only available when the 6002TA Analog Port Terminal Adapter is installed.

Local Inspect

Local Inspect allows you to identify the call appearance/directory number or feature assignment of each configured key, directory numbers, and the feature indicator assignment for the Message Waiting Indicator. You can use Local Inspect after a Parameter Download to verify call appearance and feature assignments.

▲ From the Administration Options menu, select INSPCT.
(**Setup** → ADMIN → INSPCT)

```
          LOCAL INSPECT
KEYS   DNs   MESSAGE
```

▲ Select KEYS, DN_s (Directory Numbers), or MESSAGE (Message Waiting Indicator). Each option is described below.

Tone Commander 6210/6220 Installation Instructions

Keys



Select KEYS.



On the phone or Button Expansion Module, press the key that you want to inspect. The key's indicator will alternately flash red and green.

Displays will vary depending upon the key type, as shown below.



When you are finished inspecting keys, press the **Done** key to return to the Local Inspect menu or press the **Setup** key to exit Setup Mode.

Call Appearance/Directory Number Key

The display will show for the selected key:

- Key number, directory number

```
01=CA/DN# 999-555-1012 →
```



Press the **More** key to view:

- Originate usage
- Call appearance reservation

```
ORIGINATING DN? YES →  
RESERVED=OUT/PRIORITY IN
```

DSS Key

The display will show for the selected key:

- Key number, directory number
- DSS number

```
05=DSS/DN# 999-555-4251→  
4251
```



Press the **More** key to view:

- Originate usage
- Call appearance reservation

```
ORIGINATING DN? NO →  
RESERVED=NOT RESERVED
```

Feature Activator, Conference, Transfer, or Drop Key

The display will show the key number, network feature activator number, and service description for the selected key.

```
07=NETWORK FA#56 (CALL)
Call Pickup
```

(CALL) is displayed if the feature has been locally programmed to originate a call when activated (see page 21).

Speed Dial Key

The display will show the key number and programmed autodial string for the selected key.

```
08=SPEED DIAL
9995552341
```

Directory Numbers



Select DN's to view the list of directory numbers on this phone.

The first line on the display will show the directory number, and 'ORIG' if this is an originating DN.

```
DN#999-555-8952 ORIG →
```



Press the **More** key to view additional directory numbers.



Press the **Done** key to return to the Local Inspect menu or press the **Setup** key to exit Setup Mode.

Message Waiting Indicator



Select MESSAGE.

The Message Waiting indicator will light.

The display will show the feature indicator number and the service description, if available. If the service description on line 2 is blank after a National ISDN Parameter Download, this feature has not been provisioned on your line.

```
MESSAGE=NETWORK FI#63
Message Waiting
```



Press the **Done** key to return to the Local Inspect menu or press the **Setup** key to exit Setup Mode.

Tone Commander 6210/6220 Installation Instructions

Version

Use this option to view the telephone's hardware version, software version, and serial number.

- From the Administration Options menu, select VERS.
(**Setup** → ADMIN → VERS)

```
VERSION
SERIAL H/W  S/W  6030X
```

Serial Number

- Select SERIAL.

```
SERIAL#:00016388092
```

Hardware Version

- Select H/W.

```
MODEL: 6220T
TOP:280001M  PCB:287905C
```

Software Version

- Select S/W.

```
S/W VERSION:01.07.17
```

Optional Equipment Version

- Select 6030X, 6001TA, or 6002TA to display the software version of an installed option.

```
MODEL:6030X BUTTON EXPAN
VERSION: 01.01.04
```

- Done** Press the **Done** key to return to the Administration Options menu or press the **Setup** key to exit Setup Mode.

Test

Select this option to test the LCD display, LED indicators, and keys.

- ▲ From the Administration Options menu, select TEST.
(**Setup** → ADMIN → TEST)

```

TERMINAL TEST
DISPLY KEYS 6030X
  
```

Display and LED Indicators

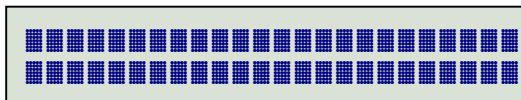
- ▲ Select DISPLY.

```

DISPLAY/LED TEST
LCD  RED  GREEN  OFF
  
```

LCD Display

- ▲ Select LCD.
All pixels (picture elements, or dots) on the display should turn dark.



- Press any key to return the display to normal operation.

LED Indicators


- ▲ Select RED to turn on all red indicators, and turn all others off.
- ▲ Select GREEN to turn on all green indicators, and turn all others off.
- ▲ Select OFF to turn off all indicators, or wait 5 seconds for automatic off.
- Done** Press the **Done** key to return to the Terminal Test menu or press the **Setup** key to exit Setup Mode.


Tone Commander 6210/6220 Installation Instructions


Keys

 Select KEYS.

```
PRESS EACH KEY TO TEST  
OR GO OFF-HOOK TO EXIT
```

 Press each key on the telephone (not on the Button Expansion Module), including the dial pad keys, one at a time.

 A letter should appear in the display for each pressed key.

 On 6210 models, 10 additional letters will appear after the first keypress, representing the 10 "missing" multifunction keys.

```
ABCDEFGHIJKLMN OPQRSTUVWXYZ  
abcdefghijklmnopqr stuvwxyz
```

If all keys are operational, the following display will be shown. Press any key to return to the Terminal Test menu.

```
KEY TEST PASSED  
PRESS ANY KEY TO EXIT
```


If any key fails, or to exit before testing all keys, go off-hook with the handset or unplug the phone.

6030X Button Expansion Module

This option tests the keys and LED indicators on a 6030X Button Expansion Module. It is only available if a 6030X is connected to the phone.

 Select 6030X.


```
PRESS EACH KEY ON 6030X  
PRESS DONE TO EXIT
```

 Press each key on the 6030X, one at a time.

The key's LED indicator should flash alternately red and green, and a number should appear in the display for each pressed key.

```
123456789012345678901234  
567890
```

 After all keys have been tested, press any key to exit the test.

 You can also exit the test at any time by pressing the **Done** key to return to the Terminal Test menu or press the **Setup** key to exit Setup Mode.

Diagnostic Display

- ▲ From the Administration Options menu, select.
(**Setup** → ADMIN → DIAG)
The display will show the states of layers 1, 2, and 3, the Terminal Endpoint Identifier, and the network switch type.

```
L1:OK      L2:OK      TEI=64
L3:OK      SWITCH=5ESS NI-X
```

- Done Press the **Done** key to return to the Administration Options menu or press the **Setup** key to exit Setup Mode.

Restart

Select Restart to reset the phone. If you are on an active call you will be disconnected. The call log will be cleared. No configuration parameters will be altered.

- ▲ From the Administration Options menu, select RESTART.
(**Setup** → ADMIN → **More** ▶ → RESTART)

```
RESTART/CLEAR CALL LOG?
YES      NO
```

- ▲ Select YES to restart the phone.

Viewing the Error and Download Logs

- ▲ From the Administration Options menu, select LOG.
(**Setup** → ADMIN → **More** ▶ → LOG)

```
VIEW LOG ENTRIES
ERROR PARAM      CLEAR
```

- ▲ Select ERROR to view the error log or PARAM (*National ISDN only*) to view the Parameter Download log.

The most recent log entry will be shown.

- More ▶ Press the **More** ▶ key to view previous entries.

- Done Press the **Done** key to return to the View Log Entries menu or press the **Setup** key to exit Setup Mode.

Clearing Logs

- ▲ Select CLEAR to remove all entries from the error log.

- Done Press the **Done** key to return to the Administration Options menu or press the **Setup** key to exit Setup Mode. The Parameter Download log is re-written each time a new download is performed.

Tone Commander 6210/6220 Installation Instructions

Troubleshooting

Inoperable Telephone Recovery Procedures

If a telephone is unable to operate normally or remains locked-up in a particular state:

1. Press the **Setup** key; the Setup Menu should be displayed. Select **ADMIN**, then press the **More ▶** key, select **RESTART**, then **YES**. This will cause the telephone to attempt re-initialization with the network. If full initialization is achieved, proceed to “Verify operation...”.
2. *If the phone display is active, but the Setup Menu does not function*, disconnect and reconnect the line cord or local power supply to cycle power on the phone. If full initialization is achieved, proceed to “Verify operation...”.
3. *If the phone display is blank and there are no lit LEDs*, for a 6210T or 6220T, verify connection to an external NT1 and verify power connection to the NT1. For a 6210U or 6220U, verify connection to an external power supply and make sure the line cord is plugged into the U IN jack on the phone. If power is connected to the phone, but the display remains blank, replace the phone.
4. *If the phone appears operational but full initialization is not achieved*, determine which protocol layer is not initializing by observing the startup diagnostic display.

Layer 1 (L1) does not initialize:

- For a 6210T or 6220T, locate the external NT1 device for the phone; verify connection between the U (LINE) connector on the NT1 and the Telco ISDN line. For a 6210U or 6220U, verify connection between the U IN jack on the phone and the Telco ISDN line.
- If the external NT1 indicates Terminal Error, verify connection and correct polarity of all wire pairs between the phone and the S/T (TERMINAL) connector on the NT1. On a multipoint line, verify correct connections and polarity to the partner phone as well. Verify termination settings on both phones and the NT1 (see page 9).
- For a standalone or single rack-mount NT1, press the NT1 reset button or cycle NT1 power by temporarily disconnecting its stand-alone power supply or removing the NT1 from the rack.
CAUTION: If you remove an NT1U-223TC triple NT1 circuit card from the rack, it will disrupt service to the other two NT1 circuits; plan accordingly.
- The network may take up to 3 minutes to synchronize L1 and L2 with the phone. If there is an external NT1, verify correct line and terminal status indications on the NT1. Follow additional troubleshooting procedures in your NT1 documentation.
- When Layer 1 is fully initialized, the display will indicate L1:OK

Layer 2 (L2) does not initialize within a few minutes:

- Repeat Step 1 (restart phone). If problem persists, contact your service provider.
- When Layer 2 is fully initialized, the display will indicate L2:OK and show the TEI number assigned by the network.

Layer 3 (L3) does not initialize within one minute after L2:OK:

- Verify correct SPID number is programmed and that it is not already in use (on a multipoint line).
- Verify that your service provider has not changed SPID formats or area codes on your ISDN line. (National ISDN SPID formats include the area code.)
- When Layer 3 is fully initialized, the display will temporarily show L3:OK and indicate the network switch type before returning to the normal idle display.

Verify operation of the phone after full initialization:

1. Go off-hook on an idle line. The selected key should light green and you should hear dial tone.
2. Dial a valid directory number for a test call. Verify that the call is successfully completed.

Telephone Configuration Troubleshooting

Symptom	Check	Fix
Inbound calls to a specific line cause the LED to flash, but there is no audible ringing.	“RINGER OFF (VOL^ = ON)” is displayed when idle.	Press the Vol▲ key while <u>not</u> on a call to enable the ringer.
	Setup → USER → RING → CONTROL > Select line key	> ALWAYS
A specific line is selected that is supposed to have dial tone, but there isn't any.	Setup → INSTL → KEYS > Select line key	> CA/DN
All inbound calls appear on CA1. Outbound calls cannot be made.	Setup → INSTL → More▶ → MODE	Select CACH, BASIC, or MERID1 as required by service provisioning.
Ringing calls are not answered when going off-hook (<i>National ISDN only</i>).	Setup → USER → More▶ → PREF	> RING
Using a specific headset, the voice level to other parties is not loud enough.	Setup → USER → More▶ → VOICE → HEAD → VOLUME	> XMT+ as many times as required
“SELECT AN IDLE LINE” is displayed when going off-hook or pressing the speaker key.	Originating DN and Call Appearance Reservation settings.	See page 20.

Appendix A

Ordering ISDN Service

Setup Wizard

The ISDN Telephone Setup Wizard simplifies ordering ISDN service. This Windows program prompts you for all required information, and prints the service order forms and key designation labels. You can download the Setup Wizard from Tone Commander's Web site at www.tonecommander.com.

Ordering Manually

Your service provider may have their own process and forms for ordering ISDN service. Contact them for instructions before you create your order.

Key Assignments

The 6210 and 6220 are compatible with all NIUF terminal packages and many other standard line configurations. If Parameter Downloading is available, the phone will automatically assign Feature Activator keys and codes to match almost any line configuration. Call appearances are always assigned in ascending order, starting with button #1. Feature activators are assigned in descending order, starting with button #10 on the 6210, #20 on the 6220, or the last button (#40 or #50) on the 6030X.



Use the table on the following page as a guide when assigning custom feature activators and indicators.

Where to Go for Help

If you need assistance ordering service, call Tone Commander Customer Technical Support at **(800) 524-0024**.

Tone Commander 6210/6220 Installation Instructions

Recommended Button Assignments

Network Button #	Assignment	
1	Call Appearance (PDN)	
2	Call Appearances 	
3		
.		
.		
.		
.		
.		
58		
59		Additional Feature Keys
60		Conference *
61		Transfer *
62		Drop *
63	Message Waiting Indicator	

* National ISDN only; DO NOT assign these keys for 5ESS Custom ISDN.

With Parameter Downloading, the phone will automatically remap feature activators (other than Conference, Transfer, Drop, and Message Waiting) in descending order, starting with key 20 on the 6220 or key 10 on the 6210. For example, network feature key #59 will be assigned to key 10 on a 6210, #58 to key 9, etc.

Appendix B

Setup Menu Tree

INSTL (*Installation Options*)

SPID (<i>Service Profile Identifier</i>)	page 18
PARAM (<i>Parameter Download – National ISDN only</i>)	page 18
START (<i>Start Download</i>)	
AUTO (<i>Automatic Download Enable/Disable</i>)	
KEYS	page 19
CA/DN (<i>Call Appearance/Directory Number</i>)	
ORIG (<i>Originating DN</i>)	
RESERV (<i>Call Appearance Reservation</i>)	
OUT (<i>Outgoing Only</i>)	
IN (<i>Incoming Only</i>)	
PRI (<i>Outgoing/Priority Incoming</i>)	
NOT (<i>Not Reserved</i>)	
FA (<i>Feature Activator</i>)	
CALL (<i>Originate a Call – National ISDN only</i>)	
DSS (<i>Direct Station Select</i>)	
DSS# (<i>Enter/Edit DSS Dialing String</i>)	
SPDIAL (<i>Speed Dial</i>)	
PAUSE (<i>Dialing Pause</i>)	
FA (<i>Feature Activator</i>)	
UNUSED	
MSG (<i>Message Waiting Indicator</i>)	page 23
MODE (<i>Terminal Mode – National ISDN only</i>)	page 24
CACH (<i>Call Appearance Call Handling EKTS</i>)	
BASIC (<i>Basic EKTS – National ISDN only</i>)	
MERID1 (<i>Meridian 1 Option Series PBX</i>)	
PASSWD (<i>Installation Password</i>)	page 25
SET	
CLEAR	
RESET (<i>Reset to Default Settings</i>)	page 26
VA (<i>Voice Announce</i>)	page 27
KEYS (<i>CA/DN Keys that accept VA Calls</i>)	
DNs (<i>Incoming Directory Numbers</i>)	
ALERT (<i>Incoming Call Alerting Patterns</i>)	
MUTE (<i>Automatic Microphone Muting</i>)	

Tone Commander 6210/6220 Installation Instructions

ADMIN (Administration Options)

INSPECT (Local Inspect)	page 29
KEYS (Call Appearance and Feature Activator Keys)	
DNs (Directory Numbers)	
MESSAGE (Message Waiting Indicator)	
VERS (Version)	page 32
SERIAL (Serial Number)	
H/W (Hardware Versions)	
S/W (Software Version)	
[option model] (Optional Equipment Version, if installed)	
TEST	page 33
DISPLY (Display and Indicators)	
LCD (Test LCD Display)	
RED (Test Red Indicators)	
GREEN (Test Green Indicators)	
OFF (Turn All Indicators Off)	
KEYS (Test Phone Keys)	
6030X (Test 6030X Keys and Indicators, if installed)	
DIAG (Diagnostic Display)	page 35
RESTART (Restart/Clear Call Log)	page 35
LOG (Error & Parameter Download Logs)	page 35
ERROR (Error Log)	
PARAM (Parameter Download Log – Nat. ISDN only)	
CLEAR (Clear Error Log)	

USER (*User Options*)

Options in this menu are described in the [6210/6220 User Guide](#).

CLOCK (*Set Time and Date*)**KEYS**

CA/DN Keys:

- DSS** (*Direct Station Select*)
 - DSS#** (*Enter/Edit DSS Dialing String*)
 - CLEAR** (*Remove Dialing String*)
 - PAUSE** (*Dialing Pause*)
- CA/DN** (*No DSS*)

Feature Activator Keys:

- CALL** (*Originate a Call – National ISDN only*)

Speed Dial Keys:

- PAUSE** (*Dialing Pause*)
- FA** (*Feature Activator*)
- CLEAR** (*Remove Dialing String*)

Unused Keys

DIR (*Call Directory*)**RING** (*Personal Ringing*)

- tone** (*ringing Tone*)
 - ALL** (*All Keys use the same Ringing Tone*)
- OFFHK** (*Off-Hook Ringing*)
 - NORMAL**
 - SINGLE** (*Single Burst*)
- CONTROL** (*ringing Control*)
 - ALWAYS** (*Ring Immediately*)
 - NEVER** (*Never Ring*)
 - WAIT2** (*Wait 2 Ring Cycles / 12 seconds*)
 - WAIT3** (*Wait 3 Ring Cycles / 18 seconds*)
 - WAIT4** (*Wait 4 Ring Cycles / 24 seconds*)
 - WAIT5** (*Wait 5 Ring Cycles / 30 seconds*)
 - WAIT6** (*Wait 6 Ring Cycles / 36 seconds*)
 - WAIT7** (*Wait 7 Ring Cycles / 42 seconds*)

PREF (*Off-hook Call Preference – National ISDN only*)

- RING** (*Answer Ringing Call*)
- IDLE** (*Select Idle Call Appearance*)
- NONE** (*Manual Call Appearance Selection*)

VOICE (*Voice Mode*)

- HAND** (*Handset*)
- HEAD** (*Headset*)
- VOLUME**
 - RCV+/-** (*Receive Volume Up/Down*)
 - XMT+/-** (*Transmit Volume Up/Down, Headset only*)

DISPLY (*Display Contrast*)

- +** (*Increase Contrast*)
- (*Decrease Contrast*)

PASSWD (*Call Log Password*)

- SET, CLEAR**

Tone Commander 6210/6220 Installation Instructions

POTS (6002TA Analog POTS Port Options)

Options in this menu are described in the 6002TA Analog Port Terminal Adapter User Manual.

RING (Ringing Control)

ALWAYS (Ring Immediately)

NEVER (Never Ring)

WAIT2 (Wait 2 Ring Cycles / 12 seconds)

WAIT3 (Wait 3 Ring Cycles / 18 seconds)

WAIT4 (Wait 4 Ring Cycles / 24 seconds)

WAIT5 (Wait 5 Ring Cycles / 30 seconds)

WAIT6 (Wait 6 Ring Cycles / 36 seconds)

WAIT7 (Wait 7 Ring Cycles / 42 seconds)

PRIV (POTS Line Privacy)

ON

OFF

CALLWT (Call Waiting Alert)

CALLID (Caller ID Display and Tone)

TONE (Call Waiting Tone only)

DISABLE

ORIG (POTS Originating Call Appearance)

Appendix C

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 D

Specifications

Contents of Shipping Container

- Telephone
- Handset
- Modular handset coil-cord
- Modular line cord
- Label Sheet
- Label Overlay
- User Guide

Standards Compliance

- ANSI T1.601-1992 and T1.605-1991
- National ISDN, Lucent 5ESS Custom ISDN
- FCC Part 15
- FCC Part 68
- Hearing Aid Compatible
- FCC Part 68 Volume Control Requirements
- UL, cUL Listed

Network Switch Compatibility

- Lucent 5ESS – National and Custom ISDN
- Avaya Definity, Multivantage, and Communication Manager PBX – National and Custom ISDN
- Nortel DMS-100 – National ISDN
- Nortel Meridian 1 Option Series PBX – National ISDN
- Siemens EWSD – National ISDN
- Lucent/AG Communication Systems GTD-5 – National ISDN

Power Requirements

- PS1 (phantom) or PS2 (pins 7 and 8)
- 24 to 56.5 VDC @ 2 W max. per terminal (excluding wiring losses)

Physical Dimensions

- 8.25" W x 8.5" D x 4.75" H, including handset

Weight

- 2.5 lbs.

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 (National ISDN)	Default Value (5ESS Custom ISDN)
Auto Param. Download	Enabled	N/A
CA Reservation	Not Reserved	Not Reserved
Call Log Password	None	None
Call Preference	Ring	(Network Controlled) *
Clock	Time of the last error log entry	Time of the last error log entry
Conference	FA/FI=60	N/A
Display Contrast	Level 5	Level 5
Drop	FA/FI=62	N/A
Handset Volume	Level 3	Level 3
Headset Volume	Level 3	Level 3
Install Menu Password	None	None
Message Waiting	FI=63	FI=63
Multifunction Keys 1-3	CA/DN	CA/DN
Multifunction Keys 4+	Unused	Unused
Off-hook Ring	Single	Single
Originating DN	Yes, PDN	Yes, Keys 1-3
Ringer Volume	Level 3	Level 3
Ringing Control	Always	Always
Ringing Tone	#5 (of 8)	#5 (of 8)
Speakerphone Volume	Level 3	Level 3
Terminal Mode	CACH	N/A
Transfer	FA/FI=61	N/A
Voice Announce Alert	Any	Any
Voice Announce DNs	All	All
Voice Announce Keys	All Disabled	All Disabled
Voice Announce Muting	On	On
Voice Mode	Handset	Handset

* fixed setting for 5ESS Custom ISDN

Appendix E

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 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 or 6220 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 or 6220, please refer to the Troubleshooting section in this 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.

