**Norstar KSU
Installation
Guide**

— NO12VG-004

Regulatory Information

Radio Frequency Interference

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

Registration

The Meridian Norstar Key Telephone System is registered with the FCC based upon compliance with Part 68 of its rules. Connection of the Meridian Norstar Key Telephone System to the nationwide telecommunications network is made through a standard network interface jack which you can order from your telephone company. Jacks for this type of customer provided equipment will not be provided on party lines or coin lines.

Telephone Company Notification

There is no need to contact your telephone company before connecting the Meridian Norstar Key Service Unit (KSU) to the telephone network, but they may request that you provided them with the following information:

- The telephone number(s) that the KSU will be connected to

- The FCC Registration Number (on label behind door on KSU)

- The Ringer Equivalence Number (on label behind door on KSU)

- The USOC Jack   RJ-11C

- Service Order Code (SOC)   9.0 F

- Facility Interface Code (FIC)   02LS2

Ringer Equivalence Number (REN)

The FCC Registration Label, found on the label behind the KSU door, includes the Ringer Equivalence Number (REN). This number is a representation of the electrical load that will be applied to your telephone line once it is connected to the KSU. The telephone lines serving your premise will not operate properly if the total load exceeds the capability of the telephone company central office equipment. That is, if too many ringers are connected to the line, there may be insufficient energy to ring your terminal(s). If the ringer load is excessive, you may also have difficulty dialing telephone numbers.

If you desire to know the total REN allowed for your telephone line(s), you may call the telephone company and they will inform you.

Hearing Aid Compatibility

The Meridian Norstar Telephones are Hearing Aid Compatible, as defined in Section 68.316 of Part 68 FCC Rules.

Rights Of The Telephone Company

If the system is determined to be causing 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 given the opportunity to correct the situation and you will be informed of your right to file a complaint to the FCC.

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

In the event of an equipment malfunction, all repairs will be performed by Northern Telecom Inc. or by one of its authorized dealers.

Address of Repair Facility

USA:
Northern Telecom Inc.
Product Service Center
720 Massman Drive
Nashville, TN
37210
Attn. RA#_____

Canada:
Northern Telecom Canada Ltd.
Telecom Services Division
30 Norelco Drive
Weston, Ontario
M9L 2X6

Set Dead trouble

Use

Check to ensure LCD contrast is dark enough for proper lighting by using the Contrast Adjustment feature from the *User Card* or *System Coordinator Guide.*

Wiring

Verify that the phone line cord is connected and in good condition. Check station wiring at both the RJ-11 and the distribution cross-connect.

Note: A TCM port should have between 15 and 20 Vdc across the Tip and Ring with the phone disconnected.

Equipment

Replace the phone with an operational phone.(Beware of Auto-Set Relocation implications in the *System Coordinator Guide – Feature Operations* and replace software cartridge with a known working cartridge.

KSU Down trouble

Wiring

Ensure that the KSU ac power cord is plugged into a working outlet. Verify that the RJ-21 connector is connected properly to both the KSU and the 50-pin distribution block.
Check by terminating a telephone directly on the QCBIX-1A strip or equivalent which connects to the KSU.

Equipment

If ac power is present and the LED indicator on the KSU is OFF, replace the KSU.

Analog Terminal Adapter trouble

Wiring

Check wiring of RJ-21 connector.

Equipment

Plug a Norstar phone into the suspect port. If it works, the wiring from the ATA to the analog device for example, single line phone or Modem should be checked. If the wiring is good, replace the ATA. If the Norstar phone does not work, check the wiring to the KSU. If that wiring is good, replace the KSU.

Checklist

Checklist

The Norstar digital key system is easy to install and program. With the use of a few access codes, initializing and programming the system is accomplished quickly and efficiently. The highlighted tab on the side of the page identifies, by task, your position in the guide.

The [_____] and [___] symbols identify which buttons to press for procedures. The [_____] symbol identifies which response appears on the LCD display of the telephones.

This Guide, through the use of checklists, photographs and illustrations, helps you to remember certain important areas. Use the Guide as a reference when unpacking the KSU and for specific wiring information. When finished with the installation, leave the Guide in the pocket of the KSU. The Troubleshooting section at the back of this Guide should help the next service representative or installer identify and solve problem areas if they arise.

English, French, or alternate language

The button labels and display information on the M7310 and M7208 phones is available in either North American English, Canadian French, or alternate language.
The feature codes are: French or alternate language
[Feature] [*] [5] [0] [2].
English
[Feature] [*] [5] [0] [1].

No Dial Tone trouble (on CO lines)

Programming

Verify that the phone has Line appearance programmed.
Use Button Inquiry ([Feature] [*] [0]).

Wiring

Unplug the RJ-11 jack (CO line) from the KSU and test for dial tone with a telephone. If no dial tone, report trouble to your telephone company. If dial tone, replace the KSU.

No Music on Hold/Background Music trouble

User

Ensure that the volume control is turned up and you are using proper feature code
[Feature] [8] [6].

Programming

Check [3. Call Handling   ] in Configuration. - Background Music and Music on Hold sections.

Wiring

Check wiring between Violet/Slate (Pin 50), Slate/Violet (Pin 25) or RJ-21 and music source.

Equipment

Check that the music source is turned ON, operational, and has the volume control set properly.

Note: Any high impedance (≈3,300Ω) /low output (1 Vrms max) can be connected as a music source.

Trouble-shooting

External Paging trouble

Ensure you are using the proper feature code `Feature` `6` `2` .
Use Button Inquiry (`Feature` `*` `0`) to verify feature or line buttons.

Check wiring between Violet/Orange (Pin 47), Orange/Violet (Pin 22) or RJ 21 connector and the paging amplifier.

Test that Paging equipment is operational. The output signal for an External Pager should be a nominal 775mV across 600 Ω.

Auxiliary Ringer trouble

If used for Night Service, ensure that Night Service is activated from the Prime phone.

Auxiliary ring contacts can be programmed to operate in conjunction with any or all of the following features:

Auxiliary Ringer	1. Lines
Loud Ringing Station Set	2. Sets
Night Ringer	3. Call Handling

Check wiring between Violet/Brown (Pin 49), Brown/Violet (Pin 24) or the RJ-21.
Check wiring between Auxiliary ring generator and ringing device.

Ensure that Auxiliary Ring contacts are operating (connect an ohmmeter across pair Violet/Brown (Pin 49), Brown/Violet (Pin 24) or the RJ-11 connector).

Note: The current capacity of the Norstar relay contacts is 50 mA dc. They are designed to operate with the NTOB17AB Auxiliary Ring Generator or equivalent.

Checking the environment

The installation area should be:

- ☐ Clean, dry, and well ventilated
- ☐ Maintained at a temperature of between 0°C and 50°C (32°F and 122°F)
- ☐ Maintained at a relative humidity of between 0% and 95% non-condensing
- ☐ Located at least 4m (13.1ft) from equipment such as copiers and electrical motors and other equipment that can produce electromagnetic interference
- ☐ An ac surge suppressor is recommended.

Checking KSU requirements

The ac power outlet for the KSU must:

- ☐ Be dedicated 115Vac, 50/60Hz, 3-wire, 15 amps
- ☐ Have a grounded third wire
- ☐ Not be switched
- ☐ Be no more than 1.5m (4.9ft.) from the KSU (An extension cord is not recommended).

Mount the KSU vertically upright on a convenient flat surface. If this is not available, a backboard is recommended. The backboard should be cut large enough to accommodate the distribution block. The KSU specifications and clearance are:

Dimension	Metric	Imperial
Length	556 mm	21.9 in
Width	356 mm	14 in
Height	87 mm	3.4 in
Weight	5250 g	11.6 lbs
Clearance (front)	1000 mm	39.4 in

Checking telephone wiring facilities

All new or existing wiring must meet the following specifications:

- ☐ One twisted or spiraled pair per phone, dc loop resistance less than 59 ohms.
- ☐ Cable length (24 AWG) not to exceed 305 m (1000ft).
- ☐ No bridge taps.

Checking equipment and supplies

There are several ways to wire a key system; the following list of material represents a typical installation.

Required equipment

☐ One Key Service Unit (KSU)
☐ Appropriate number of M7310 and/or M7208 phones in any combination.

Optional equipment

☐ Analog Terminal Adapter (for single line phone or other tip and ring devices)
☐ PC Application Interface (for Dial-by-Name and Call Detail Recording)
☐ Busy Lamp Field (for the M7310 phone only)
☐ Power supply to extend length of loop
☐ Shoulder Rest
☐ Headset
☐ Auxiliary Ring Generator
☐ External Paging Equipment
☐ Music Source
☐ Noisy Location Handset.

Miscellaneous material (may vary) required

☐ Mounting materials
☐ Two 25-pair (50-pin) distribution terminal blocks; QCBIX-1A or equivalent
☐ One 25-pair cable, 24 AWG, complete with an RJ-21 (50-pin female connector) on one end. Connects the KSU to the distribution block. Make sure the distribution block is not beyond the reach of the cable.
☐ A supply of 24 AWG twisted or spiraled station wire
☐ QCBIX designation strips or equivalent
☐ RJ-11 modular jack for each phone.

Final preparations

1. Mark and update the location of all equipment specified on the floor plan.

2. Verfiy and revise the programming sheet from the service order if required.

Typing telephone numbers

Use the green caps labeled Line 1, 2, ..., or type the individual telephone numbers on labels and attach them to the appropriate telephones. Type in the telephone number and inside extension number on the *Receiver Card* which is to be installed with a plastic lens underneath the receiver.

Testing phone and system operation

Verify the system functions and program features by working through the M7310 or M7208 user cards.

End-user training

Refer to your *Installer Checklist Card* and remember to leave the following Items to be left with the Customer or in the KSU:

KSU	Customer
☐ *Installation Guide* to go into the pocket of the KSU	☐ *System Coordinator Guide* with phone overlays stored in the pocket of the guide.
☐ *Programming Sheet* (tear off the installer section and store in the pocket of the KSU).	☐ *M7310* and *M7208* *Telephone User Cards*
☐ Floor plan to be stored in the pocket of the KSU	☐ *Optional equipment user cards* (BLF, ATA, etc.)
☐ *Optional equipment* installer cards (BLF, ATA, etc.)	☐ Spare button labels and button caps
	☐ *Programming Sheet* (Give the System Coordinator sections to the System Coordinator).
	☐ *Telephone overlays* to be stored in the pocket of the *System Coordinator Guide.*

Programming Configuration

To stay with the *Yes* default (so people can hear incoming calls on outside lines through remote ring device) and continue to the next area:

1. Press Next .
   OR
   To get *No*, press Change .

To stay with the *No* default (so autohold is in effect only after digits have been dialed on an outgoing call or if the station user has received an incoming ring signal) and continue to the last area:

1. Press Next .
   OR
   To get *Yes*, press Change .
   If Yes, idle line autohold is in effect immediatley on all call types.

Repeat the above process for all of the remaining lines.

1. Press Rls .

Completing programming

Tear off your portion of the programming sheet and put it in the KSU pocket. If you do not continue with programming, make sure you give the System Coordinator the other section of the *Programming Sheet* .

To continue programming, refer to *Configuration Programming* in the *System Coordinator's Guide.*

Applying the button labels

Do not apply button labels unless you have performed the remainder of the configuration procedures. If you expect the customer to reprogram some or all of the buttons, it would be prudent not to apply the button labels until all the reprogramming is done. There are two types of labelled buttons, pre-printed and blank ones you label yourself. Leave the label and extra button kit with the System Coordinator.

Inspecting the KSU

The box contains (report any damaged or missing items):

- [ ] One KSU complete with software cartridge
- [ ] One System Coordinator Guide (to be left on site)
- [ ] One Installation Guide (to be left in pocket of KSU)
- [ ] Two Programming Phone Overlays (to be left in the System Coordinator Guide)
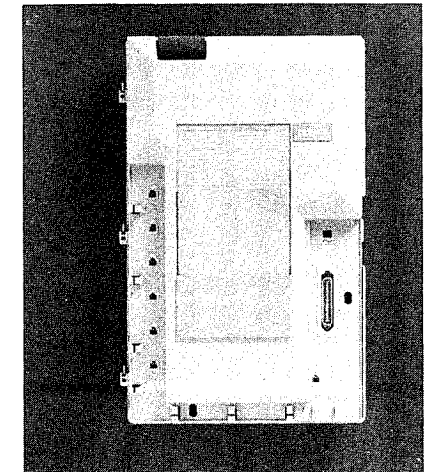- [ ] One Programming Sheet (not filled in).

Mounting the KSU on the wall

- [ ] Backboard, wooden, 3/4" thick (when recommended).
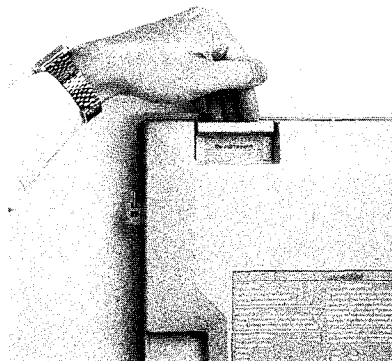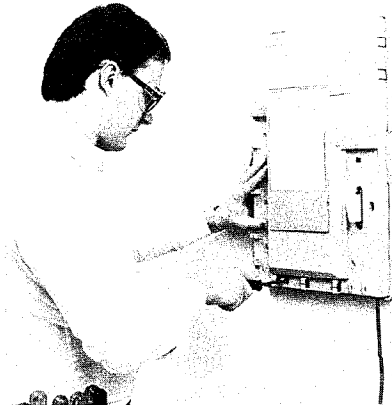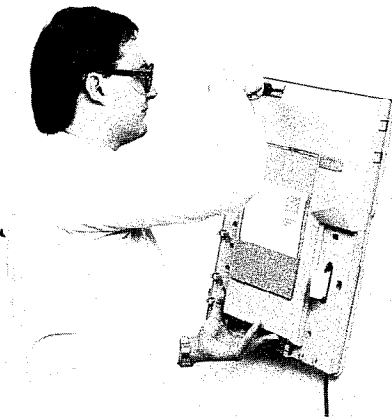- [ ] Three #10 screws, 1 1/4" - 1 1/2" long
- [ ] Screwdriver
- [ ] Level (optional)

1. Before installing the KSU, open the KSU door 90°, and applying upward pressure, lift it from its hinges. Set the door safely aside.

2. **Do not plug the KSU in at this point.** Remove the cartridge and set it safely aside.

3. Screw the top mounting screw half way into the wall.

Mounting the KSU on the wall

4. Hang the KSU, vertically upright, on the top mounting screw. Tighten this screw lightly so the KSU is snug against the wall but loose enough so you can still slide the KSU up and down. If the screw is too tight, the cartridge will have to be removed to loosen the screw if, in the future, the KSU has to be moved to a new location.

5. Make sure the KSU is level and install the bottom and right-hand side KSU mounting screws. The right-hand side screw is about 1/3 of the way up the side of the KSU. Tighten the two lower screws gently.

6. Make sure the KSU is unplugged.

7. Following the instructions on the label, install the software cartridge.

Programming Configuration

```
Configuration ........ procedure

1.    Press
      [Feature] [*] [*] [2] [6] [6] [3] [4] [4]
      OR
      [Feature] [*] [*] [C] [O] [N] [F] [I] [G]

      To add or delete telephone lines, do so with
      CONFIG, and use the STARTUP function.
```

The display responds with [1. Lines]. Look at *1.Lines* on your *Programming Sheet* under *Configuration for the Installer.* The Norstar defaults are in black and bold on this programming sheet. The following examples are based on the Startup Configuration Square template.

Selecting type of line

Program the outside line characteristics as shown on the programming sheet for each outside line. There are three choices — line pool, public and private. Selecting *line pool* assigns a line to belong to a group of outside lines, selecting *public* assigns a line to all phones and selecting *private* assigns a line to a particular phone.

1. Press [Show].
   The display responds with [Show Line: _].

2. Enter <line number 1,2 ... >from the dial pad.
   The display responds with [Type: Public].

3. To cycle throught the options, press [Change] .
   until you come to the option specified in the programming sheet.

4. To save your selection and advance to the next mode, press [Next].

Selecting line mode

To stay with the *Pulse* default and continue to the next area,

1. Press [Next].
   OR
   To get *DTMF tone* (touch tone), press [Change].

Testing the lines and phones

1. Check all outside lines by selecting each line in turn at one of the phones and verifying dial tone. If you do not get a dial tone, plug a single-line phone directly into the outside line at the distribution block. If you still do not get a dial tone, check all your wiring or contact your telephone company.

2. Check all station loop(s) by calling the Norstar phones.

3. Check the quality and clarity of all connections. Check for crackling, static, hums or any other unusual noises.

4. If there are any problems, check the Troubleshooting section of this Guide.

5. Verify visual associated indicators:

   To check a button:
   1. Select a line button and the indicator should appear.

   To check the display:
   1. Press [Feature] [*] [0] . The display responds [Press any key] .

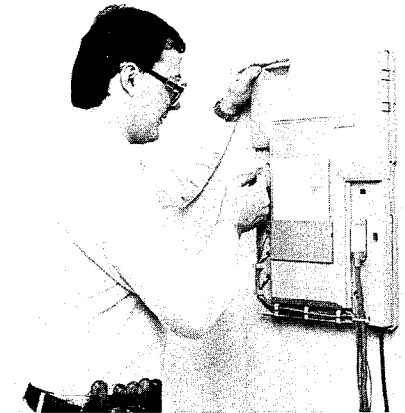   *To exit from the display:*
   1. Press [Rls] .

Connecting the phone cables and wiring
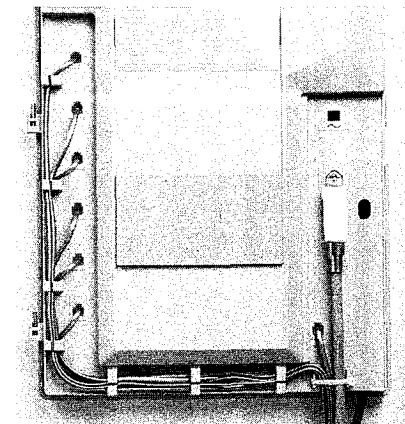
Cable and wiring material require

☐ One RJ-11 line cord, with an RJ-11 jack on each end, for each outside line to be terminated.
   Note: These cables are not required if the outside lines are already terminated with RJ-11 jacks.
☐ One 25-pair, 24 AWG, cable complete with an RJ-21 (50-pin female connector) installed on one end
☐ RJ-11 modular jacks for each station set.
☐ One 25-pair distribution terminal block.
☐ Sufficient 25-pair 50-pin distribution terminal blocks to accomodate station wiring.

Connecting outside lines proced

1. Connect the outside lines directly to the RJ-11 jacks located on the left side of the KSU. If the outside lines appear as twisted-pairs, terminate them on a QCBIX-36A block or equivalent first and then connect to the KSU with the line cords.

2. Route each outside line cord, one at a time, through the cable clips, located on the left side - down and across the bottom of the KSU, and on to the distribution block.
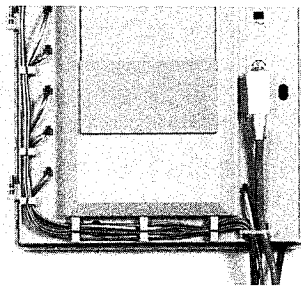
Connecting the phone cables and wiring

1. Plug the RJ-21 connector onto the corresponding connector on the KSU front panel - right side.

2. Route the 25-pair cable to the distribution block and terminate it on the top QCBIX 1A block (or equivalent). See wiring chart on page 9 for details.

3. Terminate the existing telephone wiring on the other QCBIX block or equivalent.

4. Connect the station wires (one pair per station set) to their corresponding station ports on the 50-pin connecting distribution block as per the wiring chart on the opposite page.

5. Terminate the phone set on a #625 block or equivalent jack using the center pair (tip and ring).

Norstar phones are not to be used as Off Premise Extensions (OPX).
The phones are for use with Norstar equipment only.
For OPX applications use the Analog Terminal Adapter (ATA).

Programming Startup (Cont'd)

If you wish to continue with the Startup process, all current administrative data will be replaced with the Square default values. After entering the Startup code, the display responds with Next to erase . All memory buttons are now temporarily assigned a new set of programming functions. The temporary functions of the buttons are designated when you install the overlay.

> To exit from Startup at any time during the following procedures:
> 1. Press Rls .

To confirm that the default system memory is to be erased and reset at the end of the Startup session:

1. Press the button which corresponds to the Next command on the overlay.

   The display responds with Template: Square .
   The Change command is now active. Cycle through the list to the desired template (No Prime, Hybrid, PBX, Square). Check your programming sheet for information about the templates. When the desired Template is displayed:

2. Press Next .

   The display responds with No. of Lines: 2 .
   To cycle through the number of lines assigned automatically to each telephone:

3. Press Change .

   When the desired number of lines appears:

4. Press Next or Rls to exit.

At this point, you have initialized the system configuration. Before continuing on with programming, it is advised that you test the lines and telephones to ensure that they are installed correctly.

Programming Startup

The Startup process selects one of four default configuration settings to make subsequent programming faster and easier.

The System Startup Code performs an initialization procedure which erases any existing system memory and resets it to the default values. **Startup is to be used for initial installation only. Do not use Startup to add lines after Norstar is in operation because the procedure erases all phone administrative data.**

To be accepted, the correct Startup Code must be entered no later than 15 minutes after the KSU has been powered up.
A Startup Code entered at any time after the 15-minute timeout results in the message | Startup denied |. If 15 minutes has elapsed since you powered the KSU up, unplug and repower the system again to set the timer.

All administrative data will be retained for at least three days if the power fails or if the KSU is unplugged. After three days without power, it may be necessary to perform the initialization procedures again.

Have your programming sheet and phone overlay (from the System Coordinator Guide back pocket) ready.

1. Place the overlay on the phone.
2. From the dialpad, press

   | Feature | * | * | 7 | 8 | 2 | 7 | 8 | 8 | 7 | .
   OR
   | Feature | * | * | S | T | A | R | T | U | P | .

If you wish to escape instead of proceeding with Startup, you can, at this juncture, do so without affecting system memory.
To escape and retain current administrative data:

1. Press | Rls | .

Connecting the phone cables and wiring

The following chart illustrates the station connections on the KSU. While phone connections are non-polarized, it is recommended that this wiring scheme be adopted as *good wiring practice* to create uniformity in the system.

50-Pin Distribution Block

Pin	Wire Color	Station (Defaults)		Port
26 1	White-Blue Blue-White	T R	(21)	Port 1
27 2	White-Orange Orange-White	T R	(22)	Port 2
28 3	White-Green Green-White	T R	(23)	Port 3
29 4	White-Brown Brown-White	T R	(24)	Port 4
30 5	White-Slate Slate-White	T R	(25)	Port 5
31 6	Red-Blue Blue-Red	T R	(26)	Port 6
32 7	Red-Orange Orange-Red	T R	(27)	Port 7
33 8	Red-Green Green-Red	T R	(28)	Port 8
34 9	Red-Brown Brown-Red	T R	(29)	Port 9
35 10	Red-Slate Slate-Red	T R	(30)	Port 10
36 11	Black-Blue Blue-Black	T R	(31)	Port 11
37 12	Black-Orange Orange-Black	T R	(32)	Port 12
38 13	Black-Green Green-Black	T R	(33)	Port 13
39 14	Black-Brown Brown-Black	T R	(34)	Port 14
40 15	Black-Slate Slate-Black	T R	(35)	Port 15
41 16	Yellow-Blue Blue-Yellow	T R	(36)	Port 16
42 17	Yellow-Orange Orange-Yellow	Spare Spare		
43 18	Yellow-Green Green-Yellow	Spare Spare		
44 19	Yellow-Brown Brown-Yellow	Spare Spare		
45 20	Yellow-Slate Slate-Yellow	Spare Spare		
46 21	Violet-Blue Blue-Violet	Spare Spare		
47 22	Violet-Orange Orange-Violet			Page Signal Direct
48 23	Violet-Green Green-Violet	N/O Common		Paging Equipment (relay contact)
49 24	Violet-Brown Brown-Violet	N/O Common		Auxiliary Ringer (relay contact)
50 25	Violet-Slate Slate-Violet	Music Ground		External Music Source

* T and R are symbolic representations of the station connections and should not be confused with Tip & Ring. Station connections are non-polarized.

Installing the Emergency Telephone

The Emergency Telephone connects automatically to line 1 when the power fails or when power to the KSU is disconnected.

Installation Procedure

1. Connect the optional Emergency Telephone to the emergency phone jack on the front panel of the KSU (just below the RJ-21 connector).

2. Use only a single-line phone.

3. Label the phone:
   Emergency Telephone Only. Functions only when ac power to the KSU is turned OFF.

Testing the Emergency Telephone

The Emergency Telephone must be tested with the KSU unplugged.

1. Pick up the Emergency Telephone receiver.

2. If no dial tone, check outside line 1. Unplug the Emergency Telephone and connect it directly to outside line 1. If you get a dial tone here, both the Emergency Telephone and line 1 are functioning properly.

3. Check that the CO line is properly connected to the line 1 designation.

4. If all previous steps have been verified and there is still no dial tone at Emergency Telephone, replace the KSU.

5. Repeat the Emergency Telephone test, if necessary.

Installing optional equipment
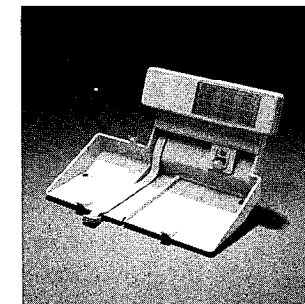
Analog Terminal Adapter

The Analog Terminal Adapter (ATA) is an interface between Norstar KSU and any standard analog device such as a single line telephone, a modem, answering machines and some fax machines.

1. Follow the ATA's installation instructions.

Busy Lamp Field

The Norstar Busy Lamp Field is a group of indicators that light up individually when specific telephones are in use. The unit attaches to the M7310 telephone and indicates whose phones are in use.

1. Follow the BLF's installation instructions.

Installing optional equipment

Auxiliary Ringer Control

The ringer must not draw more than 50 mA from a 30 V dc source.

1. Follow the manufacturer's installation instructions. Connect the Auxiliary Ring Generator to pins 24 (brown/violet) and 49 (violet/brown) on the KSU distribution block (see the station wiring chart). These pins provide a control contact. They do not provide ring current or dc voltage.

External Music Source

This feature plays music for callers on hold and Background Music. These features must be enabled with Configuration. Refer to the *System Coordinator Guide* and *Programming Sheet* for more information.

The music source can be any low-power output device such as a radio with a high-impedence earphone jack. The recommended KSU input level is 1 Vrms across an input impedance of 3300 ohms.

1. Connect the music source to pins 25 (slate/violet) and 50 (violet/slate) on the KSU distribution block (see the station wiring chart). Connect ground of music source to pin 25.

2. Make a call into the system on an outside line to a Norstar phone and put the call on hold. Adjust the volume of the music source to a suitable level. The volume can also be adjusted at the phone as well. Note: Music On Hold must be enabled first.

External Paging System

The Paging System operates in conjunction with loudspeakers and amplifiers installed by the customer. The system allows pages and announcements to be made in offices, warehouses and buildings. The paging system should produce 775 mV across the KSU input impedance of 600 ohms.

1. Follow the manufacturer's installation instructions. Connect the paging system to pins 22 (orange/violet) and 47 (violet/orange) to make a direct connection and then to pins 23 (green/violet) and 48 (violet/green) to make connection through a relay contact (max. rating: 30 V dc @ 50 mA). See station wiring chart.

Note: Norstar external paging does not support talk-back paging equipment If a CO line port is not used.

Powering up the KSU

1. Double check all wiring before applying power to the KSU.
2. Power the KSU ON by plugging in the power cord.

   The red power LED on the KSU should turn ON.
   If the red LED does not turn on

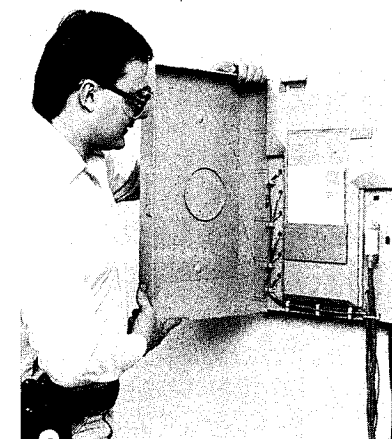3. Check for power at the ac outlet.

   If there is no ac power

4. Ask the owner of the system to check with building maintenance.

   If there is power at the ac outlet

5. Replace the KSU.

Replace the KSU door

1. Remember to re-install the door once the system is operational.

Inspecting Norstar telephones

Each box contains (report any damaged or missing items):

☐ One telephone
☐ Receiver
☐ Receiver cord
☐ Telephone User Card (to be left with the user)
☐ Designation kit containing:
  — button labels
  — button caps (pre-printed)
  — receiver card
  — plastic cover to fit over the receiver card
☐ 2.1 m (7 ft) line cord.

M7310 telephone

M7208 telephone

Installing the M7310 and M7208 telephones

1. Connect the receiver cord to the receiver jack (right hand jack when viewed from rear). Route the cord through the cord guide embedded in the bottom of the telephone.

2. Connect the line cord.

3. Connect the telephones to the #625 terminating blocks or equivalent jacks in locations designated by the customer. Route the cord through the cord guide.

4. Check telephone displays; the indicators should flash for up to 15 seconds while the set is initializing. Default time and date are then displayed. This does not verify the wiring. Check the wiring at the distribution block.

Installing a wall-mounted telephone

1. Both the M7310 and M7208 telephones can be mounted on the wall. Remove the bevelled wall-mounting base from the back of the telephone. Grip the base, and with your two thumbs, push on the top to pop out.

2. Remove the receiver clip from the base. Install the clip in the forward lip of the receiver rest.

3. Use a screwdriver or similar tool to remove the center knock-out panel.

4. Mount the base "upside down" on the wall so the RJ-11 wall jack projects through the knockout.

5. Connect the line cord between the RJ-11 wall jack and the RJ-11 telephone jack (left hand jack when viewed from the bottom). Route the cord through the cord guide.

6. Mount the telephone on the wall base.