AT&T

AUDIX Enhanced III System Integration Package SL-1 Installation and Maintenance

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About This Document

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This document contains installation and maintenance procedures for the AUDIX Enhanced III system when installed with an PBX. In addition to this document, you will need *AUDIX Enhanced III Installation,* 585-304-105 and *AUDIX Enhanced III Maintenance,* 585-304-106.

Follow the procedures of this document to perform the installation. When special instructions are required, they will be presented here. When standard AUDIX procedures can be used, you will be instructed to use the AUDIX installation manual. After completing any standard procedure, return to this document for the next instruction.

The maintenance aspect is much simpler. In most cases you can use the AUDIX maintenance manual to maintain and troubleshoot the system. If, however, you have a problem with a Voice Port Trunk (VPT) or Voice Port Controller (VPC), use this document to isolate the problem.

Intended Audience

The descriptions and procedures in this document are written for on-site service technicians and remote service personnel, including the National Customer Support Center (NCSC).

Prerequisite Skills Or Knowledge

No prerequisite skills or knowledge are assumed. However, AUDIX training is available and strongly recommended.

How This Document Is Organized

This addendum is divided into two sections: Installation and Maintenance. The installation section covers hardware and AUDIX administration. The maintenance section covers changes to maintenance forms, changes to the VPT and VPC alarm/error codes, and information on upgrades and additions.

A description of the SL-1 translations required for an AUDIX installation is provided in *AUDIX Integration Package for the SL-1 Switch: Administration and Reference,* 585-304-203.

Installation

2

This chapter, as outlined below, must be used to install an AUDIX Enhanced III (R1V4_5) system for an SL-1 PBX. Several references are made to *AUDiX Enhanced III Installation,* 585-304-105, so keep it on hand.

➡ NOTE:
    "About This Document" of the installation manual provides an overview of the installation process, where to go for help, related documents, tools required, etc.

This chapter is organized as follows and is intended to be the general sequence of steps.

- Audix Inventory—Part 1
- Audix Inventory—Part 2
- Install The Audix System
- Data Link Cabling
- Voice Port Cabling
- Audix Alarm Cabling
- Maintenance Terminal Cabling
- Audix Initialization
- Audix Administration
- Audix Tests
- Feature And Voice Port Tests

Audix Inventory—Part 1

Check to see that you have the following:

— A TN547B Multiprotocol Switch Interface (MPSI) installed in slot 15 of the AUDIX base cabinet

— AUDIX R1V4_5 Integrations Package 1 software shipped on the AUDIX disk cartridges (set of two cartridges)

   ■ One-Cabinet AUDIX cartridges (J58889UB-1, L8) read PG-3E082-01

   ■ Two-Cabinet AUDIX cartridges (J58889UB-1, L9) read PG-3E083-01

— Up to four TN762B boards to support voice mail and call answering

— Up to four TN747B boards to support Automated Attendant and outcalling

— 66MI-50 connecting blocks at the switch for the AUDIX cables

— A 105B Isolating Data Interface (IDI), an ED-1E434-11, Group 174 cable (RS449), and an H600-282, Group 1-6 cable (RS449 to RS-232C) or equivalent

Audix Inventory—Part 2

In the AUDIX installation manual, use Section 2.1 (One-Cabinet AUDIX) or Section 2.2 (Two-Cabinet AUDIX) to perform an inventory of the AUDIX cabinet(s), disk drives, and circuit packs. Use Section 2.3 to inventory the loose equipment. Then return here.

Install The Audix System

Use the AUDIX installation manual (Sections 2.5 through 2.7) to install the AUDIX system. Information includes the floor layout, earthquake protection, if required, base and expansion cabinet installation, and DC power if used. Then return here to *Data Link Cabling.*

Data Link Cabling

Figure 2-1 shows the standard setup for an AUDIX to SL-I data link.

See Table 2-A for pinouts and winng for an RS 449 connection.
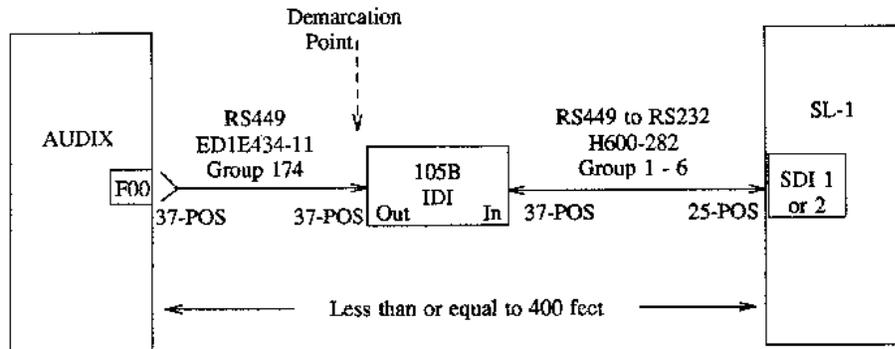
Figure 2-1. AUDIX to SLL-1 Data Link

Table 2-A. Pinouts and Wiring for an RS-449 Connection

Pin No.	Lead Designation	Function	Wire Color
26	NC	NC	W/BL
1	NC	NC	BL/W
27	NC	NC	W/O
2	FG or AA	Protective Ground	O/W
28	NC	NC	W/GR
3	NC	NC	GR/W
29	NC	NC	W/BR
4	SD (TXD) or BA	Transmitted Data	BR/W
30	NC	NC	W/S
5	ST or DB	Transmission Signal Element Timing (DCE Source)	S/W
31	NC	NC	R/BL
6	RD (RXD) or BB	Received Data	BL/R
32	NC	NC	R/O
7	RTS or CA	Request to Send	O/R
33	SQ or CG	Signal Quality Detector	R/GR
8	RT or DD	Receiver Signal Element Timing (DCE Source)	GR/R
34	NC	NC	R/BR
9	CTS or CB	Clear To Send	BR/R

Table continues on the next page.

TABLE 2-A. Pinouts and Wiring for an RS-449 Connection (Cont'd)

Pin No.	Lead Designation	Function	Wire Color
35	NC	NC	R/S
10	NC	NC	S/R
36	NC	NC	BK/BL
11	DSR or CC	Data Set Ready	BL/BK
37	NC	NC	BK/O
12	DTR or CD	Data Terminal Ready	O/BK
38	NC	NC	BK/GR
13	CD or CF	Received Line Signal Detector	GR/BK
39	NC	NC	BK/BR
14	NC	NC	BR/BK
40	NC	NC	BK/S
15	IC or CE	Ring Indicator	S/BK
41	NC	NC	Y/BL
16	NC	NC	BL/Y
42	NC	NC	Y/O
17	TT or DA	Transmitter Signal Element Timing (DTE Source)	O/Y
43	NC	NC	Y/GR
18	NC	NC	GR/Y
44	NC	NC	Y/BR
19	SG	Signal Ground	BR/Y
45	NC	NC	Y/S
20	NC	NC	S/Y
46	NC	NC	V/BL
21	NC	NC	BL/V
47	NC	NC	V/O
22	NC	NC	O/V
48	NC	NC	V/GR
23	NC	NC	GR/V
49	NC	NC	V/BR
24	NC	NC	BR/V
50	NC	NC	V/S
25	NC	NC	S/V

NC = No Connection

Voice Port Cabling

First verify that the TN762Bs, TN747Bs, and TN501Bs are in the correct slots. See Table 2-B and follow our example of a One-Cabinet AUDIX system. If you have a Two-Cabinet AUDIX, you will need Table 2-C.

Step 1: From the Account Team, how many Automated Attendant/outcalling ports were ordered?_____
(In our example, we will use three.)

Step 2: From the Account Team, how many voice mail/call answer ports were ordered?__
(In our example, we will use eleven.)

Step 3: The circuit packs required and the slots they should be in are shown on the right side of the Table 2-B or Table 2-C. Table 2-B indicates that for our example:

- A TN762B should be in slot 19

- A TN747B should be in slot 21

- A TN762B should be in slot 24.

   Are the correct boards provided for your system and are they in the correct slots? If not, order the correct boards and/or move them to the correct slots.

Step 4: If a TN762B or TN747B belongs in slot 21 of the base cabinet, verify that a D02 connector is installed on the back of the cabinet. If not, tell the Account Team to order kit D-182216 (comcode 105 716 542).

Table 2-B.   VPT Requirements (One-Cabinet AUDIX)

① Number of Auto. Atnd./ Outcalling ports

② Number of Voice Mail/ Call Answer ports

Ports Required		Circuit Packs Required		
Auto. Atnd./ Outcalling	Voice Mail/ Call Answer	Slot 19	Slot 21	Slot 24
0	1 - 8	TN762B	TN501B**	--
	9 - 16	TN762B	TN501B	TN762B
1	0	TN747B	--	--
	1 - 8	TN762B	TN501B**	TN747B
	9 - 13	TN762B	TN747B*	TN762B
2	0	TN747B	--	--
	1 - 8	TN762B	TN501B	TN747B
	9 - 12	TN762B	TN747B*	TN762B
3	0	TN747B	TN501B	--
	1 - 8	TN762B	TN501B	TN747B
	9 - 11	TN762B	TN747B*	TN762B
4	0	TN747B	TN501B	--
	1 - 8	TN762B	TN501B	TN747B
	9 - 10	TN762B	TN762B*	TN747B
5	0	TN747B	TN501B	--
	1 - 8	TN762B	TN501B	TN747B
	9	TN762B	TN762B*	TN747B
6 - 8	0	TN747B	TN501B	--
	1 - 8	TN762B	TN501B	TN747B
9	0	TN747B	TN501B	TN747B
	1 - 5	TN747B	TN747B*	TN762B
10	0	TN747B	TN501B	TN747B
	1 - 4	TN747B	TN747B*	TN762B
11	0	TN747B	TN501B	TN747B
	1 - 3	TN747B	TN747B*	TN762B
12	0	TN747B	TN501B	TN747B
	1 - 2	TN747B	TN762B*	TN747B
13	0	TN747B	TN501B	TN747B
	1	TN747B	TN762B*	TN747B
14 - 16	0	TN747B	TN501B	TN747B

③ Packs and locations required

* When a TN747B or TN762B is used in slot 21, the cabinet is limited to 14 ports.
** This slot will be empty in systems with 1-2 ports.

Step 5: Run the Group 300 (25-pair) cables from the AUDIX D0x connectors to the 66M1-50 block(s). These blocks are the demarcation point and the end of your responsibility.

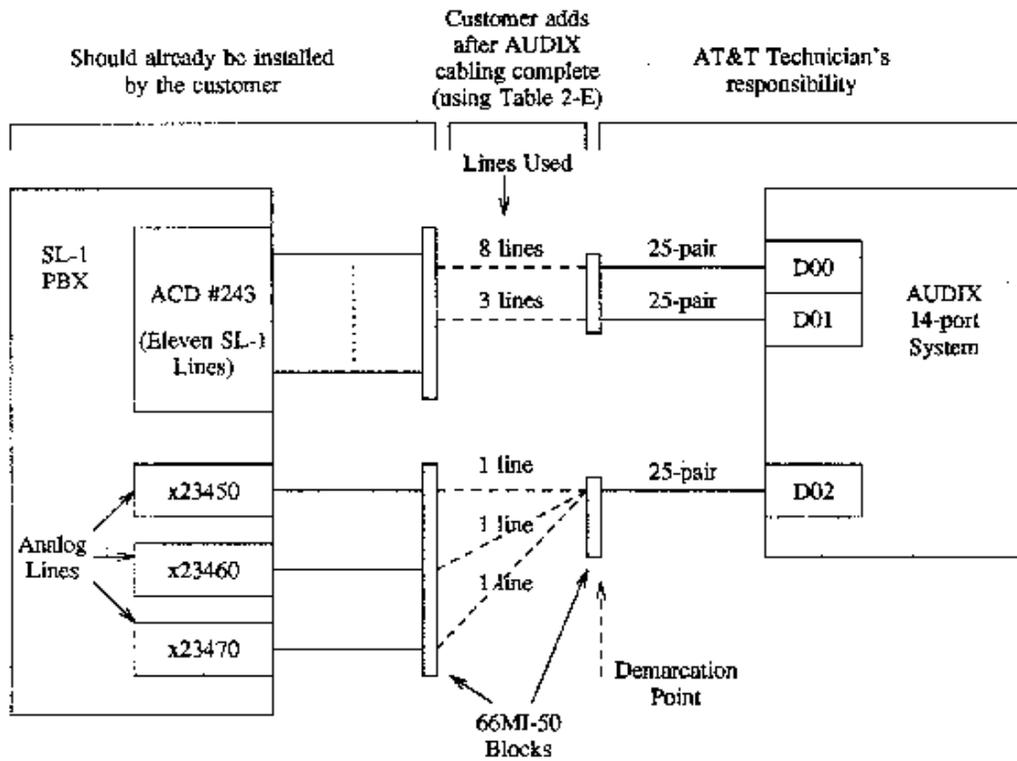Figure 2-2 follows our example. Figure 2-3 shows matches the entry circled on Table 2-C.

**Figure 2-2.   Voice Port Cabling for a One-Cabinet AUDIX (Sample).**

Table 2-C.   VPT Requirements (Two-Cabinet AUDIX)

Annotations: ① Number of Auto.Attnd/Outcall ports ② Number of Voice Mail/Call Answer ports ③ Packs and locations required ④ (circled row marker)

Ports Required		Circuit Packs Required				
		Main Cabinet			Expansion Cabinet	
Auto. Attnd./ Outcalling	Voice Mail/ Call Answer	Slot 19	Slot 21	Slot 24	Slot 19	Slot 24
0	17 - 24 25 - 32	TN762B TN762B	TN501B TN501B	TN762B TN762B	TN762B TN762B	-- TN762B
1	14 - 16 17 - 24 25 - 29	TN762B TN762B TN762B	TN501B TN501B TN747B*	TN762B TN762B TN762B	TN747B TN762B TN762B	-- TN747B TN762B
2	13 - 16 17 - 24 25 - 28	TN762B TN762B TN762B	TN501B TN501B TN747B*	TN762B TN762B TN762B	TN747B TN762B TN762B	-- TN747B TN762B
3	12 - 16 17 - 24 25 - 27	TN762B TN762B TN762B	TN501B TN501B TN747B*	TN762B TN762B TN762B	TN747B TN762B TN762B	-- TN747B TN762B
④	11 - 16 17 - 24 25 - 26	TN762B TN762B TN762B	TN501B TN501B TN762B*	TN762B TN762B TN762B	TN747B TN762B TN762B	-- TN747B TN747B
5	10 - 16 17 - 24 25	TN762B TN762B TN762B	TN501B TN501B TN762B*	TN762B TN762B TN762B	TN747B TN762B TN762B	-- TN747B TN747B
6 - 8	9 - 16 17 - 24	TN762B TN762B	TN501B TN501B	TN762B TN762B	TN747B TN762B	-- TN747B
9	6 - 8 9 - 16 17 - 21	TN747B TN747B TN747B	TN501B TN501B TN747B*	TN747B TN747B TN762B	TN762B TN762B TN762B	-- TN762B TN762B
10	5 - 8 9 - 16 17 - 20	TN747B TN747B TN747B	TN501B TN501B TN747B*	TN747B TN747B TN762B	TN762B TN762B TN762B	-- TN762B TN762B
11	4 - 8 9 - 16 17 - 19	TN747B TN747B TN747B	TN501B TN501B TN747B*	TN747B TN747B TN762B	TN762B TN762B TN762B	-- TN762B TN762B
12	3 - 8 9 - 16 17 - 18	TN747B TN747B TN747B	TN501B TN501B TN762B*	TN747B TN747B TN762B	TN762B TN762B TN762B	-- TN762B TN747B

* When a TN747B or TN762B is used in slot 21, the main cabinet is limited to 14 ports and the system is limited to 30 ports.

Ports Required		Circuit Packs Required				
		Main Cabinet			Expansion Cabinet	
Auto. Ansd./ Oncalling	Voice Mail/ Call Answer	Slot 19	Slot 21	Slot 24	Slot 19	Slot 24
13	2 - 8	TN747B	TN501B	TN747B	TN762B	--
	9 - 16	TN747B	TN501B	TN747B	TN762B	TN762B
	17	TN747B	TN762B *	TN762B	TN762B	TN747B
14 - 16	1 - 8	TN747B	TN501B	TN747B	TN762B	--
	9 - 16	TN747B	TN501B	TN747B	TN762B	TN762B
17	0	TN747B	TN501B	TN747B	TN747B	--
	1 - 8	TN747B	TN501B	TN747B	TN747B	TN762B
	9 - 13	TN747B	TN747B *	TN762B	TN747B	TN762B
18	0	TN747B	TN501B	TN747B	TN747B	--
	1 - 8	TN747B	TN501B	TN747B	TN747B	TN762B
	9 - 12	TN747B	TN747B *	TN762B	TN747B	TN762B
19	0	TN747B	TN501B	TN747B	TN747B	--
	1 - 8	TN747B	TN501B	TN747B	TN747B	TN762B
	9 - 11	TN747B	TN747B *	TN762B	TN747B	TN762B
20	0	TN747B	TN501B	TN747B	TN747B	--
	1 - 8	TN747B	TN501B	TN747B	TN747B	TN762B
	9 - 10	TN747B	TN762B *	TN762B	TN747B	TN747B
21	0	TN747B	TN501B	TN747B	TN747B	--
	1 - 8	TN747B	TN501B	TN747B	TN747B	TN762B
	9	TN747B	TN762B *	TN762B	TN747B	TN747B
22 - 24	0	TN747B	TN501B	TN747B	TN747B	--
	1 - 8	TN747B	TN501B	TN747B	TN747B	TN762B
25	0	TN747B	TN501B	TN747B	TN747B	TN747B
	1 - 5	TN747B	TN747B *	TN747B	TN747B	TN762B
26	0	TN747B	TN501B	TN747B	TN747B	TN747B
	1 - 4	TN747B	TN747B *	TN747B	TN747B	TN762B
27	0	TN747B	TN501B	TN747B	TN747B	TN747B
	1 - 3	TN747B	TN747B *	TN747B	TN747B	TN762B
28	0	TN747B	TN501B	TN747B	TN747B	TN747B
	1 - 2	TN747B	TN762B *	TN747B	TN747B	TN747B
29	0	TN747B	TN501B	TN747B	TN747B	TN747B
	1	TN747B	TN762B *	TN747B	TN747B	TN747B
30 - 32	0	TN747B	TN501B	TN747B	TN747B	TN747B

* When a TN747B or TN762B is used in slot 21, the main cabinet is limited to 14 ports and the system is limited to 30 ports.

Figure 2-3.   Voice Port Cabling for a Two-Cabinet AUDIX (Sample).
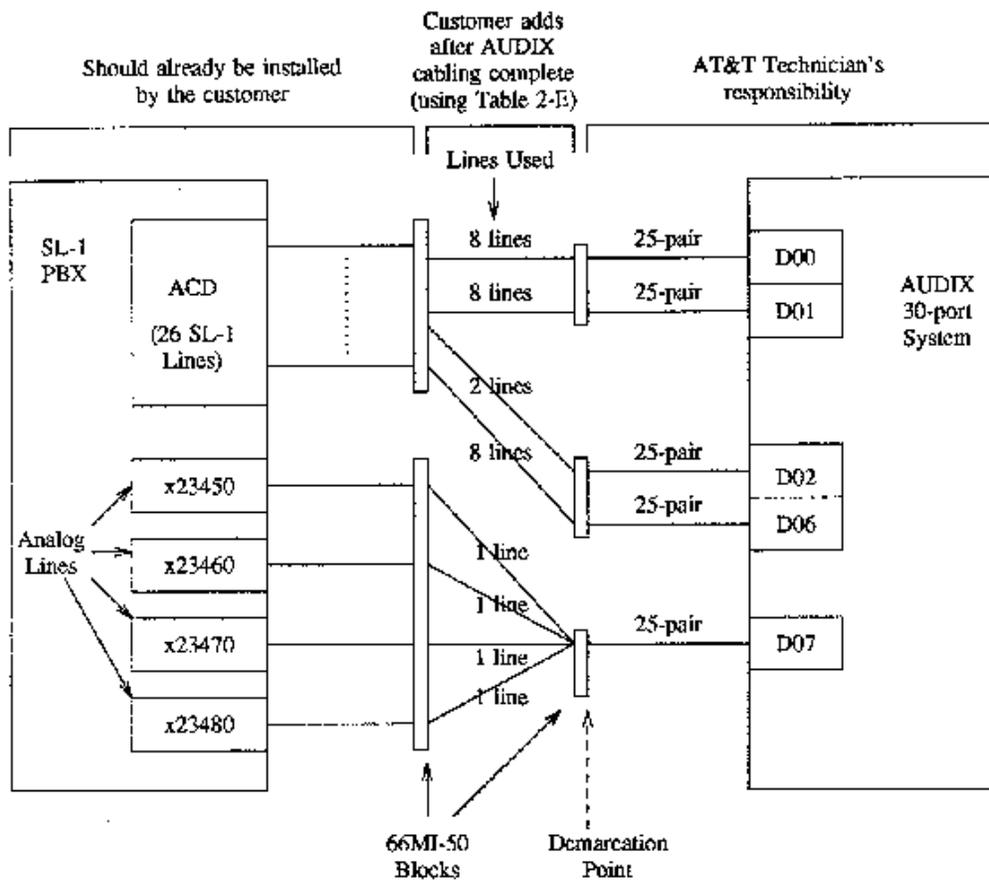
Legend:

Sample Port Requirement:
    26 Voice Mail/Call Answer ports
    4 Automated Attendant/Outcalling ports

Resultant VPT Configuration:
    D00 (VPT 1, TN762B, base slot 19) provides 8 voice mail/call answer ports
    D01 (VPT 2, TN762B, base slot 24) provides 8 voice mail/call answer ports
    D02 (VPT 5, TN762B, base slot 21) provides 2 voice mail/call answer ports (one port unused)
    D06 (VPT 3, TN762B, expansion slot 21) provides 8 voice mail/call answer ports
    D07 (VPT 4, TN747B, expansion slot 24) provides 4 automated attendant ports (one port unused)

Step 6: It is the responsibility of the customer to patch the AUDIX ports to the voice ports. First take a look at Table 2-D which shows a table that reflects our example in Figure 2-2 . Bold indicates board type, ports, and switch circuit used.

Circle the items in Table 2-E that pertain to your system. When D02 contains a VPT, ports 14-16 of D01 (one-cabinet) or ports 30-32 of D07 (Two-Cabinet) appear at D02, limiting D01 or D07 to five ports. Also, if D02 is equipped for a VPT, two ports must be left unused.

⇒ NOTE:

If you have a two-cabinet system, the circuit packs in slots 19 and 24 of the main cabinet and slot 19 of the expansion cabinet are interchangeable. Just make sure the wiring to the switch and the translations at both the switch and AUDIX match any changes you make.

Table 2-D.   Audix Voice Port Cable Pinout (Matches Figure 2-2).

Connector	Board Location	Board Type	Ports Used	Wire Pair	Connect Ports to Switch Circuit
D00	Slot 19 (base cabinet)	TN747B or TN762B	1 2 3 4 5 6 7 8	W/BL W/BR R/O R/S GR/BK Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)
D01	Slot 24 (base cabinet)	TN747B or TN762B	9 10 11 12 13 14 15 16	W/BL W/BR R/O R/S GR/BK Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)
D02	Slot 21 (base cabinet)	TN747B or TN762B	14 or 30 15 or 31 16 or 32	Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)
D06	Slot 19 (exp. cabinet)	TN747B or TN762B	17 18 19 20 21 22 23 24	W/BL W/BR R/O R/S GR/BK Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)
D07	Slot 24 (base cabinet)	TN747B or TN762B	25 26 27 28 29 30 31 32	W/BL W/BR R/O R/S GR/BK Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)

See the previous Step 6 for an explanation of this table.

Table 2-E.   AUDIX Voice Port Cable Pinout.

Connector	Board		Ports Used**	Wire Pair	Connect Ports to Switch Circuit
	Location	Type*			
D00	Slot 19 (base cabinet)	TN747B or TN762B	1 2 3 4 5 6 7 8	W/BL W/BR R/O R/S GR/BK Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)
D01	Slot 24 (base cabinet)	TN747B or TN762B	9 10 11 12 13 14 15 16	W/BL W/BR R/O R/S GR/BK Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)
D02	Slot 21 (base cabinet)	TN747B or TN762B	14 or 30 15 or 31 16 or 32	Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)
D06	Slot 19 (exp. cabinet)	TN747B or TN762B	17 18 19 20 21 22 23 24	W/BL W/BR R/O R/S GR/BK Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)
D07	Slot 24 (base cabinet)	TN747B or TN762B	25 26 27 28 29 30 31 32	W/BL W/BR R/O R/S GR/BK Y/BL Y/BR V/O	QPC 452B/QPC 594C (for TN747B) or QPC 451C (for TN762B)

See the previous Step 6 for an explanation of this table.

Audix Alarm Cabling

AUDIX can report alarms to external equipment. This equipment must be provided by the customer. Connector D03 provides a major and a minor alarm circuit. Each circuit is a simple contact closure.

The major alarm circuit appears on the V/O wire pair.

The minor alarm circuit appears on the Y/BR wire pair.

Section 6.3.3 of the installation manual shows an example where a Silent Knight Autodialer* and a Silent Knight Autodialer receiver are used.

Use a Group 300 cable to run D03 to the cross-connect field. This is most likely the demarcation point. Have the customer's switch personnel install and wire the autodialer.

Maintenance Terminal Cabling

Connect the local maintenance terminal as shown in Figure 2-4. For option settings and how to use the terminal, see Chapter 13 of the AUDIX installation manual. This chapter also shows how to attach a printer.

Figure 2-4.   Local Maintenance Terminal Setup.
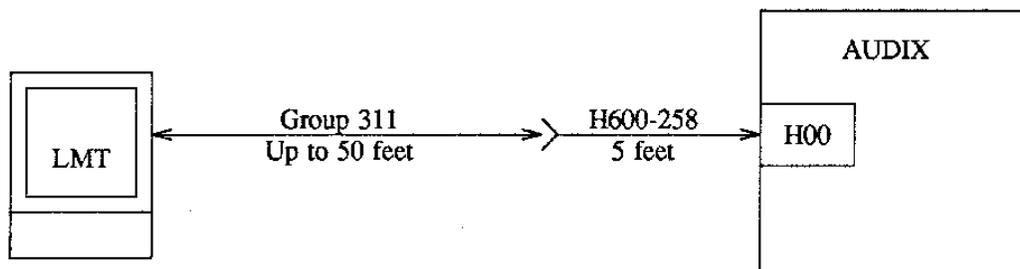
Audix Initialization

Follow the procedures of Section 6.4 in the installation manual. Make sure the programmed cartridge is labeled PG-3E082 (one-cabinet AUDIX) or PG-3E083 (Two-Cabinet AUDIX). *Stop when you get to Section 6.4 and return here.*

* Silent Knight Autodialer is a registered trademark of Silent Knight Security Systems.

Audix Administration

The following steps are performed on the AUDIX maintenance or administration terminal.

Assign The AUDIX Machine ID

Follow the procedure of Section 6.5.I in the installation manual. Return here when finished.

Assign The Switch Connection

Go to the `system : translation : switch connection` form (Figure 2-5). The system is shipped with *connection type* set to "dciu-sci." For the SL-1 PBX, do the following:

Step 1: Set *connection type* to sl1. Press CHANGE. A new set of fields will appear.

Step 2: Set the *baud rate* field to the speed that matches the SDI port on the SL-1.

> **NOTE:**
> This information is provided by the account team.

Step 3: Tab to the *ACD feature package on SLI (A,B,C)* field and type the ACD feature package that's used on the SL-1. If the switch is using ACD feature package D, leave it set at "C".

> **NOTE:**
> This information is provided by the account team.

Step 4: The *automated attendant* extension fields are used in conjunction with the Automated Attendant feature. An extension entered in one of these fields must have corresponding assignments on the `subscriber : local` form (permission type = 'a') and on the `system : attendant` form. There must also be at least one TN747B in the system.

Step 5: Set *AUDIX* to the AUDIX machine number (usually 1).

Step 6: When a VPT is installed with a TN747B, the ports on that board can be assigned to one of the three automated attendant groups. This is done by entering a 1, 2, or 3 under the appropriate port (1 through 8). An automated attendant extension must first be entered for the group (Step 4 above).

> **NOTE:**
> This information is provided by the account team.

Step 7: When all data fields have been entered, press ⎡CHANGE⎤. You can return later to enter any automated attendant data.

```
╭─────────────────────────────────────────────────────────────────────╮
│AUDIX STATUS: alarms: M   , logins:1, thresholds:none                  │
│ PATH: system : translation : switch connection                        │
│                                                                       │
│  connection type (dclu-sci/smsi/bri-api/sl1/standalone): sl1          │
│  (PRESS CHANGE TO MODIFY CONNECTION TYPE, NEW FIELDS WILL BE DISPLAYED)│
│                                                                       │
│       (THE FOLLOWING FIELDS APPLY ONLY TO SL1)                        │
│                                                                       │
│  baud rate (1200,2400,4800) : 1200                                    │
│  ACD feature package on SL1 (A,B,C): C                                │
│  automated attendant, ext 1:4523450___ ext 2:4523460___ ext 3:4523470___│
│  host switch: 1        AUDIX: 1                                        │
│                                                                       │
│          Type            Auto Attendant Group(1-3)                    │
│          (747/762)        1 2 3 4 5 6 7 8                             │
│  VPT 1:   762            _ _ _ _ _ _ _ _                             │
│  VPT 2:   762            _ _ _ _ _ _ _ _                             │
│  VPT 3:   747            _ _ _ _ _ 1 2 3                             │
│  VPT 4:   ###            _ _ _ _ _ _ _ _                             │
│  VPT 5:   ###            _ _ _ _ _ _ _ _                             │
│                                                                       │
│  ┌───────────────────────────────────────────────────────────────┐   │
│  Error and confirmation information appears on this line.             │
│  ┌─────────┬──────┬────────┐   ┌──────┬───────┐   ┌───────┬──────┬──────┐
│  │ CHANGE  │ ADD  │ DELETE │   │ HELP │ FIELD │   │ CLEAR │ EXIT │ ENTER│
│  │ OR RUN  │      │        │   │      │ HELP  │   │ FORM  │      │      │
│  └─────────┴──────┴────────┘   └──────┴───────┘   └───────┴──────┴──────┘
╰─────────────────────────────────────────────────────────────────────╯
```

Data on this form corresponds to the example of Figure 2-2.

Figure 2-5.   The system : translation : switch connection Form

Set And Test The AUDIX Clock

See Section 6.5.3 in the AUDIX installation manual.

Assign The Time Zone

See Section 6.5.4 in the AUDIX installation manual.

Assign The AUDIX Machine Profile

See Section 6.5.5 in the AUDIX installation manual.

Assign The Call Transfer out of AUDIX Feature

See Section 6.5.6 in the AUDIX installation manual.

Run Maintenance Audits on The FP

See Section 6.5.7 in the AUDIX installation manual.

Assign The Voice Ports

Go to the `system : translation : voice port` form. TN762B ports are wired to circuits that are assigned to an ACD group. Each of these circuits is assigned an LTN (ACD member number) at the switch. The LTN (a number from 1 to 253) must be entered on the AUDIX form in the corresponding field.

TN747B ports are wired to individual circuits and assigned an extension number at the switch. These extension numbers must be entered on the AUDIX form in the corresponding fields. The length of these extensions must match the *extension/port id length* field.

⇒ NOTE:
This information should be provided by the account team.

Use the following example and Figure 2-2 as a guide:

- The *extension length is 5.*
- VPT 1 is a TN762B wired to switch hunt group 243. All eight ports terminate at the hunt group.

  AUDIX voice port extensions 1 through 8 would have the form:

  1-4: 101 102 103 104

  5-8: 105 106 107 108

- VPT 2 is a TN762B with only three ports wired to switch hunt group 243. AUDIX voice port extensions 9 through 11 would have the form:

  9-12: 109 110 111

- VPT 3 is a TN747B with only three ports wired to individual circuits at the switch. VPT 3 always uses AUDIX voice ports 14, 15, and 16. They would have the form:

  13-16:_____ 23450 23460 23470

When main slot 21 is used for VPT 3 (one-cabinet AUDIX) or VPT 5 (two-cabinet AUDIX), two extension fields must be left blank since the main cabinet is limited to 14 ports (instead of 16). Which fields are left blank depends on the customer's configuration.

In addition, if two voice ports are left unused as discussed above, go to the maintenance : vsp busyout form and busy out those ports. (The system will busy out two ports automatically, but it may not choose the ports you want busied.)

Increase The Size of The "sst" Filesystem

See Section 6.5.9 of the AUDIX installation manual.

Restart AUDIX

See Section 6.5.10 of the AUDIX installation manual.

Check Alarm Status

See Section 6.5.11 of the AUDIX installation manual.

Check The Hardware Status

See Section 6.5.12 of the installation manual. Do Steps 1, 2, and 3. Then return here.

Step 4: Go to the `maintenance : vsp : equipage` form and equip the VPTs and VPCs according to the following:

- One-Cabinet AUDIX

  — Where TN501B's occupy VPC slots, set the corresponding VPC fields to "EQ". If a VPT (i.e., TN747B or TN762B) occupies slot 21, VPC 2 cannot be equipped.

  — There should be a VPT in slot 19. Set VPT 1 to "EQ"

  — If there is a VPT in slot 24, set VPT 2 to "EQ". If not, leave as ''UEQ''

  — If there is a VPT in slot 19, set VPT 3 to "EQ". If not, leave as "UEQ"

- Two-Cabinet AUDIX

  — Where TN501B's occupy VPC slots, set the corresponding VPC fields to "EQ". If a VPT (i.e., TN747B or TN762B) occupies slot 21 of the main cabinet, VPC 2 cannot be equipped.

  — There should be a VPT in slot 19 of the main cabinet. Set VPT 1 to "EQ"

  — There should be a VPT in slot 24 of the main cabinet. Set VPT 2 to "EQ"

  — There should be a VPT in slot 19 of the expansion cabinet. Set VPT 3 to EQ

  — If there is a VPT in slot 24 of the expansion cabinet, set VPT 4 to "EQ"

  — If there is a VPT in slot 19 of the main cabinet, set VPT 5 to "EQ"

Continue in Section 6.5.12 of the AUDIX installation manual with Steps 5 and 6. Skip Step 7 (already covered). Continue with Steps 8 through 11.

Subscriber Profiles

See Section 6.5.13 in the AUDIX installation manual.

Announcement Control

See Section 6.5.14 in the AUDIX installation manual.

Recording Subscriber Names

See Section 6.5.15 in the AUDIX installation manual.

Audix Tests

Perform all the tests in Section 6.6 of the installation manual. Return here to test the connectivity to the switch.

Feature And Voice Port Tests

Feature and voice port tests are similar to those of Section 6.7 in the AUDIX installation manual. Keep in mind when testing voice port connectivity that the TN762B voice ports are similar to nailed-up connections (i.e., they do not use dial tone, connect, or disconnect signaling).

If the system does not answer as expected, check the following:

■ Check the `maintenance : vsp: equipage` form and the `maintenance : vsp : busyout` form to make sure the port(s) is available.

■ Double check the placement of the TN747B and TN762B circuit packs.

■ Double check the cabling to the demarcation point.

■ Double check the assignments at AUDIX on the system : translation : voice port form.

■ In a system with a VPT (TN747B or TN762B) in slot 21 of the base cabinet:

— only three wire pairs are used inside D02. These are wire pairs 6, 7, and 8, not wire pairs 1, 2, and 3 (see Table 2-D).

— Two of the VPT ports must be left assigned (`system : translation : voice port` form) and busied out (`maintenance : vsp : busyout` form).

— VPT 3 (one-cabinet system) or VPT 5 (two-cabinet system) must be equipped (maintenance : vsp : equipage form) and VPC 2 must be unequipped.

Maintenance

3

This chapter covers the following, which is unique to SL-1 AUDIX Integrations. If you have any other problems or questions, see *AUDIX Enhanced III Maintenance*, 585-304-106.

- TN547B: MPSI

- TN747B: VPT

- TN762B: VPT

- Data Link Alarms

- The System : Translation : Switch Connection Form

- The Maintenance : System : Error Counters Form

- The Maintenance : VSP : Busyout Form.

TN547B: MPSI

The TN547B Multiprotocol Switch Interface (MPSI) circuit pack provides the data link between AUDIX and the SL-1 PBX.

Table 3-A.   MPSI (TNS47B) Alarm Resolution

Alarm Log		Description	Repair Action		
Fault	Unit:Dev		1st Choice (ckt,slot,proc.)	2nd Choice	3rd Choice
344	30 : 0	MPSI Configured for DCIU_SCI switch	TN547B, 15, B	Data link	–
346	30 : 0	Corrupt MPSI	TN547B, 15, A	Data link	–

Procedure A: General Replacement Steps

To replace the MPSI circuit pack:

1. Shut down system software (if running), spin down the RSD (if not done automatically), and power down the system.

2. Replace the TN547B board. Power up the system. The system should initialize.

3. Verify that the alarm is resolved using the "maintenance: active alarm: display" form.

If the alarm has not been resolved, check *Data Link Alarms* later in this document.

Procedure B: Check System Configuration

This alarm indicates the system has a TN547B installed, but the system : translation switch connection form has the system set for a DCIU/SCI data link. Check the following:

1. The `system: translation: switch connection` form must be administered with *connection type* set to sl1. If not, go to Chapter 2, "Installation" of this document to administer this form correctly.

If the alarm has not been resolved. check *Data Link Alarms* later in this document.

TN747B: VPT

Each TN747B Voice Port Trunk (VPT) board has eight voice-port circuits. one or more of these ports connect to analog ports at the switch for Automated Attendant and outcalling applications.

Each VPT circuit performs signaling and analog/digital conversions for the switch port. one VPT board provides analog interfaces for up to four VPC boards, which contain two channels each. These two boards communicate over the TD bus.

The following table is similar to the table in the *AUDIX Enhanced III Maintenance manual,* 585-304-106. Some changes were required to address the new VPT 3 (one-cabinet AUDIX) and VPT 5 (Two-Cabinet AUDIX) that are required for the SL-1 PBX. These new VPTs affect the port numbering scheme. This table applies to the TN747, TN747B, or the TN762B VPT board. See *TN762B VPT* later in this document for details on the TN762B.

Table 3-B. VPT Alarm Resolution

Alarm Log		Description	Repair Action		
Fault	Unit:Dev		1st Choice (Note) (ckt,slot,proc.)	2nd Choice (cause)	3rd Choice (cause)
12-19	35 : 1-8	Single polarity ring current	VPT, 19L, B	Switch port brd	Cables
20-27	35 : 9-16	Single polarity ring current	VPT, 24L*, B	Switch port brd	Cables
28-35	35 : 17-24	Single polarity ring current	VPT, 19U, B	Switch port brd	cables
36-43	35 : 25-32	Single polarity ring current	VPT, 24U**, B	Switch port brd	cables
44-51	35 : 1-8	Ringing without ground	VPT, 19L, B	--	-
52-59	35 : 9-16	Ringing without ground	VPT, 24L*, B	-	-
60-67	35 : 17-24	Ringing without ground	VPT, 19U, B	--	-
68-75	35 : 25-32	Ringing without ground	VPT, 24U**, B	--	--
76-83	35 : 1-8	No PBX release on disconnect	VPT, 19L, A	Switch port brd	Cables
Note: For systems with an expansion cabinet, the lower cabinet board is shown with an L next to the slot number and the upper cabinet board is shown with a U next to the slot number.					

* In a one-Cabinet AUDIX with a VPT 3, devices 14-16 point to slot 21L.
** In a Two-Cabinet AUDIX with a VPT 5, devices 30-32 point to slot 21L.

Table 3-B. VPT Alarm Resolution (Contd)					
Alarm Log		Description	Repair Action		
Fault	Unit:Dev		1st Choice (Note) (ckt,slot,proc.)	2nd Choice (cause)	3rd Choice (cause)
84-91	35 : 9-16	No PBX release on disconnect	VPT, 24L*, A	Switch port brd	Cables
92-99	35 : 17-24	No PBX release on disconnect	VPT, 19U, A	Switch port brd	Cables
100-107	35 : 25-32	No PBX release on disconnect	VPT, 24U**, A	Switch port brd	Cables
108-115	35 : 1-8	Ground detector stuck active	VPT, 19L, A	Switch port brd	Cables
116-123	35 : 9-16	Ground detector stuck active	VPT, 24L*, A	Switch port brd	Cables
124-131	35 : 17-24	Ground detector stuck active	VPT, 19U, A	Switch port brd	Cables
132-139	35 : 25-32	Ground detector stuck active	VPT, 24U**, A	Switch port brd	Cables
140-147	35 : 1-8	VPT trunk diagnostic test	VPT, 19L, B	Switch port brd	Cables
148-155	35 : 9-16	VPT trunk diagnostic test	VPT, 24L*, B	Switch port brd	Cables
156-163	35 : 17-24	VPT trunk diagnostic test	VPT, 19U, B	Switch port brd	Cables
164-171	35 : 25-32	VPT trunk diagnostic test	VPT, 24U**, B	Switch port brd	Cables
172-179	35 : 1-8	VPT port diagnostic test	VPT, 19L, B	Switch port brd	Cables
180-187	35 : 9-16	VPT port diagnostic test	VPT, 24L*, B	Switch port brd	Cables
188-195	35 : 17-24	VPT port diagnostic test	VPT, 19U, B	Switch port brd	Cables
196-203	35 : 25-32	VPT port diagnostic test	VPT, 24U**, B	Switch port brd	Cables
204-211	35 : 1-8	VPT dial tone seizure test	VPT, 19L, B	Switch port brd	Cables
212-217	35 : 9-16	VPT dial tone seizure test	VPT, 24L*, B	Switch port brd	Cables
218-225	35 : 17-24	VPT dial tone seizure test	VPT, 19U, B	–	–
226-235	35 : 25-32	VPT dial tone seizure test	VPT, 24U**, B	–	–
236-243	35 : 1-8	VPT hybrid circuit test	VPT, 19L, B	TN714, 18	–
244-251	35 : 9-16	VPT hybrid circuit test	VPT, 24L*, B	TN714, 18	–
252-259	35 : 17-24	VPT hybrid ckt test	VPT, 19U, B	TN714, 18	–
260-267	35 : 25-32	VPT hybrid ckt test	VPT, 24U**, B	TN714, 18	–
268-275	35 : 1-8	VPT NPE crosstalk	VPT, 19L, C	TD bus	–
276-283	35 : 9-16	VPT NPE crosstalk	VPT, 24L*, C	TD bus	–
284-291	35 : 17-24	VPT NPE crosstalk	VPT, 19U, C	TD bus	–
292-299	35 : 25-32	VPT NPE crosstalk	VPT, 24U**, C	TD bus	–
1125	55 : 1	TD-bus sanity	VPT, 19L, E	TD bus	–
1126	55 : 2	TD-bus sanity	VPT, 24L, E	TD bus	–
1127	55 : 3	TD-bus sanity	VPT, 19U#, E	TD bus	–
1128	55 : 4	TD-bus sanity	VPT, 24U, E	TD bus	–
1151	55 : 1	TD-bus control channel	VPT, 19L, D	TD bus	–
Note: For systems with an expansion cabinet, the lower cabinet board is shown with an L next to the slot number and the upper cabinet board is shown with a U next to the slot number.					

*In a one-Cabinet AUDIX with a VPT 3, devices 14-16 point to slot 21L.
**In a Two-Cabinet AUDIX with a VPT 5, devices 30-32 point to slot 21L.
In a One-Cabinet AUDIX, this fault points to the VPT in slot 21L.

Table 3-B. VPT Alarm Resolution (Contd)					
Alarm Log		Description	Repair Action		
Fault	Unit:Dev		1st Choice (Note) (ckt,slot,proc.)	2nd Choice (cause)	3rd Choice (cause)
1152	55 : 2	TD-bus control channel	VPT, 24L, D	TD bus	—
1153	55 : 3	TD-bus control channel	VPT, 19U#, D	TD bus	—
1154	55 : 4	TD-bus control channel	VPT, 24U, D	TD bus	—
1177	55 : 1	Angel ROM or RAM error	VPT, 19L, E	TD bus	—
1178	55 : 2	Angel ROM or RAM error	VPT, 24L, E	TD bus	—
1179	55 : 3	Angel ROM or RAM error	VPT, 19U#, E	TD bus	—
1180	55 : 4	Angel ROM or RAM error	VPT, 24U, E	TD bus	—
1203	55 : 1	Angel program logic inconsistency	VPT, 19L, E	TD bus	—
1204	55 : 2	Angel program logic inconsistency	VPT, 24L, E	TD bus	—
1205	55 : 3	Angel program logic inconsistency	VPT, 19U#, E	TD bus	—
1206	55 : 4	Angel program logic inconsistency	VPT, 24U, E	TD bus	—
1229	55 : 1	Translation error	VPT, 19L, E	TD bus	—
1230	55 : 2	Translation error	VPT, 24L, E	TD bus	—
1231	55 : 3	Translation error	VPT, 19U#, E	TD bus	—
1232	55 : 4	Translation error	VPT, 24U, E	TD bus	—
1278-1285	35 : 1-8	Belated PBX release	VPT, 19L, A	Switch port brd	Cables
1286-1293	35 : 9-16	Belated PBX release	VPT, 24L*, A	Switch port brd	Cables
1294-1301	35 : 17-24	Belated PBX release	VPT, 19U, A	Switch port brd	Cables
1302-1309	35 : 25-32	Belated PBX release	VPT, 24U**, A	Switch port brd	Cables
1365-1372	35 : 1-8	Hardware time-out	VPT, 19L, A	—	—
1373-1380	35 : 9-16	Hardware time-out	VPT, 24L*, A	—	—
1381-1388	35 : 17-24	Hardware time-out	VPT, 19U, A	—	—
1389-1396	35 : 25-32	Hardware time-out	VPT, 24U**, A	—	—
1402-1409	35 : 1-8	No loop-current detected	VPT, 19L, B	Switch port brd	Cables
1410-1417	35 : 9-16	No loop-current detected	VPT, 24L*, B	Switch port brd	Cables
1418-1425	35 : 17-24	No loop-current detected	VPT, 19U, B	Switch port brd	Cables
1426-1433	35 : 25-32	No loop-current detected	VPT, 24U**, B	Switch port brd	Cables
1498	35 : 1	VPT touch tone test (flash transfer)	VPT, 19L, B	Switch port brd	Cables
1499	35 : 2	VPT touch tone test (flash transfer)	VPT, 19L, B	Switch port brd	Cables
1500	35 : 3	VPT touch tone test (flash transfer)	VPT, 19L, B	Switch port brd	Cables
1501	35 : 4	VPT touch tone test (flash transfer)	VPT, 19L, B	Switch port brd	Cables
1502	35 : 5	VPT touch tone test (flash transfer)	VPT, 19L, B	Switch port brd	Cables
1503	35 : 6	VPT touch tone test (flash transfer)	VPT, 19L, B	Switch port brd	Cables
Note: For systems with an expansion cabinet, the lower cabinet board is shown with an L next to the slot number and the upper cabinet board is shown with a U next to the slot number.					

Table 3-B. VPT Alarm Resolution (Contd)					
Alarm Log		Description	Repair Action		
Fault	Unit:Dev		1st Choice (Note) (ckt,slot,proc.)	2nd Choice (cause)	3rd Choice (cause)
1504	35 : 7	VPT touch tone test (flash transfer)	VPT, 19L, B	Switch port brd	Cables
1505	35 : 8	VPT touch tone test (flash transfer)	VPT, 19L, B	Switch port brd	Cables
1506	35 : 9	VPT touch tone test (flash transfer)	VPT, 24L, B	Switch port brd	Cables
1507	35 : 10	VPT touch tone test (flash transfer)	VPT, 24L, B	Switch port brd	Cables
1508	35 : 11	VPT touch tone test (flash transfer)	VPT, 24L, B	Switch port brd	Cables
1509	35 : 12	VPT touch tone test (flash transfer)	VPT, 24L, B	Switch port brd	Cables
1510	35 : 13	VPT touch tone test (flash transfer)	VPT, 24L, B	Switch port brd	Cables
1511	35 : 14	VPT touch tone test (flash transfer)	VPT, 24L*, B	Switch port brd	Cables
1512	35 : 15	VPT touch tone test (flash transfer)	VPT, 24L*, B	Switch port brd	Cables
1513	35 : 16	VPT touch tone test (flash transfer)	VPT, 24L*, B	Switch port brd	Cables
1514	35 : 17	VPT touch tone test (flash transfer)	VPT, 19U, B	Switch port brd	Cables
1515	35 : 18	VPT touch tone test (flash transfer)	VPT, 19U, B	Switch port brd	Cables
1516	35 : 19	VPT touch tone test (flash transfer)	VPT, 19U, B	Switch port brd	Cables
1517	35 : 20	VPT touch tone test (flash transfer)	VPT, 19U, B	Switch port brd	Cables
1518	35 : 21	VPT touch tone test (flash transfer)	VPT, 19U, B	Switch port brd	Cables
1519	35 : 22	VPT touch tone test (flash transfer)	VPT, 19U, B	Switch port brd	Cables
1520	35 : 23	VPT touch tone test (flash transfer)	VPT, 19U, B	Switch port brd	Cables
1521	35 : 24	VPT touch tone test (flash transfer)	VPT, 19U, B	Switch port brd	Cables
1522	35 : 25	VPT touch tone test (flash transfer)	VPT, 24U, B	Switch port brd	Cables
1523	35 : 26	VPT touch tone test (flash transfer)	VPT, 24U, B	Switch port brd	Cables
1524	35 : 27	VPT touch tone test (flash transfer)	VPT, 24U, B	Switch port brd	Cables
1525	35 : 28	VPT touch tone test (flash transfer)	VPT, 24U, B	Switch port brd	Cables
1526	35 : 29	VPT touch tone test (flash transfer)	VPT, 24U, B	Switch port brd	Cables
1527	35 : 30	VPT touch tone test (flash transfer)	VPT, 24U**, B	Switch port brd	Cables
1528	35 : 31	VPT touch tone test (flash transfer)	VPT, 24U**, B	Switch port brd	Cables
1529	35 : 32	VPT touch tone test (flash transfer)	VPT, 24U**, B	Switch port brd	Cables
1535	55 : 5	TD-bus sanity	VPT, 21L, E	TD bus	−
1536	55 : 5	TD-bus control channel	VPT, 21L, D	TD bus	−
1537	55 : 5	Angel ROM or RAM error	VPT, 21L, E	TD bus	−
1538	55 : 5	Angel program logic inconsistency	VPT, 21L, E	TD bus	−
1539	55 : 5	Translation error	VPT, 21L, E	TD bus	−
Note: For Two-Cabinet AUDIX systems, the lower cabinet board is shown with an L next to the slot number and the upper cabinet board is shown with a U next to the slot number.					

** In a Two-Cabinet AUDIX with a VPT 5, devices 30-32 point to slot 21L.

Procedure A: General Replacement Steps

To replace a VPT circuit pack:

1. Shut down system software (if running), spin down the RCD (if not done automatically), and power down the system.

2. If this AUDIX machine has more than one VPT board of the same type, you can swap (exchange) the alarmed VPT with the matching board and reinitialize the system. Do not swap a TN747B with a TN762B, or vise versa. If the fault moves to follow the originally alarmed board, that VPT is faulty. Shut down and power down again.

3. Replace the VPT. Reinitialize the system.

4. If the VPT is a TN747B, make a VPT test call on all ports of the replaced VPT board using the `maintenance : system: test call` form. Each TN747B port has a specific extension at the switch (shown on the system : translation : voice port form).

If the VPT is a TN762B, you may have to make a test call from the switch to test the VPT. Use the AUDIX voice mail/call answer extension which provides access to the TN762Bs. Since the TN762Bs are tied to a call-distribution group at the switch, several calls may be necessary to get the call-distribution group to select the replaced VPT.

5. To ensure complete VPT operation, you may run additional tests. These tests will also run later in the background, but slowly.

    a. Run the complete TD-bus test on the replaced unit. Use the `maintenance : td-bus : test` form. Select repetitions = 5 and the "`y`" option to run the long test.

    b. Run the short version of the VPT test on each channel controlled by the replaced unit. Use the `maintenance : vpt : test` form and the "`n`" option to run the short test.

6. Verify that the alarm has not returned using the maintenance : active alarm : display form. If the alarm is still not resolved, do a restart.

7. If the alarm continues to return, replace the 2nd-choice board, check the TD bus (see Chapter 8 of the AUDIX maintenance manual), or check the switch boards and cables (see Chapter 5 of the AUDIX maintenance manual).

Procedure B: VPT Short Test

⇒ NOTE:

A description of the SL-1 translations required for an AUDIX installation is provided in *AUDIX Integration Package for the SL-1 Switch: Administration and Reference,* 585-304-203.

Many VPT alarms are caused by switch problems. Check for these as follows. If you do not have the switch cross-connect information, go to Item 2:

1. For TN747B ports, verify that the extensions assigned to these ports at the switch match the extensions assigned to them on the system: translation: voice port form.

For TN762B ports, verify that the hunt group number matches the first few digits of the extensions assigned to these ports on the system : translation : voice port form. The remaining digits on each extension number should match the member number of the hunt group to which each port is wired.

2. Check the physical connection (wiring) to the switch to make sure it is sending dial tone to AUDIX (TN747B ports only).

   a. Disconnect the AUDIX port and install a test phone on the line, then ring the phone and go off-hook to dial. Make sure the test phone has touch-tone dialing when trying to break dial tone.

   b. If you cannot get dial tone from the switch, check the connection up to the demarcation point. If the physical connection looks good, tell the account team that everything looks good from the AUDIX side.

3. If the switch side looks good, run the short version of the VPT test on the alarmed channel (repetitions = 5). Use the `maintenance : vpt : test` form and the "n" option for the short test. If *the test fails,* follow Procedure A.

Procedure C: Complete VPT Test

Run the complete version of the VPT test twice on the alarmed channel (repetitions = 2). Use the "maintenance : vpt : test" form and the "y" option for the long test.

If the test fails, follow Procedure A with the addition that the complete VPT test must run successfully twice to resolve the alarm (repetitions = 2).

Procedure D: TD-Bus Control Channel Test

Run the TD-Bus control channel test on the alarmed VPT unit (repetitions = 5). Use the "maintenance : td-bus : test'' form and the "n" option to run the short test.

If the test fails, follow Procedure A with the addition that the TD-Bus control channel test must be run five times successfully to resolve the alarm (repetitions = 5).

Procedure E: Complete TD-Bus Test

Run the complete TD-bus test on the alarmed VPT board (repetitions = 5). Use the ''maintenance : td-bus : test" form and the "y" option to run the long test.

If the test fails, follow Procedure A to resolve the alarm.

TN762B: VPT

The TN762B VPT provides eight nailed-up connections to non-dialup analog ports at the SL-1 PBX. These switch ports do not use any type of signaling for off-hook, dialing, connect, disconnect, etc. The connection is always "up". These ports are used for voice mail and call answer only. Automated Attendant and outcalling require dialing, etc., thus they must use TN747B ports. To resolve faults against the TN762B ports, see the table associated with the TN747B VPT.

Data Link Alarms

Find the active data link alarm on the following table and follow the procedure indicate at the right under "Repair Action". Not all the alarms listed apply to the SL-1 data link.

➡ **NOTE:**
Repair procedures can be found in Chapter 5 of the AUDIX maintenance manual.

Table 3-C.   Data Link Alarm Resolution

Alarm Log		Description	Repair Action		
Fault	Unit:Dev		1st Choice (cause,proc.)	2nd Choice (cause,proc.)	3rd Choice (cause,proc.)
22	30 : 0	Corrupt DCIU, SCI, or PI channel	AUDIX, A	Data link, B	Switch, C
157	30 : 0	VIP L4 is out of data transfer	AUDIX, A	Data link, B	Switch, C
158	30 : 0	DLC/MPDM handshake problem	AUDIX, A	Data link, B	Data, C
218	30 : 1	VIP L4 out of data transfer to host switch	AUDIX, A	Data link, B	Switch, C
219-237	30 : 2- : 20	VIP L4 out of data transfer to remote switch 2 to 20 (in DCS networks only)	AUDIX, A	Data link, B	Switch, C
344	30 : 0	MPSI configured for DCIU/SCI	Translations, D	--	--
345	30 : 0	SCPI configured for SMSI/API	Translations, D	--	--
346	30 : 0	MPSI corrupt	TN547B, 15, E	--	--
347	30 : 35	End to end data transfer problems	AUDIX, A	Data link, B	Switch, C
348	30 : 42	ISDN Failure	AUDIX, A	Data link, B	Switch, C
349	30 : 39	1A ESS Retry Later	Switch, A	Data link, B	--
350	30 : 41	No response from SCA	SCA, A	Data link, B	Switch, C
351	30 : 36	No SMSI/API end-to-end message, timeout	AUDIX, A	Data link, B	Switch, C

The System : Translation : Switch Connection Form

This form has changed to support the SL-1 PBX as a connection type.

> **NOTE:**
> For an example of how to use this form, see Audix Administration in Chapter 2 of this document.

```
AUDIX STATUS: alarms: M   , logins:1, thresholds:none
 PATH: system : translation : switch connection

connection type (dciu-sci/smsi/bri-api/sll/standalone): sll
(PRESS CHANGE TO MODIFY CONNECTION TYPE, NEW FIELDS WILL BE DISPLAYED)

      (THE FOLLOWING FIELDS APPLY ONLY TO SL1)

baud rate (1200,2400,4800,9600) : 1200
ACD feature package on SL1 (A,B,C): C
automated attendant, ext 1:_____ ext 2:_____ ext 3:_____
host switch: 1       AUDIX: 1

         Type            Auto Attendant Group(1-3)
        (747/762)          1 2 3 4 5 6 7 8
VPT 1:   ###              _ _ _ _ _ _ _ _
VPT 2:   ###              _ _ _ _ _ _ _ _
VPT 3:   ###              _ _ _ _ _ _ _ _
VPT 4:   ###              _ _ _ _ _ _ _ _
VPT 5:   ###              _ _ _ _ _ _ _ _


 Error and confirmation information appears on this line.
 CHANGE | ADD | DELETE |  HELP | FIELD |  CLEAR | EXIT | ENTER
 OR RUN |     |        |       | HELP  |  FORM  |      |
```

Figure 3-1.   The system : translation : switch connection Form

> **NOTE:**
> A TN762B-type VPT cannot use an automated attendant group.

Changing the Fields

Whenever a change is made on the system: translation : switch connection form, you must perform the actions listed in Table 3-D to make the changes known to the AUDIX software.

Table 3-D. Field Changes on the system : translation : switch connection Form

Field Change	Action
connection type	Restart the system
baud rate	Run the "maintenance : datalink :test" form or run the "maintenance : scpi : init" form
ACD feature package on SL-1	Run the *SD* audit on the "maintenance : audits : fp" form
auto attendant ext	Run the *SD* audit on the "maintenance : audits : fp" form
AUDIX	Restart the system
auto attendant group	Run the *SD* audit on the "maintenance : audits : fp" form

The Maintenance : System : Error Counters Form

The maintenance : vsp : error counters form has been changed to the maintenance system : error counters form and MPSI has been added to the *unit type* field. (See Figure 3-2.) This form is used to read or clear the VPC, TDBI, VB, and MPSI error counters used for firmware test failures.

For more specific information on the use of this form, see *AUDIX Enhanced III Forms Reference, 585-304-202*. Do not use this form without the assistance of remote service personnel.


```
AUDIX STATUS:  alarms: none,  logins: 1,  thresholds: none
PATH:  maintenance : system : error counters

unit type (VB, TDBI, VPC, MPSI)      :___   clear counters (y/n)? _
VPC/TDBI counter type (A, SP, G)  :__   VB board or VPC/TDBI channel: __


##################################################################
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##
##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##  ##


Error and confirmation information appears on this line.

CHANGE   ADD    DELETE        HELP   FIELD         CLEAR   EXIT   ENTER
OR RUN                                HELP          FORM
```

Figure 3-2.   The maintenance : vsp : error counters Form

Here are definitions of error counters unique to SL-1:

48 SL-1 ACK received with no outstanding packet

49 SL-1 extraneous character received (not ACK NAK or SOH)

50 SL-1 application (non_Poll) packet received while link down

51 SL-1 ACK/NAK received while link down

56 SL-1 datalink down

57 SL-1 packet serial number invalid

58 SL-1 packet serial number valid but not expected

59 SL-1 packet length out of range (from switch or VIP)

64 SL-1 packet checksum error

65 SL-1 NAK received

66 SL-1 NAK transmitted

67 SL-1 no response (from switch)

77 SMSI/SL-1 loopback message transmission count

78 SMSI/SL-1 loopback character transmission count (low order word)

79 SMSI/SL-1 loopback character transmission count (high order word)

80 SMSI/SL-1 loopback valid messages received

81 SMSI/SL-1 loopback invalid messages received

82 SMSI/SL-1 loopback valid characters received (low order word)

83 SMSVSL-1 loopback valid characters received (high-order word)

84 SMSI/SL-1 loopback invalid characters received (low order word)

85 SMSI/SL-1 loopback invalid characters received (high-order word)

86 SL-1 ACK/NAK timeout

87 SL-1 incoming packet timeout

88 SL-1 packet retransmission count

Definitions of error counters unique to SL-1 (cont'd):

89 SL-1 spurious transmit interrupt

90 Invalid MPSI mode

94 SL-1 packets transmitted traffic count (low-order word)

95 SL-1 packets transmitted traffic count (high-order word)

96 SL-1 valid packets received traffic count (low-order word)

97 SL-1 valid packets received traffic count (high-order word)

98 SL-1 bytes transmitted traffic count (low-order word)

99 SL-1 bytes transmitted traffic count (high-order word)

100 SL-1 bytes received traffic count (low-order word)

101SL-1 bytes received traffic count (high-order word)

102 SL-1 ACKs transmitted traffic count (low-order word)

103 SL-1 ACKs transmitted traffic count (high-order word)

104 SL-1 ACKs received traffic count (low-order word)

105 SL-1 ACKs received traffic count (high-order word)

106 SL-1 messages received but not passed to VIP (low-order word)

107 SL-1 messages received but not passed to VIP (high-order word)

The Maintenance : VSP : Busyout Form

This form now has a *reason* field added to each port to list the reason(s) for the busyout. There is also an extra error message; if you try to free more than 30 voice ports when VPT 5 is equipped, the system will display "At least two voice ports must be busied out".

The `maintenance : vsp : busyout` form is identical for every AUDIX model. It displays or changes the busy/released state of a Voice Session Processor (VSP) device (a VB, TDBI, VPC, or VPT). It may be used to find general TD-bus problems, such as busying-out each port to try to find an unalarmed problem. It is also used to busy-out

boards when replacing VSP devices. Busied-out VSP devices can also be released by a reboot or restart.

Figure 3-3. **The maintenance : vsp : busyout Form**

```
AUDIX STATUS:  alarms: none,  logins: 1,  thresholds: none
 PATH:  maintenance : vsp : busyout

VSP Busyout

VSP Type   (VB  TDBI  VPC  VPT):  ____

Port       State Reason     State Reason     State Reason     State Reason
  1-4:       _                _                _                _
  5-8:       _                _                _                _
  9-12:      _                _                _                _
 13-16:      _                _                _                _
 17-20:      _                _                _                _
 21-24:      _                _                _                _
 25-28       _                _                _                _
 29-32       _                _                _                _

STATE:     r - Released    b - Force Busyout    c - Campon Busyout

REASONS:  C - Craft/Unequipped  F - Fault              T - Testing
          D - Data Translations S - Switch has Busied  R - Resources


Error and confirmation information appears on this line.

 CHANGE  | ADD  | DELETE |   HELP  | FIELD  |   CLEAR | EXIT | ENTER
 OR RUN  |      |        |         | HELP   |   FORM  |      |
```

To Busy-out or Release A VSP Device

1. Type in the *VSP Type (VB, TDBI, VPC, VPTJ:*

2. Tab to the desired port field and type in the STATE (r = release, b = forced busy-out, c = camp-on busy-out).

3. Press CHANGE. The *State* field should confirm the action you chose, "r" (released) or "b" (busied out). (Camp-on busy-out may take up to 2 minutes; if it cannot complete, press CHANGE again.)

To Display Status

1. Type in the *VSP Type (VB, TDBI, VPC, VPTJ:* and press CHANGE.

2. The status for equipped ports appears. Ports that are not equipped or cannot be installed always show up as "b" (busy).

To Clear A Busyout

Use the following table to clear a busyout.

Code	Reason	Clearing Procedure
C	Busied for craft/unequipped	Go to the "maintenance : vsp : equipage" form. Equip the appropriate port. Return to the "maintenance : vsp : busyout" form. Verify that the port is released (see NOTE).
F	Busied for a fault	Go to the "maintenance : error : display" form. Fix the error code displayed on this form by using the tables in the maintenance manual. Go to the "maintenance : vpt : test" form. Follow the procedures in the maintenance manual to test the port. Return to the "maintenance : vsp : busyout" form. Verify that the port is released (see NOTE).
T	Busied for a test	Display the status again after waiting several minutes.
D	Busied for data translations	Go to the "system : translation : voiceport" form. Fix the translations on the appropriate port(s). Press CHANGE. Go to the "maintenance : vpt : test" form. Follow the procedures in the maintenance manual to test the port. Return to the "maintenance : vsp : busyout" form. Verify that the port is released (see NOTE).
S	Busied by the switch (could be an outcall in the case of a DCIU)	Notify the Switch Administrator.
R	Busied because there were not enough resources to support all of the ports	Insufficient DBP memory. Check the alarms and status of the other VSP devices (VB, TDBI, VPC, VPT).

Table 3-E.   Clearing a Busyout.

➡ **NOTE:**
Port may be busied out for more than one reason.

Form Fields

- *VSP Type (VB, TDBI, VPC, VPT)* - The VSP hardware you want to busy-out, release, or display status.

- *STATE* - is either:

  — "r - Released" Causes the port to be released from a busy-out state

  — "b - Force Busyout" Forces all traffic off the ports and then busies them out

  — "c - Campon Busyout" Waits for each port to be idle before busying-out the port. If this takes longer than 2 minutes, you may need to repeat the request.

- *State* - Shows "r" if the port is released, or "b" if it is busied out

  > **NOTE:**
  > Unequipped or uninstalled ports always appear on this form as busy (b).

- *Reason* - Displays the reason for the busyout (This is used only for VPTs.)

Display Line Messages

See Appendix C in *AUDIX Enhanced III Forms Reference,* 585-304-202 for an explanation of any displayed messages. This form will also display "At least two ports must be busied out" if VPT 5 is equipped and you tried to release all 32 VPT ports.

Additional Specifications

Available In - Normal (in-service) mode.

Service Effects - Increases or decreases the number of available resources.

Prerequisites - If a port board is unequipped, this form shows the port as busy. An unequipped port cannot be released until it is first equipped (see the maintenance : vsp : equipage form in the forms manual).

Data Base Effects - None.

Response Time - Usually less than 30 seconds. May take longer if other maintenance procedures are running.

Alarms Resolved - None.