

3608-80 Secondary T1 Unit Installation Guide

GENERAL DESCRIPTION

Document Purpose

This document provides installation information for the Secondary T1 Unit (ST1U). This document covers model number 3608-80.

Equipment Function

The ST1U is part of the 360-80 Intelligent Channel Bank (ICB). It combines the functions of a line interface unit (LIU) and a channel service unit (CSU), allowing direct connections to public T1 networks. The ST1U is a secondary T1 unit for the ICB.

Equipment Location/Mounting

Mount the ST1U in the secondary (half-size) slot of the 360-80. One T1-S controller unit (issue 2 or later) must be installed in the primary slot for proper system operation.

Note: This unit must be mounted in an Issue 2 or later 360-80 shelf.

Control Interface

This unit is managed through the Network Management Interface (NMI), which controls the provisioning of the unit and obtains status information from the unit. Provisioning and status information is described in the General section of this document. For operation of this interface, see the Network Management Interface documentation.

This unit will maintain its default provisioning until that provisioning is altered through the NMI. If this unit's provisioning is changed, it will maintain the new provisioning even if power is lost. If replaced with a new unit, the new unit will need to have its provisioning changed to the same provisioning as was set for the prior unit.

INSPECTION

Inspect for Damages

Inspect the equipment thoroughly upon delivery. If the equipment has been damaged in transit, immediately report the extent of damage to the transportation company.

Equipment Identification

Charles Industries' equipment is identified by a model and issue number imprinted on the front panel or located elsewhere on the equipment. Each time a major engineering design change is made on the equipment, the issue number is advanced by 1 and imprinted on subsequent units manufactured. Therefore, be sure to include both the model number and its issue number when making inquiries about the equipment.



To prevent electrostatic charges from damaging static-sensitive units:

Use approved static-preventive measures (such as static-conductive wrist straps and static-dissipative mats) at all times whenever touching units outside of their original, shipped, protective packaging.

Do not ship or store units near strong electrostatic, electromagnetic, or magnetic fields.

Always use the original static-protective packaging for shipping or storage.

INSTALLATION

Attaching the Rear Panel

The rear panel of the unit should be installed before all units are installed in the shelf, and before wiring begins.

Installing a New Unit

Step	Action
1.	If not already installed, install the rear panel, screwing it to the appropriate mounting locations on the shelf using the provided hardware.
2.	Insert the unit into the shelf, making sure that the unit is aligned with the card guides inside the shelf.
3.	Slide the unit fully in to the shelf.

CAUTION

If there is already a rear panel installed on the shelf, check for interference. The rear panel may need to be removed and replaced with the rear panel shipped with the new unit.

Step	Action
4.	Once the unit is fully inserted, tighten the screw on the front panel to secure.
5.	Wire the unit per the wiring information in the wiring section. The unit will perform a self-test to ensure that it is compatible with the network management software on the system.
6.	After the self-test is performed, check the software provisioning of the card using either the craft interface on the front of the controller unit or the network management interface on the rear of the controller.

Note: If a Secondary T1 unit is inserted into a shelf while power to the shelf is on, the T1 controller unit will reset.

Installing a Replacement Unit

If you are replacing a unit that is already in service, verify that the two units are the same.

Step	Action
1.	Remove the wiring connectors from the rear of the unit.
2.	Unscrew the front panel securing screw to release the unit from the shelf.
3.	Using the card ejector, remove the unit from the shelf.
4.	Follow the procedure for installing a new unit.

Wiring the Unit

Use the following steps to wire the unit for drop and re-insert configurations.

Step	Action
1.	Connect the T1 from the WEST (towards the network) 360-80 ICB, or equivalent, to J6 of the ST1U.
2.	Using the cable provided with the unit, connect J5 to J1 on the T1-S.
3.	Connect J4 of the ST1U to the input of the next 360-80 ICB or to the EAST (towards the customer termination) 360-80 ICB or equivalent.

Use the following steps to wire the unit for dual or protection configurations.

Step	Action
1.	Connect the T1 from the EAST (towards the customer termination) 360-80 ICB or equivalent to J4 of the ST1U.
2.	Connect J1 of the T1-S to the input of the next 360-80 ICB or to the WEST (towards the network) 360-80 ICB or equivalent.

Front Panel Switch and LED Definitions

The Audible Alarm Cut Off (ACO) switch is a pushbutton used to open the audible alarm contacts from the 360-80 system. This switch will only mask audible indications of present alarm conditions—it will NOT clear the alarm. If a new alarm occurs, the alarm will re-enable.

Table 1. LED Definitions

Label	Color	Indicates That...
POWER	Green	the unit is receiving power
AR	Red	The unit is detecting a red alarm on the T1 interface caused by a loss of signal (LOS) or a loss of framing (LOF) or out of frame (OOF) condition.
AY	Yellow	The unit is receiving a yellow alarm condition on the T1. This indicates that a problem is upstream at some other device or network node.
TP	Yellow	The system is conditioning the signaling data based on detected alarm conditions.
LP	Green	The unit is in a loopback condition. This indication only occurs during testing.
BY-PASS	Green	The unit is in a bypass condition.

OPTIONING

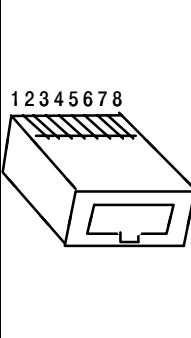
This unit comes from the factory with default provisioning, which can be changed through the Network Management software (NMS), SNMP Network Node Manager (NNM) or the craft terminal interface. See the NMS, NNM or craft terminal interface documentation for procedures. Each unit has its own provisioning options. The provisioning options are as follows with the default optioning noted:

Option	Choices	Default
T1 Frame format	Superframe (SF), Extended Superframe (ESF)	ESF
Line Build Out (LBO)	110, 220, 330, 440, 550, 660 ft. OR 0, 7.5, 15, 22 dB	0-110 ft.
T1 Line Code	AMI, B8ZS	B8ZS
T1 Loopback Selection	Line Near End, Line Far End, Payload Far End	None
Remote Control Method	None, Occupy One Channel, Facility Data Link (ESF only)	Facility Data Link
Bypass (drop and reinsert only)	Auto bypass, Forced no bypass	Auto by- pass

ALARMS

This unit provides for alarm contacts for audible and visual alarms. Access to the alarm contacts is provided on the 360-80 shelf. Pressing the audible alarm cut-off (ACO) switch clears the alarm indication for the audible alarm contacts, stopping the audible notice of the alarm (the alarm itself is NOT cleared by pressing the ACO switch). See the shelf documentation for information on wiring. The unit generates alarm indications based on the configuration of the alarm registers. See the network management documentation for more information.

Table 2. RJ-48C T1 Jack Pinouts

	Pin #	Use
	1	R (RCV from network)
	2	T (RCV from network)
	3	—
	4	R1 (XMIT to network)
	5	T1 (XMIT to network)
	6	—
	7	—
	8	—

TECHNICAL ASSISTANCE

If technical assistance is required, contact Charles Industries' Technical Service Center at:

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techserv@charlesindustries.com (e-mail)