



SLC[®]-2000 MSDT

BYB7 Digital Signal Translator (DST) Circuit Pack — SAIUNHOBAA

Overview

This data sheet describes the BYB7 Digital Signal Translator (DST) circuit pack (COMCODE 107287435) and is intended for the end-user of the unit. This circuit pack is part of the Fiber Service Module (FSM) feature of the SLC-2000 Access System Multi-Services Distant Terminal (MSDT). It replaces the optical unit (OU) at the MSDT and allows a DSX-1 formatted signal at the DS1 rate (1.544 Mb/s) to interface with the MSDT. The FSM multiplexes 12 DSX-1 signals into a 51 Mb/s signal for optical transport. This increases the circuit capacity on the fiber lines between a SLC-2000 host digital terminal (HDT) and MSDT.



CAUTION:

Under no circumstances should the DSX lines be run to outside plant cables or equipment unless both primary and secondary lightning protection are installed on both the transmit and receive lines of each DSX port.

Features

The BYB7 DST circuit pack provides the following features:

- **Function.** This circuit pack converts an unbalanced DS1 rate signal from the MSDT backplane interface unit (BIU) circuit pack to a bipolar balanced DSX-1 signal for interfacing with the FSM.
- **Alarms.** Upon detecting a loss of signal from the DSX port, the DST circuit pack transmits blue signal towards the HDT.
- **LBO Switches.** This circuit pack contains a set of three LBO switches that allows it to interface DSX lines up to 655 feet in length.
- **AMI/B8ZS Switches.** This circuit pack contains a switch that allows you to choose between AMI and B8ZS line code formats.

Functional Description

Figure 1 shows the block diagram of the BYB7 DST circuit pack.

In the receive direction, the DSX signal is transformer coupled to an interface device. This device extracts the clock and data of the input DSX signal. This clock and data are then sent to an elastic store which absorbs any input jitter, and then the data is scrambled and sent to the BIU circuit pack.

In the transmit direction, the data from the BIU is processed by a clock recovery circuit that extracts clock and scrambled data. This scrambled data is then descrambled and input to the DS1 device, along with the recovered clock. The output of the DS1 device is then transformer coupled to the DSX line.

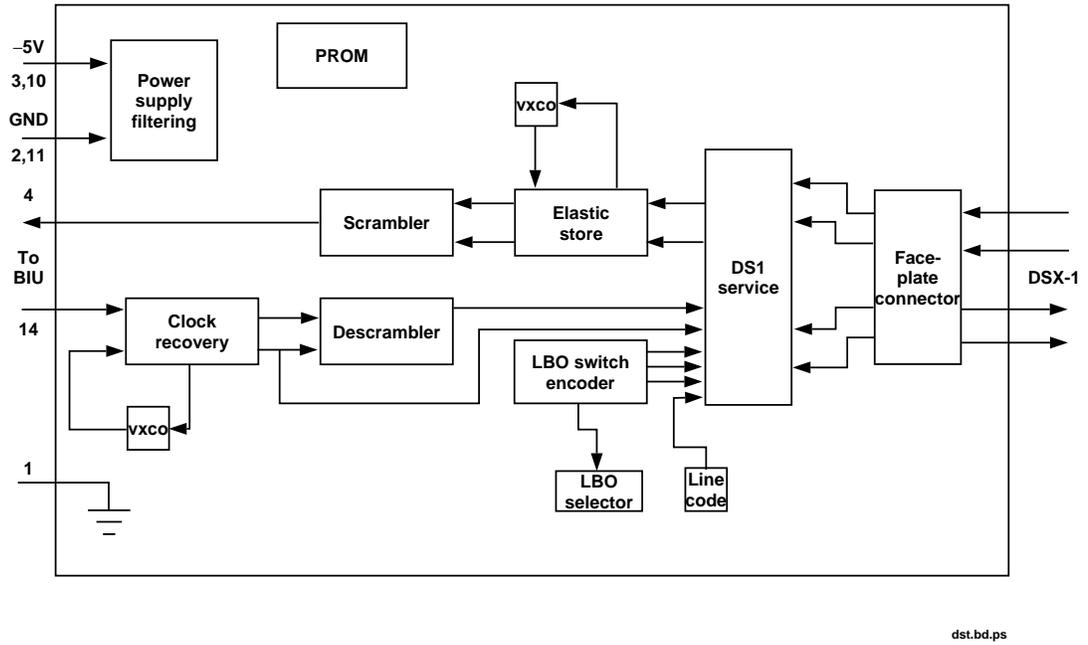


Figure 1. BYB7 DST Circuit Pack Block Diagram

Option Switches

Figure 2 shows the location of the option switches on the circuit board. These option switches control the following functions:

- **Line Build-Out (LBO) Switch.** The LBO is set using the three dip switches shown in Figure 2. Table 1 shows the settings for the line lengths up to 655 feet.



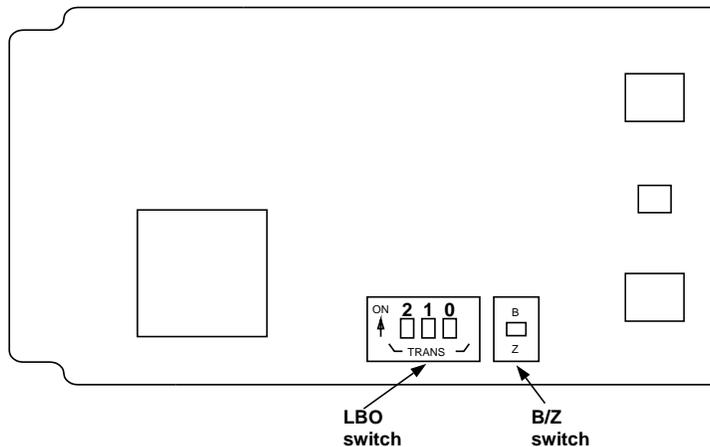
CAUTION:

Switch combinations other than the ones shown in Table 1 are not valid.

- **B/Z Switch.** The AMI/B8ZS option is set using the B/Z option switch shown in Figure 2. Set the switch as follows: **AMI/ZCS** — Z; **B8ZS** — B.

Table 1. LBO Switch Settings

Distance (ft)	SW2	SW1	SW0
0 — 132	OFF	OFF	ON
133 — 265	OFF	ON	OFF
266 — 398	OFF	ON	ON
399 — 532	ON	OFF	OFF
533 — 655	ON	OFF	ON



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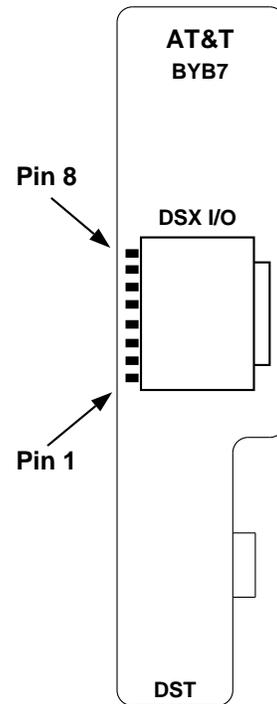
Figure 2. Option Switch Location

Faceplate

Figure 3 shows the faceplate of the BYB7 DST circuit pack. The faceplate contains an 8-pin modular connector that interfaces the input DSX lines.

Faceplate pin designations

Pin number	Use
8	Not used
7	Not used
6	Transmit tip (T)
5	Transmit ring (R)
4	Circuit ground
3	Circuit ground
2	Receive tip (T1)
1	Receive ring (R1)



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Figure 3. BYB7 DST Circuit Pack Faceplate

Technical Specifications

The BYB7 DST circuit pack conforms to the following technical specifications:

- **Temperature Range:** -40 degrees C to +85 degrees C
- **Relative Humidity:** 5% to 95%
- **Power Dissipation:** ≤1 Watt.

Technical Assistance

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergency out-of-hours help for the SLC-2000 Access System. Call the AT&T Regional Technical Assistance Center at **1-800-225-RTAC**.

Ordering Information

Call the Customer Information Center at 1-800-432-6600 to get additional copies of this document (AT&T 363-005-317).

Comments

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