

J99343GS 2-2 WIRE UNIVERSAL ADAPTIVE REPEATER/LOOP SIGNALING REPEATER COMBINED FUNCTION UNIT MTC2180BAA

DATA SHEET

METALLIC FACILITY TERMINAL

The transmission section of the J99343GS CFU (combined function unit) provides continuous automatic balancing for 19-, 22-, 24-, 25-, and 26-gauge, both H88 loaded and nonloaded, 2-wire facilities on the A- and B-sides using digital techniques. There are no manual balance controls. Gain and equalization are adjusted using manual controls. In addition to interfacing with loaded and nonloaded cable, the J99343GS CFU can impedance-match 600-ohm 2-wire switches and equipment or 900-ohm 2-wire switches and equipment. The J99343GS CFU is designed to be a substitute for the J99343G(-) type CFUs with loop signaling repeaters. Modification or wiring changes of the MFT (metallic facility terminal) bay will not be required for the J99343GS CFU.

The signaling section of this unit provides regeneration of all signals required for loop-start and ground-start operation including normal and distinctive ringing, transient blanking, dial-pulse correction, and ring-trip during silent and ringing intervals.

The J99343GS CFU can be used in the TU (transmission unit) slot of a single- or double-module mounting arrangement. When this CFU is used in the TU slot of a double-module arrangement, the companion signaling unit slot must remain vacant. For a detailed discussion of the J99343GS CFU, see AT&T Practice 332-912-165, CD-7C122-01, and SD-7C122-01. A block diagram is shown in Fig. 1. Figure 2 gives switch designations.

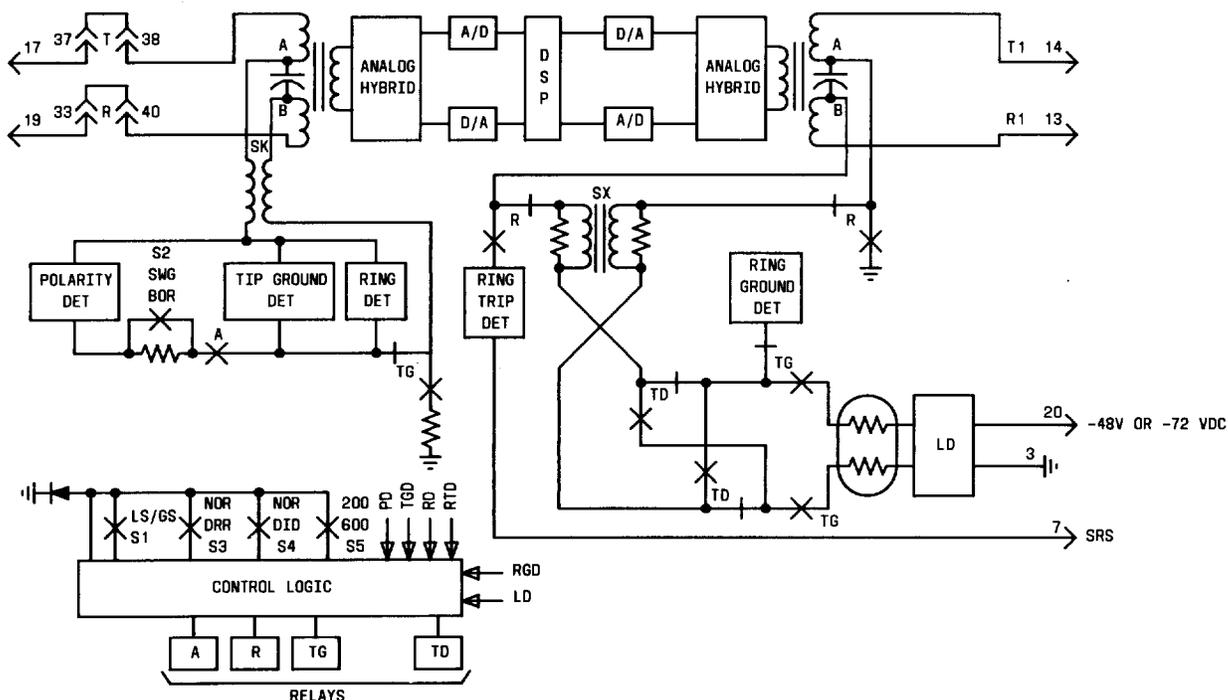


Fig. 1 — J99343GS CFU—Block Diagram

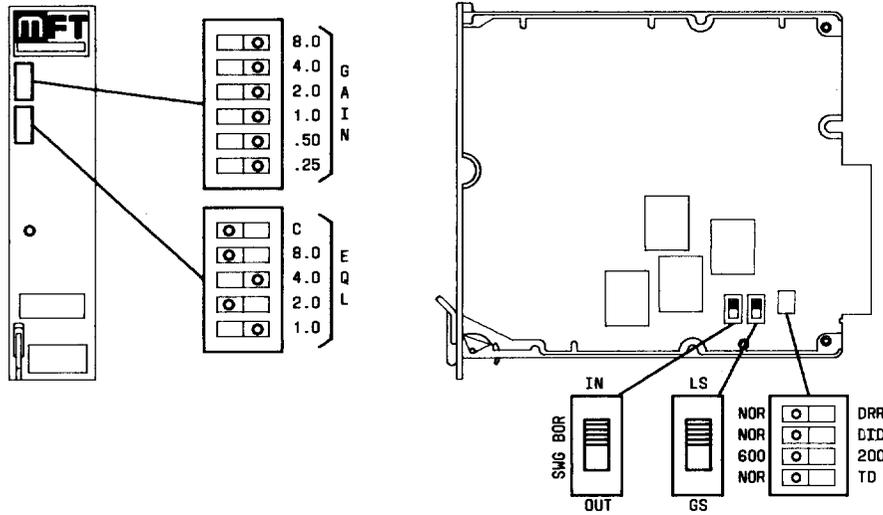


Fig. 2—J99343GS CFU—Switch Layout

GAIN: Six miniature switches, labeled GAIN, control the gain of the CFU. The GAIN switches, accessible through the front faceplate, are individually designated 8.0, 4.0, 2.0, 1.0, .50, and .25 (dB). These switches provide the same gain in both directions of transmission simultaneously.

EQL: Five slide switches, labeled EQL and individually designated C, 8, 4, 2, and 1, adjust the equalization for both directions of transmission simultaneously. When the C switch is operated toward its designation, a steeper degree of equalization or slope across the voiceband is introduced. The other four numerical switches (1, 2, 4, 8) allow selection of 16 different equalizer shapes for each position of the C switch. The operated sum of the values of the numerical switches and the C-switch position determine the equalization. See Section 332-912-212 for prescription settings of the equalization switches.

LS/GS: The LS position of the LS/GS switch is used when loops are arranged for a loop-start operation. The GS position is used for a ground-start operation.

NOR/DRR: In the NOR position of the NOR/DRR switch, "ring-ping" signals and all distinctive ringing patterns will be reproduced. In the DRR position, ringing patterns less than 170 ms in duration are rejected (no local ringing output). A ringing signal greater than 170 ms produces a 2-second ringing output. The DRR mode converts all distinctive ringing patterns into the 2-second ringing output and rejects "ring-ping" signals. Therefore, the unit can be used with other equipment that cannot pass distinctive ringing patterns.

200-600: In the 200 position, 200 ms of open-interval protection is provided. The 200-ms option should be selected for a step-by-step central office. The 200-ms option is also recommended for some LSRs (loop signaling repeaters) in a tandem arrangement. It is recommended that 600 ms be selected for the LSR nearest the switching equipment. The remaining units in the tandem arrangement should select 200 ms of protection. For most other applications, 600 ms is recommended.

NOR-TD: In the TD (toll diversion) position, all battery reversals greater than 50 ms received from the switching equipment will be regenerated and transmitted toward the station. In the NOR position, battery reversals are blocked and not passed to the station equipment.

NOR-DID: A nominal-station seizure delay of 150 ms is provided when the switch is in the NOR position. A 50-ms station seizure delay is provided when the switch is in the DID position for compatibility with delay-dial and immediate-start supervision used on direct inward dial circuits.

SWG BOR (IN-OUT): The BOR (build-out resistor) limits the switching-side loop current on short loops. The BOR is inserted in the A-side circuitry when the SWG BOR switch is in the IN position and is removed from the circuit when the SWG BOR switch is in the OUT position.