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## SLC<sup>®</sup> Series 5 Carrier System

### AUA151 (RT) POTS/SPOTS<sup>®</sup> Channel Unit - 5SC1XXO

#### Data Sheet

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This data sheet describes the AUA151 channel unit (COMCODE 106018518) and is intended for the end-user of this unit. The AUA151 CU is designed for 2-wire POTS and SPOTS<sup>®</sup> applications and must be installed in the remote terminal (RT). It furnishes a current feed interface to the customer loop and provides two channels of service. The channel unit provides a voice-frequency interface with a structural impedance of 735 ohms in series with 2.15  $\mu$ F. The transmit and receive insertion losses are both 0 dB. The unit automatically provides either a loop-start or a ground-start (PBX) interface, over loops as long as 1500 ohms.

Figure 1 is a functional block diagram of the unit and Figure 2 shows the faceplate.

The AUA151 provides the fast forward disconnect feature on ground-start circuits as well as on loop-start circuits. Fast forward disconnect means that open switching intervals as short as 50 ms are reproduced by the RT channel unit — this feature is listed as a requirement for loop-start and ground-start applications in Paragraph 5.4.6 of TR-TSY-000057. Other RT SPOTS CUs, the AUA25B, AUA59, and the AUA150 provide 350 ms open switching interval protection in ground-start applications.

The AUA151 channel unit can be used in a Series 5 universal arrangement or in a Mode 96 configuration with either a SLC<sup>®</sup> 96 central office terminal (COT) or 5ESS<sup>®</sup> switch digital carrier line unit (DCLU) at the central office (CO). In a Series 5 universal arrangement, the COT end of the channel can be terminated with an AUA32 or AUA39 channel unit for locally switched special services, or an AUA31 or AUA38 POTS channel unit at the far end if only loop-start signaling is required. In Mode 96 applications with a SLC 96 COT, the COT channel unit can be a WP36 SPOTS unit or, if only loop-start signaling is required, a WP10( ) POTS unit. Where an AUA151/AUA39 SPOTS channel unit pair provides a loop-start circuit

served by a 5ESS switch, the ground reference option (see Table 1) of the 5ESS switch must be set — otherwise, ringing will not be tripped during the silent interval. Finally, the AUA151 channel unit is compatible with a 5ESS DCLU providing a POTS or SPOTS termination. A forward disconnect feature is furnished in all of these configurations.

**Table 1. SLC® Series 5 AUA151 POTS/SPOTS® Channel Unit — On-Hook Transmission Capabilities**

COT Channel Unit	Switch	Signaling Type	RT Channel Unit - AUA151	
AUA38 or WP10( )	1A ESS™ 5ESS®	LS*	CND†	MWI‡
		LS	CND	MWI
AUA39	1A ESS	LS	CND	MWI
	5ESS	LS	CND§	MWI§
	1A ESS	GS¶	CND	MWI
	5ESS	GS	CND§	MWI§
WP36	1A ESS	LS	CND	MWI
	5ESS	LS	CND	MWI
	1A ESS	GS	CND	MWI
	5ESS	GS	CND	MWI
Integrated	DCLU** POTS Mode	LS	CND	MWI
	DCLU SPOTS Mode	LS GS	CND CND	MWI MWI

- \* Loop-start (LS) signaling.
- † Calling number delivery (CND) individual calling line identification (ICLID) feature of CND transmits number, using frequency shift keying (FSK), during silent ringing interval.
- ‡ Visual message waiting indication (MWI) CO switch transmits FSK to turn on indicator during idle state.
- § GNDREF = Y. This 5ESS switch option places a low resistance between tip lead and ground, during all nonidle call states. (Default value is currently N.) Y value is required where noted in this table, and is optional for other table entries (except for circuits bridged at the CO, which will be noisy if GND=Y).
- ¶ Ground-start (GS) signaling.
- \*\* Digital carrier line unit (DCLU) interface feature of 5ESS switch, or other switch with digital loop interface compliant with Bellcore TR-TSY-000008. (Compatibility for MWI on ground-start circuits is not covered by TR8.)

During on-hook conditions, the channel unit is not powered down. On-hook transmission (OHT) in each direction is provided where the far end is terminated with an AUA38, AUA39, WP10( ), or WP36 channel unit, or a digital switch (see

Table 1). This OHT capability, coupled with the OHT capability of the listed COT channel units in the COT-to-RT direction, permits these combinations to provide several new services requiring OHT in that direction [for example, individual calling line identification (ICLID)]. On-hook insertion loss of the AUA151 is nominally 2.5 dB — when the far end is terminated with an AUA38 or AUA39 channel unit, end-to-end insertion loss is approximately 4 dB, and somewhat less with *SLC* 96 channel units at the COT.

Loop range depends on whether the AUA151 is providing ground-start or loop-start service. In a ground-start application where the distant channel unit is a WP36, AUA32, or AUA39 (or the DCLU *SPOTS* equivalent) the loop is limited to carrier serving area (CSA) range for guaranteed transmission performance. In a loop-start application where the distant channel unit is a WP10( ), WP36, AUA31, AUA32, AUA38, or AUA39 (or the DCLU POTS or *SPOTS*® *CU* equivalent) the loop range extends to 1500 ohms (plus telset resistance) — over this range the AUA151 supplies current varying in amount from 30 mA (shortest loop) to as low as 20 mA (1500 ohms).

The AUA151 channel unit, in all its configurations, is compatible with Pair Gain Test Controller (PGTC) and eXtended Test Controller (XTC) test systems. There are no options or settings that need to be selected on this channel unit.

Faceplate LEDs indicate the following conditions:

**ODD BUSY** (Red LED): When lighted, indicates that the odd channel is busy.

**EVEN BUSY** (Red LED): When lighted, indicates that the even channel is busy.

The faceplate jack provides convenient test access to the tip (T) and ring (R) of both the odd (O) and even (E) channels.

AUA151 (RT) POTS/SPOTS Channel Unit

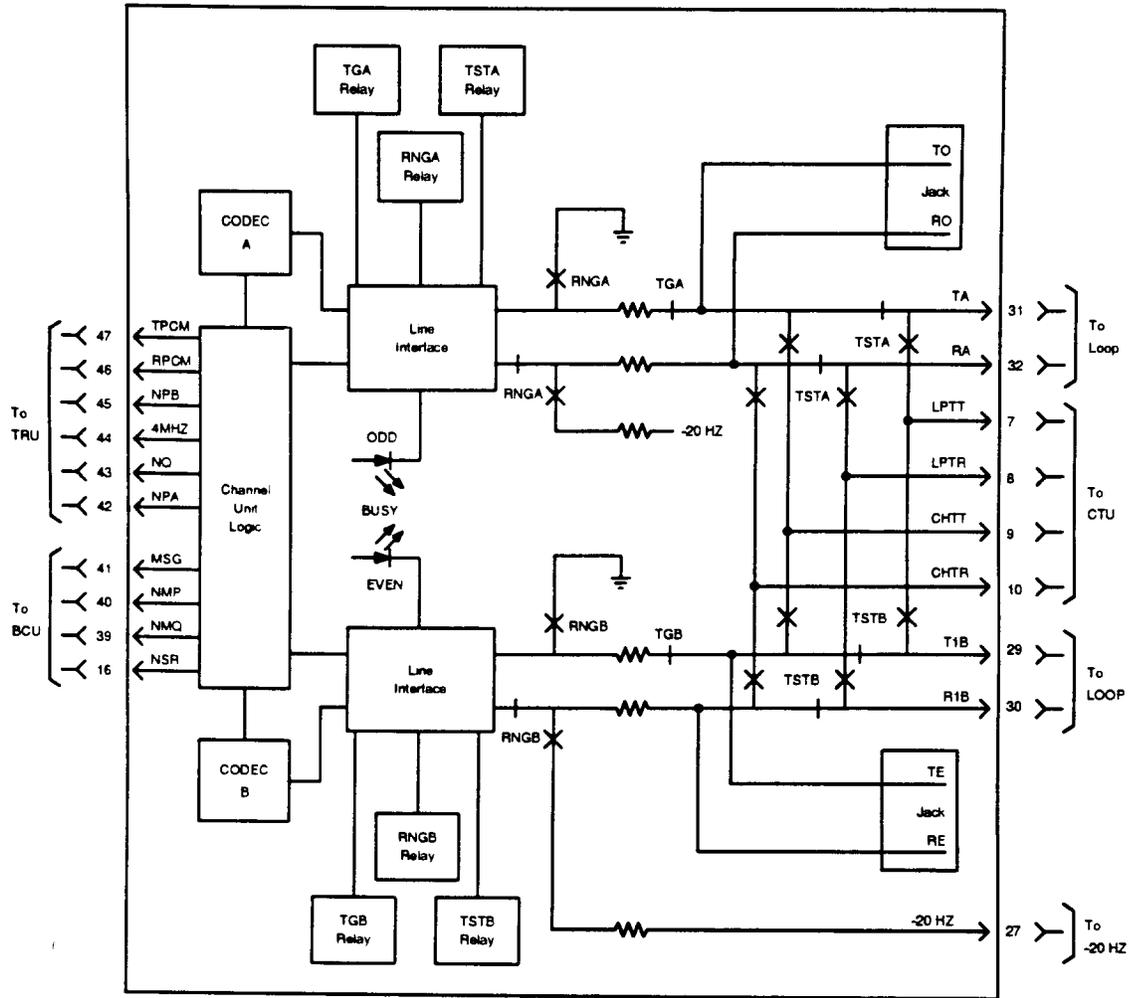
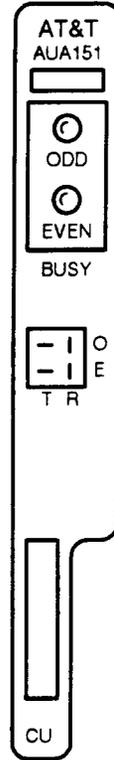


Figure 1. AUA151 Block Diagram



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Figure 2. AUA151 Faceplate

In-hours or emergency out-of-hours technical assistance for the *SLC Series 5* Carrier System can be obtained by calling the Regional Technical Assistance Center at **1-800-225-RTAC**.

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