SLC® Series 5 Carrier System

AUA36( ) (COT) DID Channel Unit—
5SCU9F0 (AUA36)
5SCU900 (AUA36B)

Features/Functions

- Meets appropriate industry standards for DID service
- Compatible with locally-switched loop reverse battery signaling requirements in TR-NWT-000057
- Faceplate test access to tip and ring for both channels (AUA36B)
- No option switches
- Faceplate BUSY LEDs
- UL* Recognized
- Enhanced inventory readout (AUA36B)

* Registered trademark of Underwriters Laboratories Inc.

Description

The AUA36( ) channel unit is a 2-wire special service unit intended for use in locally switched SPOTS® channel unit applications with both loop-start and ground-start service. The COMCODE for the AUA36 is 107505703 and the COMCODE for the AUA36B is 107392292.

For locally switched DID applications, the AUA36 is a current feed unit that provides the dial pulse originating (DPO) function between the DID trunk circuit of a central office (CO) and the *SLC* Series 5 Carrier System or *SLC*-2000 Access System. For non-locally switched DID applications, the AUA36( ) is a current feed unit that provides the analog interface between any dial pulse terminating (DPT) type trunk circuit and the loop carrier system. Examples of carrier circuits providing the DPT trunk interface would include the J98726BB 2-wire DPT channel unit.

The AUA36( ) can provide two channels of service and will always be located at the central office terminal (COT) end of the channel. The remote terminal (RT) end of the channel may be terminated by an AUA56( ) DID channel unit, an AUA42 2-wire special services channel unit or, in a *SLC*-2000 system, an SPQ442® CU. The AUA36( ) detects loop closure information from either the CO or DPT type trunk circuit and transmits this information digitally to the RT. Similarly, the AUA36 receives digitally encoded reverse battery signaling information from the RT and applies this signaling toward the CO or DPT type trunk circuit.

The AUA36 channel unit is a voice-frequency unit that provides 0 dB gain in both the transmit and receive directions. The solid-state voice path is designed with a structural impedance that provides high return loss against 875 ohms in series with 2.16 microfarads.

During the idle condition, the channel unit codecs are powered down, while the microcomputer continually monitors signaling and bank controller information.

There are no options or settings on the AUA36( ) CU.

Facility Failure

When the bank controller notifies the channel unit that a facility failure has occurred, the AUA36( ) will respond by transmitting a no loop closure code to the RT and applying a 2.5 second normal battery/reverse wink toward the CO or DPT trunk circuit to disconnect the switch and then to busy out the channel.

Test Access

Remote test access to the AUA36( ) is available when the unit's test relay is operated upon command from the mechanized loop testing (MLT) or switched access remote test system (SARTS) through the extended test controller (XTC). (See Figure 1.)

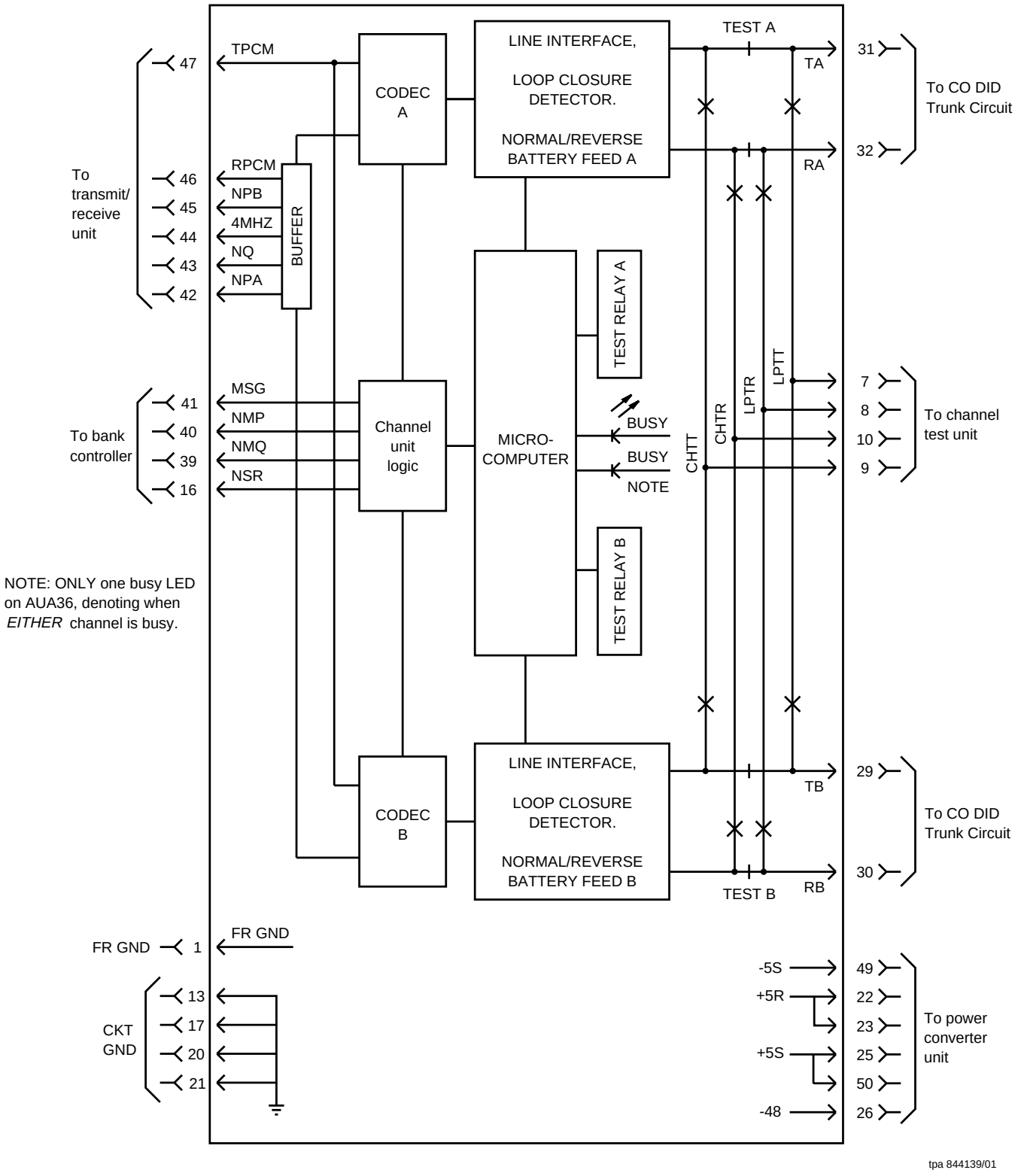

Figure 1. AUA36( ) Block Diagram

Compatibility

The AUA36( ) is compatible with *SLC* Series 5 Carrier System Feature Package C (FPC), FPC/AC, and FPF (fiber-in-the-loop) and with Release 3.2 and later of the *SLC*-2000 Access System. The far-end termination can be any of the following channel units:

- AUA56( ) DPT channel unit
- AUA42( ) E SPOTS channel unit, DPT function code
- SPQ®442 E SPOTS channel unit, DPT function code
- SPQ®454 4-Wire E&M channel unit (to IXC)
- AUA54( ) 4-Wire E&M channel unit (to IXC)

Specifications

Table 1 lists the electrical and transmission specifications for an AUA36( )/ AUA56( ) channel unit pair that supplement or highlight the detailed information in Chapter 6 of the *SLC* Series 5 Applications And Planning Guide, 363-205-010.

Table 1. AUA36( )/AUA56( ) Electrical and Transmission Specifications

Transmission Specifications for Direct Inward Dial Channel Unit Pairs		
Parameter	**Condition**	**Value**
Loop Resistance (beyond the RT)		0-900 ohms
1000 Hz loss* off-hook (±0.5 dB typical, ±1.0 dB max)	AUA36( )/AUA56 AUA36( )/AUA56B	0 dB 0dB, 2.5 dB
Frequency Response (loss relative to 1004 Hz)	60 Hz 400 Hz to 2800 Hz	>21 dB -0.5 dB to +2 dB - AUA36/56 -0.5 dB to +0.75 dB - AUA36B/56B
Gain Tracking† (loss relative to 0 dBm0)	-37 dBm0 to +3 dBm0 -50 dBm0 to -37 dBm0	+0.5 dB max. (± 0.25 dB avg.) +1.0 dB max. (± 0.5 dB avg.)
Return loss at the COT‡		ERL ≥ 18 dB SRL ≥ 12 dB
Return loss at the RT**		ERL ≥ 18 dB SRL ≥ 12 dB
Idle channel noise (at the COT and RT)		20 dBrnC maximum
Impulse noise	Measure at 47 dBrnC0 for 15 min.	≤ 15 Counts
Overload at COT and RT	+3 dBm0	≤ 0.5 dB extra loss
Signal-to-distortion	0 to -30 dBm0 -30 to -40 dBm0 -40 to -45 dBm0	> 33 dB >27 dB >22 dB
System generated tones	0 < f < 16 kHz	< -50 dBm0
Single frequency distortion	0 - 12 kHz, 0 dBm0 1004 - 1020 kHz, 0 dBm0	< -28 dBm0†† <-40 dBm0‡‡
Intermodulation distortion (4-tone method, -13 dBm0 input)	A-B (R2) product 2A-B (R3) product	> 43 dB > 44 dB
Data pulse distortion (PAR)		> 90

Transmission Specifications for Direct Inward Dial Channel Unit Pairs (Continued)		
Parameter	**Condition**	**Value**
Minimum longitudinal balance at the COT and RT***	200 Hz, 500 Hz, 1000 Hz 3000 Hz	≥ 58 dB ≥ 53 dB
Cross talk (0 dBm0 input, 200 Hz to 3400 Hz)	C-message weighting	≤ -65 dBm0

* Measured as the ICL with the RT terminated in 600 ohms and with the COT terminated in 900 ohms

† At 1004 Hz, off-hook

‡ Measured with respect to 900 ohms + 2 µF with the RT end terminated in 600 ohms + 2 µF

** Measured with respect to 600 ohms + 2 µF with the COT end terminated in 900 ohms + 2 µF

†† At any other frequency, 0 to 12 kHz

‡‡ At any other frequency, 0 to 4 kHz

*** Measured by IEEE Method 455-1976

Installation and Testing

Procedures for installing and testing the unit are given in *AT&T 363-205-402, Issue 4 SLC Series 5 Carrier System Channel Unit Installation Guide*

The AUA36( ) can be tested by the XTC upon command from MLT or SARTS.

The faceplate jack of the AUA36B CU provides test access to the tip and ring of both the odd and even channels. Local test access to the AUA36 unit is available through a channel unit extender.

Faceplate Features

Figure 2 shows the AUA36( ) faceplates. The faceplate jack (AUA36B) provides convenient test access to the tip and ring of both the odd and even channels through the ITT RTG16L2H15A channel unit faceplate test cord (COMCODE 405755208).

Faceplate LEDs indicate as follows:

- **ODD BUSY** (Red LED): The odd channel is busy when lighted.
- **EVEN BUSY** (Red LED): The even channel is busy when lighted.

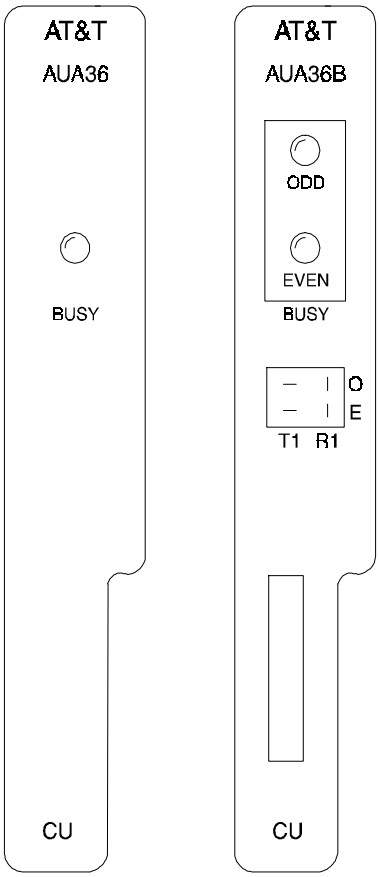

Figure 2. AUA36 Faceplate Diagram

References

The following documents provide additional information about the use of this channel unit in the Series 5 Carrier System and *SLC*-2000 Access System:

AT&T 363-205-010 *SLC Series 5 Carrier System Applications and Planning Guide*

AT&T 363-205-402 *SLC Series 5 Carrier System Channel Unit Installation*

AT&T 363-208-000 *SLC-2000 Access System Applications, Planning and Ordering Guide*

AT&T 915-710-115 *SLC Series 5 Carrier System Application Engineering*

Technical Assistance

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergency out-of-hours help for the *SLC* Series 5 Carrier System. Call the AT&T Regional Technical Assistance Center at **1-800-225 -RTAC.**

Ordering Information

Additional copies of this document (AT&T 363-005-114) are available from the Customer Information Center — call 1-800-432-6600.

Comments

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