AT&T Data Sheet
AT&T 363-005-117, Issue 4

SLC® Series 5 Carrier System

AUA58( ) (RT) POTS Channel Unit - 5SCU1H8AXX (AUA58B) or 5SC1P00AAA (AUA58C)

Features/Functions

- Meets TR-TSY-000057 and TR-TSY-000303 requirements
- Compatible with *CLASS** services
- On-hook transmission (OHT) (see Table 1)
- Fast forward disconnect
- Faceplate test access to tip and ring for two channels
- No option switches
- Faceplate BUSY LEDs
- *UL*† Recognized
- Improved performance with calling number delivery (CND) and calling name delivery (CNAM) services (AUA58C)

* Service mark of Bell Communications Research, Inc.

† Registered trademark of Underwriters Laboratories Inc.

Description

The AUA58( ) channel unit is designed for 2-wire, loop-start POTS service. This unit provides two channels of service and is located at the remote terminal (RT). The AUA58( ) furnishes a current feed interface to the customer loop at fixed-loss transmission levels. Fast forward disconnect [the RT disconnects when the central office (CO) open battery interval is longer than 50 ms] is provided when the CO termination is a POTS channel unit or a digital line unit provisioned as a POTS channel unit interface. When the CO termination is a *SPOTS*® channel unit or a digital line unit provisioned as a *SPOTS* interface, the AUA58( ) provides open switching interval (OSI) filtering on forward disconnect (the RT disconnects only for CO open battery intervals longer than 350 ms.)

This data sheet is reissued to add information on the AUA58C, which relative to the AUA58 and AUA58B, provides greater on-hook loss for improved performance with CND and CNAM services. (See Table 2.)

Relative to the AUA58, the AUA58B and AUA58C channel units radiate less electromagnetic interference. The AUA58B COMCODE number is 105710297 and the AUA58C COMCODE number is 106933583. The AUA58 is rated discontinued availability (DA).

Compatibility

The AUA58( ) is compatible with all *SLC*® Series 5 Carrier System feature packages and with the *SLC*-2000 Access System. The far-end termination can be any of the following units:

- AUA32 *SPOTS*® channel unit, loop-start only
- AUA39 *SPOTS* channel unit, loop-start only
- AUA31 POTS channel unit
- AUA38 POTS channel unit
- *SLC* 96 WP10( ) POTS channel unit
- *SLC* 96 WP36( ) *SPOTS* channel unit, loop-start only
- *5ESS*® switch digital carrier line unit (DCLU)
- *5ESS* switch integrated digital carrier unit (IDCU)

Table 1. AUA58( ) On-Hook Transmission Compatibility

CO	Signaling	Direction	Application		
WP10	LS	COT→RT	CND/CNAM	MWI	MR*
WP10(B,C)	LS	COT→RT	CND/CNAM	MWI	MR*
AUA38	LS	COT↔RT	CND/CNAM	MWI	MR
AUA38B	LS	COT↔RT	CND/CNAM	MWI	MR
WP10D	LS	COT↔RT	CND/CNAM	MWI	MR
WP36	LS	COT→RT	CND/CNAM	MWI	MR*
AUA39	LS†	COT↔RT	CND/CNAM	MWI	MR
INTEGRATED:					
POTS CU mode	LS	DCLU↔RT	CND/CNAM	MWI	MR
SPOTS® CU mode	LS	DCLU↔RT	CND/CNAM	MWI	MR

* Meter must present off-hook termination when responding to poll.
† If CO is a *5ESS*® switch, set GNDREF option to YES for ring trip.

Legend:
CNAM — Calling name delivery
CND — Calling number delivery
LS — Loop-start
MR — Meter reading
MWI — Visual message waiting indication

Specifications

Tables 2 and 3 list specifications for the channel unit. Unless otherwise shown, the values in Table 2 are for off-hook conditions.

Table 2. AUA58( )Electrical and Transmission Specifications (Note)

Parameter	Value
Loop resistance	0 Ω to 900 Ω plus 430 Ω telset
Loop current	20 mA (900 Ω loop) to 30 mA (0 Ω loop)
1kHz VF loss:	
AUA58	1 dB (±0.5 dB)
AUA58B	1 dB (±0.5 dB)
AUA58C	1 dB (±0.5 dB)
1kHz VF loss, on-hook:	
AUA58	3.5 dB (±0.5 dB)
AUA58B	3.5 dB (±0.5 dB)
AUA58C	5.2 dB (±0.5 dB)
Return loss at COT (reference Z of 900 Ω + 2.16 µF, RT terminated with 900 Ω + 2.16 µF)(on-hook, off-hook)	ERL > 18 dB SRL > 10 dB
Return loss at RT (reference Z of 900 Ω + 2.16 µF, COT terminated with 900 Ω + 2.16 µF)(on-hook, off-hook)	ERL > 18 dB SRL > 10 dB
Frequency response (loss relative to 1004 Hz, end-to-end)	400 Hz to 3000 Hz: –0.5 dB to +1 dB 3200 Hz: –0.5 dB to +1.5 dB 300 Hz and 3400 Hz: 0 dB to +3 dB
Overload at COT and RT	at +3 dBm0, ≤ 0.5 dB extra loss
Single frequency distortion with input of:	
0 Hz to 12 kHz, 0 dBm0	< –28 dBm0 at 0 Hz to 12 kHz
1004 Hz to 1020 kHz, 0 dBm0	< –40 dBm0 at 0 Hz to 4000 Hz
Signal-to-distortion with input of:	
0 to –30 dBm0	> 33 dB
–30 to –40 dBm0	> 27 dB
–40 to –45 dBm0	> 22 dB
System generated tones 0 Hz < f < 16 kHz	< –50 dBm0
Structural impedance (on-hook, off-hook)	900 Ω + 2.16 µF
Balance impedance (on-hook, off-hook)	1000 Ω in parallel with 0.022 µF
Minimum longitudinal balance (measured by IEEE Method 455-1976)	200 Hz to 1000 Hz: ≥ 58 dB 3000 Hz: ≥ 53 dB
Idle channel noise, end-to-end	≤ 20 dBrnC
60 Hz rejection	> 20 dB
Cross talk (0 dBm0 input, 200 Hz to 3400 Hz)	≤ –65 dBm0
Impulse noise at a threshold of 47 dBrnC0 for 15 minutes	≤ 15 counts
Data pulse distortion (PAR), end-to-end	> 90
Gain tracking at 1004 Hz, relative to 0 dBm0	
–37 dBm0 to +3 dBm0	±0.5 dB maximum (±0.25 dB average)
–50 dBm0 to –37 dBm0	±1.5 dB maximum (±0.5 dB average)

Note: End-to-end performance specified with AUA38 or AUA39 at COT, using 900 Ω source and terminating impedances.

Table 3. Environmental Specifications

Temperature Range (Ambient)	
Operating	–40° to 85°C (–40° to 185°F)
Storage	–40° to 85°C (–40 ° to 185°F)

Relative Humidity, Noncondensing
5% to 95%

Installation and Testing

There are no switches to set on this unit. Procedures for testing the unit are given in AT&T 363-205-402 (TOP).

The AUA58( ), in all its applications, is compatible with mechanized loop testing (MLT) and the pair gain test controller (PGTC) and extended test controller (XTC) test systems.

The faceplate jack provides easy test access to the tip (T) and ring (R) of both the odd (O) and even (E) channels through the ITT RTG16L2H15A channel unit faceplate test cord (COMCODE 405755208).

Faceplate Features

Figure 1 shows the AUA58B faceplate. AUA58( ) faceplate features include a test access jack to the tip and ring and faceplate LEDs.

ODD BUSY (Red LED): The *ODD* channel is busy when lighted.

EVEN BUSY (Red LED): The *EVEN* channel is busy when lighted.

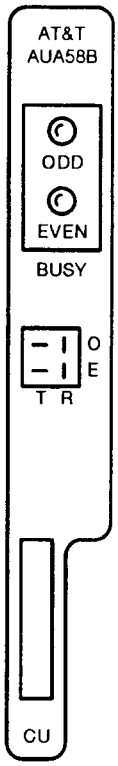

Figure 1. AUA58B Faceplate

References

The following documents provide additional information about the *SLC* 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 and Testing.*
AT&T 363-208-000	*SLC-2000 Access System Applications and Planning Guide.*
AT&T 915-710-116	*SLC Series 5 Carrier System Channel Unit Application and Prescription Setting.*

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.**

Additional copies of this document (AT&T 363-005-117) are available from the Customer Information Center — call 1-800-432-6600.

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