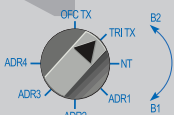


TR ISDN

CLEI: DDRPLRC1_ _

Total Reach
ISDN
CENTRAL OFFICE UNIT
1212082L1



- OFFICE I/F
- TRI I/F
- TEST
- ACT



STATUS LEDs

- OFFICE I/F**
 - RED Indicates a loss of signal from or synchronization with the 2B1Q BRI interface toward the switch
 - * FLASHING Once per second indicates receipt of a Near End Block Error from the 2B1Q BRI interface toward the switch
- TRI I/F**
 - RED Indicates a loss of signal from or synchronization with the TRI-R (Total Reach ISDN Remote) unit
 - * FLASHING Once per second indicates receipt of a Near End Block Error from the TRI-R unit
- TEST**
 - YELLOW Indicates the TRI-C unit is in a network commanded 2B+D loopback
 - * FLASHING Indicates that the TRI-C is in a network commanded loopback or that a downstream unit has been placed in loopback from the faceplate of the TRI-C. Once per second for B1 loopback, twice per second for B2 loopback
- ACT**
 - GREEN Indicates the terminal equipment has exchanged ACT bits with the ISDN switch
 - * FLASHING Once per second indicates that the ACT bit is being sent from only the terminal equipment (CPE)

MFT ADAPTER WIRING (where approved)

T400	MFT SIDE
TIP TRI-C pin 55	pin 14 TIP 1 side B
RING TRI-C pin 49	pin 13 RING 1 side B
TIP CO pin 41	pin 17 TIP side A
RING CO pin 47	pin 19 RING side A
-48 (supply) pin 35	pin 11 -48 V
-48 (return) pin 17	pin 18 Ground
Frame GND pin 11	pin 1 Chassis Ground
Frame GND pin 27	

T400 EDGE CONNECTOR PIN ASSIGNMENTS

55	TIP, TR-Interface	To Customer
49	RING, TR-Interface	To Customer
47	RING, U-Interface	From ISDN Switch
41	TIP, U-Interface	From ISDN Switch
35	-VDC Supply	
27	Frame Ground	
17	-VDC Return	
11	Frame Ground	

Note: ISDN connections are not sensitive to TIP/RING reversals.

OPTIONS

S1-1 CTONE

- ON Enables continuous periodic wake-up tones to the ISDN switch or LULT device. Wake-up tones are repeated at 17-second intervals.
- OFF Default and normal condition, in that the TRI-C sends one wake-up tone on power-up only.

S1-2 TEST

- ON Used for factory test only.
- OFF Default and normal mode.

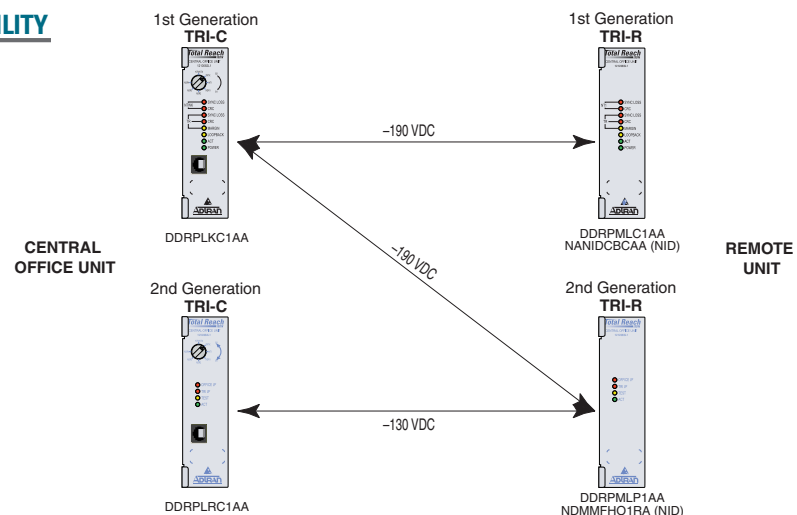
LOOPBACK TEST (ADR1 – ADR4, NT1)

Loopbacks in the network to customer direction can be initiated from either the ISDN switch (e.o.c.) or from the faceplate of the TRI-C. Loopbacks initiated from the faceplate are non-intrusive to the other B and D channels. To initiate a loopback, perform the following steps:

1. Connect the DS0 digital test set (e.g., TPI 108/109) to the 8-pin RJ-45 jack of the TRI-C and configure the set for Near Logic and 64 kb/s.
2. Rotate the 8-position rotary switch clockwise or counterclockwise for B1 or B2 selection respectively, to the desired address.
3. The TEST LED will illuminate if the loopback is successful and will not illuminate if the loopback fails.
4. Send and receive 2047 pseudo-random data to the established loopback and observe the DS0 digital test set bit error count.
5. It is not necessary to exit the test mode to select additional addresses or to change the B1/B2 channel (CW, CCW).
6. To terminate the loopback, remove the 8-pin modular ring and return the rotary switch to the unused position (between OFC TX and ADR4).

Note: The rotary switch is only intrusive if a DS0 test set is connected to the 8-pin modular interface of the TRI-C. If a test set is not connected, the rotary switch does not function. The 8-pin connector should be male with all 8 pins straight-through (no crossovers).

COMPATIBILITY



DEPLOYMENT GUIDELINES

- All loops must be non loaded
- Actual Measured Loss (AML) not to exceed 52 dB @ 20 kHz (135 Ω termination) or 61 dB @ 40 kHz.
- Loop length not to exceed 50 kft.
- Maximum single bridged tap not to exceed 2 kft.
- Maximum total bridged tap not to exceed 6 kft.
- Maximum DC resistance not to exceed 2000 Ω.

WIRING CONNECTIONS

Pair	Terminal Designations	T400 Pin #	Customer RJ-48
To/From Network	TT, RR	41, 47	–
To Customer	T, R	55, 49	4, 5

TURNUP

1. Set dip switches on both units according to circuit design and local practices.
2. Install both TRI-C and TRI-R using standard procedures.
 - a) TRI-C inserts in T400 shelf, or MFT bay with MFT adapter.
 - b) TRI-R inserts in standard non powered T200 or T400 NCTE mounting for indoor installations, or mounts to a wall for outdoor NID installations.
3. When inserted in an active housing the two units go through a synchronization and activation process during which all LEDs undergo an on/off sequence. Refer to *STATUS LEDs* on reverse side for LED descriptions.
4. After synchronization, which may take up to 90 seconds, the following LED indication will show:
 - a) ACT LED – ON
 - b) All other LEDs will be OFF until network occurrences cause illumination.
5. If LEDs in step 4 are as noted, proceed with loopback and BERT testing per specifications.
6. If LEDs in step 4 are in any other configuration, refer to *Troubleshooting*.
7. The TRISDN system will be qualified at the 20 kHz frequency.

TROUBLESHOOTING

No Power at the TRI-R

- Ensure TRI-C is supplying voltage to power the TRI-R. Measure T-R voltage at the frame (Tip to Ground = -7 to -9 Vdc, Tip to Ring = -127 to -133 Vdc, Ring to Ground = -134 to -142 Vdc).
- Measure T-R voltage at the TRI-R.
- If voltage not present at the TRI-R, check continuity of cable pair.
- If voltage is present a faulty TRI-R is indicated.
- The TRI-R does not place a measurable short between tip and ring. Cable resistance must be taken towards a manually applied short.

Power, but no Synchronization on TRI I/F

- Check cable for load coils.
- Check for excessive bridged taps.
- Verify other deployment guidelines adhered to.

Excessive Errors on Loop

- Compare resistance of individual conductors. If these are different, high-resistance or intermittent opens may be indicated.
- Check for excessive bridged taps.
- Verify other deployment guidelines adhered to.

WARRANTY

Warranty for Carrier Networks products manufactured by ADTRAN and supplied under Buyer's order for use in the U.S. is ten (10) years. For a complete copy of ADTRAN's *U.S. and Canada Carrier Networks Equipment Warranty*: (877) 457-5007, Document #414.

COMPLIANCE

Caution: Electric shock hazard. Span voltage is present on telecommunication leads (140 Vdc).