

## 360-80 T1 Channel Bank RELEASE NOTES

Covers the Charles Industries Ltd. 360-80 system T1 modules except for the 3641-80 and 3648-80 Routers

### System CD Features:

- Revisions and Manuals
  - Module Installation document/manuals
  - Module Practice documentation/manuals
  - T1 Controller User's guide documentation/manuals
  - This release note - replaces Trouble Shooting Manual

**Current Version of T1 Controller (91-360381-X) Software Release: V3.8/V10**

### Features in latest Software Releases:

NMS version 4.1: The Network Management System (NMS) software – GUI software used to manage 360-80 channel banks – will operate on 64-bit Windows-based operating systems. NMS version 4.1 is also compatible with 32-bit Windows-based operating systems.

Previously, the signal-to-noise ratio (SNR) on the 11<sup>th</sup> circuit of a 12-channel E&M card would worsen (decrease) when the 12th circuit was not mapped to any T1 timeslots. When the 12th circuit was mapped to a T1 timeslot, the SNR on the 11th circuit improves. This has been fixed with an update to the FPGA on the E&M card.

Using the craft/serial interface, usernames up to 10 characters long can be created and deleted. Previously usernames that were 10 characters long could be created, but could not be deleted. When deleting a username, only 9 characters were allowed.

T1 Controller software update can be done by following the update procedure under the router section of this CD.

### Operational Notes for the 360-80 System:

1. T1 Controller (3603) - T1 loopbacks -
  - In ESF (when selecting “payload” for type, the system automatically changes the location to "far", it then won't allow you to change it to "near" even if you select “line” for type. The work around is to exit the T1 loopback menu and then re-enter it and the option of “near” for type “line” is available.)
  - In SF (The far end line loopback will work the first time. But if you choose “payload” the 2<sup>nd</sup> time, it will revert back to “line” and still show “far” for location, however the loopback will always occur at the near end. The work around is to manually re-choose the “far” option again even though it already still displays “far” or exit the T1 loopback menu and re-enter it.)
2. T1 Controller (3603) / Secondary T1 (3608) - Cabling - The RJ-45 cable that goes from the T1 primary (RT1) to the secondary unit RJ-45 (P2) needs to be a crossover cable for bypass function to work properly. Meaning pin 1 to 5, 2 to 4, 4 to 2, and 5 to 1. It is possible to set up a D/I application with no alarms but have alarms when the system goes into bypass. **Without the**

## 360-80 T1 Channel Bank RELEASE NOTES

**Cross-Over Cable the Symptoms are:** If the system is working correctly in all directions with ESF framing, then force a bypass on the secondary. The bypass LED comes on and then the AR and AY alarms come on which is OK, but then the AR and AY LEDs also come on at both the east and west channel banks. Swapping the transmit and receive pairs on the T1 cable at the east bank (XMT to RCV and RCV to XMT), then the system is in sync between east and west banks. Removing the forced bypass, the D&RI system has alarms because of the swapped pairs on the east T1 cable.

3. Secondary T1 (3608) - Timing - When configured in a drop and reinsert configuration, D&RI shelf must be set for loop time. If the D&RI shelf is set for internal timing (it's default setting), then the signaling gets corrupted going to/from west to east (no drop at D&RI) due to timing slips and causes flicker of the LEDs and broken audio on the voice cards in all directions.
4. T1 Controller (3603) / Voice Units -
  - Half size E&M, FXO & FXS - The tone test (beep) isn't available on the SNMP interface.
  - Full size E&M, FXO & FXS - Enabling the tone test for 1 channel will block test availability to all other channels
5. T1 Controller (3603) / 64xN (3634) - Loopbacks - When doing a remote loopback using SNMP for provisioning, the local 64xN card must have the PRTS option enabled to send the remote loopback and PRTS option must be enabled at the remote unit to respond to the loopback.
6. T1 Controller (3603) / 64xN (3634) - Loopbacks - With the V.54 loopbacks enabled, using the local loopback on circuit 4 on the full size cards (channel 4 in lower slot and channel 16 in upper slot) may cause the remote 64xN card to activate its network loopback. The only way to release this loopback is locally at the remote location using the craft port or remotely using GUI management.
7. 64xN (3634) - Timing - When running the 64xN (3634) over multiple timeslots, it is advisable to set the ext. timing option to "on". Otherwise the DTE equipment may have sync problems. This problem showed up when using a Cisco1600 router with V.35 but it works normally when using DTE test sets.
8. T1 Controller (3603) / DSU (3633) / OCU (3632) - Loopbacks - Loopbacks are not available when using error correction at 56/64K.
9. DSU (3633) - RS-232 interface - When provisioned for the interface type "RS-232", the channel can not be set for a rate higher than 19.2 Kbps per the RS-232 specification.
10. T1 Controller (3603) / DSU (3633) / OCU (3632) - Loopbacks - The DSU and OCU can only generate loopbacks toward the primary T1 when a 2<sup>nd</sup> T1 is in the shelf in drop and reinsert (normal) mode. An attempt to send a loopback toward the secondary T1 will go out the primary T1 and can overwrite the data that is in that same timeslot on the primary T1.
11. Sec. T1 Controller (3608) / DSU (3633) - Protect Mode - Diagnostics, such as loopbacks, will not work when the Secondary T1 unit is optioned for 'protect' mode.
12. T1 Controller (3603) / OCU (3632) - When the OCU units are set for 64K (default) and the 4W interface is left open (no sealing current), the unit sends all zeros to the T1 network. If AMI is selected then this may cause framing errors due to excessive zeros. Correct this by setting un-used channels of the OCU-DP to any other rate (like 56Kbps) which will provide a logic '1' for each channel or turn on zero code suppression on the OCU channel
13. OCU (3632) - The sw56 option is non-operational.

## 360-80 T1 Channel Bank RELEASE NOTES

14. OCU (3632) - SNMP and GUI do not indicate an SNMP initiated loopback on even number circuits even though the LED turns on and you hear the relay change state.
15. ISDN (3638) - Loopbacks - A LULT loopback may cause both channel LEDs to turn on at the remote ISDN card.
16. T1 Controller (3603) - Provisioning History - The T1 Controller unit has a history buffer. If multiple different card types are plugged into the IAD, this buffer may overload. When this happens, bit errors occur or some channels may be corrupted. If these conditions are experienced, perform a reset to stored values. If this does not resolve the conditions, perform a reset factory default on the system. This should be done as a last resort since it will take down all customers, channel settings and time slot allocation will be cleared to default.
17. T1 Controller (3603) - GUI - Typically it takes less than a minute for the GUI to recognize (green check mark) a local T1 Controller unit when it's IP address matches one that has been put in the GUI database. However, if the T1 Controller unit is removed and replaced with a unit that has the same IP address, subnet mask and gateway address, it may take up to 9 minutes for the GUI to recognize it. This is because the units have different Mac Addresses. The one way to shorten this time span to less than a minutes is to reset the GUI PC. It is also possible to delete the entry in the arp table using the command 'arp -d <ip\_address>'. It isn't an issue for recognition of far end units thru the ESF datalink.
18. T1 Controller (3603) - GUI - The database must have at least two units entered in it to see the red 'X' and green check '√' marks.
19. Secondary T1 (3608) - The practice states that a factory default with no channel units plugged in will automatically assign timeslots to a phantom circuit. When this happens, it blocks data from the east to west but not from west to east because the default sets the timeslot mode to broadcast. Thus, the phantom is dropped to the primary but is then broadcast to the east.
20. DSU (3633) - Loopbacks - About half the time network initiated alternating DSU loopbacks will fail when using a HP37702A test set if a latching DSU loopback was sent previously. This problem is with the test set, not the DSU unit. This function works when checked with a TPI, and two different T-Berd test sets.
21. DSU (3633) - Craft Terminal - When in the DSU loopback menu, if a loopback (ocu, dsu, csu) isn't chosen and apply settings is selected, it may cause continuous scrolling of the prompt.
22. DSU (3633) - (half size unit) to the HP 3779 - When using channels 29-30, the DTE gets errors when configured for RS232. Channels 25-28 are OK. If channels 29-30 are set to RS530, then it's OK.
23. 64xN (3634) - V.54 Loopback - There is a problem with HP37702A test set when sending the 64xN unit a V.54 network loopback code. If the HP is configured for T1-DDS mode (56K) and a V.54 loopback code is sent to the 64xN unit, then the card will go into loopback correctly. If the HP is set for 56/64xN mode, then the 64xN unit will not respond to the V.54 loopback code regardless of the timeslot length. Using the T-Berd test sets and running in the 56/64xN mode, the 64xN unit will always respond to V.54 loopbacks regardless of timeslot length. This is true for both ½ and full size units.
24. 64xN (3634) - Timeslot - The 64xN indicates broken timeslots when used in multi-timeslot mode due to the T1 card buffer overloading. A reset to stored values should fix the problem.

## 360-80 T1 Channel Bank RELEASE NOTES

25. 64xN (3634) - Loopback Compatibility - The 360-80 64xN units can not do a remote loopback to a Charles 360 64xN channel unit, since the 360-80 unit only does V.54 loopbacks which are not recognized by the 360 unit.
26. 64xN (3634) - Craft - When enabling the loopbacks the loopback active indication (LPBK shown below the channel number) does not appear immediately after activating the loopback. Exiting the provisioning screen and re-entering the screen will show the loopback is active.
27. The HDSL Adapter module (81-002219-Aof 97-001787-A kit) designed for the 360-80 Issue two shelf can be used with the H2TU-C-202 module made by ADC. However the bipolar T1 signal to the 3603-81 module needs to be connected to the HDSL modular jack and the external HDSL2 signal connects to pins 1 and 2 of the T1 modular jack of the adapter module.