Appendix D

D

Diagnostic Port Quick Commands

The following tables contain diagnostic port commands for the SC-4, SC-400, MCP-2020, SD/HD-2020, ESI-2020, and MX-Lator. These command sets are primarily used for;

- Displaying the Configuration file information
- Checking board numbers and versions (scangate information)
- Obtaining Debug information

and

- Displaying current device settings (serial port settings)

Note: See Page D-9 for proper connection to each device's terminal port. If the IP address (of the device) is known, you can access the terminal port using a telnet connection.
Open Tera Term, establish a new connection, and copy a TCP/IP selection (as opposed to a serial selection).

Terminal Commands for the SC-4 and Master Control

CASE SENSITIVE

SC4/SC400 Commands

NOTE: For systems with 2 SC400 cards installed you will need to send the IP address and chassis ID to each card individually as these are stored on the card. These entries are stored in the chassis on SC4 systems.

Chassis Functions

chassis (displays all of the chassis operations)

chassis –r (reads chassis info including IP addresses, customer name and chassis ID)

chassis –d (displays scangate version and card serial number)

chassis –init (removes chassis flash data – confirm using –r cmd. Must put IP, chassis ID, cust name back using commands below)

chassis – ip1 xxx.xxx.xxx.xxx (sets ip address for port 1)

chassis – ip2 xxx.xxx.xxx.xxx (sets ip address for port 2)

chassis – gw1 xxx.xxx.xxx.xxx (sets gateway address for port 1)

chassis – gw2 xxx.xxx.xxx.xxx (sets gateway address for port 2)

chassis – mask1 xxx.xxx.xxx.xxx (sets subnet mask for port 1)

chassis – mask2 xxx.xxx.xxx.xxx (sets subnet mask for port 2)

chassis –cust xxxx (sets the customer name in chassis; 1 to 24 entries allowed)

chassis –chid xxxx (sets the chassis ID used by U-CON V4; 1 to 24 entries allowed)

chassis –unet xx (unused)

SC-4 Functions

sc4config (displays all of the current operations used by sc4config)

sc4config display (reads the configuration file from the SC400)

sc4config routers (displays the physical router table)

sc4config levels (displays the virtual router table)

sc4config srcs 25 (displays the first 25 lines in the source table. Replace the 25 with however many you would like to display)

sc4config dsts 25 (displays the first 25 lines in the destination table. Replace the 25 with however many you would like to display)

sc4config mx (displays the size of the mx table)

sc4config pl (displays the size of the party line table)

sc4config serial (displays the serial port table)

sc4config tieparms (displays tie line properties; max ties and max search table)

sc4config pools (displays tie pools created in SC4 config)

sc4config ties (displays tie line tables)

sc4config dstpools (displays destination index numbers and tie pools they are assigned to)

sc4config salvo 2 (displays salvo 2 assigned srcs and dsts; replace 2 with desired salvo)

sc4config syslog (displays syslog name used in SC4)

sc4config groups (displays group name tables for 8 and 4 char)

sc4config custstat (displays custom status table)

sc4config sim (turns simulation on for all levels; to turn simulation on for any single level add a space and then the level # after sim)

sc4config nosim (turns simulation off for all levels; to turn simulation off for any single level add a space and then the level # after nosim)

sc4config dstattrs (displays attribute table; for data router and audio attributes)

sc4config master (unused)

sc4config psrcs (unused)

sc4config pdsts (unused)

sc4config misc (unused – displays current encrypted password)

Router Functions

router (displays all of the router operations)

router save display (prints out current status of refresh table using index numbers)

router xy 1-10 (this will route inputs 1-10 to outputs 1-10; what ever number or range is entered it will switch the ins to the outs)

router src 3 (this will route source 3 to all outputs; change the 3 to desired number and this will route to all outputs)

router killstatus (blanks out the refresh table)

Miscellaneous Terminal Commands

lockdump (displays all locks and protects on the system. 0 = protect 1=lock)

lockdump clear (clears all locks – if only one needs to be cleared go to the panel)

logdump (displays entire event log in SC4 since last reset)

logdump 25 (displays only last 25 lines of events – enter desired amount after logdump)

mem (enters the memory utility for reading address information)

b (enter this while in the mem utility to check bootloader software version)

rx (enter this while in the mem utility to check firmware version – upper right corner)

tiedump (displays the tie pools created and connection status of any tie lines in use)

tiedump clear (clears status tie lines when doing tiedump but leaves tie lines connected)

sinv (displays the two control cards, part number, revs, SN# and their MAC addresses)

MC-2020/MC-400

When performing commands for the MC400 you need to be connected to the MCP-400 and not the card.

NOTE: There are some operations that will appear that are not listed below. We recommend that you do not attempt to utilize these functions as they are reserved for help from Utah Scientific.

Chassis Functions and Commands

chassis (displays all of the chassis operations)

chassis –r (reads chassis info including Ip addresses, customer name and chassis ID)

chassis –d (displays scangate version and card serial number)

chassis –init (removes chassis flash data – confirm using –r cmd. Must put IP, chassis ID, cust name back using commands below)

chassis – ip1 xxx.xxx.xxx.xxx (sets ip address for port 1)

chassis – ip2 xxx.xxx.xxx.xxx (unused)

chassis – gw1 xxx.xxx.xxx.xxx (sets gateway address for port 1)

chassis – gw2 xxx.xxx.xxx.xxx (unused)

chassis – mask1 xxx.xxx.xxx.xxx (sets subnet mask for port 1)

chassis – mask2 xxx.xxx.xxx.xxx (unused)

chassis –cust xxxx (sets the customer name in chassis; 1 to 24 entries allowed)

chassis –chid xxxx (sets the chassis ID; 1 to 24 entries allowed)

chassis –unet xx (sets the MC2020 channel node number)

MC-2020 and MC-400 Functions

For MC400 commands you need to log into the MCP400.

HDconfig (displays all possible operations with this command)

HDconfig display (reads the configuration file from the CPU – 2020 and MC400)

HDconfig status (displays serial port jumpers in 2020 only, SW version and system name in 2020 and MC400)

HDconfig timeset (sets time and date for on board real time clock - format is HDconfig timeset mm/dd/yyyy hh:mm:ss - enter <tc> after timeset to set time to timecode)

HDconfig setembed (sets default sources to embedded audio)

HDconfig setdiscreet (sets default sources to discreet audio)

HDconfig sysname <new name here> (sets new system name in CPU)

HDconfig debug (sets debug flags perMan V2ently in flash – see debug commands below)

HDconfig dimlevel <put number here> (sets audio dim to this number 0 to -45 range)

Miscellaneous Terminal Commands

mem (enters the memory utility for reading address information)

b (enter this while in the mem utility to check bootloader software version)

HDfirmware rev (reads fw for all cards installed in 2020. Only CPU in MC400)

sinv (reads inventory of cards installed in the 2020 chassis. MAC add only in MC400)

debug2020 (displays all of the possible operations used to turn on debug messages.)

debug2020 display (shows all of the group flag names as ON or OFF)

debug2020 set PANEL <enter name here> <enter ON or OFF here> (sets temp flag)

debug2020 set GENERAL <enter name here> <enter ON or OFF here> (sets temp flag)

debug2020 set TRANS <enter name here> <enter ON or OFF here> (sets temp flag)

debug2020 set MACHINE<enter name here> <enter ON or OFF here> (sets temp flag)

debug2020 set ROUTER <enter name here> <enter ON or OFF here> (sets temp flag)

debug2020 set SYSLOG <enter name here> <enter ON or OFF here> (sets temp flag)

MCP-2020/MCP-400

NOTE: There are some operations that will appear that are not listed below. We recommend that you do not attempt to utilize these functions, as they are reserved for help from Utah Scientific.

MCPconfig (displays all possible operations with this command)

MCPconfig display (reads the configuration file from the MC Panel)

MCPconfig status (displays software version and chassis connection table)

MCPconfig timeset (sets time and date for on board clock - format is HDconfig timeset mm/dd/yyyy hh:mm:ss - enter <tc> after timeset to set time to timecode)

Miscellaneous Terminal Commands

MCPconfig display (reads the configuration file from the CPU – 2020 and MCP400)

mem (enters the memory utility for reading address information)

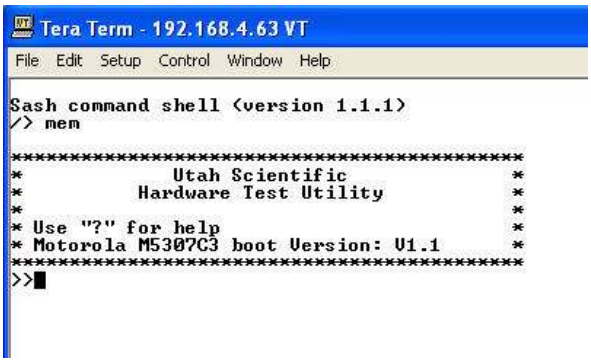
b (enter this while in the mem utility to check bootloader software version)

Device Software Lookup

Complete the following steps to lookup, or verify the software version in the SC4, SC400, MXLator, MC2020, MCP2020 and ESI2020.

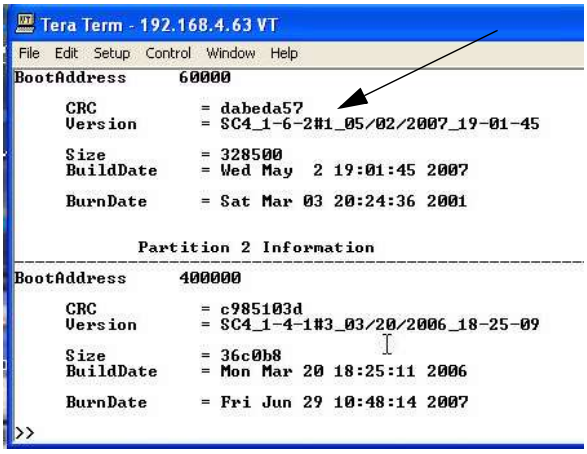
Note: If the device is already connected to the network (and Tera Term is running), you can bypass steps 1 - 9, select the TCP/IP connection, and proceed to step #10.

1. Connect the UTSCI Serial port to the RJ-45 adapter (Marked SC-4/2020 on your PC COM port).
2. Place a standard straight through CAT 5 cable from the PC adapter to the front RJ-45 port on the desired device.
3. Launch Tera Term Pro, open the Setup menu, select Serial Port and complete the following:
4. Select the desired port (COM 1, 2, etc.)
5. Set the Baud Rate to 19200.
6. Set the Data to 8-bit.
7. Set the Parity to None.
8. Set the Stop to 1-bit.
9. Set flow control to None.
10. Click OK.
11. At the prompt type **mem** (and press ENTER) The following screen will appear.



12. Next, type the letter b (lower case). ENTER

    The following screen will appear.



The version (pointed to above) is the device's current software version, for the indicated device - in this case an SC-4.

13. At the prompt type exit to leave the terminal mode.

Locating the IP Address for Additional System Devices

Complete the following steps to locate IP addresses for devices such as the SC-4, MX-Lator, SC-400, or the MC-2020.

1. Connect the UTSCI Serial port to the RJ-45 adapter (marked SC-4/2020 on your PC COM port).
2. Place a standard straight through CAT 5 cable from the PC adapter to the front RJ-45 port on the desired device.
3. Launch **Tera Term Pro**, open the **Setup** menu, select *Serial Port* and complete the following:
4. Select the desired port (COM 1, 2, etc.)
5. Set the Baud Rate to **19200**.
6. Set the Data to **8-bit**.
7. Set the Parity to **None**.
8. Set the Stop to **1-bit**.
9. Set flow control to **None**.
10. Click **OK**.
11. In the prompt window, verify communication by pressing the space bar. If you are communicating properly you will see the **/>** symbol and a blinking box.
12. Type (lower case) *ifconfig*, then press ENTER. Your system detail should begin to scroll on the PC Tera Term window.

Changing IP Addresses in System Devices

The IP address for each device is actually located in that devices chassis. Note: this should be performed with care and done when there is adequate time to allow for the device to be reset. This may require bypassing some routes if the changes are done to the Master Control as there will be a few seconds of interrupted on air video and audio.

Complete the following steps to change the IP address in the SC4, SC400, MXLator, MC2020, MCP2020 and ESI2020.

Note: If the device is already connected to the network, you can bypass steps 1 - 9, select the TCP/IP connection, and proceed to step #10.

1. Connect the UTSCI Serial port to the RJ-45 adapter (Marked SC-4/2020 on your PC COM port).
2. Place a standard straight through CAT 5 cable from the PC adapter to the front RJ-45 port on the desired device.
3. Launch Tera Term Pro, open the Setup menu, select Serial Port and complete the following:
4. Select the desired port (COM 1, 2, etc.)
5. Set the Baud Rate to 19200.
6. Set the Data to 8-bit.
7. Set the Parity to None.
8. Set the Stop to 1-bit.
9. Set flow control to None.
10. Click OK.
11. At the prompt type chassis –r to view the current IP address for that device. (Insert bottom picture and notes from SIG page 2-12 here)
12. At the prompt type chassis –ip1 xxx.xxx.xxx.xxx (xxx's = new address) to change the IP address. Note: this will also change the subnet and router addresses automatically to correspond with the new IP address.

13. Reset that device in order for the changes to take effect. If this is to be done on the SC4, SC400 or MXLator you will need to take note of which card is currently the active card (locate the active green LED on the card) and then press and hold the reset button on both the active and back up cards, and then releasing the active cards reset button first followed by the back up card. This will ensure that the system comes back up on the active card. If this is not followed the changes will not take effect.The MC2020 and MCP2020 devices only have one card to reset. The MC2020 reset is located near the center of the CPU card on the inner side, not the top button. MCP2020 reset button is located right next to the RJ45 connector that the serial cable is attached to.
14. At the prompt type chassis –r and verify that the new address was accepted.

Note: **Note: The SC4 is the only device that has two IP address ports on the rear of the chassis. These are two NICs and if the second port is needed you will follow the procedures above replacing the command chassis –ip1 with chassis -1p2. These must be two separate subnets as they are literally two distinct network interface cards. The second port can be used for attaching Ethernet devices such as Utah Scientific Ethernet panels; however the U-CON V4 software must be connected via port 1.**

Changing Gateway and Mask Addresses in SC-4/SC-400

1. Launch TeraTerm and connect to the SC4/SC400 (.

Note: If the device is already connected to the network, you can bypass steps 2 - 10, select the TCP/IP connection, and proceed to step #11.

2. Connect the UTSCI Serial port to the RJ-45 adapter (Marked SC-4/2020 on your PC COM port).
3. Place a standard straight through CAT 5 cable from the PC adapter to the front RJ-45 port on the desired device.
4. Launch Tera Term Pro, open the Setup menu, select Serial Port and complete the following:
5. Select the desired port (COM 1, 2, etc.)
6. Set the Baud Rate to 19200.
7. Set the Data to 8-bit.
8. Set the Parity to None.
9. Set the Stop to 1-bit.
10. Set flow control to None.
11. Click OK.
12. At the /> prompt type chassis –r to view the network connections.
13. To add or change the gateway type chassis –gw1 xxx.xxx.xxx.xxx (xxx's = new address).
14. To change the netmask type chassis –mask1 xxx.xxx.xxx.xxx (xxx's = new address).
15. Reset that device in order for the changes to take effect. If this is to be done on the SC4, SC400 or MXLator you will need to take note of which card is currently the active card (locate the active green LED on the card) and then press and hold the reset button on both the active and back up cards, and then releasing the active cards reset button first followed by the back up card. This will ensure that the system comes back up on the active card. If this is not followed the changes will not

take effect.The MC2020 and MCP2020 devices only have one card to reset. The MC2020 reset is located near the center of the CPU card on the inner side, not the top button. MCP2020 reset button is located right next to the RJ45 connector that the serial cable is attached to.