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REVISION HISTORY

REVISION	DESCRIPTION	DATE
1.0	Preliminary	Sept 05
1.1	Standardized Format	Mar 07
1.2	Updated card edge drawing	Nov 07
1.3	Fixed typos	Feb 08
1.4	Added features, block diagram, technical specs & VistaLINK® section.	Nov 08
1.5	Removed references to GPI, GPO, LTC specifications	Apr 09
1.6	Removed block diagram	Nov 09

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1. OVERVIEW

The 7700PTX Universal Protocol Translator module provides an interface between third-party and Evertz equipment. The 7700PTX communicates with third-party equipment either via one of four serial ports or via a built in Ethernet port. These ports can provide bi-directional protocol support.

Function:
The function of the 7700PTX generally falls into one of 4 categories:

1. **Third-Party Router Control:** In this mode the 7700PTX affords *Vista*LINK® the ability to control and monitor third-party routers. The 7700PTX can convey UMD information to Evertz monitoring equipment.

2. **Third-Party UMD Interface:** In this mode the 7700PTX translates third-party UMD protocol data into a format suitable for Evertz monitoring equipment.

3. **Third-Party Switcher Interface:** In this mode the 7700PTX extracts tally information from third-party switchers and translates and conveys that tally information to Evertz monitoring equipment.

4. **Third-Party Device Control:** In this mode the 7700PTX allows *Vista*LINK® to control third-party devices such as satellite controllers.

Features:
- 4 serial ports RS232/422 selectable
- Modular, conveniently fits into 7700FR-C 3RU frame
- Frame status trigger
- *Vista*LINK® - capable for remote monitoring and control via SNMP (using *Vista*LINK® PRO)

The 7700PTX-RCL is a network-controlled protocol translator designed to translate SNMP application commands into GVG Router Control Language (RCL) protocol packets. Translated packets are transmitted to one of up to four Encore controllers.

Figure 1-1 shows how the 7700PTX-RCL is typically set up for serial communication.

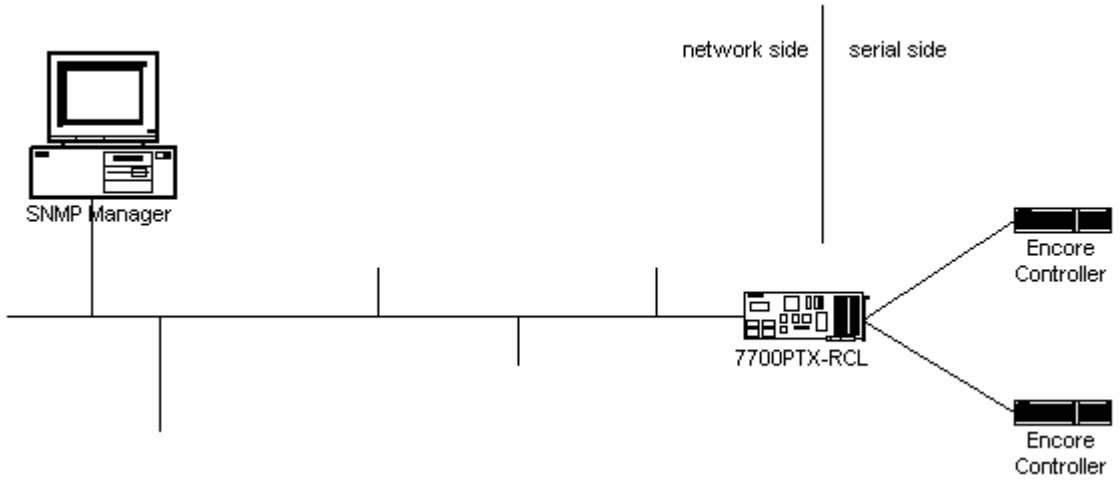

Figure 1-1: Typical 7700PTX-RCL Serial Setup

Figure 1-2 shows how the 7700PTX-RCL is typically set up for Ethernet communication.

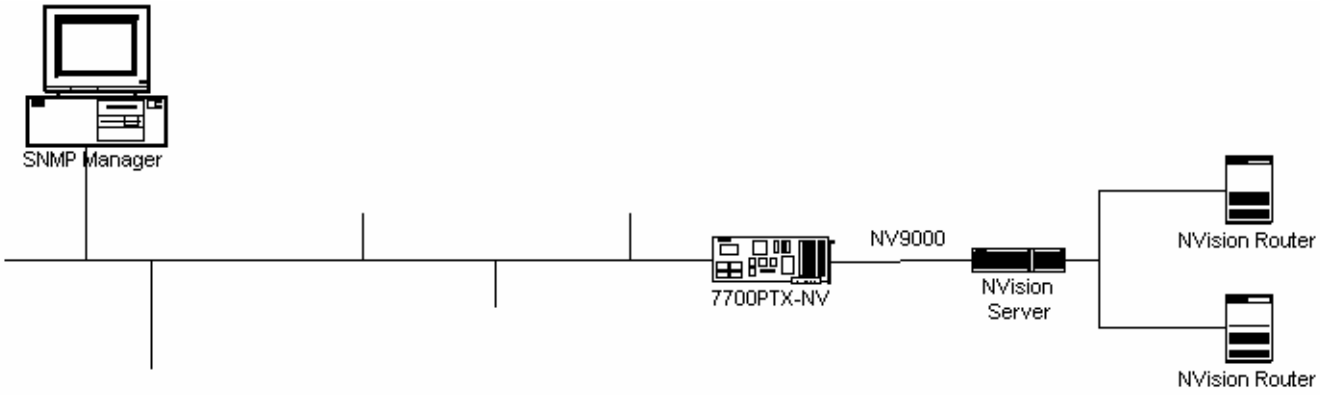

Figure 1-2: Typical 7700PTX-RCL Ethernet Setup

2. CARD EDGE CONTROLS

2.1. DETERMINING CURRENT IP ADDRESS SETTINGS

To read the current IP address during normal operation, press the toggle switch DOWN. The IP address can be read on the four-character alphanumeric display.

2.2. RESTORING FACTORY DEFAULTS

To restore all settings to factory defaults, apply power to the card while holding the toggle switch UP until the green LED illuminates.

2.3. CARD EDGE LEDS

LED 22 is illuminated when Ethernet activity is detected.

All other card edge LEDs are for factory use only.

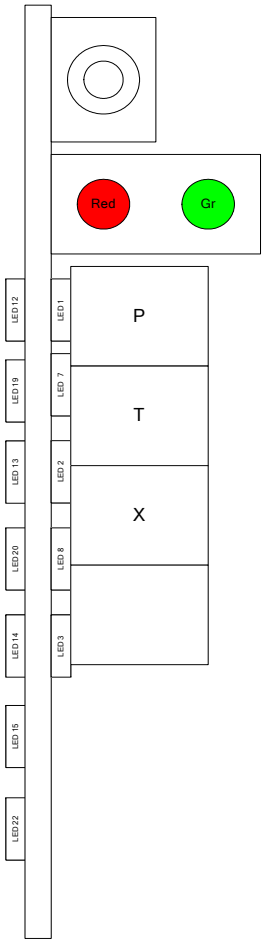

Figure 2-1: PTX Card Edge

3. TECHNICAL SPECIFICATIONS

3.1. DATA INPUT SERIAL PORT

Number of Ports:	4 RS-232 or 3 RS-422
Connector:	Phoenix Terminal Block pins
Baud Rate:	Up to 1Mbaud

3.2. ELECTRICAL

Voltage:	+12V DC
Power:	< 6W
Safety:	ETL Listed, complies with EU safety directives
EMI/RFI:	Complies with FCC Part 15, Class A EU EMC Directive

3.3. PHYSICAL

Number of Slots:	2

4. CONFIGURATION

4.1. CONFIGURATION STEPS

Perform the following steps to configure the 7700PTX-RCL:

1. Connect a PC running a console application to the PTX debug/monitor port via the adapter cable.
2. Configure the 7700PTX-RCL's network parameters.
3. Decide if the 7700PTX-RCL will communicate with the Encore controller via serial or Ethernet.
4. For serial communication, configure the parameters of each serial port of the 7700PTX-RCL to match those of the SIO port(s) of the Encore controller. Configure the 7700PTX-RCL to act as a serial RCL client.
5. For Ethernet communication, configure on the 7700PTX-RCL the IP address of the Encore controller, and configure the 7700PTX-RCL to act as an Ethernet RCL client.
6. If required, configure the parameters related to the Router Control Language protocol.
7. If required, specify what area(s) the 7700PTX-RCL are to monitor/control.
8. Configure UMD peers if required.
9. Power off the 7700PTX-RCL.
10. If the 7700PTX-RCL is to act as a serial RCL client, physically wire its serial port(s) to the SIO port(s) of the Encore controller.
11. Power on the 7700PTX-RCL.

The 7700PTX-RCL is normally connected to the master Quartz router.

4.2. DEBUG/MONITOR PORT CONNECTION

The 7700PTX-RCL is configured via the debug/monitor port, the header of which is labeled J1. A special Evertz adapter cable allows this port to connect to the COM port of a personal computer. The following steps describe this procedure.

1. Locate the small, keyed, four–pin end of the upgrade cable provided by Evertz.
2. Connect it to the four-pin interface (J1) near the front of the 7700PTX, directly above the card unlock latch.

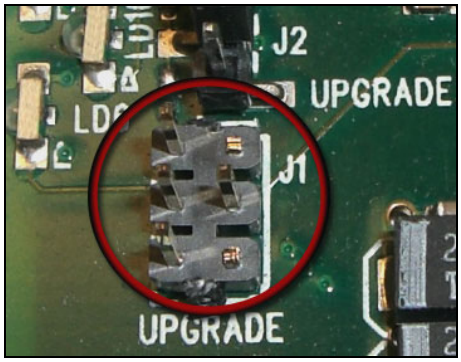

Figure 4-1: Upgrade Jumper

3. Connect the other end of the upgrade cable to a straight-through serial cable. Connect the serial cable to the serial or COM port of the computer.

4. Initiate HyperTerminal on your computer by selecting: "Start\Programs\Accessories\Communications\HyperTerminal".

5. Enter a name for your connection, for example: PTX.

6. Press the <Enter> key. A new "Connect To" window opens.

Figure 4-2: 'Connect To' Window

7. Select COM1 for the "*Connect using*" setting. If COM1 is in use, choose an alternate COM port.

8. Press the <Enter> key or select OK. This opens the "COM Properties" window as shown in Figure 4-3.

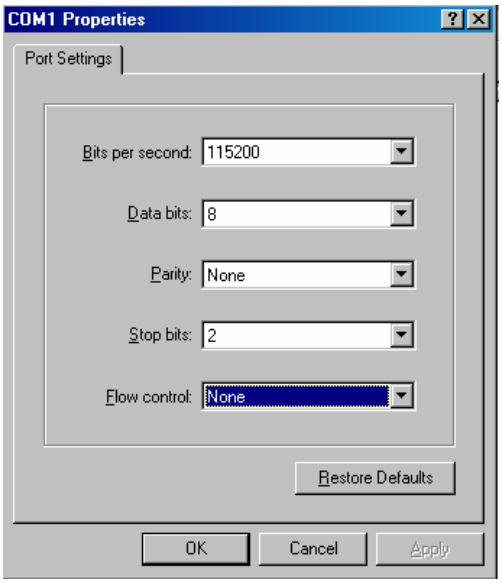

Figure 4-3: COM1 Properties

9. Enter the information as listed in Figure 4-3.

10. Press the <Enter> key or select OK. The "COM Properties" window closes, leaving the HyperTerminal window open.

11. Apply power if the 7700PTX-RCL does not have power. The boot sequence and Main Menu are displayed in the HyperTerminal window.

12. If the 7700PTX-RCL has power, press the <Enter> key to view the 7700PTX-RCL's menu system.

13. Various 7700PTX-RCL parameters are configurable via the 7700PTX-RCL's menu system, the root of which is called *Main Menu*.

4.3. MAIN MENU

Table 4-1 lists the entries available in the 7700PTX-RCL's *Main Menu*.

Entry	Item	Notes
1	**Network Configuration**	IP address, subnet mask, gateway, etc.
2	**Serial Port Setup**	Baud rate, number of data bits, etc. of serial ports which connect to Encore controller(s)
3	**SNMP Setup**	IP address of SNMP manager(s) to receive traps
4	**RCL Protocol Setup**	Settings specific to the Router Control Language protocol
5	**Under Monitor Display Setup**	IP address and TCP port of PPV to receive the description of the input associated with a particular output
6	**Engineering/Debug**	Used for troubleshooting

Table 4-1: 7700PTX-RCL Main Menu

4.4. NETWORK CONFIGURATION

1. From the *Main Menu* select *Network Configuration*.

2. If DHCP (Dynamic Host Configuration Protocol) is desired, then the *Use DHCP* field is set to *True*. Otherwise, the IP address, subnet mask, and gateway (if any) are set and the Use DHCP field set to *False*.

3. Once the network settings are configured, select *Save* and *Exit* before exiting *Network Configuration* to save the settings, otherwise select *Exit*.

The 7700PTX-RCL must be rebooted for any network setting changes to take effect.

4.5. SERIAL PORT SETUP

4.5.1. Parameters

The 7700PTX-RCL has four serial ports. The parameters associated with each serial port are listed in Table 4-2. Typically, the Quartz router is set to 38400 baud, 8 data bits, no parity, 1 stop bit.

Parameter	Special Notes
Baud Rate	
Data Bits	
Parity	
Stop Bits	
Standard	For serial port 4, only RS-232 is valid.

Table 4-2: Serial Port Parameters

The serial port settings of the 7700PTX-RCL must match those of the router(s). The 7700PTX-RCL must be rebooted for any serial parameter changes to take effect.

4.5.2. Back Plate

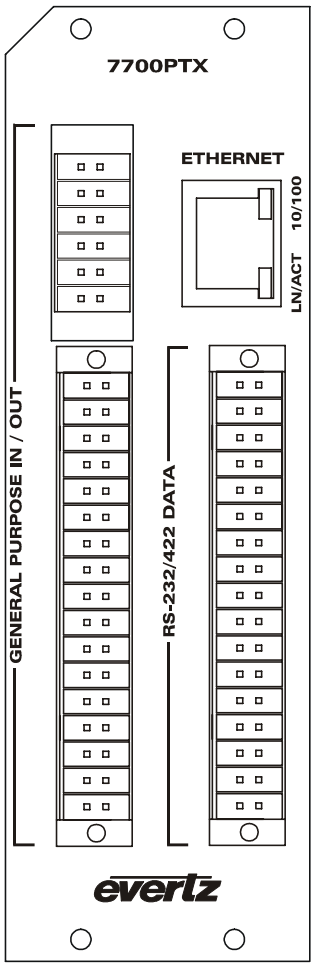

Figure 4-4: 7700PTX Back Plate

4.5.3. RS-232 Wiring

Figure 4-5 shows which pins of the back plate are used for RS-232 serial connections.

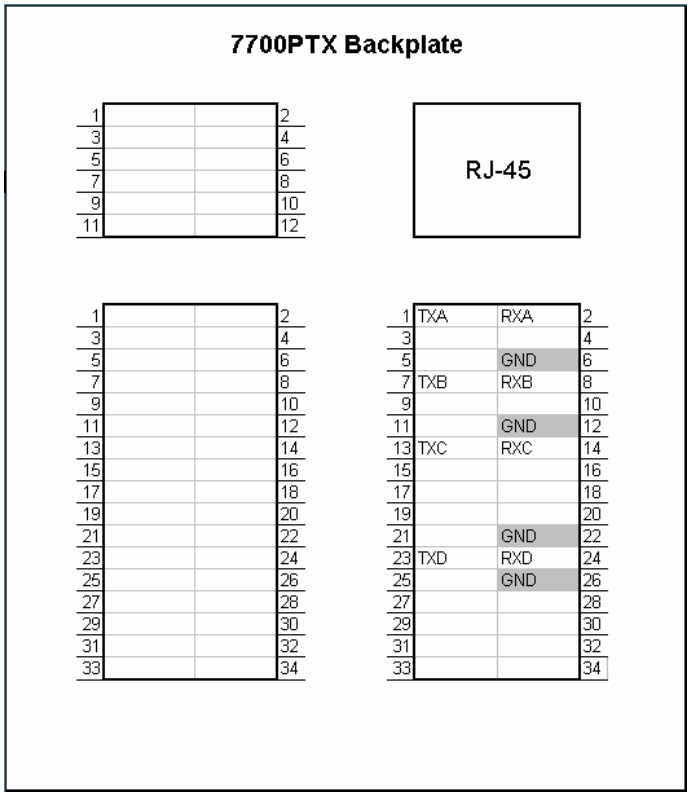

Figure 4-5: RS-232 Pins

Table 4-3 details how to connect the 7700PTX-RCL to the router for RS-232 operation.

7700PTX-RCL			Router	
Port	**Pin Name**	**Pin**	**DB9 Male Pin**	**Pin Name**
1	**TXA**	1	3	**RX**
	RXA	2	7	**TX**
	GND	6	6	**GND**
2	**TXB**	7	3	**RX**
	RXB	8	7	**TX**
	GND	12	6	**GND**
3	**TXC**	13	3	**RX**
	RXC	14	7	**TX**
	GND	22	6	**GND**
4	**TXD**	23	3	**RX**
	RXD	24	7	**TX**
	GND	26	6	**GND**

Table 4-3: RS-232 Wiring

4.5.4. RS-422 Wiring

Figure 4-6 shows which pins of the back plate are used for RS-422 serial connections.

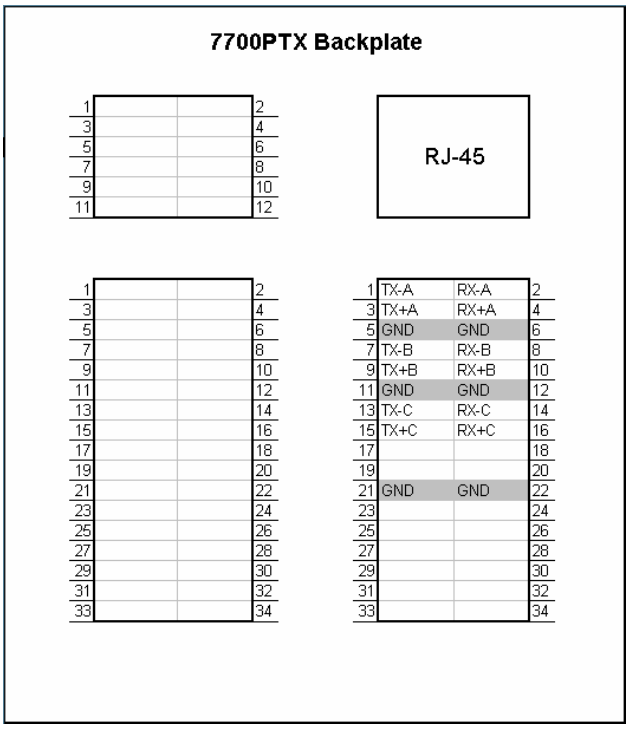

Figure 4-6: RS-422 Pins

Table 4-4 details how to connect the 7700PTX-RCL to the router for RS-422 operation.

7700PTX-RCL			Router	
Port	**Pin Name**	**Pin**	**Pin**	**Pin Name**
1	**TX-A**	1	8	**RX-**
	TX+A	3	3	**RX+**
	RX-A	2	2	**TX-**
	RX+A	4	7	**TX+**
	GND	6	6	**GND**
2	**TX-B**	7	8	**RX-**
	TX+B	9	3	**RX+**
	RX-B	8	2	**TX-**
	RX+B	10	7	**TX+**
	GND	12	6	**GND**
3	**TX-C**	13	8	**RX-**
	TX+C	15	3	**RX+**
	RX-C	14	2	**TX-**
	RX+C	16	7	**TX+**
	GND	22	6	**GND**

Table 4-4: RS-422 Wiring

The 7700PTX-RCL's fourth serial port is not RS-422 capable.

4.6. SNMP SETUP

Table 4-5 lists the parameters associated with the SNMP setup.

Parameter	Notes
Read-only community	Community string used for SNMP gets. The default is *public*.
Read-write community	Community string used for SNMP gets or sets. The default is *private*.

Table 4-5: SNMP Parameters

These parameters must match those of the SNMP manager. Changes to these parameters do not require a reboot of the 7700PTX-RCL.

4.7. RCL PROTOCOL SETTINGS

4.7.1. RCL Client Type

The Encore controller is a RCL server. The 7700PTX-RCL is a RCL client. There are 2 types of RCL clients: serial and Ethernet. The 7700PTX-RCL supports both client types, but not simultaneously. The default setting is a serial RCL client.

4.7.1.1. Enabling Serial RCL Client

To enable the 7700PTX-RCL to act as a serial RCL client follow the steps below:

1. From *Main Menu* select *RCL Protocol Settings Setup.*
2. Select *Enable serial RCL client.*
3. The 7700PTX-RCL must be rebooted for the client type changes to take effect.

4.7.1.2. Enabling Ethernet RCL Client

To enable the 7700PTX-RCL to act as an Ethernet RCL client that communicates with the Encore controller over TCP, follow the steps below:

1. From *Main Menu* select *RCL Protocol Settings Setup.*
2. Select *Enable Ethernet RCL client.*
3. Select *RCL Ethernet Settings Setup.*
4. Select *RCL server IP address/TCP port setup.*

5. Select *Set Encore IP address.*

6. Enter the IP address of the Encore controller.

7. Select *Save* and *Exit.*

8. The 7700PTX-RCL must be rebooted for the client type changes to take effect.

4.7.2. Level Bitmap

When enabled, the 7700PTX-RCL includes a level bitmap with the appropriate commands it transmits to the Encore controller. The level bitmap is a 32-bit quantity in which each bit specifies the presence (bit = 1) or absence (bit = 0) of a particular level. If no level bitmap accompanies a command that supports it, then all levels are used.

By default the 7700PTX-RCL does not use a level bitmap. If a level bitmap is required it can be configured on a per-port basis:

4.7.2.1. Serial RCL Client

1. From *Main Menu*, select *RCL Protocol Settings Setup.*

2. Select *RCL Serial Settings Setup.*

3. Select *RCL Protocol Setup For Port 1* (if the Encore controller is connected to the 7700PTX-RCL second serial port then select *RCL Protocol Setup For Port 2*).

4. Select *Set level bitmap usage.*

5. Select *y* when prompted.

6. Use *Set individual level* and *Set all levels* to set/clear the appropriate levels in the bitmap.

7. Select *Save and Exit* to start using the level bitmap. No reboot of the 7700PTX-RCL is required.

4.7.2.2. Ethernet RCL Client

1. From *Main Menu* select *RCL Protocol Settings Setup.*

2. Select *RCL Ethernet Settings Setup.*

3. Select *RCL Protocol Setup For Port 1.*

4. Select *Set level bitmap usage.*

5. Select *y* when prompted.

6. Use *Set individual level* and *Set all levels* to set/clear the appropriate levels in the bitmap.

7. Select *Save and Exit* to start using the level bitmap. No reboot of the 7700PTX-RCL is required.

Unless there is a specific need for it, level bitmap usage should not be enabled.

4.7.3. Areas

The maximum number of controller sources and destinations supported on a per-port basis is shown in Table 4-6.

Port	Maximum Number of Sources	Maximum Number of Destinations
Serial 1	4096	2048
Serial 2	4096	2048
Serial 3	4096	2048
Serial 4	4096	2048
Ethernet	4096	2048

Table 4-6: Supported Number of Controller Sources/Destinations

Should the total number of sources and/or destinations configured on the controller exceed these limits, or if you are interested in controller 1 or more specific areas, configure area names on the 7700PTX-RCL.

The Encore controller can partition the router system into smaller units called areas with each area having some user-assigned name. The 7700PTX-RCL can manage up to 16 different areas. The 7700PTX-RCL manages all areas (the default) when no area names are specified.

Configure Area names on the 7700PTX-RCL as follows:

4.7.3.1. Serial RCL Client

1. From *Main Menu* select *RCL Protocol Settings Setup.*
2. Select *RCL Serial Settings Setup.*
3. Select *RCL Protocol Setup For Port 1* (if the Encore controller is connected to the 7700PTX-RCL second serial port the *RCL Protocol Setup For Port 2* would be selected).
4. Use *Add/edit area name* and *Remove area name* to configure the areas of interest.
5. If you do not wish the 7700PTX-RCL to report area names to VLPro or to propagate them to UMDs, select *Set area name reporting usage* and then select *y.*
6. Select *Save And Exit* to start using the configured area names. No reboot of the 7700PTX-RCL is required.

4.7.3.2. Ethernet RCL Client

1. From *Main Menu* select *RCL Protocol Settings Setup.*
2. Select *RCL Ethernet Settings Setup.*
3. Select *Protocol Setup For Port 1*.
4. Use *Add/Edit area name* and *Remove area name* to configure the areas of interest
5. If you do not wish the 7700PTX-RCL to report area names to VLPro or to propagate them to UMDs, select *Set area name repor*ting usage and then select *y.*
6. Select *Save And Exit* to start using the configured area names. No reboot of the 7700PTX-RCL is required.

The use of area names is strongly recommended. If no areas are specified then the 7700PTX-RCL will assume *all* areas.

4.7.4. Filtering Non-Configured Sources & Destinations

Until a source is enabled within the Encore controller system it assumes the default name *NOSRC*. Until a destination is enabled it assumes the default name *NODST*. By default these are *not* filtered by the 7700PTX-RCL, preserving the actual router density. For example, suppose we have a 16-source and 16-destination router system where only 2 sources and 2 destinations are configured. By not filtering non-configured source and destination names the 7700PTX-RCL will report the correct router system size (16 x 16). If the 7700PTX-RCL were to filter, it would report a router system size of (2 x 2). Filtering non-configured names is desirable only when they fall at the end of a system. For instance, it is possible to have the following on an 8-source system:

Source Number	Name	7700PTX-RCL Assigned Number
1	Cam1	1
2	Cam2	2
3	Cam3	3
4	Cam4	4
5	NOSRC	
6	NOSRC	
7	NOSRC	
8	NOSRC	

Filtering the names for this scenario does not present non-configured sources to the user. Furthermore, since the configured names are contiguous, the source number assigned by the 7700PTX-RCL (and used by VLPro) will be valid.

Consider this scenario where the configured names are not contiguous and the non-configured source names are filtered:

Source Number	Name	7700PTX-RCL Assigned Number
1	Cam1	1
2	Cam2	2
3	NOSRC	
4	NOSRC	
5	NOSRC	
6	NOSRC	
7	Cam 3	3
8	Cam 4	4

Suppose source number 3 is enabled:

Source Number	Name	7700PTX-RCL Assigned Number
1	Cam1	1
2	Cam2	2
3	Bars	3
4	NOSRC	
5	NOSRC	
6	NOSRC	
7	Cam 3	4
8	Cam 4	5

As you can see, the numbers assigned by the 7700PTX-RCL to the last 2 configured sources have changed. If VLPro were to use any macros using assigned source numbers 3 and 4 these macros would now be invalid as assigned numbers 3 & 4, due to the Encore configuration change, correspond to Bars and *Cam3*, not *Cam3* and *Cam4*.

In order to change this setting, follow the steps below:

4.7.4.1. Serial RCL Client

1. From *Main Menu* select *RCL Protocol Settings Setup.*
2. Select *RCL Serial Settings Setup.*
3. Select *RCL Protocol Setup For Port 1* (if the Encore controller is connected to the 7700PTX-RCL second serial port the *RCL Protocol Setup For Port 2* would be selected).
4. Select *Filter out non-configured sources & destinations.* Select the setting.
5. Select *Save And Exit*. No reboot of the 7700PTX-RCL is required.

4.7.4.2. Ethernet RCL Client

1. From *Main Menu* select *RCL Protocol Settings Setup.*
2. Select *RCL Ethernet Settings Setup.*
3. *Select RCL Protocol Setup For Port 1*.
4. Select *Filter out non-configured sources & destinations.* Select the setting.
5. Select *Save And Exit*. No reboot of the 7700PTX-RCL is required

Filter non-configured source and destinations only if Encore's configured sources and destinations are contiguous.

4.7.5. Transmit Notification Response

Leave this parameter set to the default *no* unless the Encore controller requires a L4 response to its unsolicited notification message.

4.8. UNDER MONITOR DISPLAY SETUP

The 7700PTX-RCL has the ability to transmit router source label information to the UMDs of up to 12 PPVs. As an example, suppose we have the setup of Figure 4-7.

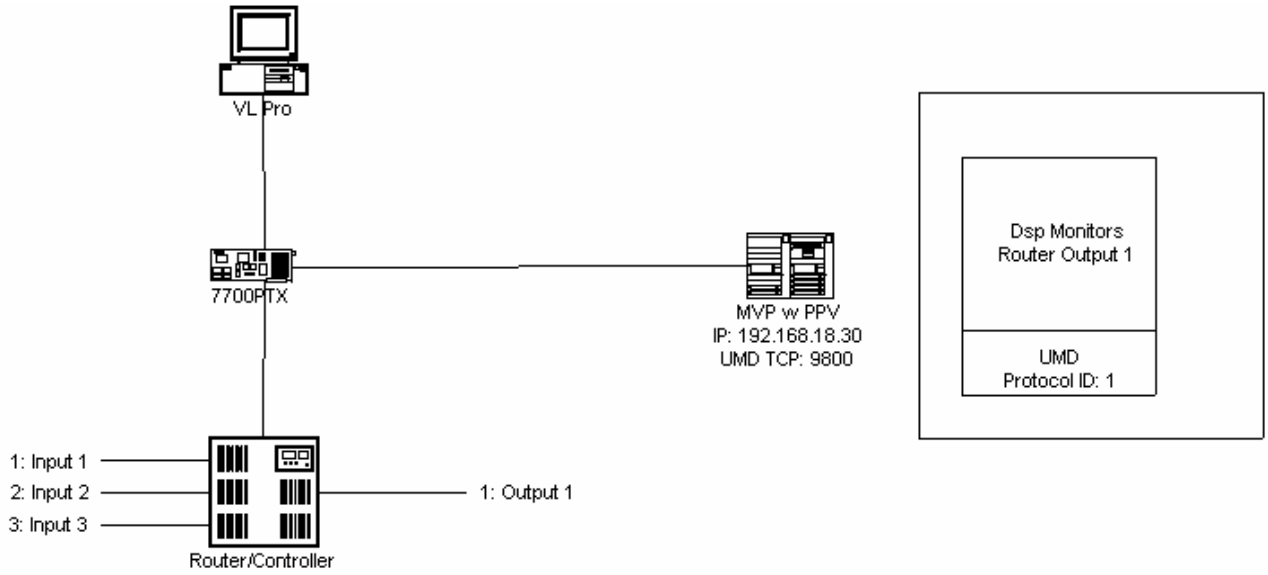

Figure 4-7: UMD Example

Where:

- A router has 3 inputs connected (labeled Input 1, Input 2, and Input 3) and 1 output (labeled Output 1)
- A 7700PTX-RCL monitors the router cross points
- An MVP contains a PPV with IP address 192.168.18.30
- The PPV is set to receive UMD data via the Image Video protocol over a TCP, with TCP port configured at 9800
- Protocol ID (PID) set to 1
- A PC running *Vista*LINK® Pro configures the 7700PTX-RCL so that the UMD PID associated with router Output 1 matches the PID of the UMD (for example, 1)

The *Under Monitor Display Setup* menu allows the configuration of the IP address and TCP port of the PPV to receive router source label information. In keeping with the above example, the 7700PTX-RCL would be configured to have a peer 1 IP address of 192.168.18.30 and a TCP port of 9800. When router input 1 is on output 1, the UMD of the display should display INPUT 1. If the cross point is switched to input 3, the UMD should display INPUT 3.

The 7700PTX-RCL must be rebooted for any UMD peer changes to take effect.

5. TROUBLESHOOTING TIPS

5.1. VLPRO NOTES

1. The 7700PTX-RCL must be able to communicate with any connected controllers in order for VLPro to operate properly.

2. The 7700PTX-RCL must be able to communicate with its configured UMD peers before UMD information can be transmitted.

3. VLPro must associate a UMD protocol ID with a router output in order for UMD information to be transmitted.

5.2. CHECKING SERIAL CONTROLLER COMMUNICATION

1. From the *Main Menu* select *Engineering/Debug*.

2. Select *Show task state*.

3. There are four entries, one for each serial port, listed under the heading *Router protocol PCB state…* If the state associated with the serial port is reported as *ready* then the 7700PTX-RCL is actively communicating with the controller on that port. If the state is consistently reported as *down* then the 7700PTX-RCL is unable to communicate with the controller in which case the serial port settings or wiring should be checked.

4. Figure 5-1 shows the 7700PTX-RCL is able to communicate with a controller connected to port 2.

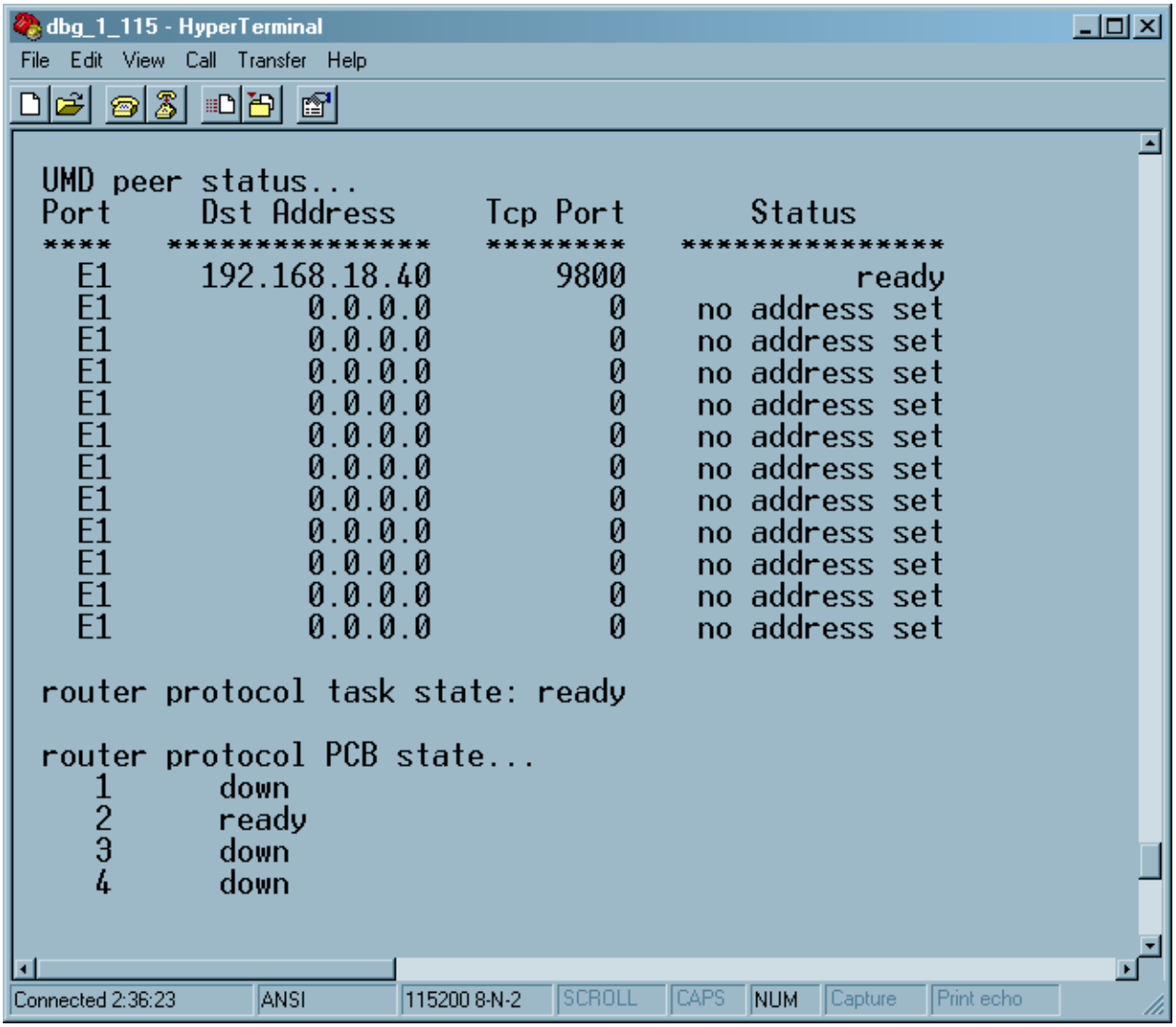

Figure 5-1: Communication States

5.3. CHECKING UMD PEER COMMUNICATION

1. From the *Main Menu* select *Engineering/Debug*.

2. Select *Show task state*.

3. There are up to 12 UMD peer entries listed under the heading *UMD peer status…* A status reported as *ready* indicates the 7700PTX-RCL is able to communicate with that UMD peer. A status consistently reported as something other than *ready* indicates the inability of the 7700PTX-RCL to communicate with that UMD peer. Ensure that the UMD peer has been rebooted after being configured to receive the Image Video over TCP.

4. Figure 5-1 shows the 7700PTX-RCL able to communicate with the UMD peer whose IP address is 192.168.18.40 who is listening on TCP port 9800.

5.4. CHECKING ETHERNET CONTROLLER COMMUNICATION

1. From the *Main Menu* select *Engineering/Debug*.

2. Select *Show task state*.

3. As per Figure 5-2, *router protocol PCB* state 1 should appear as ready. This reports the 7700PTX-RCL's ability to exchange RCL protocol data with the controller. The *Router Ethernet state* should appear as *ready*. This reports the 7700PTX-RCL's ability to exchange TCP data with the controller. If this state is consistently reported as *down* then you should check the IP address of the server, the server's ability to receive TCP traffic over TCP port 12345, use a computer to ping both the 7700PTX-RCL and the controller.

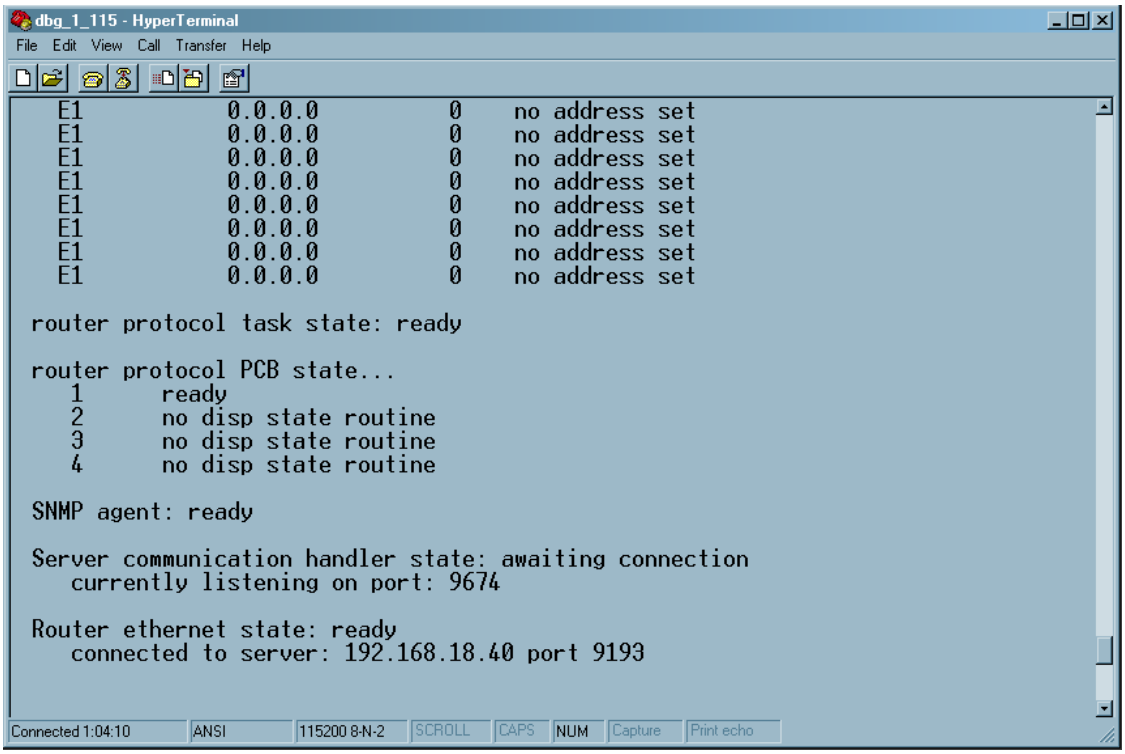

Figure 5-2: Ethernet Communication State

5.5. POLLING

If the Encore controller is configured to lose its subscriptions over time then the 7700PTX-RCL will need to be configured to have a poll duration. The duration specifies the amount of time, in seconds, between polling cycles. A polling cycle consists of a refresh of all pertinent notifications. By default, the7700PTX-RCL is not configured to refresh these notifications – the assumption being the Encore controller will not expire them (which is typical).

The poll duration can be changed via the *Set Router Poll Status* entry of the *Engineering/Debug* menu. The time between polls can be set on a per-serial port basis. If 0 is selected as the time between polls, polling is disabled (the default).

Once set, the router poll status setting takes effect immediately; no reboot is necessary. It is saved to flash and recalled should the 7700PTX-RCL be powered off, then on.

6. PERFORMING A FIRMWARE UPGRADE

There are two ways to upgrade PTX firmware:

Using FTP to perform the upgrade via TCP/IP. (*recommended procedure*)
Using a terminal application such as *HyperTerminal* to perform the upgrade via a serial connection.

6.1. FTP PROCEDURE

1. Open a command prompt window (in Windows: Start/Programs/Accessories/Command Prompt)

2. Enter the location of the firmware file. For example, type *cd c:\temp*.

3. Enter the command *ftp* followed by the PTX IP address.
   For example, type *ftp –A 192.168.18.22*.

4. Enter the FTP command *put* followed by the firmware file name. For example, *put ptx.bin*.

5. When the transfer is complete enter the FTP command: *bye*.

6. Step 5 begins the process of saving the firmware to the non-volatile flash of the PTX. The save process is displayed as a percentage on the PTX LCD. Once the process is complete, the PTX LCD again displays the product name and firmware version.

7. Power off the PTX.

8. Power on the PTX.

6.2. SERIAL PROCEDURE

1. Power off the PTX.

2. Connect an adapter cable to a PC running a console or terminal application, such as Windows *HyperTerminal*, to the PTX debug/monitor port.

3. Configure the port settings of the terminal program as follows:

Baud	**115200**
Parity	**no**
Data bits	**8**
Stop bits	**2**
Flow Control	**None**

4. Set the PTX run/upgrade jumper to the upgrade position.

5. Power on the PTX.

6. After a few moments, the prompt *PPCBOOT>* will appear. Enter the command *upload.*
7. Start the firmware upload on the terminal application (for instance, in *HyperTerminal* select Transfer/Send File…), use Xmodem as the transfer protocol, and select the firmware file. For example, *ptx.bin.*

8. Once the upload is complete the message *upload okay* is displayed.
9. Power off the PTX.
10. Set the PTX run/upgrade jumper to the run position.
11. Remove the serial adapter cable.
12. Power on the PTX.

7. *VISTA*LINK® REMOTE MONITORING/CONTROL

7.1. WHAT IS *VISTA*LINK®?

*Vista*LINK® is Evertz' remote monitoring and configuration platform which operates over an Ethernet network using Simple Network Management Protocol (SNMP). SNMP is a standard computer network protocol that enables different devices sharing the same network to communicate with each other. *Vista*LINK® provides centralized alarm management, which monitors, reports, and logs all incoming alarm events and dispatches alerts to all the VLPro Clients connected to the server. Card configuration through *Vista*LINK® PRO can be performed on an individual or multi-card basis using simple copy and paste routines, which reduces the time to configure each module separately. Finally, *Vista*LINK® enables the user to configure devices in the network from a central station and receive feedback that the configuration has been carried out.

There are 3 components of SNMP:

1. An SNMP manager, also known as a Network Management System (NMS), is a computer running special software that communicates with the devices in the network. Evertz *Vista*LINK®-C Configuration Utility graphical user interface (GUI), third party or custom manager software may be used to monitor and control Evertz *Vista*LINK® enabled products.

2. Managed devices, (such as 7700PTX modules), each with a unique address (OID), communicate with the NMS through an SNMP Agent. The 7700PTX-RCL communicates directly with the manager using its internal Agent.

3. A virtual database known as the Management Information Base (MIB) lists all the variables being monitored, which both the Manager and Agent understand. Please contact Evertz for further information about obtaining a copy of the MIB for interfacing to a third party Manager/NMS.