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REVISION HISTORY

<u>REVISION</u>	<u>DESCRIPTION</u>	<u>DATE</u>
0.1	Preliminary Version	Jul 00
1.0	Released version, updated table 2	Jun 02

1. OVERVIEW

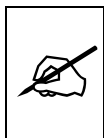
The 7700-RCP is a rack mounted control panel to control many of the 7700 series modules. It connects to the 7700FR frame through the 7700FC Frame Controller module, which acts as a gateway to individual modules in the frame.

The 7700-RCP connects to the 7700FC controller modules via an RS 422 control port.

2. INSTALLATION

2.1. CONNECTING THE REMOTE CONTROL PANEL

The SERIAL I/O 9 pin D connector on the rear panel is used to connect the remote control panel to the SERIAL I/O 9 pin connector on the 7700FC Frame controller module in the 7700FR Frame. The 9 pin straight through cable provided can be used to connect the remote panel to the frame. For longer distances, simply make your own cable of the required length according to the diagram in Table 2. Communications to the remote panel is through an RS-422 connection, so the panel can be located up to 1000 feet from the main electronics unit. A plug in 12 VDC adapter supplies power for the remote control panel.



Revision 1 I/O modules for the 7700FC have a different pinout and can not use the straight through cable. Consult manual change sheet 7700FC Chg1 for the correct cable information.



The 7700FC manual documents the pinout for Rev B I/O modules for the 7700FC, which are wired for RS-232 communications and can not be used with the 7700-RCP. Contact the factory if you have a Rev B I/O module. Consult manual change sheet 7700FC Chg2 for the correct pinout information for Rev A I/O modules.

Pin #	Name	Description
1	GND	Ground
2	TX-	RS-422 Transmit – Output
3	RX+	RS-422 Receive + Input
4	Tx Gnd	Transmit ground
5	---	Not connected
6	Rx Gnd	Receive Ground
7	TX+	RS-422 Transmit + Output
8	RX-	RS-422 Receive – Input
9	GND	Ground

Table 1: Remote Panel Serial I/O Connector Pin Definitions

7700FC End			Remote Panel End	
9 pin D Male	Pin	Belden 9729	9 pin D Female	Pin
	1			1
Rx-	2	-----1a-----	Tx-	2
Tx+	3	-----2b-----	Rx+	3
Tx Gnd	4	---drain 2---	TxGnd	4
	5			
Rx Gnd	6	---drain-1---	RxGnd	6
Rx+	7	-----1b-----	Tx+	7
Tx-	8	-----2a-----	Rx-	8
	9			9
Frame Gnd	Shield	---drain-1---	Frame Gnd	Shield

Table 2: 7700FC (Rev A) to Remote Control Panel Cable

3. SPECIFICATIONS

3.1. SERIAL I/O

Standard: RS 422
Connector: Female DB-9
Baud Rate: 38400
Format: 8 bits, no parity, 1 stop bit

3.2. ELECTRICAL

Voltage: + 12VDC
Power: 6 Watts.
EMI/RFI: Complies with FCC Part 15, class A and EU EMC directive.

4. FRONT PANEL

The display area consists of a 16 digit alphanumeric display, 4 LED status indicators and a 4 pushbutton keypad. The keypad is used to select which module is being addressed with the remote control panel and to navigate the menu system of the individual module.

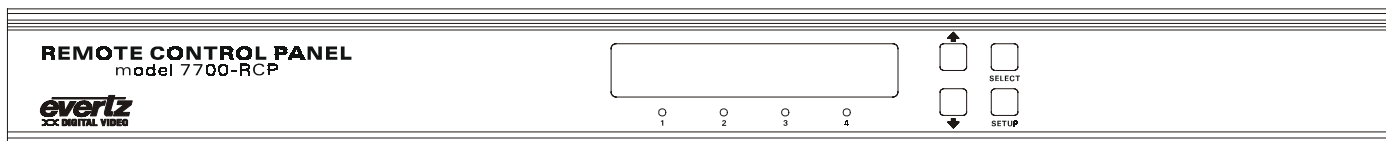


Figure 1: 7700-RCP Front Panel

4.1. FRONT PANEL OVERVIEW

4.1.1. Overview of the Pushbuttons

Four front panel pushbuttons are used to control the operation of the 7700-RCP.

↑ & ↓ When LED 1 is Off, these keys are used to select which module the remote panel is controlling. The modules are numbered from the left of the frame starting at 1. The 7700FC Frame controller module will be installed in slot 1. The modules that can be controlled by the 7700-RCP will occupy slots 2 to 15 in the frame.

When LED 1 is On, these keys function the same as the toggle switch on the module and are used to navigate the menu of the selected module. The **↑** key operates the same as pressing the toggle switch up and the **↓** key operates the same as pressing the toggle switch down.

SELECT When LED 1 is Off pressing this key selects the module that is shown on the front panel and activates its menu system. LED 1 will now come On indicating that the remote panel is controlling the menu system in one of the modules.

When LED 1 is On the **SELECT** key operates the same as the Pushbutton on the module being controlled.

SETUP This key is not used at this time.

4.1.2. Overview of the Status LEDs

Four front panel LEDs are used to indicate operational status of the 7700-RCP.

1 When this LED is Off the remote panel is in *Module Select* mode. Pressing the **↑ & ↓** keys will select the next (previous) module in the frame. The module slot number and name will be shown in the display. For example: 14. AVM Card

When this LED is On the remote panel it indicates that a specific module in the frame has been selected for control and the remote panel keys are now used to navigate the module's menu system. The front panel display will show that the card in the selected slot is active. For example: 14. AVM ACTIVE

2,3,4 These three LEDs are not currently used.

5. CONTROLLING THE 7760AVM MODULES

In order to simplify the operation of the 7760AVM modules, the operation from the remote control panel has been limited to a subset of the AVM module menu system. When you select one of the modules using the **SELECT** key, the AVM module immediately enters its *On Screen Display Configuration* menu, with the top menu item (*Back*) selected. This is the main menu used to configure the window positions and to turn them on or off. It is also used to turn on the audio bar graphs, and to configure the window colours and opacity. The complete menu system for the AVM module is still available using the card edge toggle switch and pushbutton. See the 7760AVM manual for complete details of the menu system.

7700 MultiFrame Manual

7700-RCP Remote Control Panel

Press the **↑** or **↓** keys to move up and down the list of available sub menus. An arrow (**>**) moves up and down the left hand side of the menu items to indicate which item you are currently choosing. Once the arrow is on the desired item, press the **SELECT** key to select the next menu level.

On all menus, there are two extra selectable items: *Back* and *Exit*. Selecting *Back* will take you to the previous menu (the one that was used to get into the current menu) while *Exit* will return the display to its normal operating mode. On the main level of the *On Screen Display Configuration* menu, **BACK** and **EXIT** will both take you to the normal operating mode and return the remote panel to its *module selection mode*.

Once in a sub menu, there may be another menu layer, or there may be a list of parameters to adjust. If there is another set of menu choices, use the **↑** or **↓** keys to select the desired menu item and press the **SELECT** key.

To adjust any parameter, use the **↑** or **↓** keys to move up or down to the desired parameter and press the **SELECT** key. The arrow will move to the right hand side of the line (**<**) indicating that you can now adjust the parameter. Using the **↑** or **↓** keys, adjust the parameter to its desired value. If the parameter is a numerical value, the number will increase if you press the **↑** key and decrease if you press the **↓** key. If the parameter contains a list of choices, you can cycle through the list by pressing the **↑** or **↓** keys.

When you have stopped at the desired value, depress the **SELECT** key. This will update the parameter to the selected value and move the arrow back to the left side of the parameter list (**>**). Continue selecting and adjusting other parameters or use the **BACK** or **EXIT** commands.