

11.3 WR-3 Interactive Remote

The WR-3 is a microprocessor based remote control unit used for easy access to user defined 24.24M preset, gain, and mute functions. It is installed in a standard wall-mount electrical box location. Up to four WR-3 remote controllers can be connected to a 24.24M, and are phantom powered through two 3-conductor cables. Connection to the 24.24M is via the Data In and Data Out terminals on the rear of the 24.24M, and can be made up to 1,200 feet (365M).

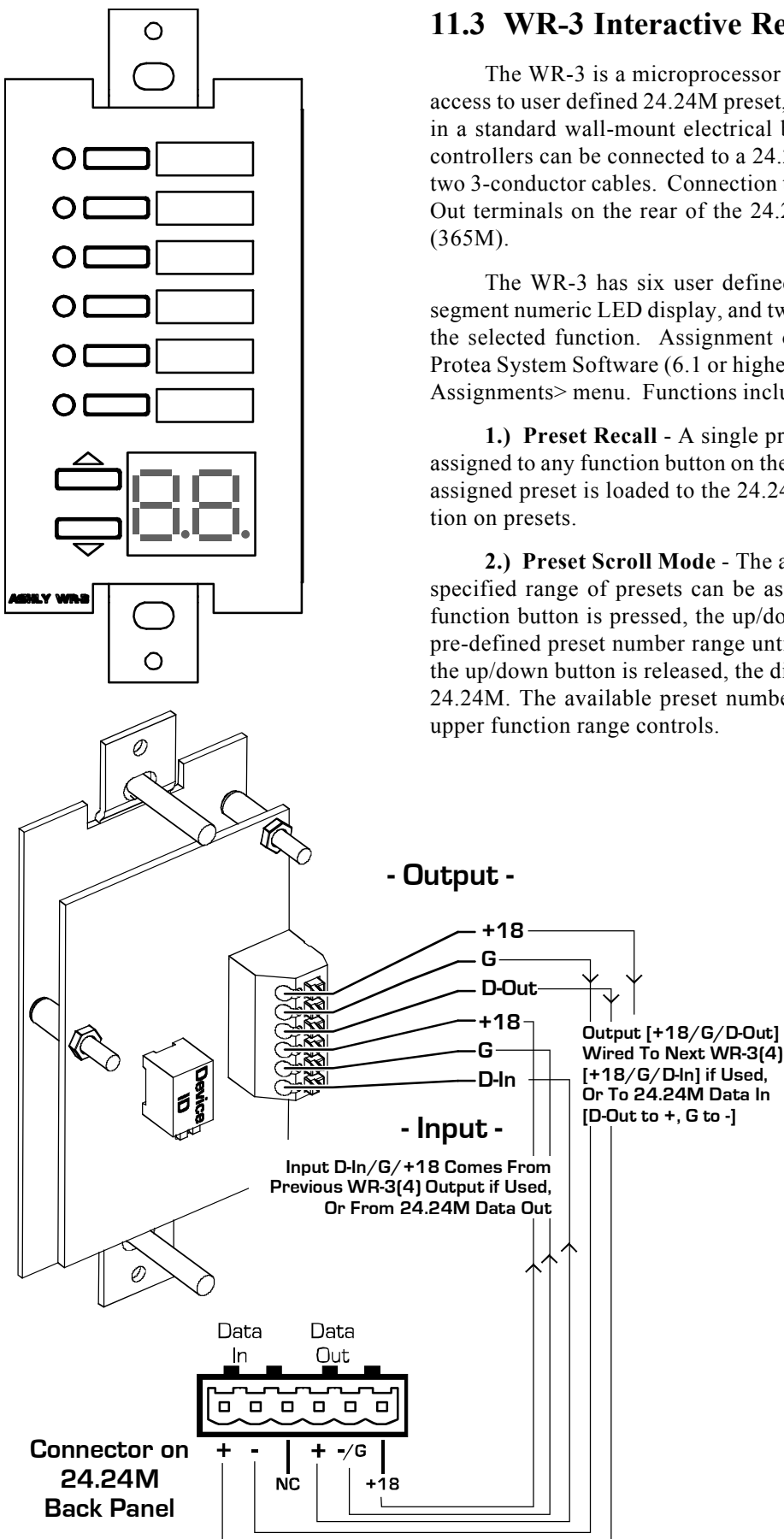
The WR-3 has six user defined function select push-buttons, a seven segment numeric LED display, and two increase/decrease push-buttons to edit the selected function. Assignment of a function to each button is done in Protea System Software (6.1 or higher) in the <Options / Define Wall Remote Assignments> menu. Functions include the following:

1.) Preset Recall - A single preset (1-35) stored on the 24.24M can be assigned to any function button on the WR-3. When that button is pressed, the assigned preset is loaded to the 24.24M. See section 10.1 for more information on presets.

2.) Preset Scroll Mode - The ability to recall a 24.24M preset within a specified range of presets can be assigned to a function button. When the function button is pressed, the up/down buttons are used to scroll through a pre-defined preset number range until the desired number is reached. When the up/down button is released, the displayed preset number is recalled to the 24.24M. The available preset number range is defined using the lower and upper function range controls.

3.) Input Gain Control An individual 24.24M input channel can have its gain control assigned to any button on the WR-3. The 0-99 up/down buttons set the actual gain according to the table found on the opposite page. The lower and upper function range controls set the gain limits in dB if desired.

4.) Output Gain Control Likewise, an individual 24.24M output channel can have its gain control assigned to any button on the WR-3. The 0-99 up/down buttons set the actual gain according to the table found on the opposite page. The lower and upper function range controls set the gain limits in dB if desired.



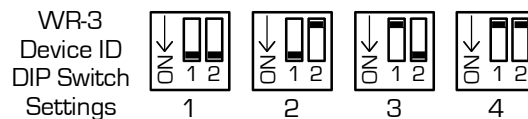
Gain Display	Actual Gain (dB)	Gain Display	Actual Gain (dB)	Gain Display	Actual Gain (dB)	Gain Display	Actual Gain (dB)	Gain Display	Actual Gain (dB)	Gain Display	Actual Gain
0	Off	17	-39.3	34	-28.7	51	-18	68	-7.3	85	+3.3
1	-49.4	18	-38.7	35	-28	52	-17.4	69	-6.7	86	+3.9
2	-48.7	19	-38.1	36	-27.4	53	-16.8	70	-6.1	87	+4.6
3	-48.1	20	-37.5	37	-26.8	54	-16.1	71	-5.5	88	+5.2
4	-47.5	21	-36.8	38	-26.2	55	-15.5	72	-4.8	89	+5.8
5	-46.9	22	-36.2	39	-25.5	56	-14.9	73	-4.2	90	+6.5
6	-46.2	23	-35.6	40	-24.9	57	-14.2	74	-3.6	91	+7.1
7	-45.6	24	-34.9	41	-24.3	58	-13.6	75	-3	92	+7.7
8	-45	25	-34.3	42	-23.7	59	-13	76	-2.3	93	+8.3
9	-44.4	26	-33.7	43	-23	60	-12.4	77	-1.7	94	+9
10	-43.7	27	-33.1	44	-22.4	61	-11.7	78	-1.1	95	+9.6
11	-43.1	28	-32.4	45	-21.8	62	-11.1	79	-0.4	96	+10.2
12	-42.5	29	-31.8	46	-21.1	63	-10.5	80	+0.2	97	+10.8
13	-41.8	30	-31.2	47	-20.5	64	-9.9	81	+0.8	98	+11.5
14	-41.2	31	-30.6	48	-19.9	65	-9.2	82	+1.4	99	+12
15	-40.6	32	-29.9	49	-19.3	66	-8.6	83	+2.1		
16	-40	33	-29.3	50	-18.6	67	-8	84	+2.7		

WR-3 Display Gain vs. Actual Gain in dB

5.) Input Mute - The function buttons can be assigned to mute a single input, or any combination of inputs. Pressing the function button will mute the assigned input channels, and then pressing the up/down buttons will toggle between mute and unmute. The LED displays “0” when the inputs are muted, and displays “1” if unmuted.

6.) Output Mute - The function buttons can be assigned to mute a single output, or any combination of outputs. Pressing the function button will mute the assigned output channels, and then pressing the up/down buttons will toggle between mute and unmute. The LED displays “0” when the inputs are muted, and displays “1” if unmuted.

WR-3 Wall Remote ID - Multiple WR-3 units (up to four) can be used with one 24.24M to remotely control assigned functions. Each WR-3 must have its own unique Device ID number (1-4), even if only using one WR-3. The device ID is manually selected with a DIP switch on the back of the circuit board (see figure below). Be sure to properly match the software ID numbers with the manually set WR-3 device ID, and that no two WR-3 units share the same ID.



WR-3 Data Connections - The back panel of the 24.24M has an RS-232 mode switch which affects data connections. This switch should be out when the 24.24M is connected only to a PC. The RS-232 mode switch should be in whenever the 24.24M is connected to a PC and is the first unit in a multiple unit data path, such as one or more WR-3 units. If the PC is removed from the 24.24M so that only the WR-3 units are in the data path, the RS-232 switch should be out. *Note: Baud Rate must be set to 9600 in Protea System Software when used with a WR-3.*

To connect a single WR-3 to a 24.24M, use the provided Euroblock connectors to wire the Data Out connection on the 24.24M to the Data In connector on the WR-3, and wire the WR-3 Data Out to the 24.24M Data In. Connectors are labeled on the back of the circuit board. For multiple WR-3 installations, daisy-chain them from output to input, with the output of the last WR-3 in the series plugged back into the 24.24M Data In jack. Each connection requires three conductors, but two-conductor shielded mic cable will work if the shield is wired to the ground connection.

WR-3 Configuration Management - WR-3 configurations are stored on the 24.24M, not the WR-3 itself. There is no permanent memory in the WR-3. The configuration files can be save to the 24.24M, or saved to disk as a <*.pwc> file. WR-3 configuration files are different than the <*.pmc> files which are used for the entire 24.24M settings. WR-3 configuration files can be recalled from disk, and the current configuration can be printed for reference using the default Windows printer setup.

Wall Remote Label Templates - The Ashly web site (www.ashly.com) has Word document templates for printing a label for each of the three WR models. This label can be cut to fit and slid behind the mylar overlay, displaying user specified functions through the clear overlay windows.

11.4 WR-4 Programmable Zone Controller

The WR-4 is similar to the WR-3 in appearance, but is specifically designed for zone input control. It offers input source selection options and output gain control for a single 24.24M output channel.

- Using the WR-4, up to six different input source configurations can be stored and recalled to one 24.24M output channel. The six input source select buttons can be used together in any combination, adding or removing any of the six configurations in real time.

- An up/down button pair on the WR-4 is used to adjust output gain of the 24.24M channel under WR-4 control

- The user has the option of setting the WR-4 for exclusive source selection, whereby only one source select button can be active at a time.

- Finally, the WR-4 can control a biamped system by applying input source selections and gain control to the next sequentially higher 24.24M output channel.

- The WR-4 installs in a standard wall-mount electrical box, with a maximum wire length of 350ft (107m). Up to four WR-4 units can be wired in series and phantom powered from one 24.24M. Additional units can be added in series (data only) but require an additional external power supply.

- *Note: All programming modes can be disabled by switching the internal DIP Switch #1, found on the back of the WR-4 circuit board, to the ON position. The Output Volume Control can be locked by switching the internal DIP Switch #2, found on the back of the WR-4 circuit board, to the ON position.*

Getting Started

Match the WR-4 Device ID to the 24.24M Under Control.

The device ID of a 24.24M is found in the LED display window on the front panel. Be sure to check in Protea System Software 24.24M <Options> menu that the <Front Panel Switch/Display> is set to <Device ID Select>.

Enter the WR-4 Device ID Programming Mode by simultaneously pressing buttons one and six on the WR-4. The button one LED will start flashing indicating the WR-4 is in Device ID Programming Mode. Once in Device ID programming mode, press the WR-4 up/down buttons to match the displayed LED number to the Device ID number of the 24.24M. When the correct Device ID is showing in the WR-4 LED display, accept it by again simultaneously pressing buttons one and six, returning the WR-4 to normal operating mode.

Assign the 24.24M Output Channel the WR-4 Will Control.

Enter the WR-4 Output Channel Control Programming Mode by simultaneously pressing buttons two and six on the WR-4. The button two LED will start flashing indicating the WR-4 is in Output Channel Control Programming Mode. The number displayed in the WR-4 numeric LED display is the 24.24M output channel that the WR-4 will control. Use the Up/Down buttons to select the desired 24.24M output channel. *Note: The WR-4 does not know whether additional installed output channels are available on the 24.24M or not, so verify that the selected output channel actually exists.* When the desired output channel is shown in the WR-4 LED display, accept by again simultaneously pressing buttons two and six, returning the WR-4 to normal operating mode.

Program the Input Source Configurations.

For a given 24.24M output channel under WR-4 control, *all input channels of interest must first be linked in Protea System Software to that output channel.* Each of the six source select buttons on the WR-4 can represent a subset of all input sources linked (in software) to the targeted 24.24M output channel. When programmed, each select button can link as few or as many inputs to the output channel as desired, and multiple configurations can overlap simultaneously by punching in or out any of the six select buttons in real time.

To program a WR-4 source select button, enter the WR-4 Source Select Programming Mode by simultaneously pressing buttons three and six on the WR-4. The last used source select button and LED (button #1 default) will start flashing, indicating the WR-4 is in Source Select Programming Mode for that button, or alternatively press any other source select button to program that one instead.

Once in Source Select Programming Mode for a given button, begin assigning one or more input channel sources to the currently active button by pressing the WR-4 up/down buttons to scroll through the input channels displayed on the WR-4. To accept (or deselect) an input channel number currently displayed on the WR-4, press the current source select button when the desired input channel number is shown. The input channel number on the WR-4 will flash if it is assigned to the WR-4 source select button currently being programmed, or remain solid if unselected. Each of the six source select buttons can be programmed in this manner, simply by choosing the source select button and then assigning the input source channels for that button. *Note: The WR-4 does not know whether any additional installed input channels are available on the 24.24M or not, so verify that the selected input channel actually exists.* Once all desired input sources are selected to the active source select button, save the source select assignments by pressing both the Up/Down buttons together. This returns the WR-4 to its normal operating mode.

Programming the WR-4 Options

There are two options available in the WR-4. The first is Exclusive Source Selection Mode, where only one source select button (and its programmed input sources) can be active at a time. The second option is for Biamped Operation Mode, where both the current channel and the next sequentially higher 24.24M output channel will be adjusted by a single WR-4. Note that true stereo operation is not possible in Biamped Mode due to the fact that both output channels must share the same set of input channels and channel source selection instructions from the WR-4.

Enter Option Programming Mode by simultaneously pressing buttons four and six. The button four LED will start flashing indicating the WR-4 is in Option Programming Mode. The LED displays “01” for Exclusive Source Selection, and “02” for Biamped Operation. Press the up/down buttons to scroll through the options, and press the fourth select button to enable or disable the displayed option. The option’s number will flash when the option is turned on, and remain solid if the option is turned off. Press both the Up/Down keys together to exit the programming mode and return the WR-4 to normal operation.

Using more than Four WR-4 Units

A 24.24M Matrix Processor’s phantom power supply can only power up to four remote controller units (WR-3 or WR-4) at a time. It is possible to connect more wall remotes if an external power supply is used with the additional units. It should be noted, however, that only four WR-3’s can be connected to a 24.24M Matrix Processor at any given time, due to the WR-3’s method of communication with the device. There is no set limit for the WR-4 wall remotes, its limitation is set by the amount of time it will take data to be transferred through the system.

The external power supply should supply anywhere from +15VDC to +20VDC and supply at least 28mA of current for each remote controller connected. To connect an external power supply to phantom power several remote controls, follow the procedure below.

1. Connect the 24.24M Data Out connection to the Data In of the first remote control as normal but do **NOT** connect the terminal labeled “+18” on the 24.24M.
2. Connect the external power supply negative terminal (-) to the 24.24M terminal labeled “-/G” which is also connected to the first remote control.
3. Connect the external power supply positive terminal (+) to the first remote controller Data Input terminal labeled “+18”.

Connect the Data Output of the first remote controller to the Data Input of the second remote controller. Continue this Data Output to Data Input ‘daisy chain’ for all remote controllers and connect the last remote control’s Data Output to the 24.24M’s Data Input.