



Series 3000
Model R-165
Audio/Video – IF/RF Relay Panel

Instruction Manual

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Specifications

RF Isolation

> 60 dB @ 750 MHz.

Attenuation

+/- 1 dB 0 to 750 MHz

See Attached Graphs.

Power Requirement

+12 VDC @ 220 mA maximum
(UL approved wall supply included.)

Control Inputs

Contact Closure

Absolute Maximum Input Voltage	5 VDC
Logical High Input Voltage	3.5 VDC Minimum
Logical Low Input Voltage	1.5 VDC Maximum

Serial Input

RS-485, 2 wires plus ground
Control by SwitchWare2© software for Windows®

Physical

3.5" H X 3" D X 19" W , 1 Rack Mount

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Design and specifications are subject to change without notice.

Accessories Included with instrument:

Switchware Software
Mounting Kit
Power Supply
Instruction Manual

Installation

Mounting:

The 3000R-165 requires a minimum of 3.5 vertical inches of space in a standard 19" wide EIA equipment rack. Slide the unit into the rack frame and secure it, using the 3000R/22M mounting hardware supplied with the unit.

Connections:

1. The Video (or IF/RF) switches are mechanical relays, and connections to them are made through 75 Ω BNC connectors on the rear of the unit. Connect your cable for the default signal to the NC (normally closed) connector. Connect your cable for your alternate signal - which you will substitute for the default signal - to the NO (normally open) connector. Connect the cable to your modulator or other destination to the COM (common or output) connector.

These connectors will switch either video signals, or may alternately be used to switch high frequency signals, such as IF or RF. The frequencies useable are shown on the frequency response charts included.

Of course, both inputs must be the same type of signal.

It is also permissible to use some relay sets for baseband video and some for high frequency, since all switch modules are isolated.

2. If the signals being switched are baseband video, with audio following, connect the audio signals to screw terminals of the same switch group, ensuring that the left and right channels for the default audio are connected to the L NC 1 and 2, and the R NC 1 and 2, and the signals for the alternate signal are attached to the L NO 1 and 2 and the R NO 1 and 2 connectors. The L OUT 1 and 2 and the R OUT 1 and 2 are routed to the modulator or other destination of the audio signals.
3. If you are using the unit with a contact closure switcher, connect the switch for each Relay Unit to the connector for Contact Closure as appropriate.
4. If you are using the unit with the optional SwitchWare2© control software, refer to the LAN Control section following or the SwitchWare2© manual for connection instructions.
5. Connect the +12 VDC lead (white) from the power supply to the +12v terminal on the rear panel, and the black lead to the GND terminal. Plug the power supply into a 90 - 264VAC power outlet, and the unit is ready to function.

Operation

When the contact closure for the appropriate Relay Unit is closed, the output (Com) connection is switched from the default input (NC) to the alternate input (NO).

LAN Control

The 3000R-165 can also be controlled over a LAN connection from a PC using the provided SwitchWare2© software. This application requires the separate purchase of a LAN to RS-485 converter, Lantronix model UDS10. Purchase this converter directly from Lantronix.

The Lantronix UDS10 ethernet to serial adaptor, comes with software for the setting of the IP address and the port to be used in the UDS10. Follow the instructions on the CD. The default baud rate to be used is 9600, None for parity, 8 bits and 1 stop bit, using TELNET through the serial port.

Connect the UDS10 to the ethernet port of the setup computer using a 'crossover' cable. Open a web browser, and connect to the device using the default URL displayed on the unit. When the Configuration guidelines page opens, select UDS settings.

Change the Serial Protocol to RS485. Update the settings with the button on the Menu. Select the Server Properties button under the Menu. Change the IP address that the device will use on your network.

Change other settings as required to address the UDS10 through your network. Select Update Settings under the Menu label. Contact your IP personnel for further assistance.

To use the device for communications with the Monroe Electronics, Inc., products utilizing 'Switchware' software, use a male dB25 'solder pot' connector. These connectors are widely available. Obtain about three feet of three wires of different colors. Solder a jumper from pin 14 to pin 21 on the dB25, and then solder one of the three colored wires to pin 14. Then solder a jumper from pin 15 to pin 22, and solder another of the colored wires. Finally, solder the third wire to pin 7 of the dB25. Install the cover for the dB25.

Install the connector on the UDS10, and connect the three wires to the 3000R-165 connection strip. The wire from pin 14/21 on the connector is attached to DATA 1, the wire from pin 15/22 is attached to DATA 2 and the wire from pin 7 to GND.

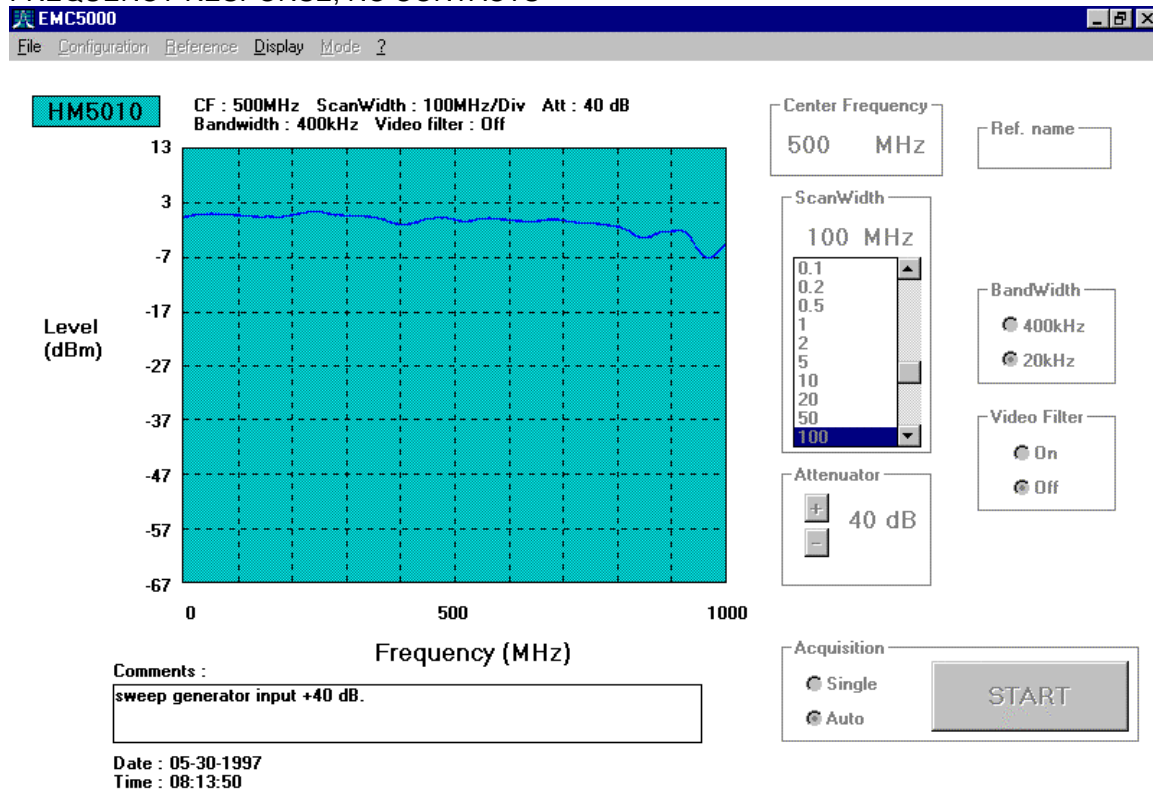
Multiple units can be operated from the single UDS10 as each unit has a unique ID number assigned during manufacturing. Each unit's RS485 connection is "daisy chained" from the preceeding unit. The last unit on the chain must have the 3 terminating jumpers installed inside the unit. Remove the rear cover and install jumpers on J18, J20 and J21. These jumpers are located next to the RS485 screw terminal connector.

Plug the ethernet cable from your system into the UDS10.

Install Switchware on a computer connected to the network, and follow the instructions to add a location with LAN connectivity.

Switch operation is now shown in the SwitchWare2© manual.

Switching time is <30 mS.
 FREQUENCY RESPONSE, NC CONTACTS



ISOLATION, NO CONTACTS

