

LIMITED WARRANTY

This product is warranted to the original consumer purchaser to be free from defects in materials and workmanship under normal installation, use and service for a period of one (1) year from the date of purchase as shown on the purchaser's receipt.

The obligation of Rolls Corporation under this warranty shall be limited to repair or replacement (at our option), during the warranty period of any part which proves defective in material or workmanship under normal installation, use and service, provided the product is returned to Rolls Corporation, TRANSPORTATION CHARGES PREPAID. Products returned to us or to an authorized Service Center must be accompanied by a copy of the purchase receipt. In the absence of such purchase receipt, the warranty period shall be one (1) year from the date of manufacture.

This warranty shall be invalid if the product is damaged as a result of defacement, misuse, abuse, neglect, accident, destruction or alteration of the serial number, improper electrical voltages or currents, repair, alteration or maintenance by any person or party other than our own service facility or an authorized Service Center, or any use violative of instructions furnished by us.

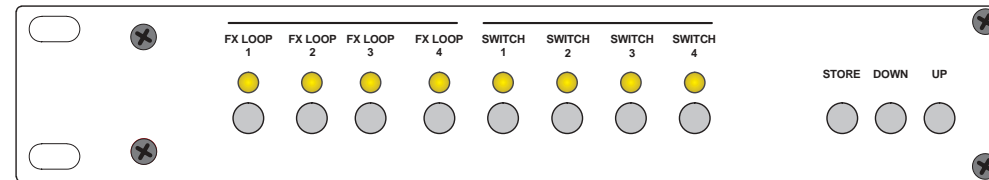
This one-year warranty is in lieu of all expressed warranties, obligations or liabilities. ANY IMPLIED WARRANTIES, OBLIGATIONS, OR LIABILITIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE ONE YEAR DURATION OF THIS WRITTEN LIMITED WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

IN NO EVENT SHALL WE BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER. Some states do not allow the exclusion or limitation of special, incidental or consequential damages so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RFX
Salt Lake City, UT
12/03



RP93s PATCHWORK MIDI CONTROLLED AUDIO SWITCHER



OWNERS MANUAL

Thank you for your purchase of the RP93s Patchwork. This unit is designed to provide years of reliable service as a MIDI Controllable audio and signal switcher. Please take a moment to read this Owner's Manual carefully. It will provide you with all the information you need to operate this device properly.

INTRODUCTION

The RFX RP93s Patchwork is a MIDI control device that provides control of 4 switch and a 4 stereo FX loop devices. Up to 128 control combinations can be programmed into the RP93s and are retrieved through MIDI Program Change commands or button selection. The Program Change command that retrieves programmed control information from the RP93s can also be selected for one or all channels. The RP93s accepts MIDI program changes and sets 8 relays to any pre-programmed configuration. It can be used to replace footswitches in amplifiers, keyboards, etc. and can control "stomp boxes" or other non MIDI equipment through the sends and returns of its effects loops.

FEATURES

- Control up to 8 switch functions with MIDI program changes
- Front panel and MIDI control of switch relays
- 128 MIDI patches in nonvolatile memory
- 4 stereo effects loops and 4 2500 Volt isolated relay switches
- Supplies MIDI phantom power for controller pedal

INSPECTOR

1. Unpack and Inspect the RP93s package
If obvious physical damage is noticed, contact the carrier immediately to make a damage claim. We suggest saving the shipping carton and packing materials for safely transporting the unit in the future.
2. Please complete the Warranty Registration Card and return it to the factory.

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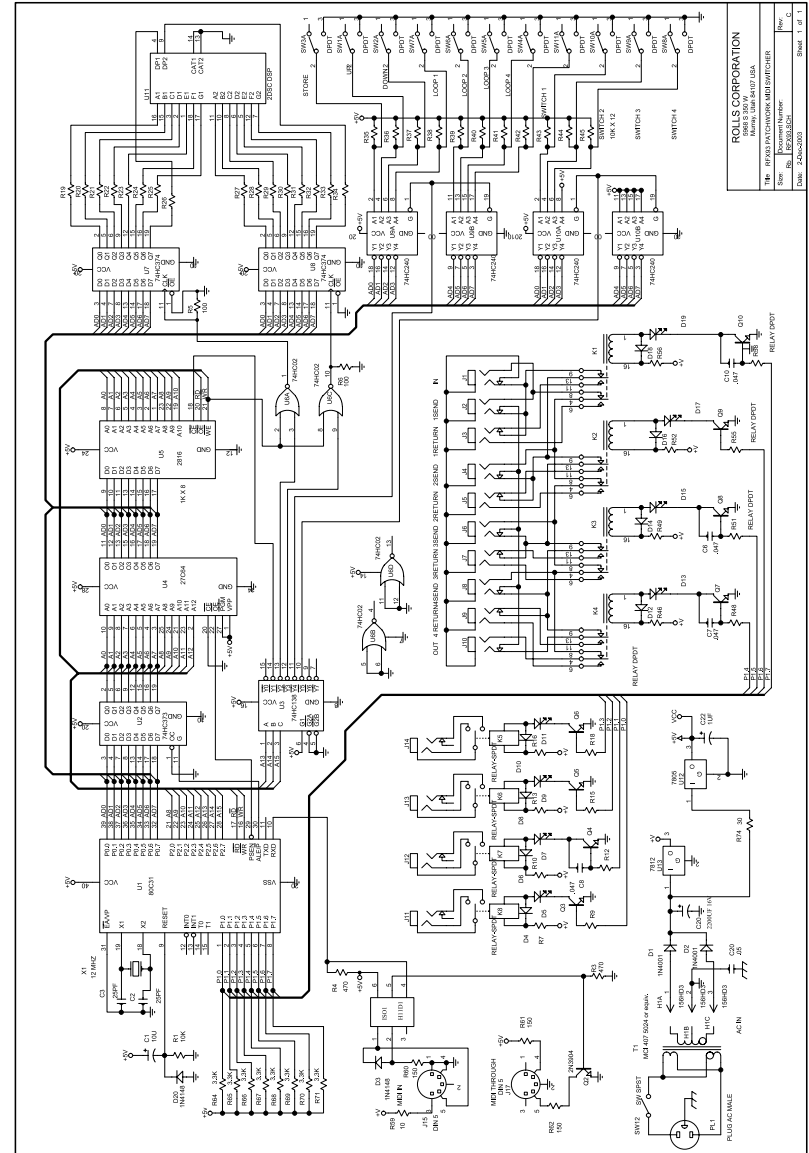
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RFX MIDI PHANTOM POWER

Inspired by an article in the December 1989 issue of Electronic Musician (by Craig Anderton), we decided to emulate their MIDI phantom power model for RFX equipment. MIDI receivers supply 12 VDC on pins 1 and 3, and transmitters receive power on those same pins. Many MIDI devices can be modified to supply power down the cable, but of course RFX makes no warranty to anyone as to the applicability of this modification or any damage that might be done as a result thereof. We supply this note for those adventurous people who may want to give it a try.

Connect pin 1 to circuit ground, and pin 3 to +9 - +15 VDC of the receiving unit.

SCHEMATIC



MIDI TEST MODE

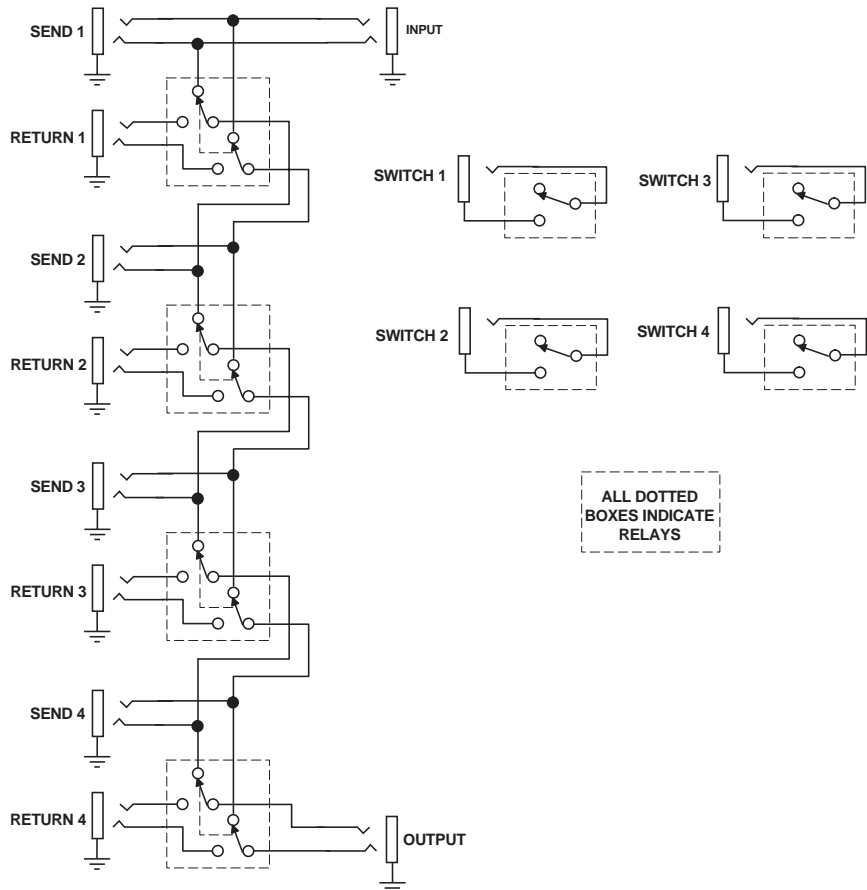
The RP93s has the ability to display the MIDI information present at the MIDI IN jack.

- To enter Test Mode, first make sure the RP93s power is off. Hold the UP and DOWN buttons while switching the power on. Table 3 shows which MIDI commands and their status.

TABLE 3 TEST MODE COMMANDS AND DISPLAY

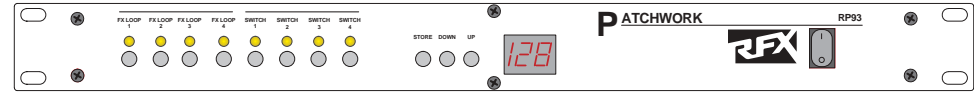
LED	MIDI COMMAND	1st Display	2nd Display
Loop 1	Note Off	Channel Number	Note Number
Loop 2	Note On	Channel Number	Note Number Key
Loop 3	Pressure	Channel Number	Note Number Control
Loop 4	Change	Channel Number	Control Number Program
Switch 4	Change	Channel Number	Program Number Channel
Switch 3	Pressure	Channel Number	Pressure Value
Switch 2	Pitch Wheel	Channel Number	Not Used
Switch 1	System Message	SE or SC or RT	Not Used

BLOCK DIAGRAM



DESCRIPTION

FRONT PANEL



FX LOOP 1 - 4: When pressed and the LED is lit, the corresponding FX Loop jacks are enabled. Used for programming presets.

SWITCH 1 - 4: Identical function to that of the FX LOOP switches except that these enable the Switch 1 - 4 jacks on the rear panel.

STORE: Used to store presets when making changes in Learn Mode.

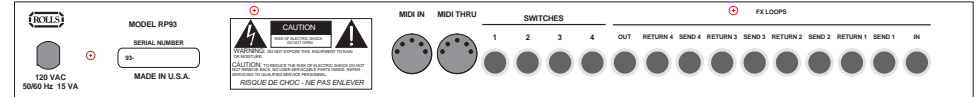
DOWN: Decrements presets, program numbers and MIDI channels.

UP: Increments presets, program numbers and MIDI channels.

LED Display: Shows the current program number, or the information to be displayed while in Learn Mode.

Power Switch: Applies power to the RP93 when the unit is connected to an AC outlet.

REAR PANEL



MIDI IN: For connection to the device that is sending the MIDI information to the RP93.

MIDI THRU: This jack is used to directly pass the MIDI information that is present at the MIDI IN jack.

SWITCHES 1 - 4: 1/4" jacks used to devices that require a "tip to sleeve" switching activation. The tip of the jack is alternately connected to the sleeve or open depending on the status of the corresponding front panel switch.

OUT: 1/4" TRS jack containing the signal(s) from the IN and the four FX Loop jacks.

RETURN/SEND jacks 1 - 4: 1/4" TRS jacks used to send stereo signals from the IN jacks out to signal processing devices, and return them back to the OUT jacks.

IN: 1/4" TRS jack for connection to the device with the signal to be processed in the FX Loop jacks.

SPECIFICATIONS

Jacks:	14; 1/4" phone TRS jacks
MIDI ports:	5-pin DIN IN and Through jacks
Display:	2-digit high efficiency red .56"
Phantom Power:	+12 VDC on pins 1 and 3 of MIDI IN jack
MIDI signals recognized:	Program Change with MIDI Channel
Size:	17" x 1.75" x 6"
Power:	120/230 VAC 15 VA 50/60 Hz

OPERATION

Operating Mode

The RP93s switch settings, once pre-programmed, are recalled via MIDI Program Change information and are then shown on the front panel display. The Program Change information must be sent on a MIDI Channel that matches the Channel of the RP93s.

- The factory setting for the MIDI Channel Number is "omni" or channels 1 - 16.
- The factory setting for all RP93s presets is all Switches and FX Loops OFF.
- While in Programmed Operation mode, pressing the UP or DOWN button will increment or decrement the display and the switch setting presets. Pressing and holding the UP or DOWN button will cause the display to increment rapidly, but the switch and FX loop settings will not change until the button is released. Pressing a SWITCH or LOOP button will alternate the on or off state of the associated switch or FX loop port. Changing the state of a port in this way does not affect the programmed setting for the displayed Program Number.

The 8 front panel LEDs always show the current state of the switch and FX loop ports.

Program Numbers 100 - 128 will show a 00 - 28 along with a dot in the lower right of the tens digit to indicate the 100s. There is no program number 0, and 1 - 9 are displayed as single digits.

DEVICE CONNECTION

The FX loops have an input, 4 sets of sends and returns and an output. These may be used to control the presence of foot pedals, rack processors, other instruments, etc. in the signal path. These may also be used as a 4-way A/B box by connecting to the FX returns only and using the Main Out as the output. Since the RP93s is passive in its signal path (all switching is done with relays), the signal may go either way. This means the RP93s may also send a single signal to up to 4 different amplifiers.

There is no change of interference or crosstalk because the switches are contact closure between the tip and sleeve of the 1/4" connectors. There is no connection between the different switches.

LEARN MODE

Changes to the Switch and FX Loop settings for each Program Number settings are all made and stored in Learn Mode. Setting the MIDI Channel, and utilizing the RFX MIDI Test Mode are also done in Learn Mode.

ENTERING LEARN MODE

- The RP93 enters Learn Mode by pressing both UP and DOWN buttons simultaneously, and holding them down for approximately 5 seconds. When in Learn Mode, the numeric display blinks. Please note that in Learn Mode,

no MIDI data is processed by the RP93s but data will continue to pass to the MIDI Through port.

MODIFYING PRESETS

- Pressing the UP and DOWN buttons will increment and decrement the display of the Program Number. As in Operating Mode, changing the Program Number with the UP and DOWN buttons will cause the stored switch and FX loop settings to be engaged.
- Pressing a switch or LOOP button will alternate the on or off state of the associated switch or FX loop port. Changing the state of a port in this way does not affect the programmed setting for the displayed Program Number (until the STORE button is pressed). The state of a switch or FX loop port is indicated by the LEDs.
- When the desired setting is shown on the LEDs, press STORE. This will save the current setting of the switch and FX loop ports for the displayed Program Number. The display will blank momentarily during the storing operation.

CHANGING THE MIDI CHANNEL

In order for a Program Change command to affect the switch and FX loop settings, the proper MIDI channel must be set.

- To set the MIDI Channel, enter Learn Mode. Press the DOWN button until 01 is displayed, then press once more - an oF appears in the display. To set a specific MIDI Channel, press the DOWN button until the desired channel is displayed. For Omni mode, continue pressing the DOWN button until "on" is displayed, for all off mode, leave "oF" displayed.
- To enable the setting you have chosen, press the STORE button.
- To return to programming the Program Numbers, press the UP or DOWN buttons until the Program Numbers are again displayed.

RESTORING DEFAULT SETTINGS

- To restore the factory presets, press and hold Switch 1 and Switch 2 simultaneously for 5 seconds. The display will show FP during the reset operation. The RP93s will remain in Learn Mode after the default settings have been restored.

RETURNING TO OPERATING MODE

- To return to normal operation mode, press and hold the UP and DOWN buttons again (same as entering Learn Mode) for 5 seconds. *Note: Any settings that have not been stored will be lost.*