



PSC RF MULTI SR 4 PACK



Frequency Ranges:

“Single Band” 470Mhz to 700Mhz

“Dual Band” 470-618Mhz and also Lectro Block 941

“Wide Band” 470Mhz to 960Mhz

- Supports Two Slot Receivers
- Built in RF Distribution and Filtering
- Provides Remote Antenna Powering
- Built in Battery Distribution
- Takes Two External Batteries
- Provides Multi-Color LED Battery Metering
- Made in the U.S.A.

Operation Manual Version 1.0

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Thank you for purchasing your new PSC RF Multi SR Four Pack. This new product combines RF and power distribution for use with your Slot Receivers and also provides DC power distribution for the rest of your audio equipment. This unit will allow the use of two external batteries (NP-1, Smart battery or other similar portable batteries).

PLEASE BE SURE THAT YOU HAVE READ AND UNDERSTOOD THIS ENTIRE OPERATIONAL MANUAL BEFORE OPERATING YOUR NEW PSC RF FOUR PACK.

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The PSC RF Multi SR Four Pack contains two separate, active 1 x 3 RF splitters for use with up to two slot style receivers. This compact, rugged device was developed using the latest super low noise RF amplifiers and is offered in several models that operate over the following frequency ranges:

Model #	Description:	Frequency Range:
RF4PSB	PSC RF 4 Pack, "Single Band"	470-700Mhz
RF4PDB	PSC RF 4 Pack, "Dual Band"	470-618Mhz and also 940-960Mhz
RF4PWB	PSC RF 4 Pack, "Wide Band"	470-960Mhz

Its two inputs are traditional BNC connectors for ease of use in interfacing with your external antennas. Each of the SMA outputs offers a typical isolation factor of 24 to 28dB between radio receivers. The PSC RF Multi SR Four Pack also has the ability to power external powered antennas or remote line amplifiers. There are two front panel mounted switches on the unit. One is marked "MAIN POWER" and this controls the overall power to the unit. The second switch is marked "ANT PWR" and this switch controls the power being sent to an external powered antenna or remote line amplifier. Both switches light up when in use. The entire unit is powered from any source of external DC power of 12Vdc @ approximately 195mA. On the left side of the unit there are four TA3M mini XLR output connectors. These provide audio output from the three slot receivers as well as a high-density DB-15 connector that offers all of the audio outputs on one convenient "audio snake" connector. In addition, there are two chassis mounted SMA

connectors on the left side panel of the unit. These offer two additional RF outputs that can be used to feed another PSC RF Multi SR Four Pack or PSC RF Multi SMA or an outboard receiver or other similar device.

The PSC RF Multi SR Four Pack is also equipped with a built in Battery Distribution System. There are two battery power inputs on the left side panel of the unit. These two external battery inputs can be used with various rechargeable battery types and sizes. In our industry these batteries would typically be NP-1 or the newer “Smart” batteries. You can also use Sealed lead acid (SLA) batteries, V-lock batteries and many other types. By equipping this new product with two battery inputs, you can use two batteries at the same time for use with heavy equipment current loads or for extended run times. You can also use one battery by itself or one battery with our optional AC power supply.



FRONT PANEL SHOWING: (left to right)

Antenna “A” RF Input BNC

Main Power Switch

Remote Antenna Power Switch

1st Slot Position

2nd Slot Position

Antenna “B” RF Input BNC

Battery Level LED Meter



LEFT SIDE PANEL SHOWING: (left to right)

Two 4 Pin TB4M (mini XLR) Power Connections

DB-15HD Audio Output Snake Connector

4x TA3M Audio Output Connections

2 x SMA RF Outputs (loop throughs)



RIGHT SIDE PANEL SHOWING: (Left to right)

5 x DC Power Distribution Outputs

Dual USB Power Outputs (4 Amps available current)



REAR PANEL SHOWING: (Left to right)

PSC Logo

Future Optional Equipment Cover Plate

SN Location

Frequency Range Information

RF DISTRIBUTION:

Your new PSC RF Multi RD 4 Pack contains RF distribution designed to provide proper, clean RF distribution to your Slot Receivers. Each half of the diversity RF distribution contains a built in DC bias circuit designed to be able to power external remote powered antennas and/or remote RF amplifiers, an RF limiter to help guard against RF overload, RF bandpass filters (various ranges available), a very low noise RF Amplifier, and a RF splitter. Each half of the RF circuitry also contains its own, dedicated power regulation circuit. Two SMA connectors are provided on the Left Side Panel as RF Outputs for use in sending RF to another RF 4 Pack or any RF receiver. These SMA outputs are post bandpass filter so they are RF filtered.

POWER DISTRIBUTION AND METERING

This device also contains a built in Battery Distribution System (BDS). On the left Side Panel, you will find two Battery Input connectors. These are 4 mini Mini XLR connectors and are wired with the pins doubled up for higher current capacity. (Pins 1 & 2 are Ground (-) and Pins 3 & 4 are Positive (+). You can use all typical battery types and chemistries such as NP-1 batteries, "Smart" batteries, V-Lock batteries. You can use Nickel Cadmium, Nickel metal Hydride, Lithium Ion, Lithium Iron Phosphate (LiFePO4) or Sealed Lead Acid (SLA) batteries.

When you turn on the unit's main power switch located on the lower left corner of the front panel, the unit will fully power up. There is a 4 LED, multi-color battery level meter located on the lower right-hand corner of the front panel. This meter will indicate your battery level **when**

the unit is powered up. When all four LEDs are lighted, it indicates a fully charged battery. As the battery capacity drops, so will the lighted LEDs. Each LED indicates approximately 25% of the battery capacity remains:



RED, YELLOW, GREEN and BLUE LEDs LIGHTED = FULL BATTERY CAPACITY

RED, YELLOW and GREEN LEDs LIGHTED, = 75% BATTERY CAPACITY

RED AND YELLOW LEDs LIGHTED = 50% BATTERY CAPACITY

RED LED ONLY LIGHTED = 25% OR LESS BATTERY CAPACITY

BATTERY METER CALIBRATION:

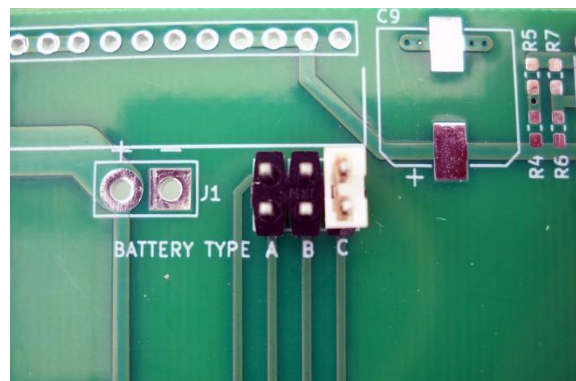
Inside the unit is a small jumper that can be set to three different positions corresponding to three different battery chemistries (voltages). The jumper is factory set to monitor Lithium Ion batteries (14.8Volt nominal voltage) This setting is the most common as it is correct for most of the newer lithium NP-1 batteries and all of the new lithium “Smart” batteries. There are also two other settings. One setting is for use with 12.8-volt batteries such as sealed Lead Acid (SLA) and Lithium Iron Phosphate (LiFePO4). The other setting is for use with Nickel Metal Hydride batteries (some older NP-1s). If you want to use the non-factory standard battery monitoring, you must remove the top cover of the unit by removing the 14 screws located on the top cover.

Once the cover is removed, you will see the battery monitor jumper. It is located near the USB power jack on the main bottom PCB. You can then move the jumper to the position desired. The three positions are marked on the PCB:

Position “A” = 14.8V Lithium Ion (Lithium NP-1 or any “Smart” Lithium Battery)

Position “B” = 13.2V Nickel metal Hydride

Position “C” = 12.8V Sealed Lead Acid (SLA) or Lithium Iron Phosphate (LiFEPO4)



STEP BY STEP USE GUIDE:

- 1. Install your slot style receivers into the openings on the front of the PSC RF Multi SR Four Pack noting the correct direction of the DB-25 connectors. Gently slide the receivers into the slots until you feel the DB-25 connectors line up. Once you feel the connectors line up, firmly press the slot receiver fully into place. Lock your receivers into place using the screws on the receivers.**
- 2. Connect your audio output cables from the four TA3M audio outputs or from the DB-15ND connector to your mixer or recorder's inputs. Either connector type can be used with either analog or AES digital signals.**
- 3. Connect one or two batteries to the TB4M Chassis 4 pin connectors on the left side panel of the unit.**

4. Connect your two receiver antennas to the RF input BNC connectors on the front panel of the unit. When using powered antennas or remote line amplifiers, turn on the “Antenna” power switch. For all other uses, leave this switch turned off.
5. Connect the PSC RF Multi SR Four Pack cable mounted SMA connectors to your slot receivers using a “Criss cross” or X pattern. In some situations, it may make more sense to keep the RF cables aligned with the receivers rather than crossed. Either way is acceptable. See photo below:



6. Power up the unit. Note that the power switch lights up green when the unit is turned on.

NOTES

1. When used with ENG “bag” mixing setups, we recommend that you remotely mount your receive antennas up and away from your equipment. This will help eliminate picking up of RF spray from digital recorders.
2. Different brands of wireless receivers require their own specific brand made adapters to work with our Four Pack. These are the same adapters required to install the slot receivers in an Ikigami or Panasonic camera. For example:

Lectrosonics SRB requires their “SRUNI” kit.

Wiscom MCR42 requires their “SCK42-IK-PSC” kit.

Audio Limited A10-RX no adapter needed.

SPECIFICATIONS:

Size:	9.25" x 5.75" x 1.6" (23.5cm x 14cm x 4cm)
Weight:	1.6 Lbs. (0.725 kg)
Power:	External DC, 12 to 18Vdc @ 170mA
Input Impedance:	50 Ohms
Input Connector:	BNC
Input Impedance:	50 Ohms
Output Connector:	SMA
Maximum Input Signal:	+13dB
Noise Figure:	0.8dB
Chassis Material:	Aircraft Aluminum
Finish:	Black Epoxy Wrinkle Texture Powder Coat
Warranty:	1 Year, limited

CONNECTOR PINOUTS:

External DC Power:

Pins 1 & 2 = Ground

Pins 3 & 4 = + 12Vdc

Mini XLR:

Pin 1 = Ground

Pin 2 = Audio + (Hi)

Pin 3 = Audio - (Low)

DB-15 Multipin

RX1, CH1,

Pin 4 = Ground

Pin 14 = Audio +

Pin 9 = Audio –

RX1, CH2,

Pin 3 = Ground

Pin 13 = Audio +

Pin 8 = Audio –

RX2, CH1,

Pin 2 = Ground

Pin 12 = Audio +

Pin 7 = Audio –

RX2, CH2,

Pin 1 = Ground

Pin 11 = Audio +

Pin 6 = Audio -

DECLARATION OF CONFORMITY

STANDARD: EN 60065.2012 Power, Safety

 EN 55032.2012 Part 1, Emissions

 EN55032.2012 Part 2, Immunity

PSC

MODEL: RF Multi SR Four Pack

RESPONSIBLE PARTY: Professional Sound Corp.
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TYPE OF PRODUCT: Antenna Distribution

MANUFACTURER: Professional Sound Corp.

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We hereby declare that the equipment bearing the trade name and model number listed above has been tested in accordance with the requirements contained in the above listed directives. All necessary steps have been taken and are in force to assure that production units manufactured will conform to Directive guidelines.

November 2020 Professional Sound Corporation.

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