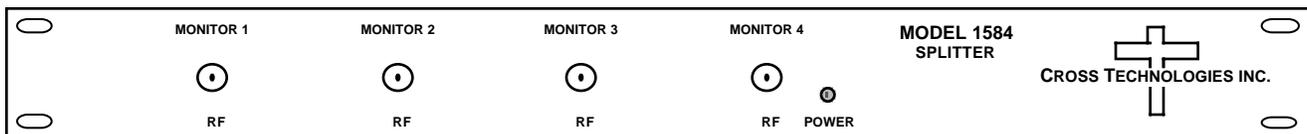


# Instruction Manual

# Model 1584-45S RF Splitter

June 2013, Rev. C



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6170 Shiloh Road  
Alpharetta, Georgia 30005

(770) 886-8005  
FAX (770) 886-7964  
Toll Free 888-900-5588

WEB [www.crosstechnologies.com](http://www.crosstechnologies.com)  
E-MAIL [info@crosstechnologies.com](mailto:info@crosstechnologies.com)

# INSTRUCTION MANUAL

## MODEL 1584-45S RF Splitter

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Alpharetta, Georgia 30005

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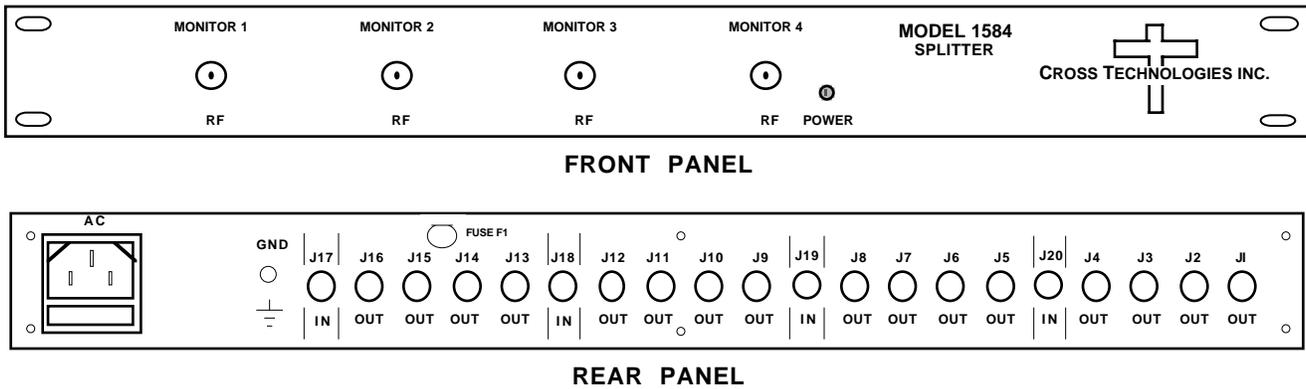
WEB [www.crosstechnologies.com](http://www.crosstechnologies.com)  
E-MAIL [info@crosstechnologies.com](mailto:info@crosstechnologies.com)

# MODEL 1584-45S RF Splitter

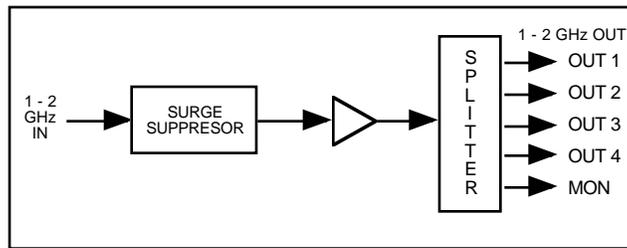
## 1.0 General

### 1.1 Equipment Description

The Model 1584-45S is four, five-way, 0.95 - 2.05 GHz, 0 dB gain splitters in a 1 Rack Unit chassis with a single 115 VAC power supply. Each splitter provides surge protection and excellent RF characteristics. Each splitter has a monitor connector on the front panel and four outputs on the back panel. One 115 VAC input power supply provides +24 VDC voltage for internal amplifiers. A surge suppressor on each splitter input protects against high voltage transients. All splitter outputs are AC coupled so no DC appears on their center conductors. On the front panel, a green LED indicates the presence of power from the +24 VDC power supply.



**FIGURE 1.1 MODEL 1584-45S Front and Rear Panels**



**FIGURE 1.2 MODEL 1584-45S Block Diagram (Each Splitter)**

## 1.2 Technical Characteristics

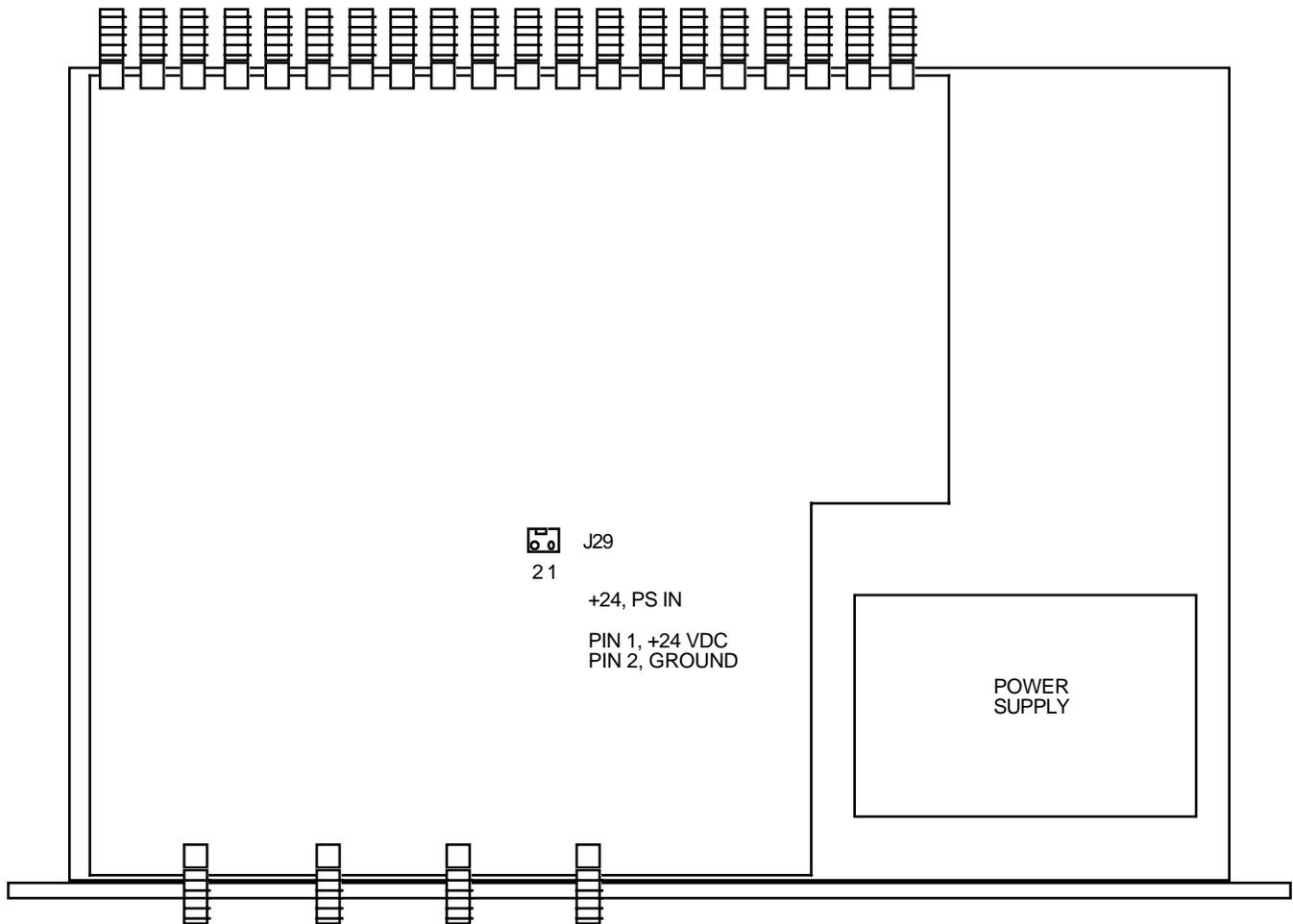
### EQUIPMENT SPECIFICATIONS\*

<b>TABLE 1.0 1584-45S Equipment Specifications**</b>	
<b>Input Characteristics</b>	
Input Impedance	75Ω
Return Loss	12 dB minimum, 14 dB typical
Input Level	-20 dBm total maximum
<b>Output Characteristics</b>	
Impedance	75Ω
Return Loss	12 dB minimum, 14 dB typical
<b>In-Band Characteritics</b>	
Gain	0 db ± 1.0 dB
Frequency Response	± 1.0 dB, 950-2150 MHz; ± 0.5 dB, any 20 MHz incr.
Port to Port Isolation	> 18 dB, 20 dB typical
Coupler to Coupler Iso'n	> 35 dB, 40 dB typical
<b>Indicators</b>	
Power	Green LED indicates DC Voltage
<b>Other</b>	
Surge Suppressor	SiDACTOR
RF Connectors	Type F (female)
AC Power	100-240 ± 10% VAC, 47-63 Hz, 30 watts max.
Mechanical	SiDACTOR
<b>Options</b>	
-B	75Ω, BNC RF Connectors
-D	75Ω, BNC RF Connectors
<b>Models</b>	
1584-25S	Two, 4-Way Splitters with 1 front panel monitor each
1584-29S	Two, 8-Way Splitters with 1 front panel monitor each
1584-45S	Four, 16-Way Splitters with 1 front panel monitor each
1584-116S	One 16-Way splitter with no front panel monitor
*10°C to 40°C; Specifications subject to change without notice.	

## 2.0 Installation

### 2.1 Mechanical

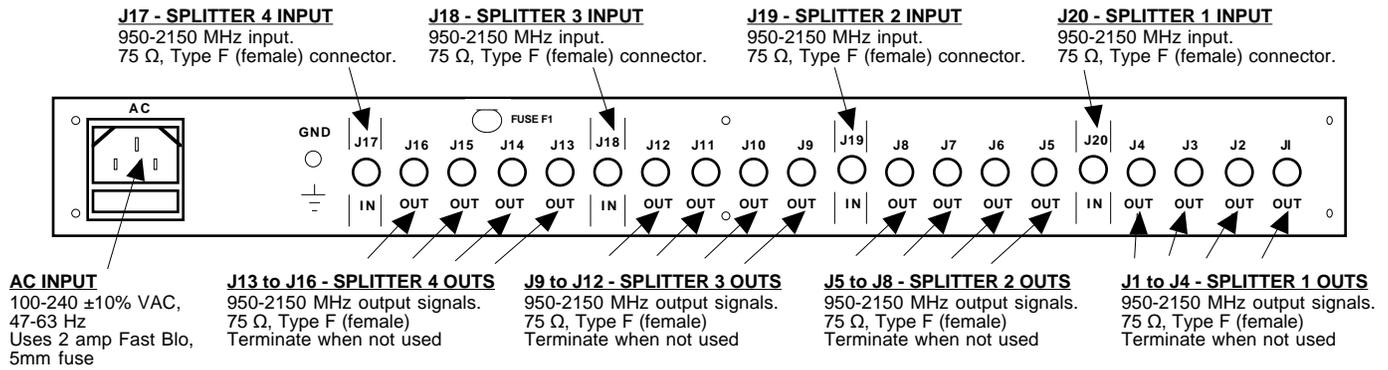
The 1584-45S consists of one RF printed circuit board (PCB) housed in a 1 RU (1 3/4 inch high) by 12 inch deep chassis. One +24 VDC power supply provides power for the internal amplifiers and LED. Connectors are type F, female for the RF connections. The 1584-45S can be secured to a rack using the 4 holes on the front panel. Figure 2.0 shows how the 1584-45S is assembled. J29 connects the DC voltage from the power supply to the PCB as shown.



**FIGURE 2.0 1584-45S Mechanical Assembly**

## 2.2 Rear Panel Input/Output Connectors

The input and output connectors on the rear panel are shown in Figure 2.1.

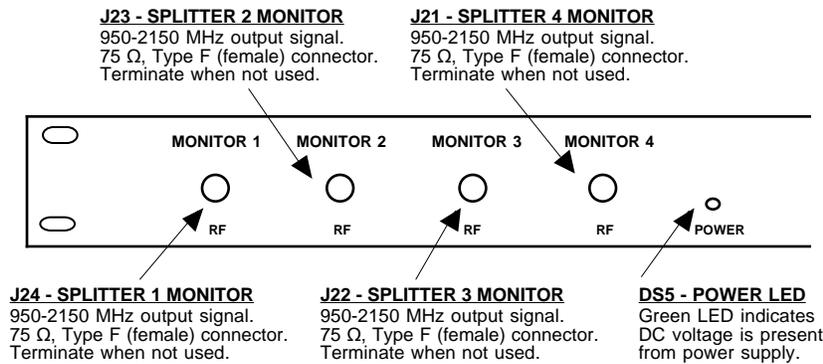


**FIGURE 2.1 1584-45S Rear Panel**

TABLE 2.1 Connector Options	
Option	RF Connector
STD	Type F, 75Ω
B	BNC, 75Ω
D	BNC, 50Ω

## 2.3 Front Panel Monitors and Indicators

Figure 2.2 shows the front panel monitors and indicators.

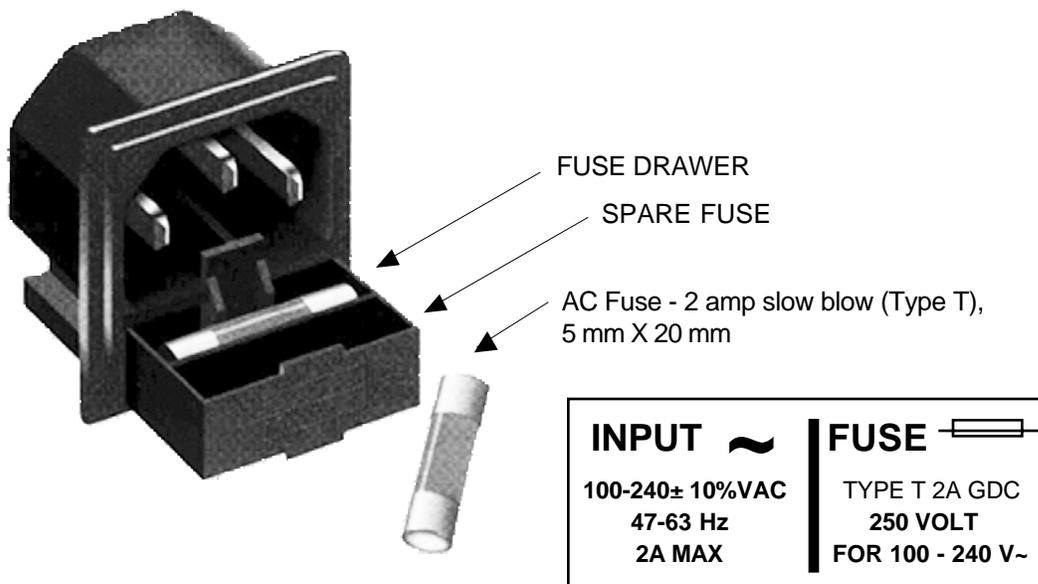


**FIGURE 2.2 1584-45S Front Panel**

## 2.4 Operation

1. Connect RF cables to the 1584-45S (Figure 2.1).
2. Connect 100-240  $\pm$ 10% VAC, 47 - 63 Hz to AC on the back panel and observe that the AC POWER LED is lit on the front panel (Figure 2.2).
3. Monitor RF signals on the front panel monitors to insure proper signals (Figure 2.2).
4. AC Fuse - The fuse is a 5mm, 2 amp fast blo and is inserted in the far slot in the drawer below the AC input as shown in Figure 2.6. There is a spare fuse in the rear slot. If a fuse continues to open, the power supply is most likely defective. Note that the power supply module within the chassis also has a fuse but failure of this fuse indicates the power supply may be defective.

**PLEASE NOTE:** FOR OPTIMUM PERFORMANCE, THE MONITOR PORT AND SPLITTER PORTS SHOULD BE TERMINATED WITH 75 OHM TYPE F TERMINATIONS WHEN NOT USED.



**FIGURE 2.6 Fuse and Spare Fuse Locations**

## 2.5 Environmental Use Information

- A. **Rack-Mounting** - To mount this equipment in a rack, please refer to the installation instructions located in the user manual furnished by the manufacturer of your equipment rack.
- B. **Mechanical loading** - Mounting of equipment in a rack should be such that a hazardous condition does not exist due to uneven weight distribution.
- C. **Elevated operating ambient temperature** - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack may be greater than room ambient temperature. Therefore, consideration should be given to Tmra.
- D. **Reduced air flow** - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. Additional space between unit may be required.
- E. **Circuit Overloading** - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits could have on over current protection and supply wiring. Appropriate consideration of equipment name plate rating should be used, when addressing this concern.
- F. **Reliable Earthing** - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connection to the Branch (use of power strips).
- G. **Top Cover** - There are no serviceable parts inside the product so, the Top Cover should not be removed. If the Top Cover is removed the ground strap and associated screw **MUST BE REINSTALLED** prior to Top Cover screw replacement. **FAILURE TO DO** this may cause **INGRESS** and/or **EGRESS** emission problems.



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