

SPSM: “The patented self-healing power routing solution that provides virtually unlimited power to the network”

SPC Technical Specifications & Functions



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Page 1 of 6

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Smart Power Combiner Function

The Smart Power Combiner (SPC) is in reality, two (2) line power inserters (LPI) in the same housing. They function as a standard power inserter to combine the AC line power with the RF power.

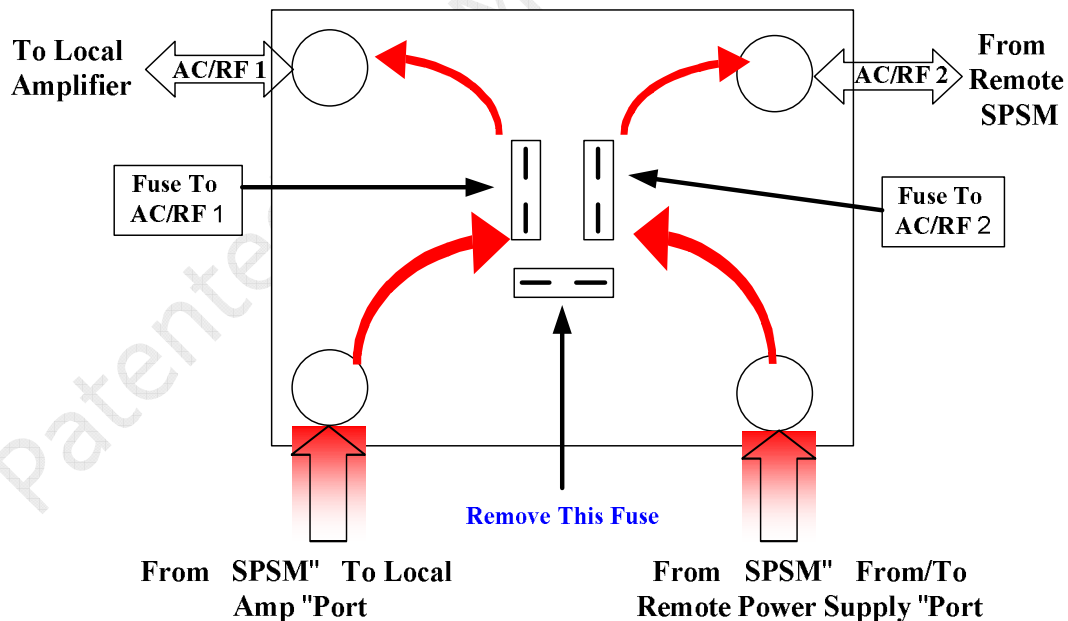
The SPC has two separate parts for two separate AC paths. This allows the SPC to function as follows:

1. It will support two (2) separate power supplies.
2. It will support one (1) standard power supply or one dual power supply.

The SPC uses three (3), 30 Amp fuses to:

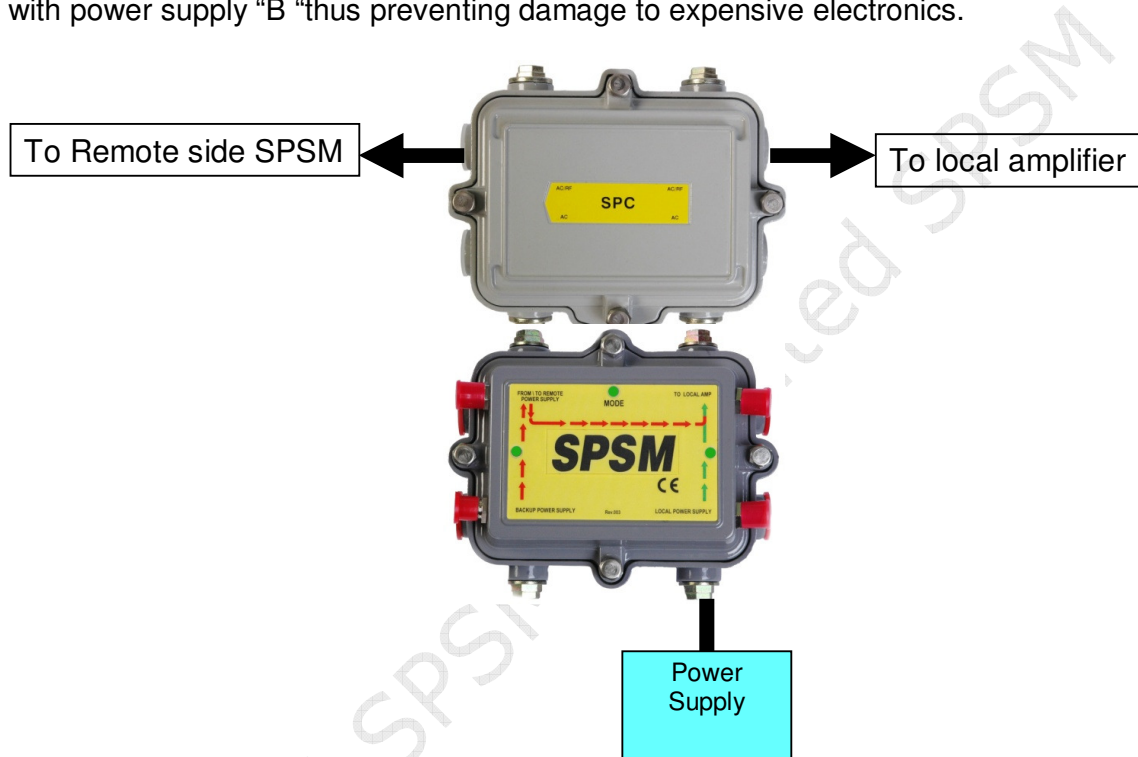
1. Connects the power from AC1 to AC/RF1.
2. Connects the power from AC2 to AC/RF2.
3. Connects AC1 (Or AC2) to both AC/RF1 and AC/RF2.

SPC Block Diagram Inner side Viwe



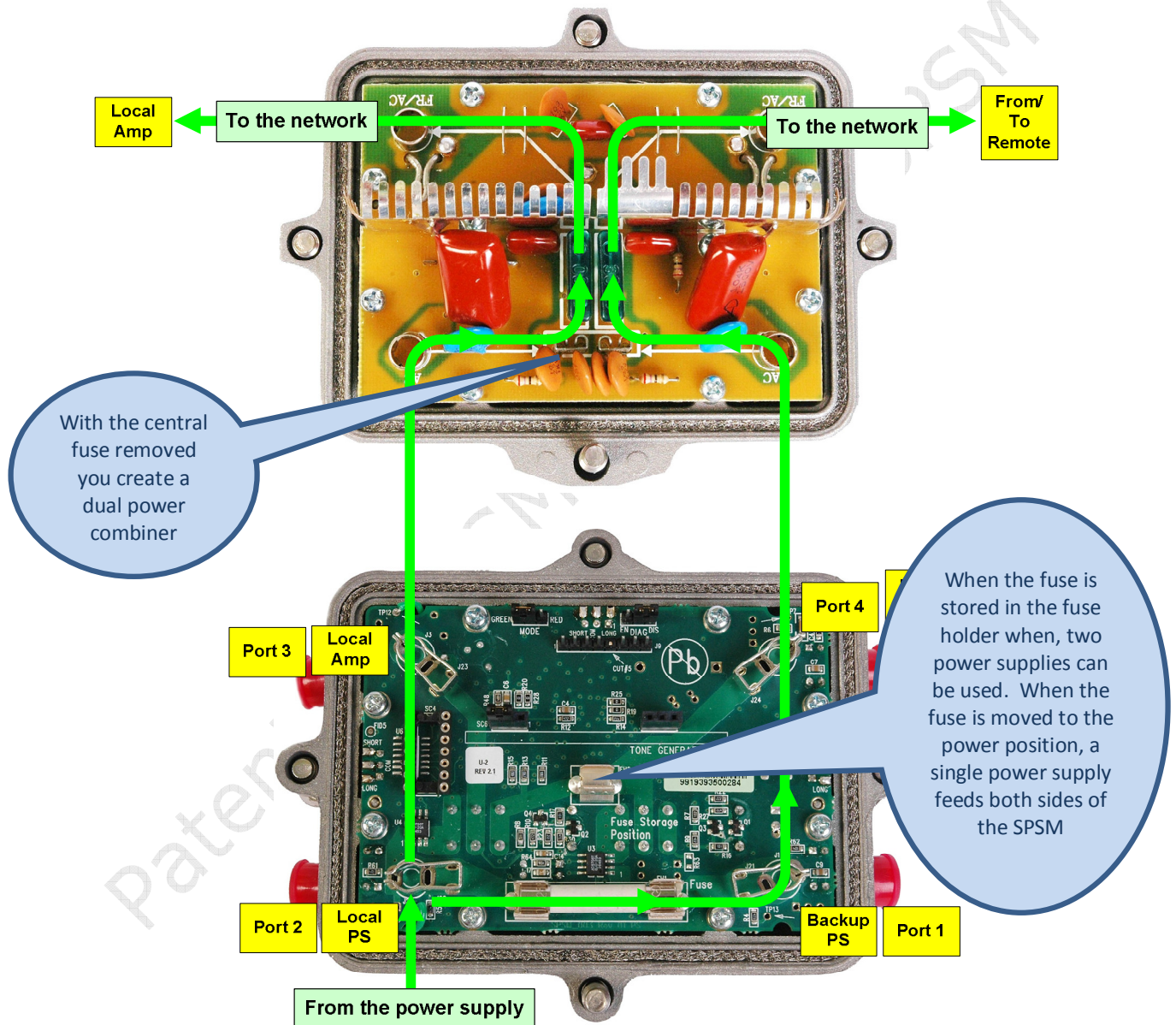
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When using the SPSM backup design for an existing HFC network, the SPC prevents two power supplies or a dual power supply, from routing power through the same location at the same time. The SPC prevents any possibility of this occurring by closing one side of the power circuit preventing power supply “A” from conflicting with power supply “B” thus preventing damage to expensive electronics.



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Dual Power Combiner w/Single Power Supply Input



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SPC Specifications

Through Loss		
Max. [dB] (In to Out)	5MHz	1
	30MHz	0.6
	50MHz	0.5
	100MHz	0.6
	330MHz	0.8
	450MHz	0.9
	550MHz	1
	600MHz	1
	750MHz	1.2
	860MHz	1.4
	1000MHz	1.7

Isolation		
(RF-AC In) Min. [dB]	2-29MHz	65
	30-399MHz	64
	400-599MHz	62
	600-749MHz	60
	750-899MHz	60
	900-1000MHz	60

Return Loss		
Min. [dB]	5-29MHz	16
	30-899MHz	17
	900-1000MHz	16

Hum Modulation		
Max.[dB]	5-49MHz	-60
	50-449MHz	-70
	450-749MHz	-64
	750-1000Mhz	-60

SPC - General Specifications

- Bandwidth 5-1GHz.
- Response +/- 0.35 dB from nominal through loss
- RFI shielding >120dB
- Heavy duty power passing choke 17Amp for each port.
- 90° swivel blocks for easy aerial or pedestal installation.
- Fused outputs ports.
- Stainless steel hardware.
- Cable strip gauges on the housing and heat shrink ridges on the 5/8" X 24 ports.
- 360 die cast aluminum housing & faceplate has been sealed and chromated
- Interlocking tongue/groove housing and plate for excellent RFI isolation
- Port numbers die cast into housing.
- Torque specifications for base plate are 30 to 45 in/lbs or 40.3 to 58.1 kg/cm.
- Impedance 75Ω.