

DIRECTIONAL MULTI-TAPS

SD MST4XX (4) INPUT TAPS

SITUATION

The signals from any (4) polarity DBS dish are required for multiple switches at multiple locations.

SOLUTION

Model **SD MST416**, **SD MST412**, **SD MST409** and **SD MST406** multiple input taps directionally couple a portion of trunk signals to feed single or groups of DBS switches.

RELATED CONSIDERATIONS

Amplifiers are required to increase the signal level from the dish to feed the taps. Model **LAL204A-T** includes automatic gain control for a constant input to the taps. The tap values are 16 dB, 12 dB, 9 dB and 6 dB. Model **SD MST416** tap output is 16 dB less than the input

FEATURES

- CATV / Ka/Ku bandwidth..... 5 to 2150 MHz
- High Isolation adjacent input..... >40 dB
- DC passing Output to Input
- DC blocking Tap Port
- Die Cast case..... (2) 10 AWG Green Ground screws

APPLICATION NOTES

Model **LAL204A** amplifiers may be spaced at (5) floor increments when used with model **SD MST416**, **SD MST412**, **SD MST409** and **SD MST406** tap per floor.

The trunk level is indicated on the left and the tap level output is indicated on the right. The levels are at 250 MHz / 2150 MHz to indicate slope.

Automatic gain simplifies the design and the installation knowing that the amplifier output is -20 dBm when the LED lights are Green.



SDMST416

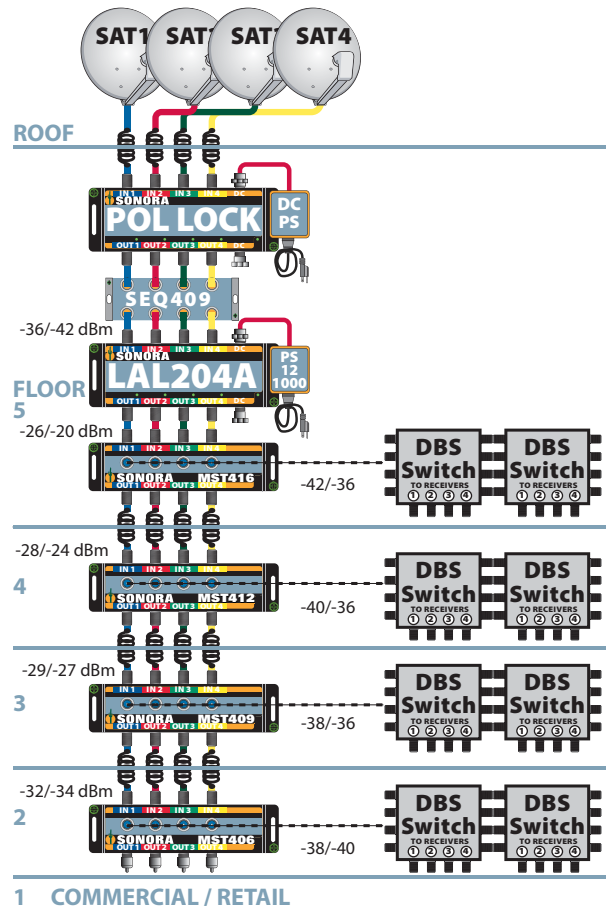
SDMST412

SDMST409

SDMST406

DESCRIPTION

(4) coax, 54 to 2150 MHz DBS directional couplers. DC passive OUTPUT to INPUT. DC blocking at the tap port.



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(4) Input Trunk Directional Coupler (TAP)
5 to 2150 MHz,
6 dB, 9 dB, 12 dB and 16 dB tap values

Model Number		Unit	SD MST606 6 dB MDU Tap	SD MST409 9 dB MDU Tap	SD MST412 12 dB MDU Tap	SD MST416 16 dB MDU Tap
System Impedance		ohm	75			
Operating Frequency Range		MHz	5 to 2150			
Number of Input Ports		Each	(4) SCTE Indoor F , 1 inch spacing			
Number of Output Ports		Each	(4) SCTE Indoor F , 1 inch spacing			
Isolation between ports		dB	> 40 dB			
Input / Output Return Loss		dB	> 12 (min)			
TAP Return Loss		dB	> 10 (min)			
Output Port to Tap Isolation		dB	> 20			
DC Voltage Loss Output to Input		VDC	0.5 max			
DC Power Passing Output to Input only		mA	1000 (max.), Power passes from Trunk Output to Input			
Insertion Loss (min & max over frequency & temperature range)			Min (54 MHz)	(250 MHz)	Typical	Max (2150 MHz)
6 dB Tap	Input to Output Port	dB	3.5	3.5	5.0	5.5
	Input to Tap Port	dB	6.8	6.8	6.7	7.2
	Tap to Input Return Path 5 - 40 MHz	dB	7.0			
9 dB Tap	Input to Output Port	dB	2.0	2.0	3.5	4.0
	Input to Tap Port	dB	9.0	9.0	9.5	10.5
	Tap to Input Return Path 5 - 40 MHz	dB	9.5			
12 dB Tap	Input to Output Port	dB	1.5	1.6	2.7	3.0
	Input to Tap Port	dB	11.8	11.8	12.5	13.2
	Tap to Input Return Path 5 - 40 MHz	dB	13.2			
16 dB Tap	Input to Output Port	dB	0.8	0.9	1.2	2.0
	Input to Tap Port	dB	16.0	16.3	16.5	17.2
	Tap to Input Return Path 5 - 40 MHz	dB	17.2			
Environmental Requirements			Indoor or Lock Box (Note unit shall not be exposed to direct outdoor elements)			
Operating Temperature range		°C	-40 to + 65			
Humidity			Shall survive 95% relative humidity over operating temperature			
Ground Screws		Each	2 Green Screw Ground Points, per NEC 2008 version code 250.126, 10 gauge copper			
Mounting Tabs		Inch	(2) @ 6.25 center to center			
Dimensions L x W x H		Inch	3.5 x 6.75 x 0.9			
Weight		lb	0.9			
Master Carton Quantity		Each	24			