

Remote Antenna Switches for HAM RADIO



Remote Receive Antennas Switch "LBSuper III": 8 Inputs, 1 Output, 3 x BandPassFilters (160/80/40) and 2 PreAmplifiers (each +11 db.)

General specifications:

50Ω or 75Ω design:	<i>Part number: LBSuper III-50 or LBSuper III-75</i>
RF Connectors:	SO-239 (UHF) for 50Ω or F for 75Ω design
8 inputs, 1 output:	BCD controlled relay switch <i>Multiplexer technology ready@</i>
Passive Lightning Protection:	Unselected ports terminated with 4W 50 or 75Ω carbon resistor, allows usage of reversible Beverage antennas and Multiplexers
Active Lightning Protection:	Gas Discharge Tube and 1MΩ bleeding resistor on selected antenna coax input
BandPassFilters selectable:	Three, 7 pole Chebyshev family: 1.8÷2.0Mhz(160m); 3.5÷4.0(80m), 7÷7.2(40m)
Insertion loss in the filter's pass band:	≤ 1,5 dB
VSWR:	≤ 1,5:1
Preamplifiers:	Two, cascade, each can be selected separately, Norton design, Gain 11db each, typically NF ≤ 3.2db, 3 rd Order Intermodulation Intercept +50dBm
Operating power:	Both, band pass filters and PreAmplifiers can be bypassed +13.8Vdc ÷20Vdc at 0.3A total, higher voltage can be required at control consoles with long runs of control cables
Control cable:	12 conductors, 0.35÷0.5mm ² (AWG#20÷#24), wire size depends on a control cable length, number of connectors depends on a usage of all the device features
Control cable connector:	12 pins, IP65 rated, round, metal connector, plug included (<i>can be substituted with Phoenix pluggable connector</i>)
Case:	Die-cast aluminum, rubber gaskets, IP65 rated for the enclosure excluding connectors
Case ground:	M6 bolt with washers, lock washer and nuts
Operating Temperature:	-40 to +65 degrees C
Size:	205 x 125 x 75 mm / 8,1" x 4,9" x 2,9", mounting flanges with four-hole on-center spacing of 189 x 80 (7.44 in. by 3.15 in.)
Net weight:	≤1,0 kg / 2,2 lbs

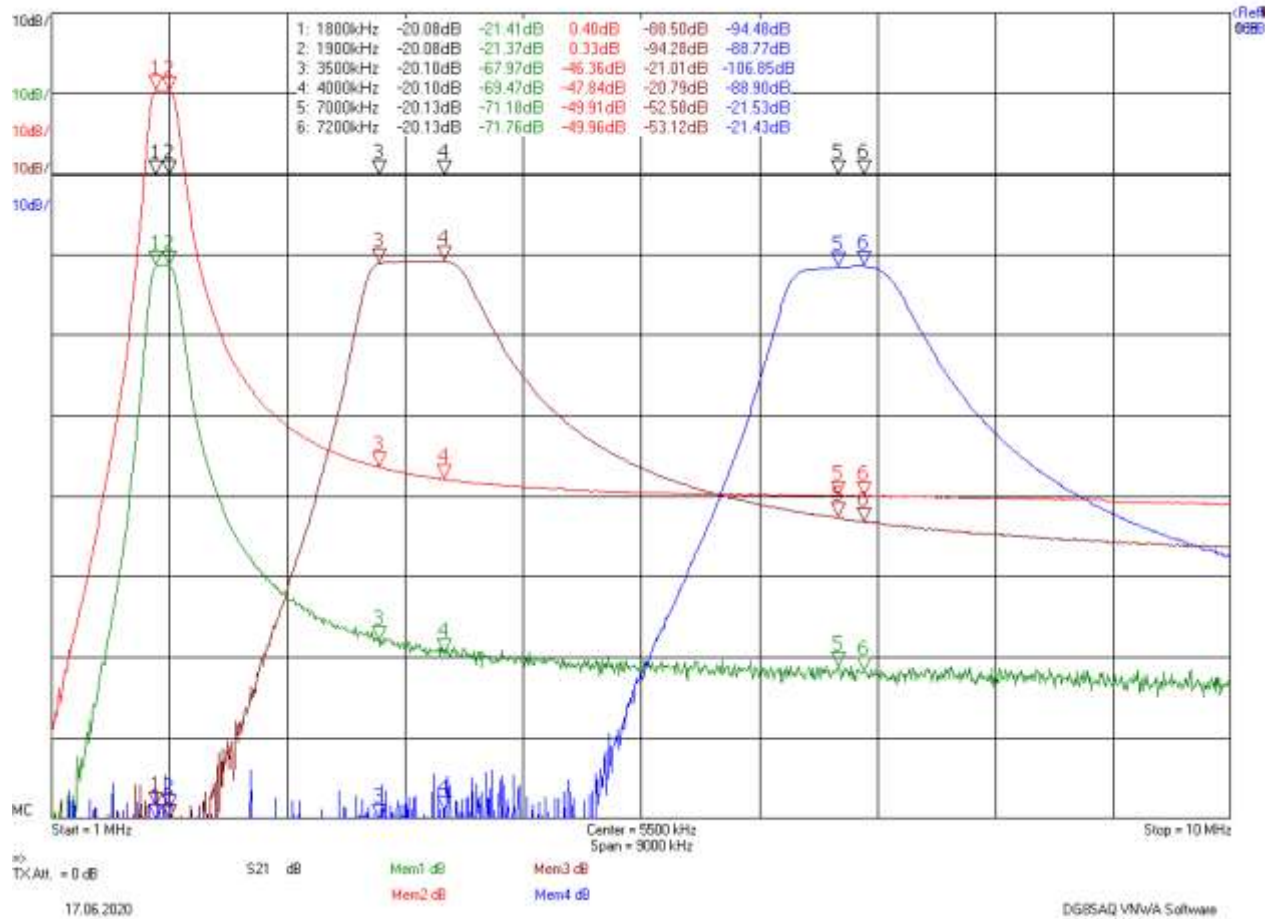


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Serial number #0620-0646 BandPassFilter Adjustments:

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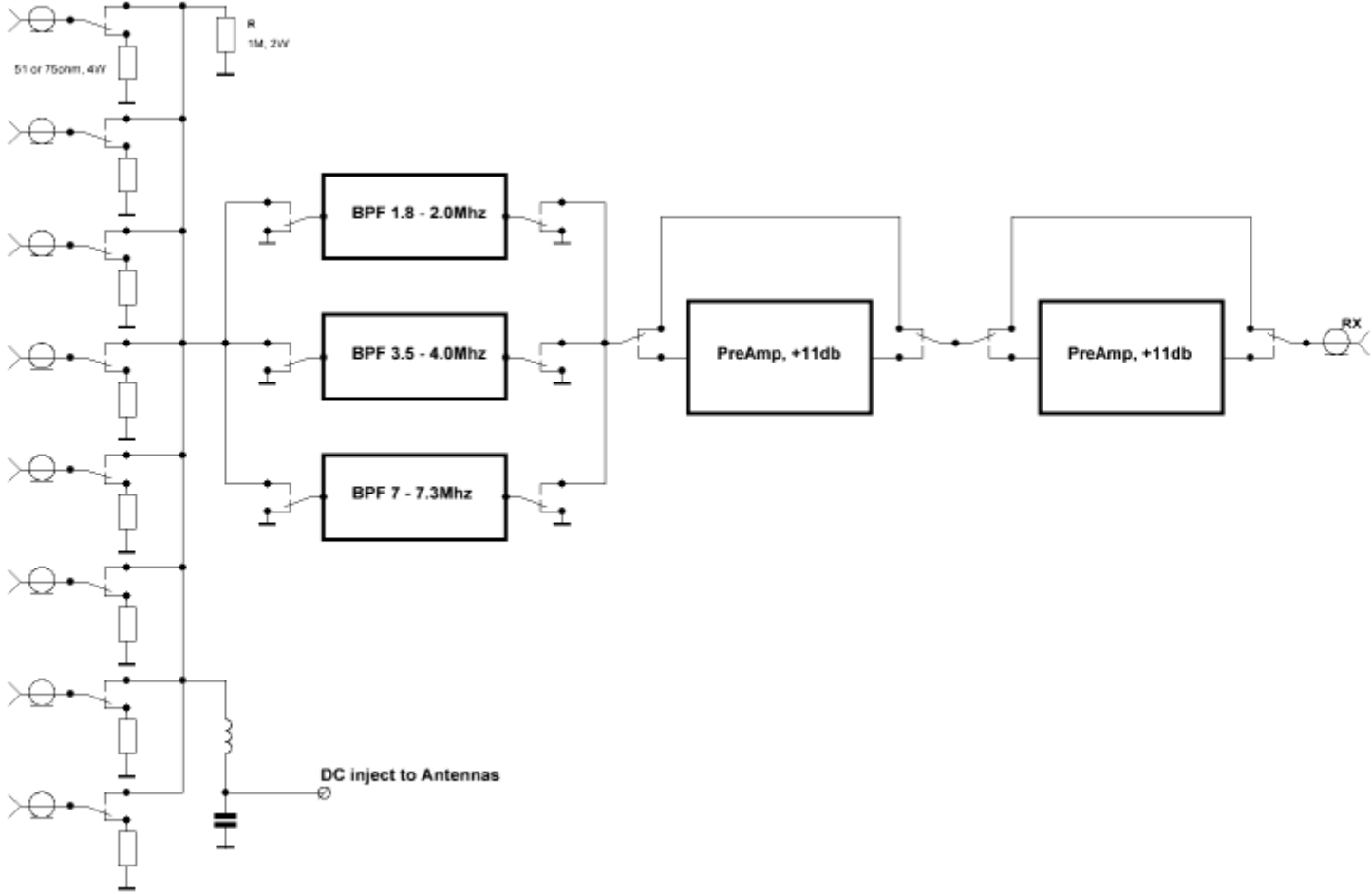
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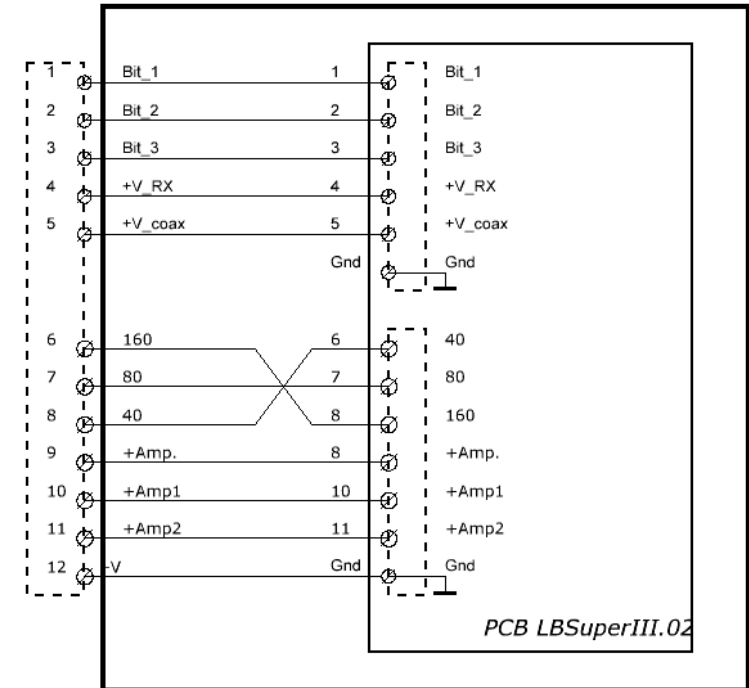
Pins description :

- #1-#3 : BCD control of 8 input relay switch
- #4 : Power for BCD decoder,
can be used to switch OFF antennas on TX
- #5 : DC inject to Antennas
- #6 : Selects 160 m Band Pass Filter
- #7 : Selects 80 m Band Pass Filter
- #8 : Selects 40 m Band Pass Filter
- #9 : +13VDC positive volatge exists when any of the BPF selected
can be used with limited numer of control lines to switch PreAmps
- #10 : Selects PreAmp #1
- #11 : Selects PreAmp #2
- #12 : Common

BCD, 3 bit, (3 wires) truth table in all the LBS gear looks like:

Direction:	Ant. port	Bits: 3-2-1
315 deg.	#1	000
0 deg.	#2	001
45 deg.	#3	010
90 deg.	#4	011
135 deg.	#5	100
180 deg.	#6	101
225 deg.	#7	110
270 deg.	#8	111

LBSuper III remote relay switch



Notes on control voltages:

Each PreAmp has its own voltage regulator to guarantie its features.

Minimum of +13.8VDC required at the pins #1-#11

Depending on the control cable lenght you may higher outputs from your Power Supply

Input stages protection on TX:

Required if transmit antenna is in close proximity with receive antennas.

Receive antenna input can be deselected by switching OFF BCD power line only, pin#4, (use TX Gnd signal of your transmitter).