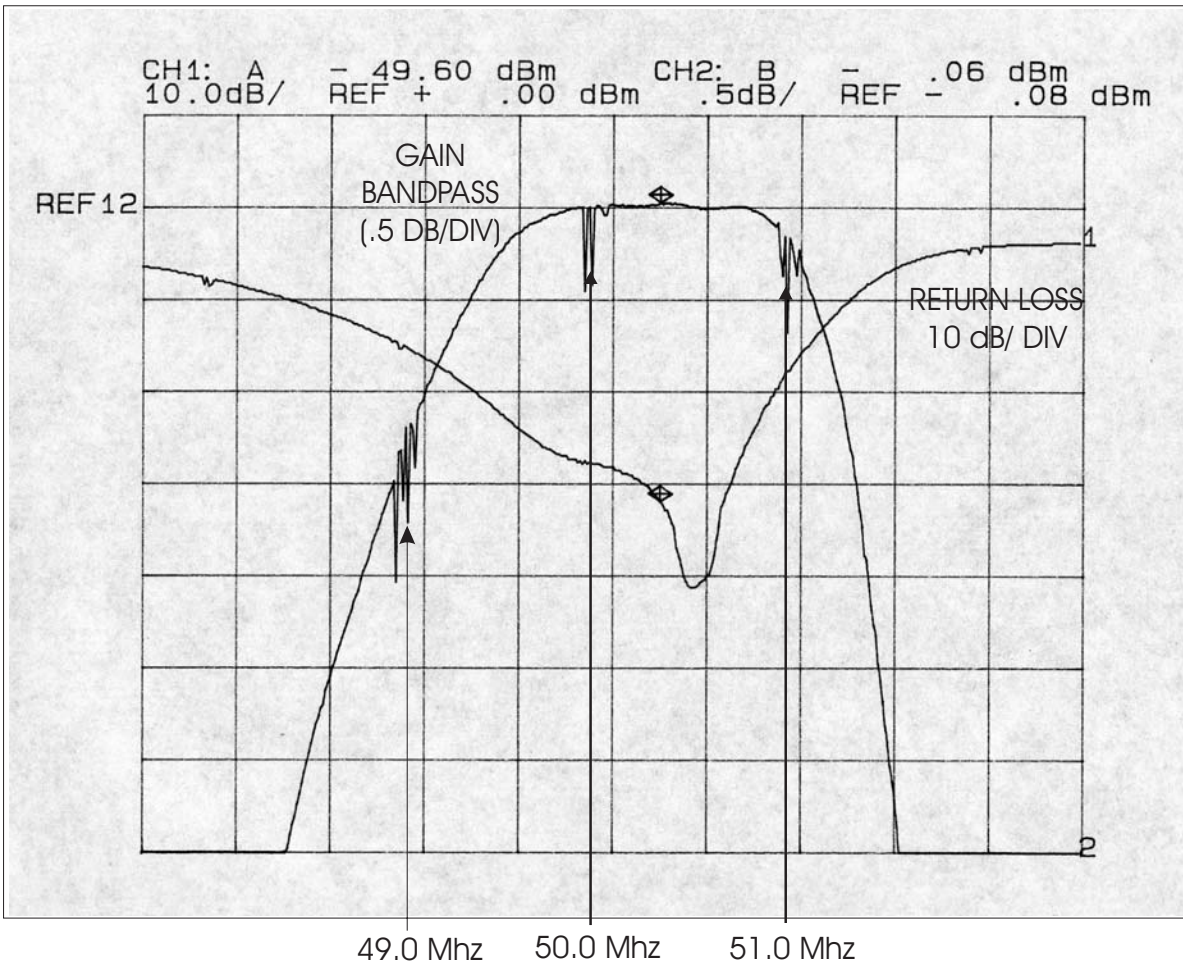




DIRECTIVE SYSTEMS

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DS50-5 50 Mhz 5 ELEMENT YAGI



The DS50-5 has been designed to provide the most bang for the buck: High gain, an unbraced 17 ft boom, and a clean pattern from 50 to 51 Mhz. Gain is flat across the range. (The above curves are 0.5 dB per division!) Performance is good below 50 Mhz to detect video carriers out of the band, but performance drops fast above 51 Mhz. This can help reduce Channel 2 overload problems. Strong channel 2 broadcast transmitters can overload receiver frontends.

SPECIFICATIONS

GAIN: dBd	9.1 dBd	Weight, Lbs.:	19.0 shipping weight
Frequency	49.0 - 51.5 Mhz	Wind area, sq ft.:	1.9
F/B ratio	20 dB	Boom Diameter:	1.5" and 1.375"
Impedance:	50 Ohms	Element dia.:	0.75" taper to 0.500"
Connector:	Type "N" female, UG-58/U	-3 dB bw. E, H	45°, 60°
Power Rating:	1500 watts	Sidelobes, -dB:	E: -20, H: -16 <i>worst case</i>
Boom Length:	17' 4"	Stacking Dist. Ft.	13ft min 19 ft max (vert)

PARTS BAG DS50-5

QUANTITY	DESCRIPTION	QUANTITY	DESCRIPTION
7	U-bolt, SS. 1/4-20 x 1 1/2"	2	8-32 x 3/4" machine screw
14	Nut, SS.1/4-20	10	8-32 SS.hex nut
14	Lock washer, split, SS. 1/4"	10	#8 SS. split lock washer
5	block, element, mach. Aluminum	4	5/16-18 SS. Hex nut
2	Hose clamp, SS. 1 5/8"	4	5/16-18 SS. Split lock washer
10	Hose clamp, SS. 3/4"	2	5/16-18 SS. U-bolt
4	8-32 x 1 1/4" machine screw (T-match bars)		
2	8-32 x 2" machine screw (boom pinning)		

PARTS LIST DS50-5

QUANTITY	DESCRIPTION
5	Element, 5/8" x 0.058" wall x 48" long (center section) drilled for 1 1/2" u-bolt
4	Element insert, 1/2" OD x 0.058" wall x 38" long, aluminum (Refl & DE)
2	Element insert, 1/2" OD x 0.058" wall x 34" long, aluminum (Dir #1)
4	Element insert, 1/2" OD x 0.058" wall x 32" long, aluminum (Dirs 2&3)
1	Balun assembly. RG-142/U teflon coax, with lugs attached, 83.5" long
1	Boom assembly, 1 1/2" OD x 0.058" wall, x 72" long, mid boom section
2	Boom assembly, 1 3/8" OD x 0.058" wall, x 72" long, end boom section
1	Boom to mast bracket, 3" x 5" extruded aluminum, drilled for 2" u-bolts
1	Driven element assembly, assembled with UG-58/U connector & insulators
2	T-match rods, 1/4" x 28 1/4" aluminum rod, drilled one end
2	T-Match bars, machined aluminum, 1" x 3/8" x 3 1/4" drilled 5/8 & 1/4"

ASSEMBLY INSTRUCTIONS

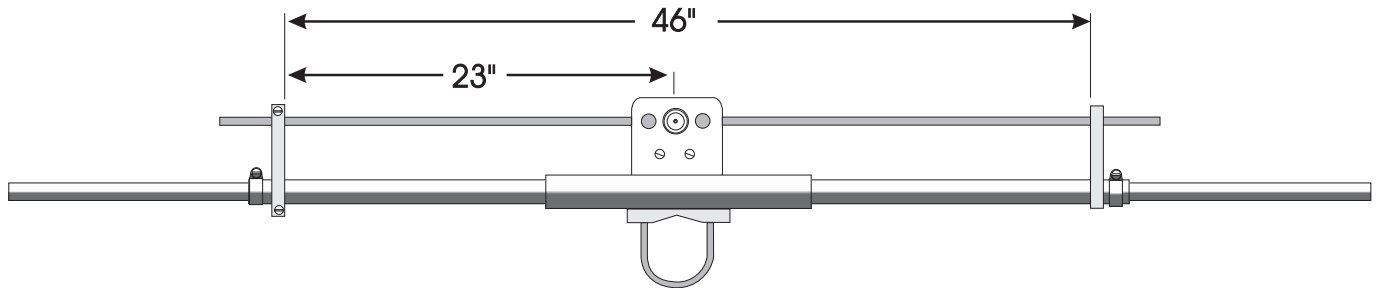
1. Locate the element pieces. Slide the 1/2" dia. End pieces into each end of the 5/8" drilled mid sections. Use the 5/8" worm clamps to tighten the end pieces according to the drawing. Note that each element length is marked, and that the longer 1/2" dia pieces are installed on the reflector and driven elements. Locate the two T-match bars, 1" x 3/8" x 3 1/4" aluminum, and position them on the 5/8" dia. Driven element center section. Leave them loose. They will be set later. Tighten all hose element clamps.
2. Assemble the boom sections. The 1 1/2" mid section is slotted for the 1 1/2" ss worm clamps. Use the 8-32 x 2" hardware to pin each section as you align the marks and slide the 1 3/8" dia end sections into position. Booms are marked for easy assembly.
3. Assemble all elements on the boom according to the drawing. Note that there is 1" from the end of the rear boom and the reflector. The last director, will be one inch from the front end of the boom. Do not attach the driven element yet.
4. Locate the driven element connector assembly and locate it on the driven element with the connector side facing the front of the antenna. Tighten the u-bolt on the driven element, and install the T-match rods, (1/4" x 28 1/4" long) to the insulator posts. Observe the drawing on page 1 and attach the drilled ends to the 4-40 machine screws that extend from each insulator. (The hardware is already pre-installed there. Set the T-match dimensions as shown on page 1. Attach the balun now as well. Coil the balun in a 3-4" dia and tape to the boom.
5. Attach the 1 1/2" u-bolts and 2" u-bolts to the boom to mast 3" x 5" bracket and locate it at the balance point of the antenna. Connect and tape your main feedline to the connector. Seal it well, and tape coax to the boom.



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DS50-5 50 MHz Yagi



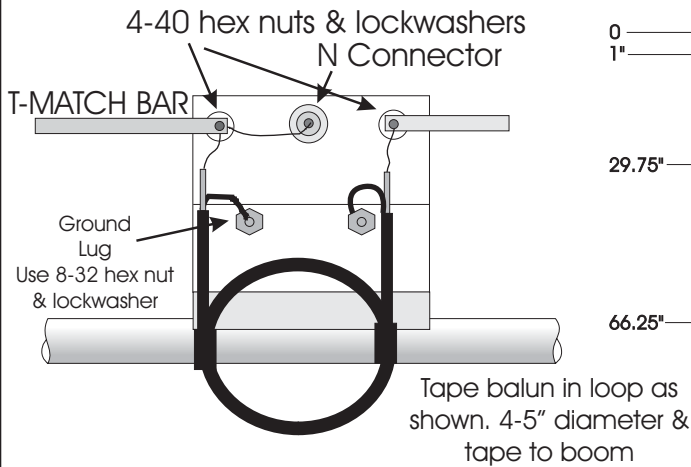
Each element consists of:

5/8" o.d. X 0.058" X 48" aluminum tube, slotted each end. one piece

1/2" o.d. X 0.058" X 38" aluminum tube, two pieces (on REF & DE)

1/2" o.d. X 0.058" X 34" aluminum tube, two pieces (on DIRECTOR 1)

1/2" o.d. X 0.058" X 32" aluminum tube, two pieces (on DIRECTOR 2&3)



T-Match detail

The driven element bracket contains an N connector with a short wire and lug attached to the lefthand insulator post, as viewed from the back of the connector. When stacking more than one antenna, it is important that both antennas have the lug attached to the same side when the antennas are in the final position. Failure to do this will result in out of phase condition with poor results.

