

# Directive Systems & Engineering

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## PRELIMINARY INFORMATION

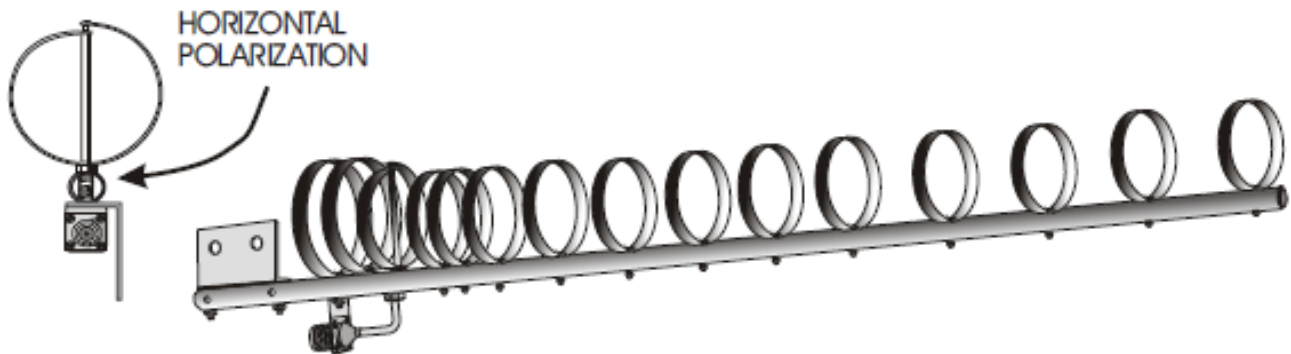
### 2300-2500 MHz Loop Yagi (Rear Mount), Model DSE1215LYRMK

#### SPECIFICATIONS

Frequency range:	2.30 to 2.50 GHz	Gain:	15.5 dBi
Number of elements:	15	3 dB Beamwidth	
Boom length:	24 inches	(E plane):	27°
Boom diameter:	0.5 inches	F/B ratio:	≥24 dB
Mast diameter:	1 1/2 in. max	Maximum Power:	400 W average
Weight: (assembled)	2 pounds assembled	Stacking distance:	9 inches vertical
Connector:	Type-N female		9.75 in. horizontal

#### PARTS LIST

Quantity	Description	Quantity	Description
1	drilled boom	1 pkg	4-40 stainless steel screws, nuts, lock washers, 8-32 hardware
2	reflectors 1&2		
1	driven element		
5	directors 1-5	1	small 3/4 x 1 3/4" boom to mast bracket
5	directors 6-10		
4	directors 11-14	1	U-bolt with nuts & saddle
4	directors 15-18	1	Cable assembly w/connector

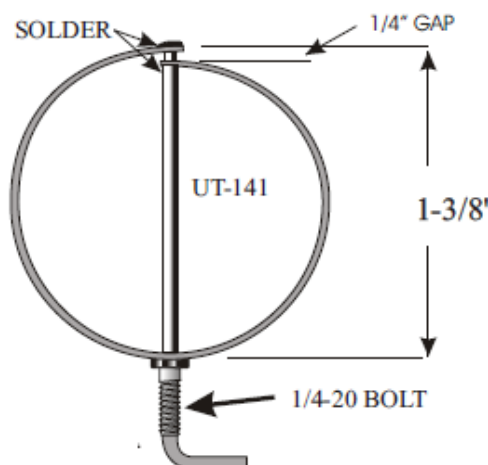


## ASSEMBLY INSTRUCTIONS

- 1) Attach loops to the boom with 4-40 x 3/4" screws, lock washers and nuts in proper sequence. Loops go on the side of the boom marked "TOP" or "X". When tightening the nuts on the parasitic elements, be careful not to torque them too tightly. Snug down the nuts, align the elements and use a screwdriver for the final tightening. A 1/4" nut driver is almost mandatory for this job! Attach the driven element with the 1/4-20 stainless steel nut. If only a single antenna is being built, it does not matter which way the loop is oriented. If antennas are to be stacked, see "Instructions for Stacking Loop Yagis."
- 2) Attach the boom-to-mast angle bracket and 8-32 x 1" hardware on the rear of the boom. Install U-bolt in the mast plate.
- 3) Install the connector-cable assembly through the hole in the driven element mounting bolt and solder the coax ends to the ends of the loop. Solder the inner conductor first. Bend the connector bracket rearward and secure it to the boom with a 3/4" machine screw in the hole between the two reflectors. (Refer to the diagram on page 2) Attach the feedline and tape it to the mast. Seal all connections with silicone RTV or equivalent.
- 4) The SWR should be 1.5:1 or better from 2250 -2350 MHz. Additional tweaking can be accomplished by adjusting the distance between the driven element and R1 or by adjusting the shape of the driven element.

### ASSEMBLY TIPS:

The boom diameter is 0.5 inch, and it is drilled for 4-40 hardware (no. 33 drill bit). The driven element hole is enlarged to 1/4 inch. All elements are 0.032 inch thick and 0.250 inch wide. Note that the element spacing from D7 on is 2.0025 inches. To bend elements, wrap the strip around a suitable form (such as a piece of pipe or tubing). The driven element is formed in the same way then soldered to the mounting bolt as shown. The feed coaxial cable (0.141 inch semi rigid) goes through the mounting bolt and is soldered to the open ends of the element. For best match, the driven element should be approximately 1.375 inches high; this makes it wider than it is tall. This shape can be adjusted for best match. This antenna is based on work done by G3JVL.



## Directive Systems Warranty Policy

All Directive Systems antennas are built with the finest materials available. We take great pride in building a quality product that will give years of good service and performance. If there is a defect in materials or workmanship within 90 days of purchase, Directive Systems will repair or replace, free of charge, the defective part. **DO NOT RETURN ANYTHING WITHOUT PRIOR AUTHORIZATION FROM DIRECTIVE SYSTEMS.** Please contact us either by phone or email describing the problem and we will work to resolve it. If, after examining a new antenna you received, you are not satisfied, contact us immediately for return authorization and refund. **ANY ANTENNA THAT HAS BEEN MODIFIED WILL BE SUBJECT TO A RESTOCKING CHARGE. IF AN ANTENNA IS SO MODIFIED AS TO MAKE IT UNUSABLE, DIRECTIVE SYSTEMS RESERVES THE RIGHT TO REFUSE TO ACCEPT THE ANTENNA FOR RETURN.**