

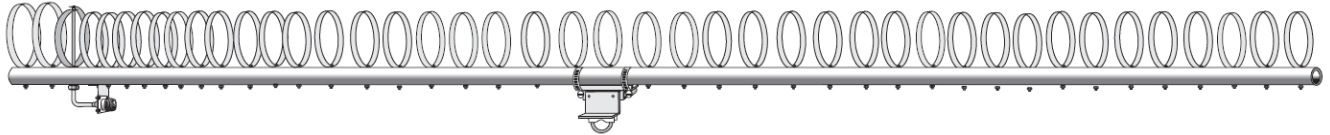
# Directive Systems & Engineering

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703-754-3876

## 1421 MHz (HYDROGEN LINE) Loop Yagi, Model DSE2145LY



### SPECIFICATIONS

Frequency Range:	1.40-1.44 GHz
Number of elements:	45
Boom Length:	132 inches
Boom diameter:	.75 inch
Mast diameter:	1 1/2-inch maximum
Weight:	3 pounds
Connector:	Type N female
Gain:	$\cong 20.0$ dBi
3 dB Beamwidth (E Plane):	$= 16^\circ$
F/B Ratio:	$> 20$ dB
Maximum Power:	400 W. average
Stacking distance:	22 inches Vertical 24 inches Horizontal

### PARTS

*Note: All hardware is Stainless Steel unless otherwise noted.*

1	Swivel Mount Assembly
2	1" Hose Clamp
1	1 1/2" U-Bolt
1	Saddle
2	1/4-20 Hex Nuts
2	1/4" Lock Washer
1	Anti-Seize Compound

**Anti-Seize Compound** - Apply a small amount of the supplied Anti-Seize Compound to the aluminum joints and to the threads of the U-Bolts to prevent galling.

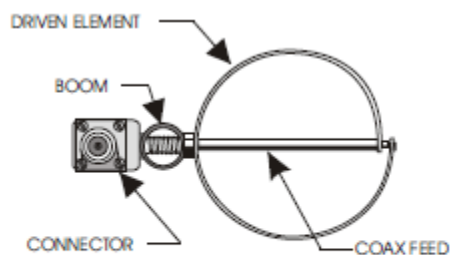
**BEFORE INSTALLING YOUR NEW ANTENNA, PLEASE BE SURE  
TO READ THE ENCLOSED WARNING PAMPHLET.**

## ASSEMBLY INSTRUCTIONS

- 1) Unpack antenna and locate the hardware package. Antennas are shipped in two sections, with the splice between Directors 20 & 21. Remove D21 from the rear boom section and slide the two boom pieces together, using the alignment marks. Replace D21 and tighten.
- 2) Straighten any misaligned elements and tighten hardware if necessary. **But do not touch R1, DE or D1, as these are factory set.**
- 3) If the boom-to-mast "L" bracket isn't already attached to the swivel bracket, do so now with the hardware provided. (See diagram on opposite page. Polarization may be easily adjusted by loosening the two hose clamps. Hydrogen line radiation is mostly randomly polarized.)



**HORIZONTAL  
POLARIZATION**  
(Can be up or down)



**VERTICAL  
POLARIZATION**  
(Can be left or right)

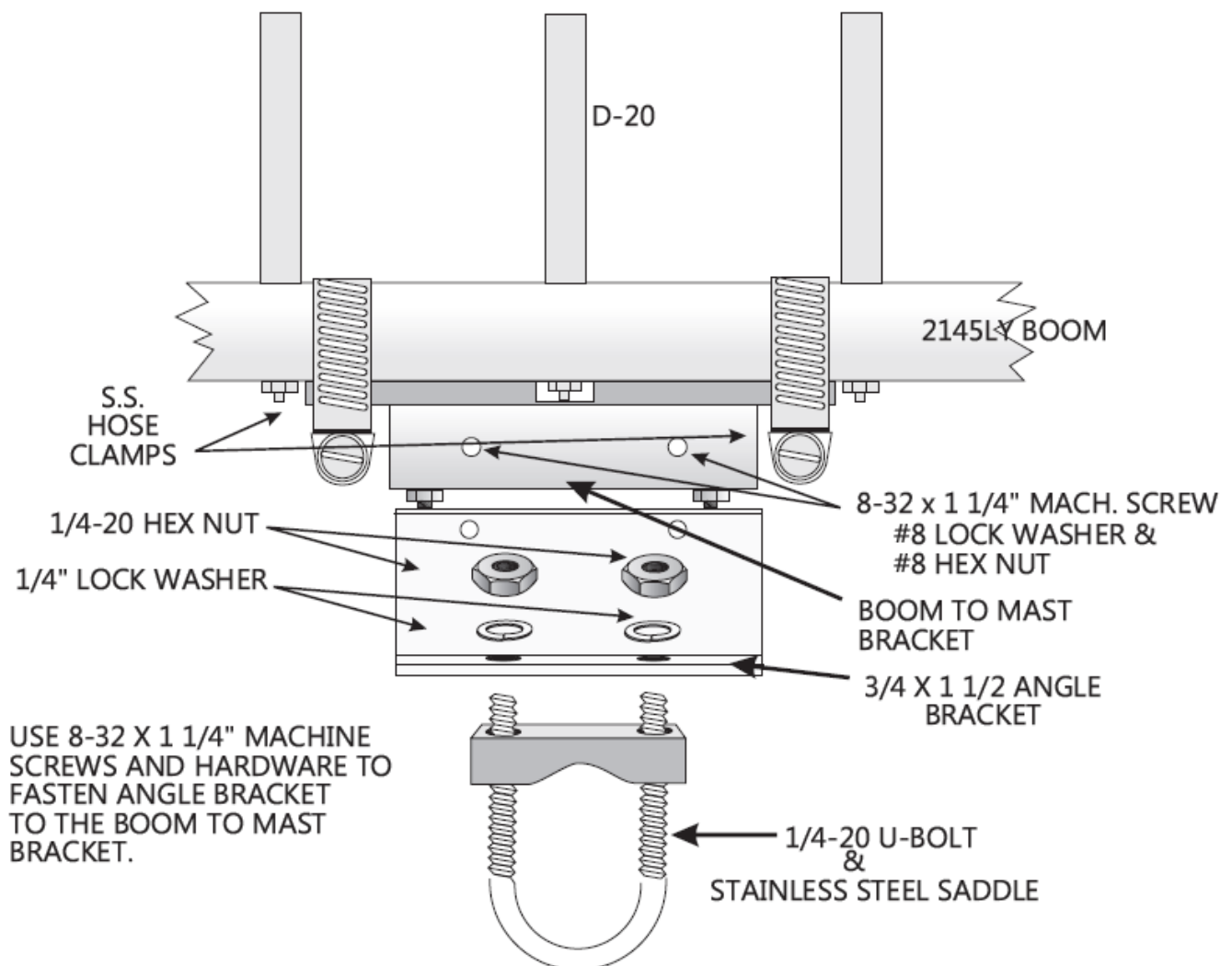
- 4) Attach the feed line and tape it to the bottom of the boom. The connector should be sealed with electronic grade RTV or equivalent.
- 5) The antenna SWR has been adjusted for less than 1.5:1 at the factory. Additional tweaking can be accomplished by adjusting the distance between the driven element and R1 and D1, or by slightly adjusting the shape of the driven element. **NOTE: Do not attempt this adjustment unless the proper equipment and qualified personnel are available.**
- 6) If antennas are to be stacked, see "Instructions for Stacking Loop Yagis"

**DO NOT, UNDER ANY CIRCUMSTANCES, APPLY ANY TYPE OF SEALANT OR COATING TO THE DRIVEN ELEMENT, T-ARMS OR CONNECTOR ASSEMBLY, OTHER THAN KRYLON® CLEAR COAT. ANY OTHER COATING WILL ADVERSELY AFFECT THE SWR AND VOID YOUR WARRANTY.**

## 1421 MHz Loop Yagi Model DSE2145LY Mounting

The 2145LY loop yagi (1421 MHz HYDROGEN LINE) is fitted with a special adjustable polarization mount so that your antenna polarization can be adjusted for best results. The mounting center for the antenna is at Director20. The 2145LY is provided with two stainless steel hose clamps that hold the boom to the Boom to Mast Bracket. The boom fits into a saddle on the bracket and by loosening the clamps, the boom can be rotated nearly 90 degrees clockwise or counter clockwise. In this manner, the polarization of the antenna can be set to match that of the incoming signal for maximum reception. When max signal strength has been realized, tighten the two hose clamps to prevent further movement.

The mounting bracket allows elevation control when mounted on a horizontal support mast of up to 1 1/2 inches in diameter. See diagram below.



## 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 the defective part, free of charge, to the original purchaser. **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.**