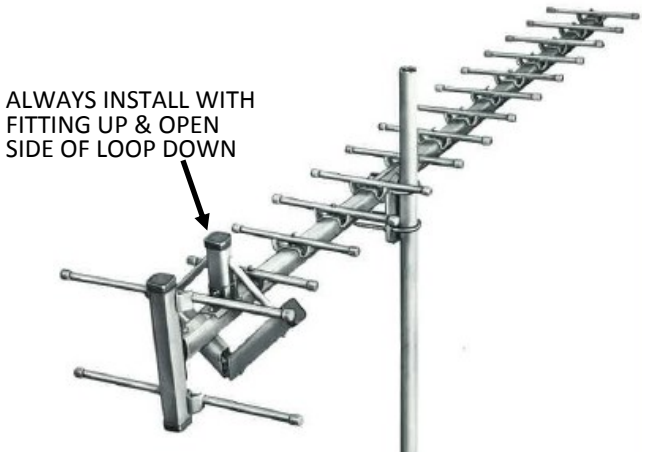
J-SERIES

UHF MATV ANTENNAS

MODEL: J275D-*-K



Description:

J-Series UHF antennas are heavy duty, 75-ohm units, specifically designed for master antenna (MATV) systems. The unique diamond loop driver provides both horizontal and vertical directivity with excellent impedance and true coaxial match across the UHF range. The vertically spaced reflectors maintain high front to back ratios across the band. The 13 directors, which are cut to one of seven sub-bands, offer high gain and Yagi-like performance characteristics.

Each antenna has a 75-ohm threaded 'F' type output connector and is supplied with all necessary installation hardware, one Jerrold Model F-659 (pat, pen.) universal coaxial connector and one Model WB-61 weatherboot with sealing ring.

Installation

Material and Tools Required:

It is assumed that a sturdy, properly grounded mast of up to two inches in diameter is already in place.

1. Sufficient 75-ohm coaxial cable such as RG-59/U, Jerrold CAC or RG-6/U , for preparing a down-lead

NOTE: Where the down-lead run is long, RG-59/U cable may incur excessive losses in the UHF band. Jerrold CAC or RG-6/U cable is therefore recommended.

2. One additional Jerrold Model F-659 adjustable fitting.
3. A 7/16 inch nut-driver.
4. A 1/2 inch nut-driver or wrench.
5. A 7/16 inch open-end wrench.
6. Cable preparation tools: a ruler with a 1/16 inch divisions; a pair of wire-cutters; a small file; a Jerrold Model PL-659 crimping tool.

Assembly and Mounting:

1. Tap the end-plugs onto the ends of the tubular director elements, if desired, and assemble the elements to the crossarm using a single long hex-bolt as shown in Figure 1. Do not over tighten the hex bolts

2. Loosely assembly the dual 'U' bolt mounting bracket onto the crossarm as shown in figure 2.

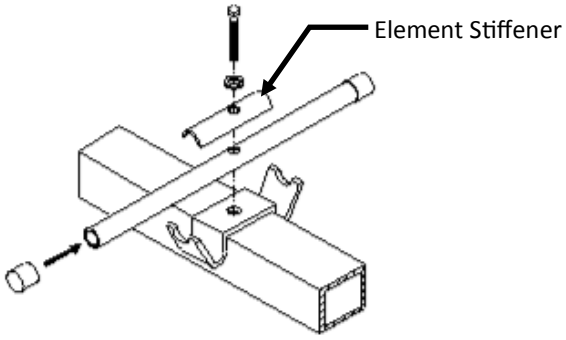


Figure 1: Director Assembly Detail

SPECIFICATIONS

Model J275D- (specified channels)	14-27	28-35	36-42	43-50	51-60
FREQ. RANGE (in MHz)	470-550	550-600	600-650	650-700	700-750
GAIN	12dB				
IMPEDANCE	75-OHM				
FRONT-TO-BACK RATIO	20dB				
DIRECTOR ELEMENT LENGTH (in inches)	5.5 to 8.5, dependent upon frequency				
WINDLOAD	85 mph: w/ 1/4 Inch radial ice = 52lbs: w/ no ice = 34lbs 100 mph: w/ 1/4 Inch radial ice = 71lbs; w/ no ice = 46lbs				
TURNING RADIUS	44 inches				
AVG. SHPG. WGT.	7 pounds				

3. Lift the antenna into position, hold it upright, with the output terminal facing up as shown in the photo, and slide its 'U' bolt assembly onto the mast

4. Orient the antenna in the desired direction, than tighten the hex-nuts on the 'U' bolts sufficiently for supporting the antenna.

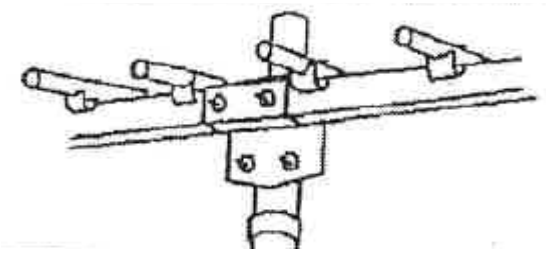
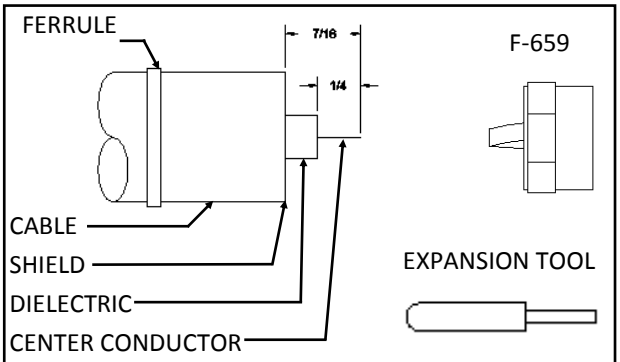


Figure 2: Mounting Detail

DOWN-LEAD CONNECTION:

1. Cut the required length of coaxial cable for the down-lead, slip the weatherboot small end first onto one end and press the sealing ring onto the antenna output fitting.

2. Prepare cable ends as shown in Figure 3.



A. Remove 7/16" of the outer jacket.

B. Fan the shield back over the outer jacket, the trim the shield close to the jacket.

C. Remove 1/4" of dielectric; do not nick the center conductor

D. Scrape off any fuzz from the surface of the center conductor and file of any burns from its end.

Figure 3: Preparation of Cable

3. Install the F-658 connectors on the cables as follows:

A. Where RG-59/U type cable is employed, slip the ferrule over the cable end and push the connector mandrel between the cable dielectric and shield until the mandrel is completely covered. Next, position the ferrule over the enclosed mandrel and crimp the ferrule with a Model PL-659 crimping tool.

B. Where RG-6/U type cable is employed, first expand the mandrel by inserting the plastic tool provided into the threaded end of the connector and pushing it all the way through the mandrel. Then proceed as in step 3A.

4. Install the cable fitting onto the antenna connector, hand tighten, then wrench-tighten the fitting not more than 1/6 of a turn.

5. Apply a liberal coating of Silicone weather-proofing compound to the connection, then slide the weatherboot fully over it.

6. Run the down-lead to the 'head-end' or distribution equipment according to standard practice, using tape and appropriate insulated staples as required.

NOTE: Route down-lead cable from fitting to crossarm in a smooth arc and tape to the crossarm and mast.

FINAL ORIENATION:

Rotate the antenna until maximum signal strength is received, then fully tighten the hex-nuts on the 'U' bolt assembly.

ARRAYS OF CUT_TO_CHANNEL MODELS:

J-Series antennas may be 'stacked' both vertically and horizontally for greater gain and directivity. It is essential that the spacings given below in Figure 4 and Table 1 be strictly adhered to for best possible results. The feeds of all antenna within the array must face in the same direction for proper polarity.

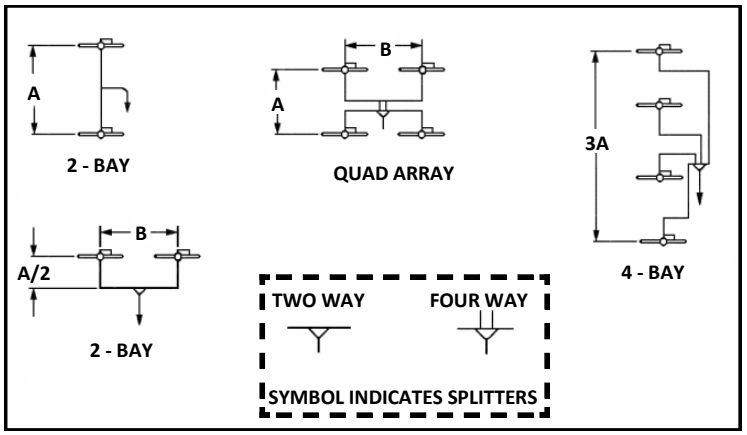


Figure 4: Array Spacing of "J-Series" UHF

Channels	14-27	28-35	36-42	43-50	51.60
Dimensions "A" (in.)	36"	32"	30"	28"	26"
Dimensions "B" (in.)	40"	35"	33"	31"	29"

TABLE 1: ARRAY SPACING

Splitting harnesses may be made from any good quality 75-ohm coaxial cable such as RG-6/U and Jerrold Model F-659 (pat. Pend.) adjustable coaxial connectors. Jerrold Model 1596B two-way or Model 1597 four-way UHF splitters are recommended. These should be used with Model HB-1 outdoor housings for weather protection. Instructions for Use are supplied with each splitter. Consult your Jerrold dealer. Each leg of the harness should be as short and directly routed as practical with no sharp bends, lengths is not critical. However, the pairs of input cables for each 1596B splitter or pair of splitters must be of equal length: the four input cables for Model 1597 splitters must also be of equal length.

NOTE: THIS ANTENNA CAN BE CONVERTED TO A CANTILEVER MOUNT BY APPLYING A CANTILEVER KIT "CL-50"