

# Installation Instruction

## Model G7-144

### Warning

INSTALLATION OF THIS PRODUCT NEAR POWER LINES IS DANGEROUS.  
FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS.

### ASSEMBLY INSTRUCTIONS

1. Check package contents against illustration to insure all items are included.
2. Refer to Figure 1 and install the four radials. This is accomplished by inserting the four #4405-1 screws through the #5357 plate and through the #3553-12 radials then two to three turns into the cast aluminum base. When the radials are properly aligned, tighten down the screws. Add the yellow caps to the ends of the radials.
3. Assemble the vertical radiator section per illustration
4. Mount the antenna on a 1" to 1 3/4" diameter mast with the u-bolts supplied.
5. Before you attach your cable be sure you have an N type connector on the cable and not PL-259 connector because the connector on the antenna is an N type.

### TUNING INSTRUCTIONS

After the assembly is complete, install a dependable watt meter at or near the feed point of the antenna. The G7-144 utilizes a 5/8 wave lower, 5/8 middle, 5/8 upper collinear radiator which has been spaced for optimum low angle radiation.

The dimensions shown in the illustration (47 1/4, 45 and 46 1/2) are for tuning the G7-144 to 146.5 MHz. To tune the antenna to some other frequency in the band, loosen the clamp of the bottom radiator and adjust the length until the reflected power of V.S.W.R. is obtained.

Secure this clamp. Loosen the clam of the middle radiator and adjust this length until the lowest possible reading is obtained.

Repeat the same procedure for the upper radiator.

Secure all hardware and clamps

Before final installation, if desired, coat the entire antenna with the exclusion of the rf connector with a good grade acrylic lacquer such as "Krylon".

The total useable bandwidth is more than 2MHz under 1.5:1 without degradation of gain which makes the antenna idea for duplex operation.

### Newtronics Limited Warranty

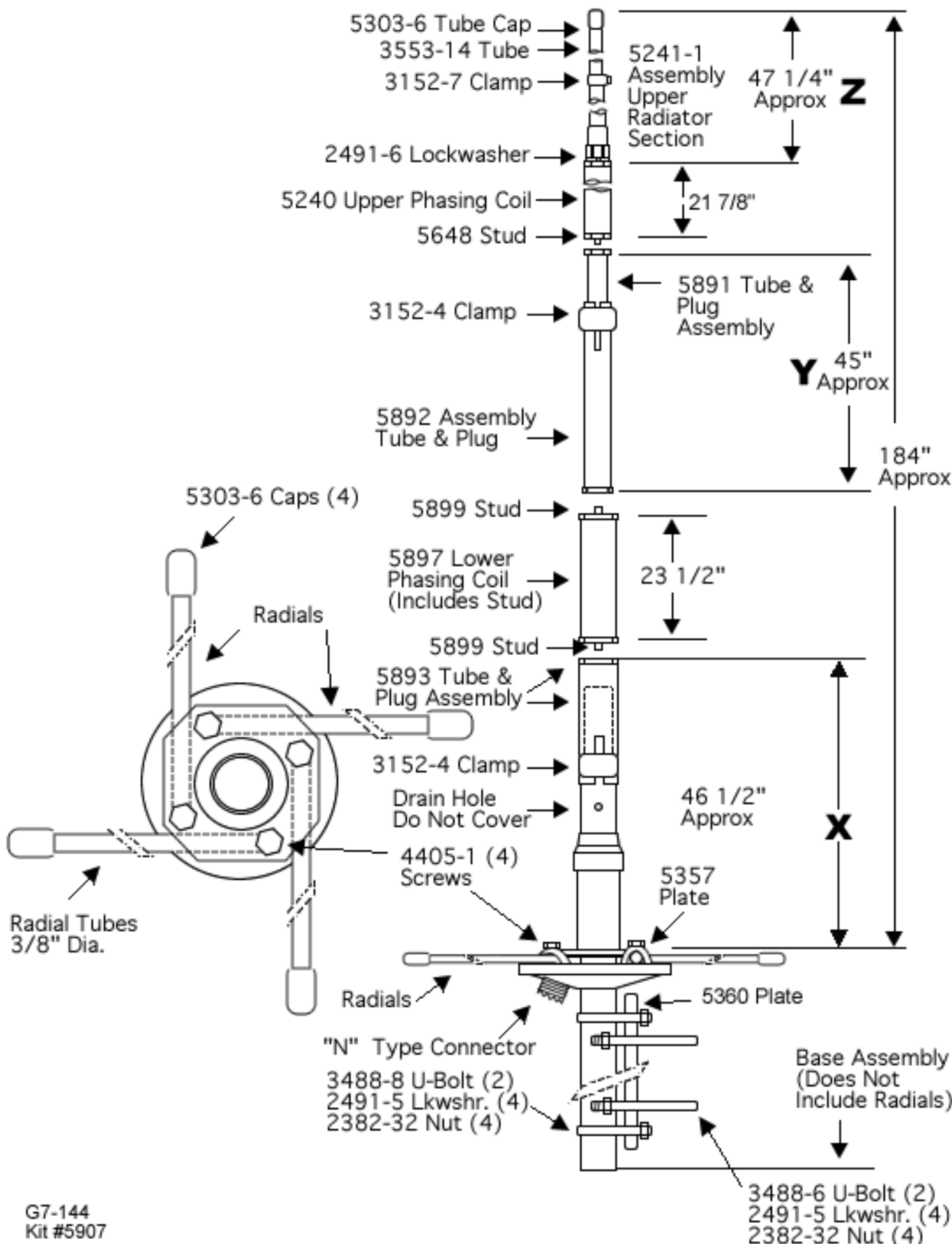
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G7-144  
Kit #5907



# G7-Series Tuning Chart

Use diagram on back of instruction sheet

## Frequency (MHz)

### G7-136 136-144 MHz

	"X"	"Y"	"Z"
136	51 3/4	50 1/2	52 1/2
136.5	51 1/2	50 1/4	52 1/4
137	51 1/4	50	52
137.5	51	49 3/4	51 3/4
138	50 3/4	49 1/2	51 1/2
138.5	50 1/2	49 1/4	51 1/4
139	50 1/4	49	51
139.5	50	48 3/4	50 3/4
140	49 3/4	48 1/2	50 1/2
140.5	49 1/2	48 1/4	50 1/4
141	49 1/4	48	50
141.5	49	47 3/4	49 3/4
142	48 3/4	47 1/2	49 1/2
142.5	48 1/2	47 1/4	49 1/4
143	48 1/4	47	49
143.5	48	46 3/4	48 3/4
144	47 3/4	46 1/2	48 1/2

### G7-144 143-149 MHz

143	48 1/4	46 3/4	49
143.5	48	46 1/2	48 3/4
144	47 3/4	46 1/4	48 1/2
144.5	47 1/2	46	48 1/4
145	47 1/4	45 3/4	48
145.5	47	45 1/2	47 3/4
146	46 3/4	45 1/4	47 1/2
146.5	46 1/2	45	47 1/4
147	46 1/4	44 3/4	47
147.5	46	44 1/2	46 3/4
148	45 3/4	44 1/4	46 1/2
148.5	45 1/2	44	46 1/4
149	45 1/4	43 3/4	46

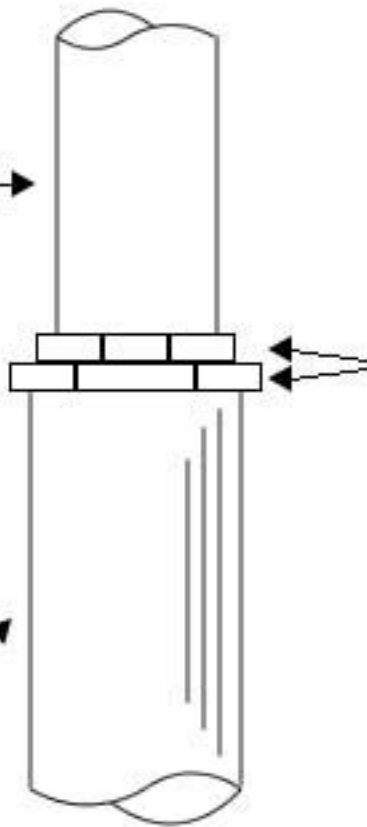
### G7-152-1 148-154 MHz

148	47	45 5/8	50
148.5	46 3/4	45 3/8	49 3/4
149	46 1/2	45 1/8	49 1/2
149.5	46 1/4	44 7/8	49 1/4
150	46	44 5/8	49
150.5	45 3/4	44 3/8	48 3/4
151	45 1/2	44 1/8	48 1/2
151.5	45 1/4	43 7/8	48 1/4
152	45	43 5/8	48
152.5	44 3/4	43 3/8	47 3/4
153	44 1/2	43 1/8	47 1/2
153.5	44 1/4	42 7/8	47 1/4
154	44	42 5/8	47

NOTE: ALL LENGTHS ARE IN INCHES

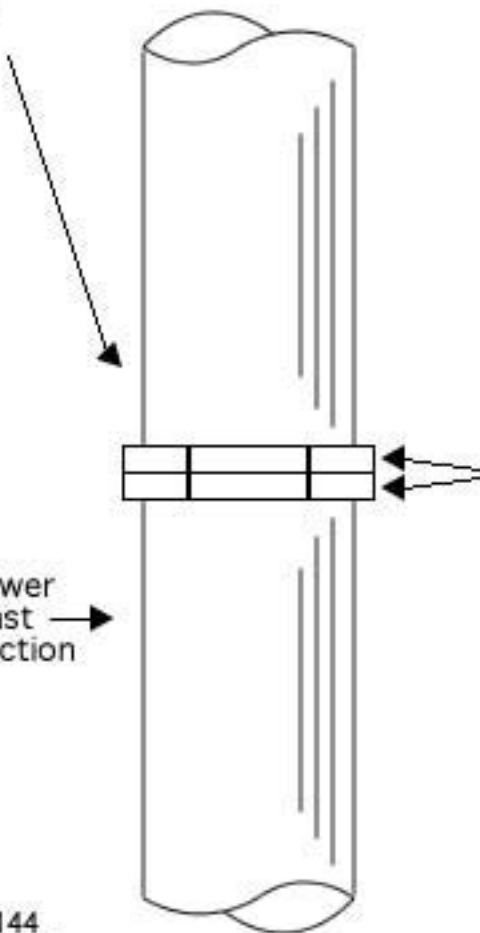
G7-144  
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Upper  
Mast  
Section →



Tighten upper mast section onto coil by using wrenches on adjacent hex plugs. Do not tighten by gripping on coil cover. Do not tighten by using wrenches on the lower coil hex to tighten the upper mast section.

Coil ↗



**CAUTION**

Tighten coil onto lower mast section by using wrenches on adjacent hex plugs. Do not tighten by gripping on coil cover. Do not tighten by using wrenches on the upper coil hex to secure the lower mast section.

Lower  
Mast  
Section →

## **CAUTION:**

Do not use coax seal or tape on type "N" connector. This antenna is designed to drain excess water around the outside of chassis mounted "N" connector. Sealing this area will cause the antenna to retain water.