



Unless otherwise specified — All dimensions are in inches and title block tolerances apply. All thread dimensions to be met after plating where applicable and are to be gauge checked. Break all sharp edges .010-.015 after finish machining. All machined surfaces shall be smooth within 63 micro inches.

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REVISION

DIMENSIONAL TOLERANCES

BASIC	FRACTIONAL	DECIMAL
0" - 1"	$\pm .010$	$\pm .003$
1" - 6"	$\pm 1/64$	$\pm .005$
6" - 24"	$\pm 1/32$	$\pm .008$

ALL ANGLES $\pm 1^\circ$

TITLE

FLEXIBLE
STATIONMASTER

DRAWING NO.

M-31726-A

DRAWN BY

JVT

9-10-76

APPROVED BY

WMM

9-10-76

**phelps
dodge**
Communications Company

Marlboro, New Jersey

Q & A for Phelps-Dodge Flexible Stationmaster VHF Antenna

After receiving the attached diagram, Bob WA1MIK had several questions. Clint WA6TMJ actually built an antenna from this drawing and he provided all the answers.

Along the top of the drawing, near the middle, there's a 26-3/16 inch section that says "7 REQ.". This means there are seven such alternating pieces of RG-8A/U, all wired in series. Yes, that's over 15 feet of length. There must always be an odd number of sections at this location.

Further to the right there are two pieces of RG-8A/U coax in parallel, both 13-1/4 inches long. These make a tuned shorting stub, a filter if you could call it that.

At the far right of the drawing, where the piece of RG-11A/U begins, there's the notation of "13-1/4 3 @ 120°" above it. This refers to three metal rods 13-1/4 inches long, equally spaced, used as ground radials that stick out perpendicular to the antenna.

The diagram mentions "soft solder". This is just standard 60/40 tin/lead solder. When Clint built his, he wrapped a small diameter bare copper wire around each joint several times then soldered them well.

The whole antenna is over 22 feet long and can be placed inside a 2 inch PVC pipe.

Stationmaster antennas built in the 1970s often broke at their internal solder joints, even when encased in a fiberglass tube. They do not like to be bent. People have successfully removed the guts of these antennas and repaired the broken joints to get them going again.