

The Beer Can Vertical

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Discarded tin cans can be easily assembled into an inexpensive, sturdy and effective vertical antenna.

IN A DAY OF EVER rising costs when you can get something for nothing it's time to look twice. The beer can vertical is not an original idea, but it is certainly one that deserves greater popularity. If you have a taste for beer go out and buy two and a half cases . . . if not, put out a call on 14 mc and call for volunteers—you won't have any trouble getting them.

The beer can vertical is mounted on the family garage about fifteen feet from the ground. The base can is secured to a porcelain stand-off insulator, the type used to hold neon tubing. We ran across some on the surplus market for about fifteen cents, although to this day nobody has been able to explain what part they played in the war. At any rate standard insulators may be used and they are available in many different sizes and shapes to fit most installations. The insulator itself is bolted to a heavy metal base, in our case this was an old speaker frame. The speaker frame was then fastened to the garage roof with lag bolts.

It is desirable to open both ends of the beer cans even though this entails considerably more work (the second end shouldn't be opened until the contents have been used). If only one end is open there is a tendency for moisture to form from condensation.

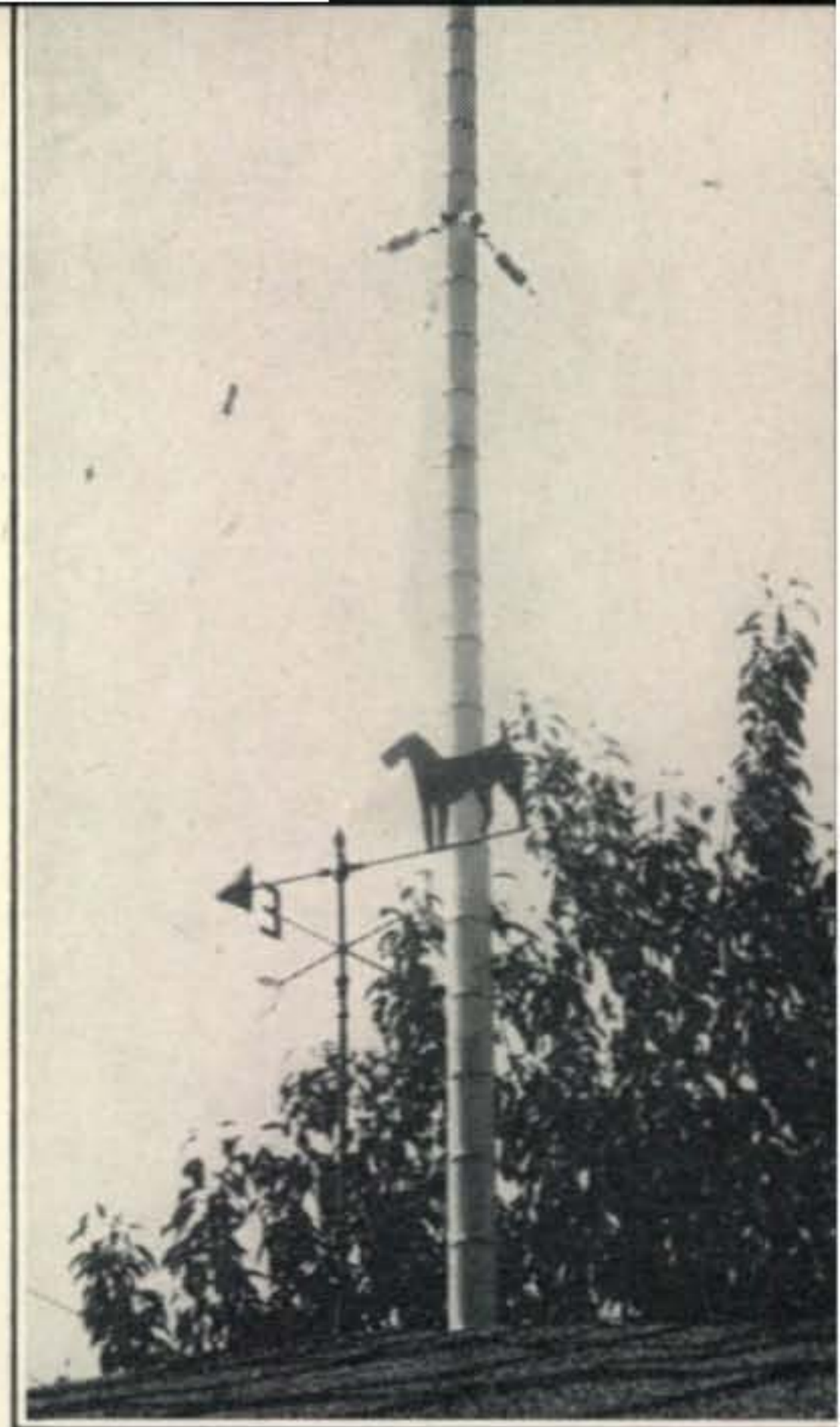
Constructional Details

The first step is to nail down two pieces of furring strips about four or five feet long on your bench. They should be spaced just far enough apart so that the cans do not touch the bench and lay evenly in a row. Do not run the seams of the cans in a straight line as this will cause the completed mast to bow badly. Alternate the seams, that is, one up and one down. Soldering should be accomplished with a 300-watt or larger iron, a blow torch, or an iron which can be heated on an external fire. The best solder to use is half and half bar solder or acid core. Results with either of the two mentioned solders were superior to rosin core solder, which isn't adaptable to soldering on tin plate.

When all the cans are lined up tack about four of them at a time together, soldering them at the top and bottom. The initial joint will hold them firm so you can rotate them and solder all the way around. If you have someone to assist and hold up one end as you solder, about fifteen foot lengths are practical. The top can should have a rain shield soldered to it, which can be nothing more than a round disc of

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The handsome beer
can vertical belies
its humble origin.



copper slightly larger than the diameter of the can. The bottom can should have a similar plate soldered to it and made out of 1/16 or 1/8" thick copper or brass plate.

When the soldering is completed moisten a rag with gasoline and wipe all joints clean of acid before painting. The vertical was sprayed with two coats of Duco red-oxide normally used as an undercoat for automobile work. The final paint consisted of two coats of white automobile Duco. Most automobile supply stores carry this or similar paint.

The guy wires are fastened to the beer cans with 1/4" copper bands 1/16" thick that are pinched in four places and drilled to take No. 14 galvanized wire. The guy wires are put through the holes and twisted to hold the pinch in shape. Then just above the joint the bands are secured with a nut and bolt. The guy wires are broken up every six feet with starin insulators.

Feeding the Vertical

After trying numerous feed systems we found the most satisfactory to be a 500-ohm line consisting of No. 18 wire spaced 2 inches into a quarter-wave matching stub. The stub consists of No. 12 wire spaced 4 inches. The feeder is slid up and down the stub until the point of optimum loading is obtained. Running 40 watts input excellent reports have been received throughout the U.S. and from numerous DX stations.

Furring strips are nailed to the bench top to hold the cans in position for soldering.

