Rotating Side Arm

By Mike Wetzel, W9RE

rompted by several requests at Dayton regarding my rotating side arm, I would like to present the information on it. The side arm described works very well on Rohn 25 and 45 and can also be adapted to other similar sized towers. It gives approximately 300° rotation and, using the construction described, is extremely rugged.

The terminology used by various people is somewhat vague, so first let me define some terms that I use. "Swing arm" is the part that is usually tubular, connects to the rotator and turns. The "side arm mount" consists of angle and plate. Both "side arm bearing" and "side arm rotator" mounts are the parts that attach to the tower and either hold the bearing or the rotator (see Figures

1 and 3).

I have used my side arm rotator mounts with Ham-Ms, Hygain Roto-brakes, Tailtwisters and prop pitches. My side arm bearing mounts have used stock flange bearings and homemade wood bearings.

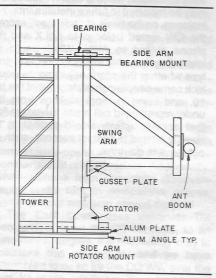


Fig 1—Rotating Side Arm

A	25 G 23 -1/2"		MATL 1-1/2" PIPE SKED 40
В	22-1/2"	18-1/2	C. Individual Society and an
			1 TOP BEARING
A	TIO		2 ROTATOR
48	1-1/2"	de de la Granda	6" 26"

Fig 2—Swing Arm Details

The swing arm is made from 11/2-inch schedule 40 water pipe and is welded (I couldn't come up with a way to avoid this welding). The side arm mounts are made of 2-inch × 21/2-inch × 3/16-inch aluminum angle. 3/8-inch aluminum plate, hex head cap screws and U-bolts. All aluminum is 6061-T6.

My side arm mounted antennas presently are as follows:

- 1) Rohn 45, 52-ft boom 7-element log-Yagi for 20 meters, mounted at 75 ft on 140-ft tower, prop pitch rotator.
- 2) Rohn 25, 42-ft boom 5-element razor beam for 15 meters, mounted at 40 ft on 100-ft tower, Tailtwister rotator.
- 3) Rohn 25, 32-ft boom 5-element razor beam for 10 meters, mounted at 55 ft on 90-ft tower, Tailtwister rotator.
- 4) Rohn 25, 204BA 4-element 20-meter beam mounted at 60 ft on 140-ft tower, Ham-M rotator.

The side arm mounting seems to exhibit a much larger force on the rotator than would be experienced with the antenna mounted on a straight mast in the conventional way. As verification of this fact, I originally tried using a Ham-M rotator on the