

Tilt Base Review

Solution

MFJ Antenna Tilt Bracket

MFJ-1903

Hy-gain ATB-75

Cushcraft R-8TB

The tilt bracket is able to connect with a variety of different antennas. It is intended to provide a stable support with a convenient ability to raise and lower. With this ability, the owner can quickly and safely perform maintenance as necessary.

Different makers allow different mounting arrangements. Some will have a fixed or removeable bracket, or may simply provide or expect a pole or mast to be used to mount the product. An antenna or mast is the normal useage of this product. But it can be used anywhere a pivot function is required.

Two u-channel aluminum brackets are supplied. They are of different sizes, and the smaller slips inside the larger. They are attached together and may pivot at either one end or the other as required. Four bolts on each end clamp the brackets tightly together. There is a variety of hardware supplied. Bolts, nuts, washers, ubolts, and spacers should be enough to mount about 95 percent of the vertical antennas on the market. Verticals are generally assumed to be used, but a vertical mast would be more general. You might have a mast, with a rotator and beam on top, for example. It is hard to accomodate all possible installations. There will be leftover hardware. Instead of a ground mount mast, you may choose to mount the bracket to a wooden surface such as a 4x4 inch board or fence post, with lag bolts, which are not supplied.

For normal installation, it is recommended to position the tilt point as close to the ground, or foot level, as practical. This allows grasping the antenna mast as high as possible, which gives the largest mechanical advantage. You have a longer lever. Plan where you want the antenna mast to lay down, free of foreign objects which can be damaged. Use reasonable care when moving the mast. Sudden jerks can bend or damage fragile parts. If you mount the tilt point too high, it becomes difficult to grasp the antenna pipe. A lower grasp point requires much more energy, as the mechanical advantage goes away.

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Installation and operation

Upright mounting is assumed for most installations. You should try out the bracket before final installation. A table top is suggested. In the actual operation, a support should be supplied, if necessary, to prevent contact with the ground, which can bend fragile components from the weight of the antenna. Check for objects in the tilt path also, such as tree limbs. The antenna and mast pipes are normally mounted on the outside of the brackets, but smaller pipes can be mounted on the inside, as necessary. The tilt bracket can also be used as a pipe to pipe coupler if the tilt operation is not needed.

In this example, the bracket will open on the top side and pivot on the lower side. To release the mount for tilting, remove the inside two bolts and slightly loosen the outer two bolts on each side. Place the bolts in a safe location for later replacement. The bracket will pivot on the outer two bolts. Remove the inner two bolts on the top side. An assistant may be needed to hold the antenna in place while the final bolts are removed, to prevent unplanned operations. Now remove the outer two bolts on the top side. The antenna is now ready for tilting. There are no stops, and the bracket will tilt about 120 degrees from the secure postion. Lower the antenna and gently position it as necessary on a support, for inspection and maintenance. After you are through, raise the antenna back to its vertical postion and replace the bolts which were removed earlier.

It is also possible to tilt the bracket on the top bolts. However, the bracket must be located very close to the top of the support mast. If not, the bracket will stop on contact with the support mast. This time, remove the two top inside bolts first. Remove the bottom two bolts, and tilt the bracket over the top of the support mast. The bracket will tilt more than 120 degrees. Reverse the operation to remount the antenna in the vertical position.

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Methods of mounting

Most installations will have a vertical pipe which is used for a mast mount. The pipe is secured to prevent movement. It may be secured like a fence post, mounted in concrete, secured to a wall, mounted on a roof peak or eave, or fastened in some other manor. Ubolts, lag bolts, or normal bolts may be used. You will have to decide which works best for you. A couple of different holes are punched in the tilt bracket to allow more than one size of hardware.



examples:

Hy-gain AV-680 and Cushcraft R9 have an insulator at the bottom of the mast which provides all of the necessary support. A flat plate and ubolts are supplied with the antenna for normal pipe mounting. A pipe can be mounted to the tilt bracket and then the antenna is mounted on this. But, better yet, remove the flate plate entirely and mount the base insulator directly to the tilt plate.

Hy-gain AV series(AV-18AVQ) verticals have a special bracket which cannot be removed easily. They use smaller ubolts which fit the smaller hole pattern in the tilt bracket. It was found that tightening too much bent this bracket. Support spacers supplied mount between the tilt bracket and the antenna bracket, on the ubolt, to prevent bending. DX Engineering antennas also use a very similar bracket.

For other brands, if you cannot decide on how to mount them, take a picture of the base of your antenna, and attach it to a Help Ticket at *mfjenterprises.com*, which is our email server. Supply as much information about it as possible. A ruler near the base is helpful. Other help is provided on the large green HELP button on the website. You can also enter the email server at *hy-gain.com*, *cushcraftamateur.com*, and *ameritron.com*

Attachments:

-  [Tilt base with dowel pin.jpeg](#)
-  [Tilt Base using Winch.JPG](#)

Article details

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