

# ***Tarheel Antennas, Inc.***

## **Instruction Manual for the Model 75A "Stubby" Continuous Coverage HF Antenna**

PROUDLY MADE IN THE



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# **Thank you for purchasing the Model 75A Tarheel Antenna**

## **Packing List for Model 75A**

Model 75A Antenna  
6 ft. Stainless Steel Whip  
Up/Down Switch  
20 ft. Control Cable  
Ferrite Core  
Fuse Holder & Fuse  
1 tube of Dielectric Compound  
Manual

## **Packing List for Model 75A Package**

All of the above -- plus the following  
Small MT-1 Antenna Bracket  
Quick Disconnect for the Whip  
21 ft. of RG-8X Coax with connectors installed  
1 pack of Coax Seal

## **Model 75A Antenna Specifications**

Lower Mast Length -- 16"  
Frequency Coverage with 6' whip -- 3.5 to 30 MHz  
Power Rating -- 250 watts P.E.P.  
Typical SWR -- 1.5 to 1 or less  
Total Height with 6' whip at 30 MHz -- 7'6"  
Total Height with 6' whip at 3.7 MHz -- 8'0"  
Weight 5.5 lbs.

# Thank you for purchasing the Model 75A "Stubby"

When properly installed this antenna will provide continuous coverage as follows:

3.7 MHz to 34 MHz with a 5' whip

3.5 MHz to 30 MHz with a 6' whip (supplied with the antenna)

## **CH-1 -- Capacitance Hat**

Hat only -- 3.5 MHz to 30.0 MHz

Hat with 3 ft. whip -- 3.1 MHz to 28.0 MHz

Hat with 6 ft. whip -- 2.8 MHz to 21.0 MHz

Before proceeding with the installation, make sure you have received everything.

You should have the following:

1 - Model 75A "Stubby" Antenna

1 - 6' Whip

1 - 3/8" x 24 TPI Stud

1 - 20 ft. Control Cable

1 - Ferrite Core

1 - Manual Switch Box

1 - Fuse Holder and Fuse



## Installation

Before installation of this antenna there are a few things you might have to consider. To get peak performance you need to mount the antenna as high as possible on the vehicle, also try to separate it as much as possible from other antennas that might be on the vehicle.

We designed this antenna around using a mount that directly mounts to ground, like a ball mount (Photo 1). This type of mount works well.



Photo 1

Included with the antenna is a ferrite core that needs to be mounted on the control wire as close as possible to the antenna. Loop the wire through the choke at least 3 times. This choke (Photo 2) does two things, first it helps reduce antenna motor noise during tuning, second it decouples the control wire from the antenna; without this core, the antenna will be untunable.



Photo 2

Next is the control box and control cable. We preassemble everything here so you'll have a plug and play system. If for some reason you need to cut the wires, the color codes are as follows:

## Initial Tune Up

For the initial tune up a SWR analyzer is nice to have if you have access to one. If not, make all your adjustments with low power. Now, lower your antenna until it reaches the end stop and go to 10 meters and check your SWR, you might have to raise the antenna a small amount to come into 10 meters, next go to 15 meters and check your SWR, it should be low. Next, you can go to 20 meters and raise the antenna until you get a SWR dip there. Then 40, then so on.

Keep in mind that 10-20 meters are close together. If the SWR doesn't go below 1.5 on these bands the ground is most likely the problem, remember the ground needs to be right at the base of the antenna.

If properly installed this antenna will have a standing wave below 1.5 from 3.5 to 30 MHz. We know that every antenna installation is unique and it is impossible to describe all the scenarios in this manual. However, if you are having problems with this initial tuning please call.

# Operation

Remember that when the coil is all the way in it's resonant on the high bands and all the way out on the low bands. It will take a little time to get use to this style of antenna, some mark the antenna with tape to mark the approximate location of the bands, some just listen to the noise level increase on the radio's receive when its close to resonant. When you fine tune you need to transmit a low carrier (AM, FM, CW) at 5 to 10 watts and watch the SWR meter till the dip.

## Running an Amplifier

This antenna is designed to handle up to 250 watts P.E.P. Do not exceed these ratings. Always do the initial tuning with low power then apply more power if needed.

## Maintenance

Very little maintenance is required for your Tarheel Antenna. You should have years of trouble free service from this antenna. You've made a large investment for a mobile antenna. Here is a tip to help take care of your investment.

We use an automotive finish on this antenna so whenever you wash and wax your vehicle raise your antenna and wash and wax the shaft and the bug shield (Lexan tube), with wax on your antenna the bugs will have a harder time sticking to it.

About once per year or so, depending on how much driving you do and where the antenna is mounted you will need to wash the coil to remove any road grime, no parts to replace. Also a dirty coil will show vertical black streaks.

Here's how to clean the coil:

1. Run the antenna up till all the coil is exposed.
2. Remove the are 3 screws in the top Delrin Cap.
3. Then slide the Lexan bug shield down to expose the coil, next feel the coil, is it sticky?
4. If so it's dirty, now wipe the coil with alcohol.
5. Then lightly scrub the coil with a Scotch-Brite pad (available at any hardware store).
6. Then one more wipe with alcohol and that's it.
7. Reassemble the Antenna.

After you have the antenna reassembled, now is the time for a good cleaning on the outside. Use the alcohol to remove the grime off the tube and Lexan, next get a good coat or two of wax on it.

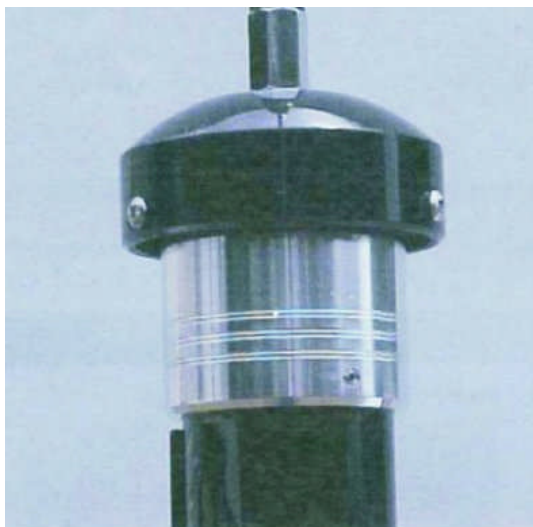
# Relative Tuning Positions

The following photos will show you relative tuning positions of the Model 75A "Stubby" Antenna.

**LEXAN COVER REMOVED FOR CLARITY**



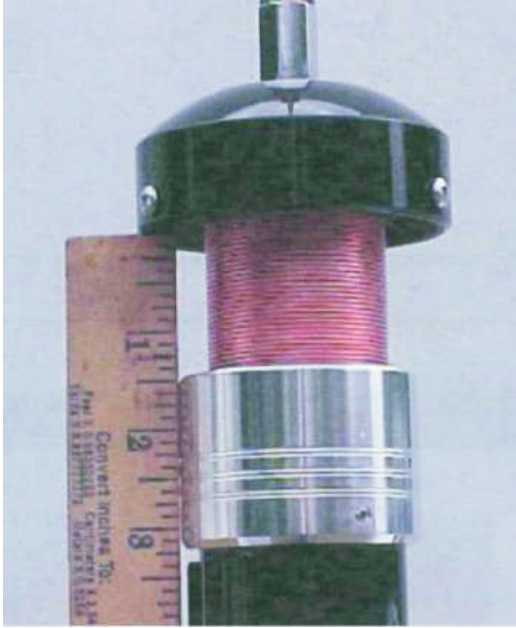
Model 75A "Stubby" -- full down position with 5 ft. whip -- 34.0 MHz



Model 75A "Stubby" -- 21.2 MHz  
with 5 ft. whip



Model 75A "Stubby" -- 14.2 MHz  
with 5 ft. whip @ 1/2" of coil showing



Model 75A "Stubby" -- 7.1 MHz  
with 5 ft. whip @ 1 1/2" of coil showing



Model 75A "Stubby" -- 3.9 MHz  
with 5 ft. whip @ 4" of coil showing

## Warranty & Guarantee

IF for the 1st 30 days if for any reason you are not completely satisfied, return the antenna undamaged for a full refund less the shipping charges. The antenna has a ONE YEAR NO MATTER WHAT WARRANTY to the original owner. If for any reason (**other than damage due to unauthorized disassembly, negligence, improper use, or use of Non-recommended Controllers**) your Tarheel Antenna fails to perform due to quality or workmanship Tarheel Antennas, Inc. will at our discretion either repair or replace at no charge for parts or labor. Shipping charges are your (the customer's) responsibility to and from Tarheel Antennas' repair shop.

We here at Tarheel Antennas hope you enjoy one of the best performing, best built, best looking motorized antennas available.

We here at Tarheel Antennas hope you enjoy one of the best performing, best built, best looking motorized antennas available. Please pass along any suggestions you may have to make our antenna better. All suggestions are appreciated. Also when you have your antenna installed please send us pictures.

Thanks,  
Tarheel Antennas