



Programmable Antenna Rotator VH226F User's Manual

Unpacking

Make sure the following pieces are in the box:

- (1) Drive unit
- (1) Control unit
- (1) Remote control

Hardware kit:

- (2) U Bolts
- (5) Rotor-Mounting Bolts
- (3) Short Brackets
- (1) Long Bracket (with guy-wire holes)
- (10) Nuts
- (8) Washers

Note: Bolts require a 10mm or adjustable wrench (not included).

Installing the Outdoor Drive Unit

Step 1: Attach cable to the drive unit

1. Run cable (not included) to the drive unit.
***IMPORTANT:** Up to 150' (46m) of 20AWG 3 conductor cable may be used. For longer runs, use heavier gauge wire.*
2. Unscrew the single screw on the bottom door. Swing the door open.
3. Insert the cable through the grommet on the side of the drive unit.
4. Separate the cable leads for 1.5" (4cm) and strip off the insulation for 0.5".

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Important Information

IMPORTANT SAFETY INSTRUCTIONS PLEASE READ AND SAVE FOR FUTURE REFERENCE

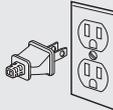
	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
THE LIGHTNING FLASH AND ARROWHEAD WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF "DANGEROUS VOLTAGE" INSIDE THE PRODUCT.	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	THE EXCLAMATION POINT WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF IMPORTANT INSTRUCTIONS ACCOMPANYING THE PRODUCT.
SEE MARKING ON BOTTOM / BACK OF PRODUCT		

WARNING:
TO PREVENT FIRE OR ELECTRICAL SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.



This is class II equipment designed with double or reinforced insulation so it does not require a safety connection to electrical earth (US: ground).

The MAINS plug is used as the disconnect device, the disconnect device shall remain readily operable.



Plugging in for power AC OUTLET POWER SUPPLY: 100-240 V - 50/60 Hz
The AC power plug is polarized (one blade is wider than the other) and only fits into AC power outlets one way. If the plug will not go into the outlet completely, turn the plug over and try to insert it the other way. If it still does not fit, contact a qualified electrician to change the outlet, or use a different one. Do not attempt to bypass this safety feature.

Care and Maintenance

- Always use a soft cloth to clean the speaker and transmitter. Never use any product containing alcohol or other solvents as they may damage the surface.
- Use caution when plugging the power transformers in an AC outlet to avoid the risk of electric shock.
- If the speaker are used outside on a deck or patio, make sure you take them indoors in the event of a rainstorm to prevent possible damage.
- Do not operate or store the system in extreme temperatures.

CAUTION: Please keep the unit in a good ventilation environment. Do not install the equipment in a confined space, such as a book case or similar unit.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Changes or modifications not expressly approved by VOXX Accessories Corporation could void the user's authority to operate the equipment.

Industry Canada Regulatory Information
CAN ICES-3 (B)/NMB-3 (B)

Avis d'Industrie Canada
CAN ICES-3 (B)/NMB-3 (B)

For PLUGGABLE EQUIPMENT, the socket-outlet shall be installed near the equipment and shall be easily accessible.

Do not use this apparatus near water.

The apparatus shall not be exposed to dripping or splashing or placed near objects filled with liquids.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

Only use attachments/accessories specified by the manufacturer.

Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

WARNING: Please refer the information on exterior bottom enclosure for electrical and safety information before installing or operating the apparatus.

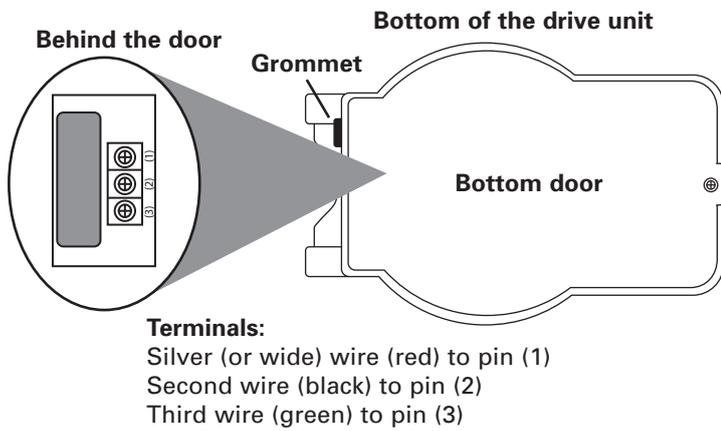
Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Product Information

Keep your sales receipt to obtain warranty parts and service and for proof of purchase. Attach it here and record the serial and model numbers in case you need them. These numbers are located on the product.

Model No.: _____
 Purchase Date: _____
 Dealer/Address/Phone: _____



IMPORTANT: To avoid moisture collecting in the cable make sure the cable jacket passes thru the grommet.

- Find the silver- or wide-jacketed lead and connect it to pin (1). Connect the adjacent lead to pin (2). Connect the third lead to pin (3). If 4-wire cable is used, connect both wire 3 and 4 to pin (3).

IMPORTANT: Make sure there are no loose strands which can short between terminals.

- Doublecheck the wiring order. Close the door and screw it back into place.

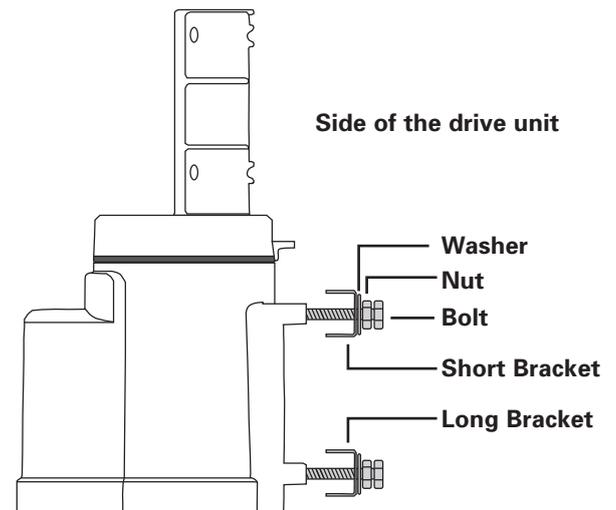
Step 2: Mount the drive unit

If you're not mounting the unit inside a tower, you'll need to mount it to a separate mast (not included). This kit comes with the necessary hardware for mounting.

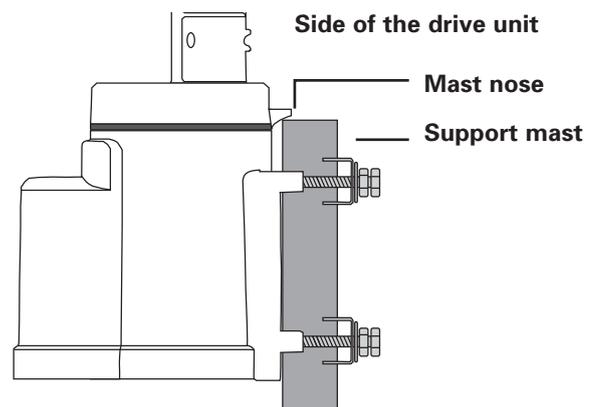
CAUTION: Select a mounting location where the antenna cannot come in contact with power lines while it is being installed, and where the installation will not fall across power lines if a guy wire should fail.

- Screw four nuts onto four rotor-mounting bolts. Screw each nut all the way to the head of each bolt. Then put one washer on each of the bolts, next to the nut.
- Place a short bracket over two of the bolts, with the flat section of the bracket snug against the washerless nuts. Place the long bracket over the other two bolts the same way.
- Screw the short bracket/bolt assembly into the top two holes on the side of the drive unit base. Screw the long bracket/bolt assembly into the bottom two holes. Screw each bolt as far as it will go into the drive unit.

- Position the brackets and nuts/washers so that they leave just enough room for the support mast to go through.



- Lower the drive unit onto the support mast until it stops on the mast nose of the drive housing. Tighten the nuts. Moderate tightening with a 10mm or adjustable wrench will cause the teeth to grip the mast securely.



IMPORTANT: Do not overtighten to the point that you deform the mast, since this will reduce its strength. The drive unit is designed for 1.25" diameters but will accommodate up to 2" diameter support masts.

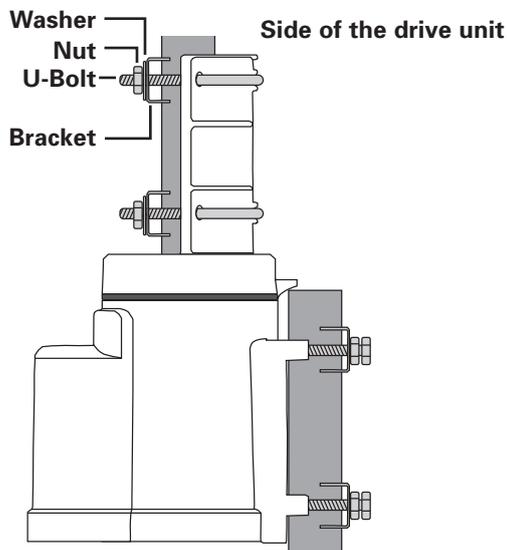
- (Optional) Attach guy wires (not included) to the holes in the bottom bracket.

Step 3: Install the antenna/cable

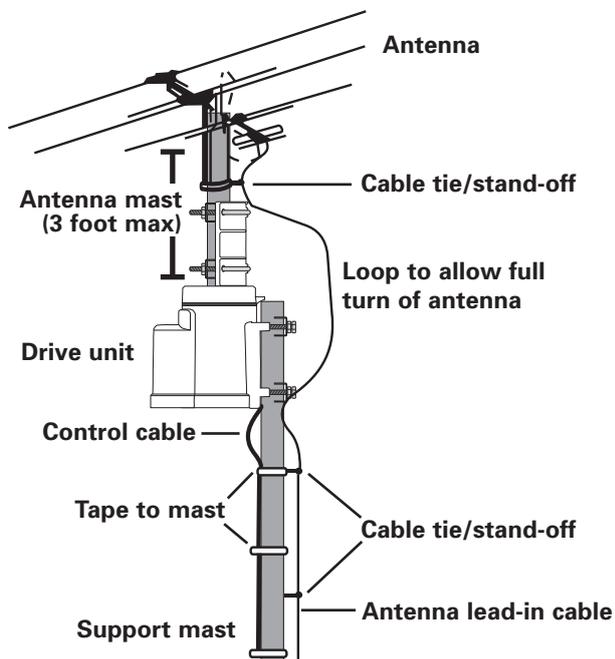
1. Insert the 2 U-bolts through the back of the rotor section of the drive unit.
2. Place the remaining 2 brackets over the ends of the U-bolts.
3. Put a washer and nut on the very end of the U-bolts to keep the brackets in place.
4. Position the brackets and nuts/washers so that they leave just enough room for the antenna mast to go through.

Note: Use no more than 3 feet of antenna mast between the rotor and the antenna itself.

5. Lower the antenna mast between the brackets and the rotor. Tighten the nuts. Moderate tightening with a 10mm or adjustable wrench will cause the teeth to grip the mast securely.



6. After connecting the antenna lead-in cable to the antenna, fasten it to the antenna mast using cable tie/stand-off insulators or electrical tape (not included) as shown. Provide a generous loop at the drive unit.

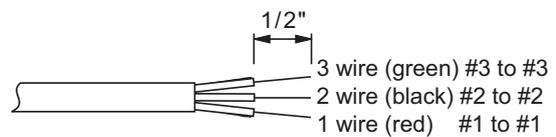


7. Attach the lead-in cable to the support mast with cable tie/stand-off insulators (not included) approximately every four feet.
8. Tape the rotator control cable directly to the support mast.

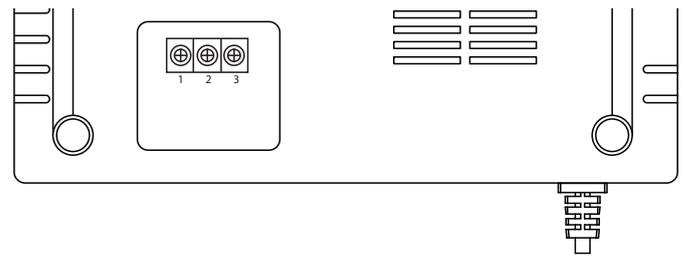
Installing and Programming the Indoor Control Unit

Step 1: Set up to the control unit

1. Determine the length of cable needed to run between the outdoor and indoor units. Cut the cable to that length.
2. Strip about 1/2" of the jacket off the end of each wire.



3. Insert each bare wire into the connector plate on the control unit's back panel as shown below.



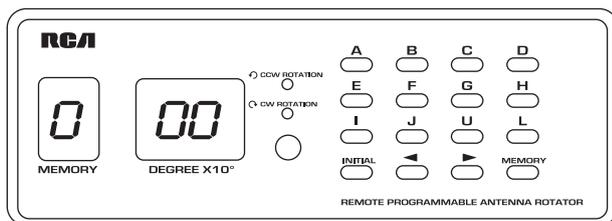
4. Release jacket to secure on connector.
5. Plug power cord of the control unit into an AC outlet.
6. Turn on the unit by putting the switch on the right side of the control unit in the on position.

The **MEMORY** display on the front panel reads **0**, and the **DEGREE X 10** display reads **00**.

Step 2: Initialize the control unit

1. Make sure the control unit is on (if it isn't, put the switch on the right side of the unit in the on position).
2. Press the **INITIAL** button on the control unit's front panel. The control unit and rotator are initializing to prepare for initial setup. The **MEMORY** and **DEGREE X10** indicators blink during this process, which takes about a minute and a half.

When the **MEMORY** and **DEGREE X10** indicators stop blinking, the control unit and rotator are ready for setup.



3. Check to make sure the control and drive units are properly calibrated by looking at the position of the drive unit and antenna at different **DEGREE X10** readings. Use the > and < buttons on the control unit to go to the following **DEGREE X 10** readings, then check the drive unit/antenna position.

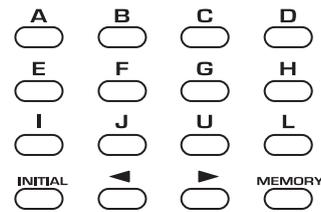
DEGREE X10 reads...	Drive unit/antenna position
00	Starting position
09	90° clockwise from start
18	180° from start
27	270° clockwise from start
36	Starting position

If the DEGREE X10 reading and the drive unit/antenna position don't match, go to the **Recalibrating the Rotator** section on the next page.

NOTE: A strong storm or power failure may cause the rotator to change position. Use the **INITIAL** button to re-synchronize the system. If this reset procedure doesn't get the desired results, the antenna of driver motor may be misaligned on the antenna mast. You can either go to the antenna and re-orient it or program the control unit to correspond to the new antenna orientation.

Step 3: Program the control unit

1. Tune your TV to the station that you want to receive.
2. While watching your TV screen, press the < and > buttons on the control unit's front panel to move the antenna clockwise (>) and counter-clockwise (<) until you find the position that gives you the best reception for this channel.
3. When you've found the best antenna position for this channel, press the **MEMORY** button on the control unit's front panel. The **MEMORY** and **DEGREE X10** indicators blink.



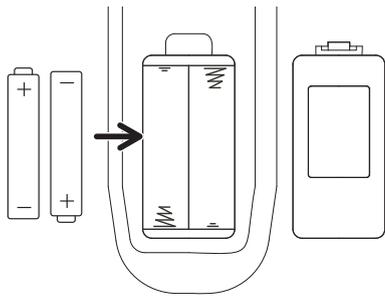
4. Press one of the letter buttons on the control unit's front panel to store the antenna position for this station to that button. The **DEGREE X10** indicator shows the degree of the antenna's position.

Note: Using a letter button that already has a position stored to it in this step erases the old position stored and stores the new one.

5. Use the Memory Location Chart that comes with this product for recording the channel and antenna position corresponding to each letter button. Write down this information on this chart.
6. Repeat steps 3-7 for the next TV station. Choose a different letter button to store its location.

You can store up to 12 antenna positions so that you can easily find the best reception for each TV station.

Step 4: Install batteries in the remote



1. Press and push the battery compartment cover to remove it.
2. Insert the batteries, matching the batteries to the (+) and (-) marks inside the battery compartment.
3. Push the battery cover back into place.

Battery Precautions:

- Do not mix old and new batteries.
- Do not mix alkaline, standard (carbon-zinc) or rechargeable (nickel cadmium) batteries.
- Always remove old, weak or worn-out batteries promptly and recycle or dispose of them in accordance with Local and National Regulations.

Using the Programmable Antenna Rotator

To go to a programmed antenna position: Press the letter button for that position on the remote or on the control unit's front panel.

The drive unit turns the antenna to that position, and the control unit displays the position of the antenna in degrees.

To stop the rotator while it's going to a programmed position: Turn the control unit off, then turn it back on. Press the **INITIAL** button to resynchronize the unit.

To fine-tune the antenna position (or position manually): Press the > or < buttons on the remote control or control unit's front panel to move the antenna clockwise (>) or counter-clockwise (<).

Re-Calibrating the Rotator

This antenna rotator comes from the factory calibrated and ready to set up. However, if you notice that the control unit's display and the drive unit's position do not match (for example, if the display reads 30 but the antenna has done a complete 360-degree rotation), you can recalibrate the rotator to make them match again.

1. Press the **INITIAL** button to return the drive unit to its starting position—the line on the rotator section of the drive unit should line up with the line on the base once this is finished.
2. Press the **INITIAL** button a second time to completely reset the control and drive units.
3. Press and hold the **INITIAL** and > buttons on the control unit's front panel—make sure you press the **INITIAL** button slightly before the > button. Keep holding these buttons down as the display starts counting **up** in seconds.
If the display starts counting **down** from 36, the control unit is in initialization mode, not calibration mode. Let the rotator finish initialization, then try step 2 again, this time pressing the > button more quickly after the **INITIAL** button.
4. Watch the antenna and drive unit—when it completes a full 360-degree turn, release the **INITIAL** and > buttons on the control unit. This typically takes about 57 seconds.

The **DEGREE X10** indicator displays the rotator cycle time. The control unit uses this information to keep the antenna positions and program locations synchronized.

Resetting the Memory Buttons

Resetting the control unit's memory buttons erases all programmed antenna positions.

1. Turn off the control unit.
2. Press and hold the **D** button on the control unit's front panel.
3. While holding the **D** button, turn the control unit back on. The **CCW** and **CW** indicators light up.
4. Release the **D** button and turn the unit back off.
5. Turn the unit back on a second time. The unit will perform the initialization procedure.

The **MEMORY** on the front panel reads **0**, and the **DEGREE X10** display reads **00**. The unit is resetting its memory.

12 Month Limited Warranty

Voxx Accessories Corporation (the "Company") warrants to the original retail purchaser of this product that should this product or any part thereof, under normal use and conditions, be proven defective in material or workmanship within 12 months from the date of original purchase, such defect(s) will be repaired or replaced with new or reconditioned product (at the Company's option) without charge for parts and repair labor.

To obtain repair or replacement within the terms of the warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), specification of defect(s), transportation prepaid, to an approved warranty station.

This Warranty is not transferable and does not cover product purchased, serviced or used outside the United States or Canada. The Warranty does not extend to the elimination of externally generated static or noise. This Warranty does not apply to costs incurred for installation, removal or reinstallation of the product, or, if in the Company's opinion, the product has been damaged through acts of nature, alteration, improper installation, mishandling, misuse, neglect, or accident. This Warranty does not cover damage caused by an AC adapter not provided with the product.

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT.

This Warranty is in lieu of all other express warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED TO DURATION OF THIS WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HEREUNDER, INCLUDING ANY IMPLIED WARRANTY, MUST BE BROUGHT WITHIN A PERIOD OF 24 MONTHS FROM THE DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

Some states/provinces do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state/province to state/province.