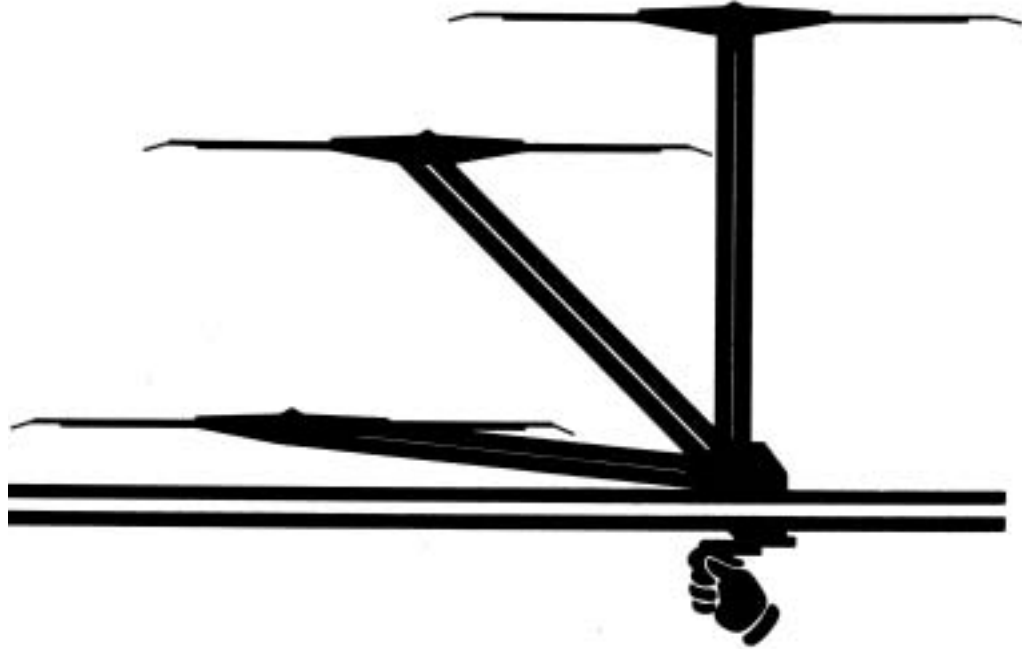


# OWNER'S MANUAL

**SIGNAL COMMANDER<sup>®</sup>**



**THIS MANUAL CONTAINS  
INSTRUCTIONS FOR: MOD 500**

- INSTALLATION
- OPERATION
- TROUBLESHOOTING
- EXPLODED PARTS DRAWING
- WARRANTY

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## SECTION I INSTALLATION INSTRUCTIONS

This manual contains information on the following Signal Commander® 6000 models and accessories; the model you have purchased is clearly marked on the front of this manual.

MODEL 150	Non-Amplified Antenna
MODEL 250	Amplified Antenna
MODEL 350	Amplified, 2nd TV Ready
MODEL 500	Amplified, 2nd TV & Cable TV Ready

### Accessories:

2nd TV Kit	2nd TV Power Supply & Coax Cables (for Models 350, 500)
Cable TV Kit	Outside Plate & Cable (For Model 500)

### INSTALLATION KIT CONTENTS:

#### ALL MODELS

Qty.	Description
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1	Head Assembly
1	Lift Mechanism Assembly
1	15' Coaxial Cable
1	6' Coaxial Cable
1	Coaxial Coupling
1	75 Ohm Wall Mount Power Supply
1	Ceiling Plate
1	Rotation Handle
1	Elevation Handle Assembly
10	#8x1" Hex Head Sheet Metal Screws
4	#8X3/4" Round Head Screws
2	Groove Pins
2	E Clips

#### MODEL 250, 350 & 500

1	Amplifier (Inside the Head Assembly)
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#### 2nd TV Kit (Mod 350 & 500)

1	2nd TV Power Supply With 12 V Outlet
2	Coax Cables

#### Cable TV Kit (Model 500)

1	Cable TV Plate
1	Coax Cable
4	#8 X3/4" Round Head Screws

### TOOLS AND SUPPLIES REQUIRED:

#### Mechanical Installation

- Electric Drill (1/2" capacity)
- Drill bits: 1/16" and 1/2" Dia.
- 1-1/2" Diameter Hole Saw
- Phillips screwdrivers
- Extension Cord
- Combination Wrenches (2)
- Tape Measure or Ruler
- Hacksaw
- Pliers or Vise Grips

#### Electrical Installation

- DC Polarity Indicator or Ohm Meter
- Sabre Saw
- Crimping tool

#### Supplies

- Non-hardening Caulking Compound or Silicone
- Electrical Tape
- Electrical Wire 16 AWG or Heavier
- Electrical Box if not Already Installed

### WARNING

**Driving with the antenna raised or partially raised will damage your antenna and void your warranty**

## 1. Installation Planning

### A. Pre-wired Vehicles

Follow the instructions in this manual in conjunction with the RV manufacture's recommendations to locate and install the Signal Commander Antenna and power supply.

### B. All other Vehicles

Location of the antenna must allow antenna head to point towards the rear of the vehicle when resting in the travel position, and must clear all roof mounted equipment when being raised, lowered or rotated. the roof should not be more than 5.0" thick.

The inside ceiling must be clear of obstructions to ceiling plate and handle. For the cleanest installation, it is recommended that the coaxial cable enter through the roof and be hidden inside a closet. The wall of the

closet can be used to mount the power supply.

Locating the antenna close to the television receiver and the 12 Volt DC power source will simplify the installation. Power supplies should be flush mounted in standard electrical boxes. Assure that the 12 Volt source is limited by a 7.5A fuse maximum.

Power supplies should not be connected to existing circuits with fans or motors as this may cause interference to the television, damage the antenna amplifier, and void the warranty.

If your model supports cable TV connection (see page 2 for Models and accessories), the cable TV plate can be installed in your vehicle's convenience bay or externally on the side of the vehicle.

## 2. Installation

### WARNING!

#### Electricity Kills!

**Power lines may be overhead.**

**Care must be taken when installing or raising the antenna.**

**Before drilling, care must be taken not to damage any wiring that may be located between the vehicle roof and ceiling.**

Step 1: Tape the drill template to the roof of the vehicle in the position where the antenna will be installed.

**Note: The arrow must point towards the rear of the vehicle. 5 feet of rear ward clearance is required.**

Step 2: Using a 1-1/2" diameter hole saw, cut a hole through the roof and ceiling for the center shaft.

Step 3: Drill one 1/2" diameter hole through the roof only for the coaxial cable.

Step 4: Drill ten mounting screw holes 1/16" diameter, approximately 1" deep. Remove drill template and clean around mounting area.

Step 5: Measure the thickness of the roof. Using the table and illustrations on page 4, cut the elevation shaft and rotation handle to the correct length for the vehicle's roof.

Step 6: Caulk the bottom of the baseplate with a liberal amount of non-hardening, sealing compound, then position and attach the lift mechanism to the roof with ten #8x1" pan head sheet metal screws. Seal the edges of the base plate and the top of the screws with sealing compound. Keep sealing compound away from the surface between base plate and pivot plate.

Step 7: Mount antenna head to lift arm mechanism using two 1/4"x2-1/4" grove pins and "E" clips.

Step 8: Connect the coaxial cable to the antenna head and tighten. Slide the rubber boot over the connection.

Step 9: Attach the other end of the coaxial cable from the antenna to the 15' coaxial cable. Feed the cable through the base plate hub into the inside of the vehicle. Make sure there is adequate cable available for free rotation of the antenna. Route the cable to the primary power supply location. Fill the hub hole with sealing compound, seal around the hole, slide the rubber boot over the baseplate hub and seal the boot and the coaxial cable.

**NOTE: If a roof wedge is used to level the antenna you need to seal the roof wedge also.**

Step 10: Locate the ceiling plate over the rotation handle with pointers aligned and slide assembly over shaft in ceiling. Mark hole positions and remove rotation handle. Mount ceiling plate in place using four #8x3/4" long round head screws.

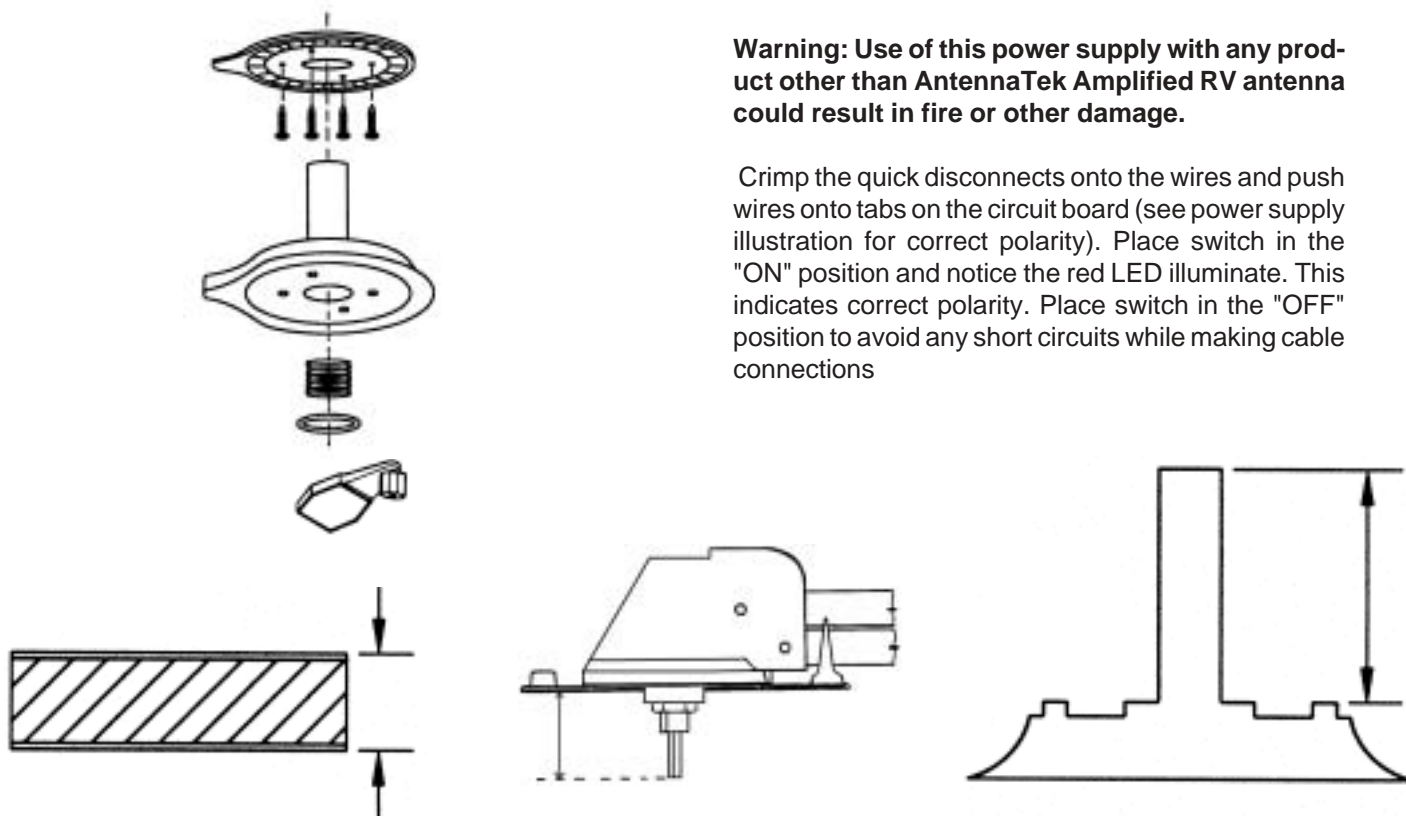
Step 11: Assemble rotation handle, spring, washer and elevating handle (See illustration). Slide all parts over shaft and tighten the screw in the elevation handle.

Step 12: Operate the lift and rotate mechanisms to check for correct operation (See Section II - Operating Instructions).

Step 13: The power supply is designed for installation in any standard electrical box. To mount the power supply cut a hole in the wall and install the electrical box. Place the power supply switch in the "OFF" position. Run two wires # 14 AWG or havier from a 12 Volt DC power source to the rear of the power supply. Assure that the 12 Volt DC power source current is limited to 7.5A at 12Volt DC.

**Warning: Use of this power supply with any product other than AntennaTek Amplified RV antenna could result in fire or other damage.**

Crimp the quick disconnects onto the wires and push wires onto tabs on the circuit board (see power supply illustration for correct polarity). Place switch in the "ON" position and notice the red LED illuminate. This indicates correct polarity. Place switch in the "OFF" position to avoid any short circuits while making cable connections



<u>Roof Thickness</u>	<u>Elev. Shaft Length</u>	<u>Rot. Handle Length</u>
1" Min.	2 1/4"	1/2"
1 1/2"	2 3/4"	1"
2"	3 1/4"	1 1/2"
2 1/2"	3 3/4"	2"
3"	4 1/4"	2 1/2"
3 1/2"	4 3/4"	3"
4"	5 1/4"	3 1/2"
4 1/2"	5 3/4"	4"
5"	6 1/4" Max	NO CHANGE

Step 14: Connect the coaxial cable from the antenna to the connector marked "Antenna" on the rear of the power supply.

Step 15: To connect the second power supply available as an optional accessory for the model 500, run two # 14 AWG or heavier wires from a 7.5A limited 12 Volt DC power source and connect to the rear of the power supply. Insulate the DC connections with wire nuts and insulating tape.

**CAUTION:**     *The red wire is positive (+)  
The white wire is negative (-)*

Attach a coax cable from the rear of the second power supply to the connector marked 2nd TV in the rear of the primary power supply.

Step 16: The cable TV kit is available as an accessory for the model 500. Using the cable plate as a template, mark the center hole and four screw holes. Drill the center hole using a 1/2" bit. Attach one end of a coax cable to the center connector on the rear of the primary

### Warning:

**Use of this power supply with any product other than AntennaTek amplified RV antenna could result in fire or other damage.**



### Warning:

**Do not connect high current devices to 12 Volt receptacle.**

**Maximum current rating of this receptacle is: 7.5 Amps at 12 Volt DC.**

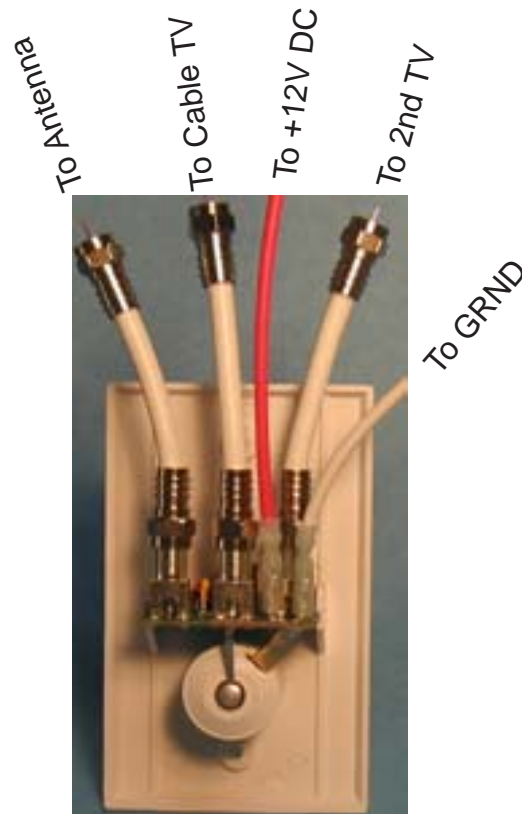
power supply; the other end of the coax to the connector in the rear of the cable plate.

Caulk the cable plate using non-hardening sealing compound and attach using four #8x3/4" long round head screws.

Step 17: Place the power supply(s) inside the electrical box(s) and mount flush with 2 # 6x3/4" flat head screws. Attach the coaxial cable(s) to the front of the power supply(s) and connect to the television set(s). Place Switch in the ON position.

### MAINTENANCE:

Lubricate the gears and the "O" ring on the elevating shaft assembly at least twice yearly or as required. With the antenna in the down position remove the 7/8-14 plug and spray a liberal amount of silicon lubricant on the gears and the "O" ring. Install the 7/8-14 plug over the gear and tighten. Remove the arrow clip on the gear housing and spray silicon lubricant into hole. Install the arrow clip.



## SECTION II OPERATING INSTRUCTIONS

### 1. To Raise & Rotate Antenna

A : Rotate elevation handle clockwise. A clicking sound will occur when the antenna is completely extended.

B: Switch ON the main power supply (amplified models only). Note red LED indicator illuminated. This indicates amplified reception.

C: Switch ON the television and tune in a suitable station.

Pull rotation handle down to disengage gear from ceiling plate and rotate antenna until the picture and sound are clearest.

NOTE: For the Model 500, if external cable TV is connected, turning your power supply OFF will route cable TV to all attached TV's.

**Warning:** *Vehicle must not be driven with antenna in raised or partially raised position. Worm gear or worm breakage may result.*

### 2. To Lower Antenna

A: Pull rotation handle down to disengage gear from ceiling plate and rotate the antenna until the pointer on the ceiling plate is aligned with the pointer on the rotation handle. Rotate elevation handle counter-clockwise until you hear the antenna touch the roof (resistance will be felt in the handle).

**WARNING:** *Lowering the antenna with the pointers misaligned may damage the antenna.*

B: You may want to switch your main power supply off. Amplified reception is possible while driving if your antenna is in the full down position.

C: Model 500 only. If external cable TV is connected, disconnect and attach protective cap.

## SECTION III TROUBLESHOOTING GUIDE

Elevation handle turns, but antenna does not raise or lower

Handle loose  
Stripped gears

Tighten screw  
Replace gears

Antenna will not rotate

Rotation handle engaged to ceiling plate  
Obstruction when raised  
Friction adjustment  
Installation (caulking)  
Coax cable too tight

Pull down to disengage from ceiling plate  
Remove obstruction  
Adjust center lock nut  
Remove excessive caulkin between base and pivot plates  
Adjust cable

LED on power supply does not light up

Switch off  
DC power  
Coax cable shorted

Turn switch on  
Check 12 V supply, & polarity  
Replace coaxial cable

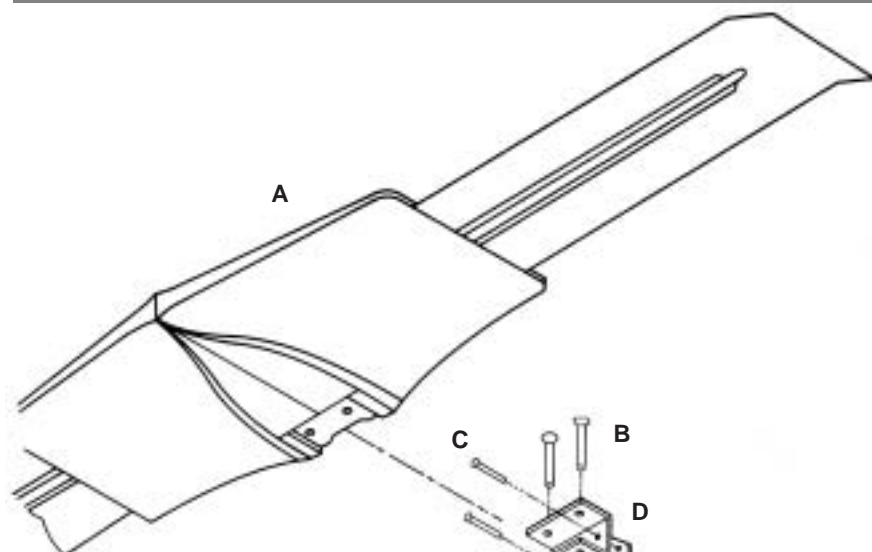
Picture not clear

Television  
Wiring  
Antenna cables  
Power supply  
Antenna or Vehicle location

Tune in or change station  
See installation steps 14 & 16  
Coax cable going to antenna head should have 12V DC, between center conductor and outside shield.  
Switch on (or off if you are too close to TV transmitter)  
Raise and rotate antenna, or move vehicle

**Note:** Signals may be interfered with if the antenna is too close to obstructions such as buildings or trees.

## SECTION IV EXPLODED PARTS DIAGRAM



### Distributors:

#### AUSTRALIA

Coast Connection  
(02)9684-1434

#### CANADA

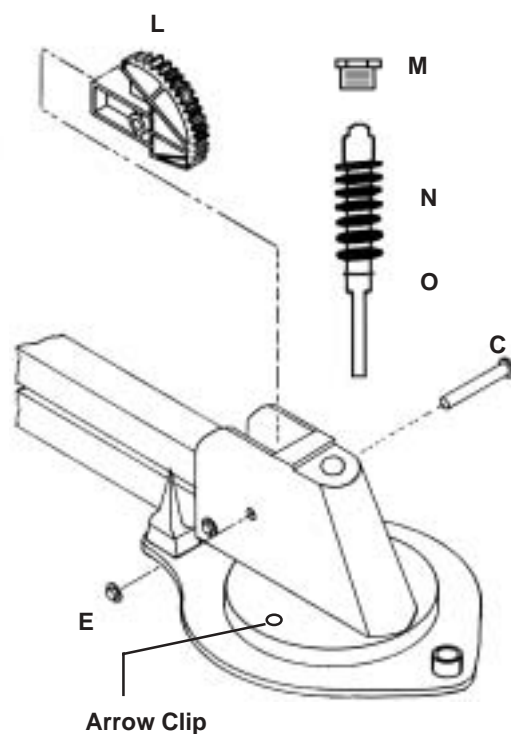
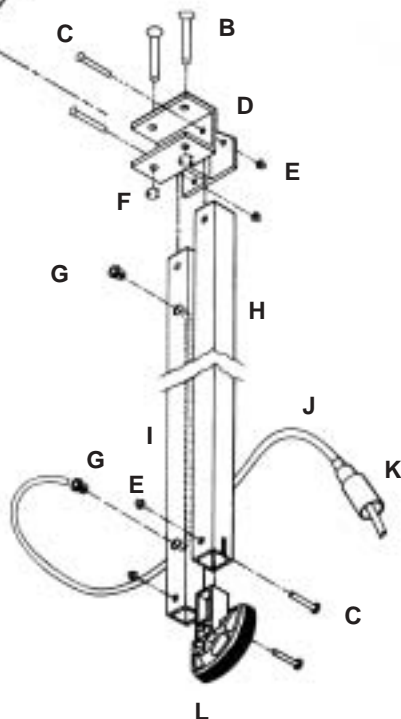
Danzy Distributors  
(877)326-9962

#### NEW ZEALAND

RV Wholesale  
64-7-825-2044

#### USA

Arrow (800) 228-1001  
Coast (800) 495-5858  
DTI (800)289-0919  
Pantera Sales (800) 456-0123  
AntennaTek (888) 349-8303



Arrow Clip

SYMB.	DESCRIPTION	P / N	SYMB.	DESCRIPTION	P / N
A	Amplified Head Assembly	904411	V	Center Lock Nut	065612
A	Non-Amplified Head ASM	903311	W	Ceiling Plate	065651
B	Groove Pin	030196	X	#8x3/4" Screw	065574
C	Pin	065565	Y	Rotation Handle	065656
D	Upper Pivot	065554	Z	Spring	030280
E	Cap Nut	030260	AA	Washer	065659
F	"E" Clip	030197	BB	Elev. Handle	065542
G	Grommet	065583			
H	Upper Arm	065601			
I	Lower Arm	065602			
J	Coax Cable	065546			
K	Boot	040102			
L	Worm Gear	065645			
M	7/8-14 Plug	065614			
N	Elev. Shaft Assembly	065641			
O	Small O-Ring	065568			
P	Aluminum Gear Housing	065610			
Q	Large O-Ring	065569			
R	Disc Washer	065561C			
S	#8x1" Screw	065581			
T	Base Plate	065551C			
U	3/4" Nylon Washer	065660C			

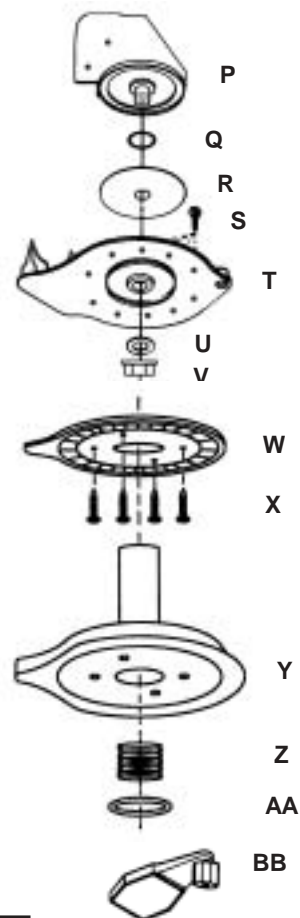
NOT SHOWN

Coax Cable Assembly 15' 065577  
Coax Cable Assembly 6' 065543  
12V DC Power Supply  
- Non Amplified / 2nd TV 065710  
- Single TV (Mod 200) 065720  
- Two TV (Mod 300) 065730  
- Two TV + Cable Ready 065840

Gear replacement kit 019612

Assembly  
P/N019725

KIT P/N  
019703



## SECTION V WARRANTY

Know your rights and responsibilities before operating this product! Please read the "limited warranty" provided below carefully. Improper operation and maintenance, abuse, neglect, etc. will void your warranty.

### **AntennaTek, Inc. LIMITED WARRANTY**

#### **1. Duration:**

One year (365 days) from date of purchase.

#### **2. Who gives the warranty?**

AntennaTek, Inc. (the "Company")

#### **3. Who receives this warranty?**

The original purchaser (the "Purchaser"), other than for the purpose of resale, of the Signal Commander Antenna.

#### **4. What is covered under this warranty?**

A. Repair or replacement at no charge, parts found by the Company to be defective, provided that the Company receives notice of the defect within three hundred sixty five (365) days from the date of original purchase.

B. Payment of reasonable freight charges incurred to repair or replace the defective part, as pre-authorized by the Company via an "Authorization to Return" form. Expedited shipment or shipment other than that offered by the Company is available as an optional, customer paid service.

#### **5. What is not covered under this warranty?**

**A. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM DATE OF ORIGINAL PURCHASE OF THE SIGNAL COMMANDER® ANTENNA. LIABILITY FOR INDIRECT OR CONSEQUENTIAL DAMAGES FOR ANY INCIDENTAL EXPENSES, UNDER ANY AND ALL WARRANTIES IS EXCLUDED.**

Some states do not allow limitation on how long an implied warranty lasts, or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

B. Any failure that results from accident, purchasers' abuse, neglect, improper maintenance, or failure to operate and use the product in accordance with the instructions provided in the owner's manual supplied with the product.

C. Any labor charges, travel time, or mileage incurred as a result of installing the replacement part.

D. Any failure that results from improper installation of the product.

E. Any component not sold or manufactured by the company.

#### **6. Responsibilities of purchaser under this warranty.**

A. Provide proof of purchase to qualify for credits under provisions of coverage.

B. Promptly notify the seller, or alternately the Company, of any claim hereunder.

C. Obtain Authorization to Return from the Company and return the product to the Company: AntennaTek, Inc., P.O.Box 851, Longmont, Colorado 80502-0851.

D. Use reasonable care in the maintenance, operation, use and storage of the product in accordance with the instructions contained in the owner's manual.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.