

ver 6.0

Fully Automatic Motorised Satellite TV System

SatKing PRO MAX

Your PRO MAX's Serial Number



User's manual

Customer Help Line: 1300 139 255
Support Email: support@satkingpromax.com.au
Website: www.satkingpromax.com.au

www.satkingpromax.com.au

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1. General Information

1-1. Introduction

These instructions describe the functions and operation of the SatKing PRO MAX fully automatic satellite system.

Correct and safe operation of the system can only be ensured by following these instructions. Your SatKing PRO MAX is an intelligent satellite TV reception antenna system which can align itself towards a preset satellite automatically when the system is located within the footprint of the selected satellite. The latest Australian coverage map is available on www.satkingpromax.com.au.

The SatKing PRO MAX only occupies a small amount of space to perform the necessary adjustments with it's slim and agile antenna body.

For general operation, please ensure that the system always has a clear view of the Northern Sky. If the satellite's signal beam is interrupted by obstacles such as buildings or trees, the unit will not function and no satellite TV signal will be received, move your van slightly and try again. For more information on general use of this unit consult your local dealer for assistance.



1-2. Proper use and operation

This product has been designed for fixed installation on vehicles with maximum speeds of 130 km/h. It is designed to automatically aim an antenna at geostationary television satellites. The power to the system is supplied by a standard vehicle electrical system with a rated voltage of 12 or 24 Volts DC.

Use of the equipment for any other purpose to the one specified is not permitted.

Please also note the following instructions from SatKing:

- It is not possible to add or remove components on this product.
- The use of other components other than those originally supplied.
- When completing Installation you or your contractor must strictly follow all instructions in the supplied User Manual. Failure to follow the user manual may cause damage to the SatKing PRO MAX or your vehicle.
- The product does not require any regular maintenance; all service must be carried out at approved service centre's.
- All relevant guidelines of the automotive industry must be observed and complied with.
- The equipment must only be installed on solid vehicle roofs.
- Avoid cleaning your vehicle with the mounted satellite system in a drive-through car wash or a car wash with a high-pressure cleaner.
- The SatKing PRO MAX comes with a 3 year warranty, for full warranty details please visit our website www.satkingpromax.com.au
- After Sales Support Line 1300 139 255 or support@satking.com.au
- If you are using VAST all card activation and channel entitlement issue's are handle by the VAST call centre 1300 993 376. Their hours are 9am till 12pm and 2pm till 4.30pm QLD time.

1-3. Safety notes



Please carefully read and follow the operating instructions in this manual.

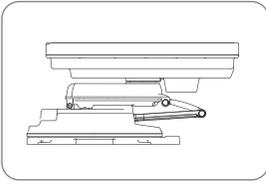
Upon installation of the PRO MAX, please ensure the installation is done with supplied cables and ensure the controller cable is not modified in anyway, this carries data.

As the user of this equipment, you are responsible for ensuring compliance with the relevant laws and regulations.

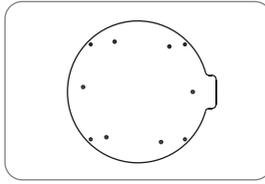
The manufacturer does not take liability for direct or indirect consequential damage of the system, motor vehicles or other equipment by reason of incorrect battery usage, incorrect installation or wrong wiring connection.

2. Contents

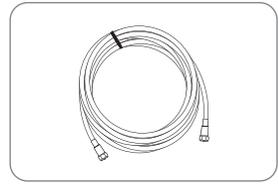
2-1. Components bundle



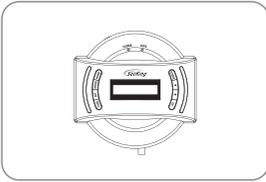
Main unit



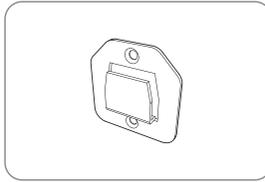
Mounting plate



Controller(labeled) cable - 7m



Controller



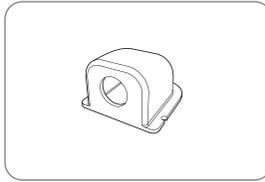
Controller bracket



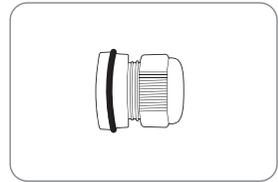
Power input cable
+ (Red), - (Black)



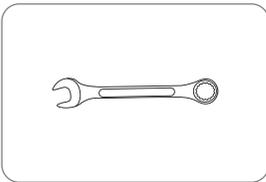
Receiver(labeled) cable - 7m
(x2 for twin outputs)



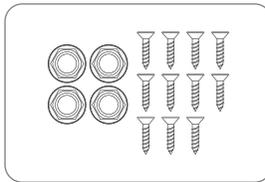
Cable holder



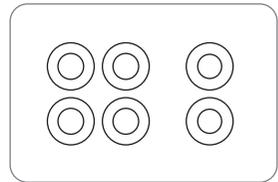
Cable gland



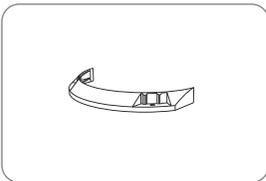
Spanner



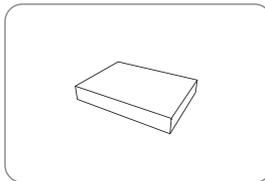
M4x20 (11), M8 Self-lock nut



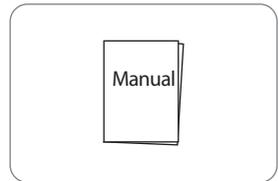
Washer (4), Bushing (2)



Deflector



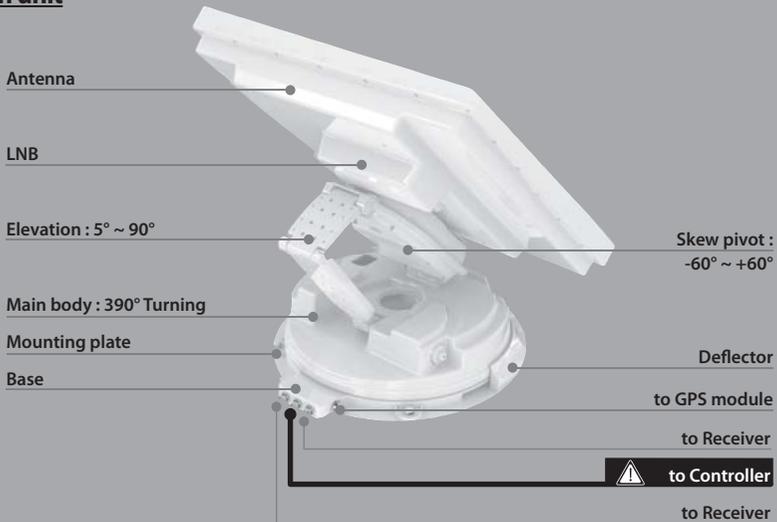
GPS module



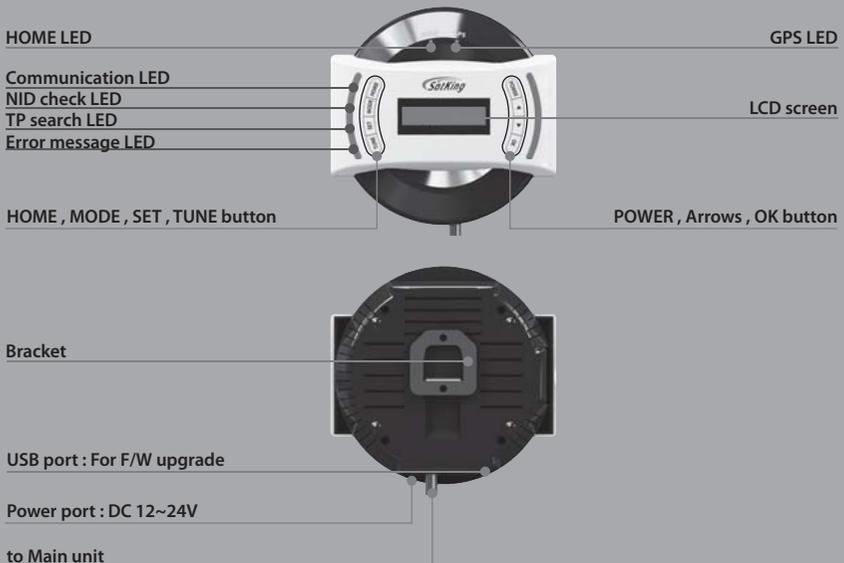
User manual

2-2. Name of parts

Main unit

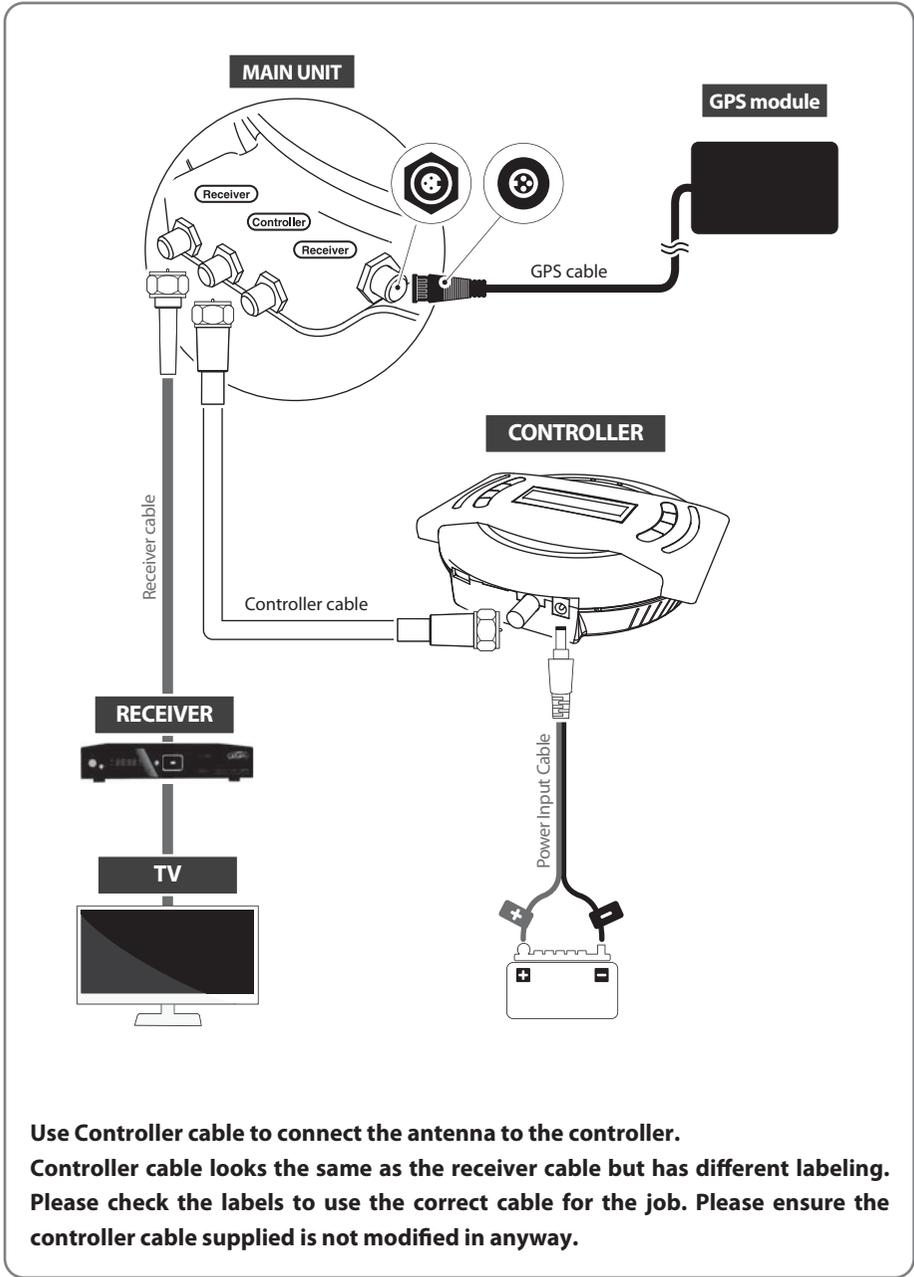


Controller



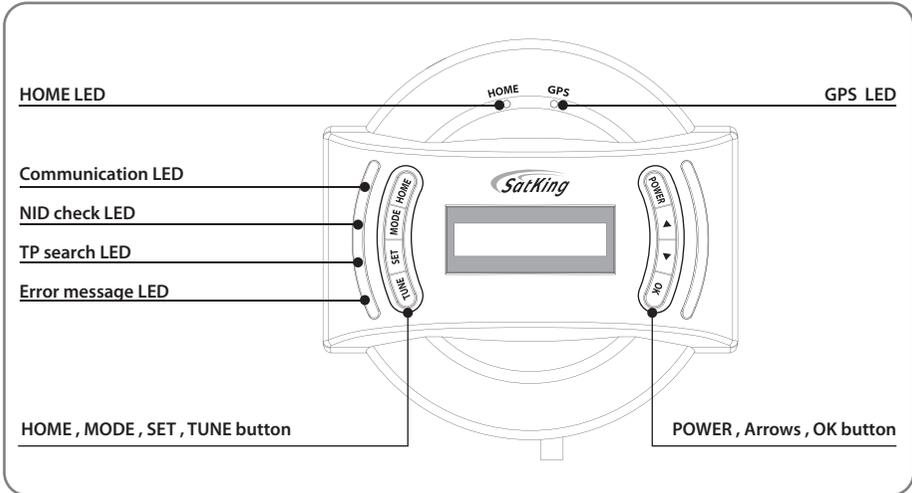
3. Operating Instruction

3-1. Connection diagram



Use Controller cable to connect the antenna to the controller. Controller cable looks the same as the receiver cable but has different labeling. Please check the labels to use the correct cable for the job. Please ensure the controller cable supplied is not modified in anyway.

3-2. Functional description



1. Get ready to use

- i. When the all cable connections are completed, press POWER to turn the unit on.
- ii. HOME LED will be solid this means the antenna is ready to go.
- iii. Communication LED will be solid when the unit is turned on.
(This light means antenna unit is communicating with controller correctly.)
- iv. If the antenna did not go back to the HOME position, the HOME LED will continue to flash while antenna comes back to HOME. When the unit is ready, the default satellite "VAST" or the last selected satellite will show on LCD screen of the controller.

NOTE

HOME position is when the antenna completely folded down and facing forward.

- v. GPS LED flashes while searching for the current location. When GPS position is confirmed the LED will become solid.

NOTE

The PRO MAX can still locate the satellite without the GPS locked.

- vi. Waiting until both HOME & GPS LED's are solid is recommended as this will allow the PRO MAX to find the selected satellite faster with more precise alignment accuracy.
- vii. If the searching operation starts before GPS becomes solid the GPS LED will continue to flash even when the satellite is already locked. In this case, the PRO MAX may readjust the skew once its current location is confirmed.

2. Selecting the satellite

- i. Select the satellite (ie VAST 156) you wish to view using the arrow buttons on the controller and press OK.
- ii. Network Identification (NID) check LED will flash and the antenna status will display "SEARCHING" and then "CHECKING" will appear on LCD screen.
- iii. NID check LED will be solid once the satellite is found and then "SAT FOUND" will appear on the LCD.

NOTE

If the antenna has found the satellite using TP data, the TP search LED will be illuminated along with NID LED. Locking to the satellite with TP data, simply means that the Network ID may not have been available.

- iv. If you have selected the wrong satellite, move to the correct satellite name using arrows and press OK to confirm new satellite.
- v. Auto fine tuning, the unit does this automatically, you can also auto tune again by pressing OK once "Sat Found" is on the LCD.

3. Back to HOME position & Turning off

- i. After use and before travelling, press HOME to return the PRO MAX back to HOME position.
- ii. To fully turn off the unit, press HOME and then hold the POWER for 5 seconds.
- iii. If you will stay in your location for an extended period or wish to save power you can leave the unit up by simply by pressing the POWER button and powering the unit off, the signal will still come through to your satellite TV receiver.

4. Special function 1 : FINE TUNE mode

FINE TUNE mode can be initialised when a selected satellite is found and you want to increase the signal strength further.

NOTE

There is an "Auto Fine Tune" built in simply press "OK" when "Sat Found" is displayed on the controller LCD panel. If you require more signal quality follow the procedure below:

- i. Press TUNE to start the FINE TUNE mode.
- ii. First TUNE is for AZ (Azimuth). Adjust antenna position using arrow buttons to find a new position providing better signal quality and press OK to set.
The signal level will be displayed on the controller (Q ___) or your satellite receiver.
- iii. Repeat the same process of adjust the EL (Elevation) and SK (LNB skew).
- iv. To save new position of the satellite and exit, press the TUNE button.
Saved new position will be placed in the memory for your next turn on. But once your vehicle moves or confirms new GPS location, the saved position will be reset.
- v. For Manual GPS RESET of the last position memory, press SET once and go to YES and press OK.
Restart the PRO MAX to apply reset to your next operation.

5. Special function 2 : ERROR MESSAGE

Error message LED will be illuminated and the error message detail will be shown on LCD display, this will detail if there is a problem with main unit. These can assist your dealer with trouble shooting.

- i. **HOME POSITION error**
If antenna does not come back to HOME position within the allowed time or the system does not recognise HOME position despite the antenna being back at HOME position (The Limit sensor is faulty).
- ii. **TUNNER error**
If there is no response when searching the satellite due to a faulty tuner or its settings.
- iii. **MOVEMENT error**
If the PRO MAX cannot move to correct position. Check for something impeding the unit.
- iv. **COMMUNICATION error**
If connection is lost between the PRO MAX and controller. Check the controller cable.
- v. **Current error**
If one of the motors is jammed, remove power an try again.

6. Special function 3 : TEST mode

TEST mode can be initialised when either an error message is shown or the antenna is at HOME position.

- i. Press MODE once to enter TEST mode and press OK.
- ii. Go to "AZIMUTH - ELEVATION - SKEW - ALL MOTORS - GPS Information- FW Ver" using the arrow buttons and press OK to select.
- iii. To exit, press MODE and PRO MAX will return to previous status.

3-3. Quick Start Guide

1. Press POWER to turn on the unit and select a satellite "VAST 156" using arrow buttons and press OK.
2. Wait until "SAT FOUND" is displayed on controller LCD display.
3. Now power on your TV & receiver and your TV channels will be shown.

NOTE

You may need to wait 30 seconds while the receiver smartcard updates.



WARNING

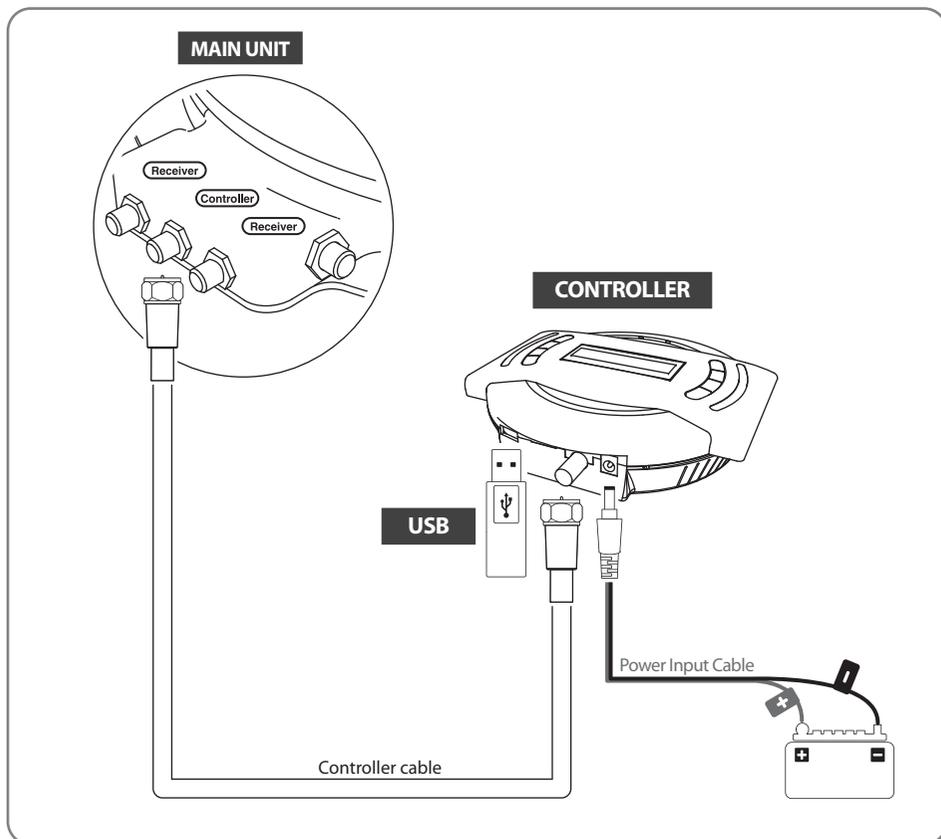
When you physically move the SatKing PRO MAX, the unit should be returned to HOME position to prevent damage.



NOTE

SatKing PRO MAX will be automatically folded back to HOME position if vehicle moves faster than 10km/h for 2 minutes when the unit is powered.

4. Software Update



1. Transfer software program to a USB stick (do not place inside a folder).
 - i. Please go to SatKing PRO MAX website www.satkingpromax.com.au to download update program(software).
 - ii. In case a controller does not recognise the USB drive, take the USB out and plug into a PC. Right click USB folder, go to "Properties" and check if the"File system" is FAT32. If not, right click USB folder again, go to "Format" and re-setup a file system to FAT32.
2. Ensure that the unit is turned off and plug the USB into USB port on the bottom of controller.
3. Press and hold TUNE button then also press the POWER button.
4. Unit will turn on and "USB connected, F/W Update mode" will be shown on LCD.
5. Once "SATKING PROMAX_SET_OK" is shown, update is completed, remove the USB device.
6. If you encounter any trouble trying to update your PRO MAX, your USB will be too old or the wrong format.

5. Advanced Settings

Modify Transponder (TP) Mode

- i. Press MODE twice to enter Modify TP MODE and press OK.

NOTE

To select and set numbers, use arrow buttons to see available options. The numbers, adjust individually with the cursor and press OK to move to next option. You only need to use this function if the satellite operator changes all it's parameters. This would be very rare.

- ii. Select the satellite you want to modify, as example "00 VAST ~ 05 OPTUS D3" and press OK.
- iii. Select TP number among "00~02" and press OK. (Three TP's are programmed for each satellite)
- iv. Repeat the same process by inputing data for FREQ (frequency) and SYMBOL (symbol rate).
- v. Select type of signal DVBS or DVBS2 and press OK.
- vi. Select polarisation VER (vertical) or HOR (horizontal) and press OK.
- vii. Select YES or NO to save and/or go back to first stage of TP Modify.
- viii. To exit, press MODE and PRO MAX will return to previous status.
- ix. For manual TP data RESET, press SET twice and then select YES and press OK. Restart PRO MAX to apply the reset to your next start up.

Change VAST STB Home Transponder (TP)

In very low signal areas or in bad weather it may be an advantage to change the home TP in your VAST receiver, this will allow the VAST receiver to search for the strongest TP first

NOTE

Due to signal levels all channels may scan in but not be available.

SatKing VAST Receivers

- i. Press Menu_Select Installation and press "OK"_Enter Password 1234.
- ii. Press yellow button (TP Edit)_Change frequency to 11807.
- iii. Green bars should appear down the bottom of the TV screen, once this happens press the red button (start search).

UEC DSD 4121

- i. Press Menu_Select #6 Advanced Options and press "OK".
- ii. Select #2 Install Setup_press "OK".
- iii. Enter password 1234_Select #1 Sat Signal Setup_press "OK".
- iv. Select #1 Freq MHz_press "OK".
- v. Manually enter 11807 and press "OK". Select #5 Accept these settings and press "OK".
- vi. Select #4 satellite Rescan and press "OK".

6. Trouble Shooting

There are a number of common issues that can affect the signal reception quality or the operation of the SatKing PRO MAX. The following sections address these issues and potential solutions.

A. No function when you power on the controller

- i. Check again that all the cable connections have been made correctly.
 - ✓ Connection between the battery and controller.
 - ✓ Connection between the controller and the antenna. Make sure that the cable is plugged into the correct port on the antenna.
- ii. Check if the power input cable has been damaged.
- iii. Check the battery polarities(+/-).

B. Failed to lock to the selected satellite

- i. Satellite signals can be blocked or degraded by buildings and trees.
Make sure there are no obstructions in a northerly direction, maybe move van slightly.
- ii. If the GPS light is flashing for a long time, press "SET" to enter the manual GPS mode and select your location.
- iii. Select another satellite, VAST or FOXTEL both come from the same position but use different parameters so changing the satellite will force the unit to search different parameters.
- iv. If the GPS light is solid and the unit cannot find the signal but the direction of the satellite is clear, Try selecting a different location with GPS. Press "SET" and select a state that is next to the state you are actually in and then select a location in that state, this will force a different type of satellite search pattern.

C. Mechanical problems

- i. If the antenna does not move into desired position.
 - ✓ Try to power OFF/ON again or remove the power jack from the controller and then re-connect.
- ii. If the antenna makes a noise whilst remaining static.
 - ✓ Try to power OFF/ON again or remove the power jack from the controller and then reconnect. If problem persists, please contact your local distributor for assistance.
- iii. If the system has been improperly wired, the system may not operate. Contact your local dealer for assistance.

D. Terrestrial antenna (Also known as local antenna)

- i. We recommend that you retain your local antenna as there will be some locations where there are trees blocking the satellite signal but there is no clear view of the sky but there is adequate terrestrial TV signal available.

7. Specifications

7-1. Dimensions



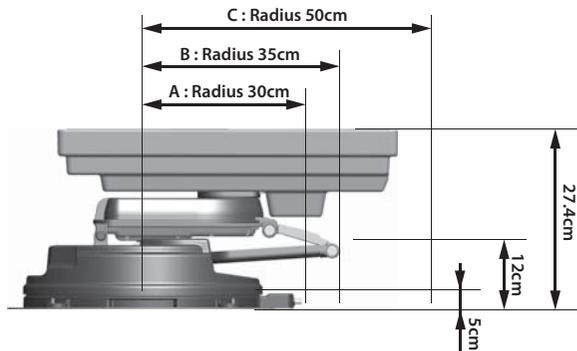
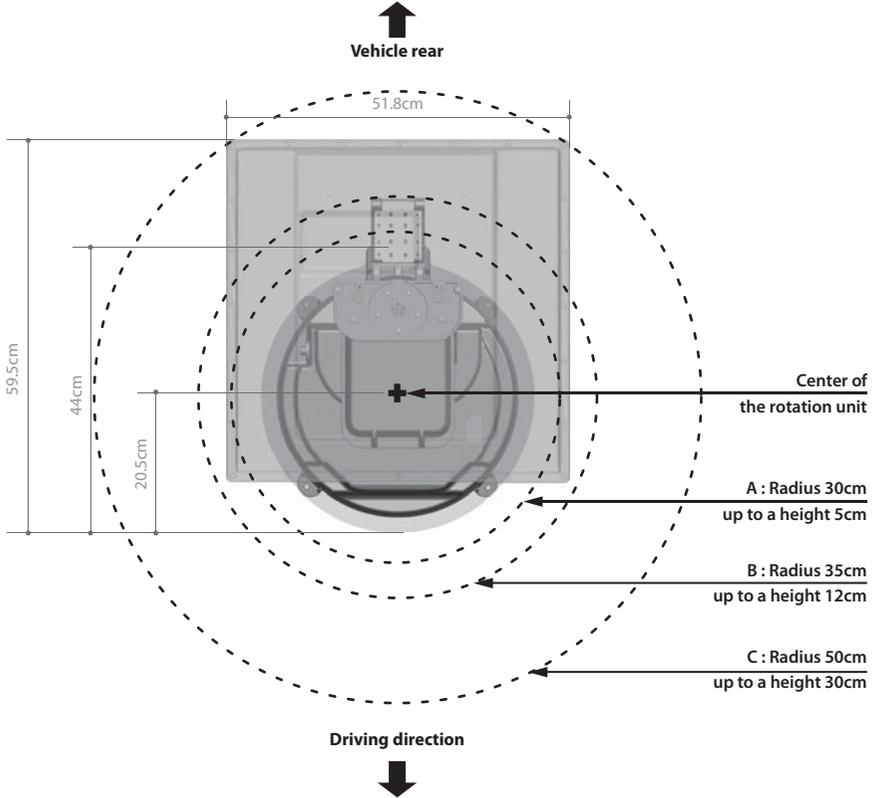
7-2. Specifications

MODEL NAME	SatKing PRO MAX
Weight	19.6 kg
Work Condition	Stationary
Polarization	Linear (Horizontal / Vertical)
LNB Output	Dual Output
LNB Input Frequency	11.7 ~ 12.75 GHz
LNB Output Frequency	950 - 2150 MHz
Angle Range	(EL) 5° ~ 90° / (AZ) 390° / (SK) -60° ~ +60°
Satellite Searching Time	80 seconds
Power Requirement	DC 12~30V
Power Consumption	60W searching (2W standby)
Operating Temperature	-30°C ~ +60°C
Tuner	DVBS, DVBS2
GPS	24 channels
Gear Drive	Heavy Duty Full Metal

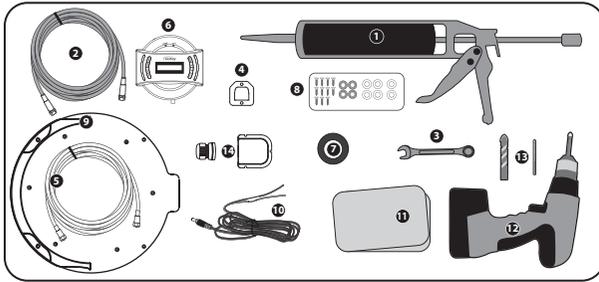
8. Caravan/Motorhome Installation

8-1 . Required space for the SatKing PRO MAX

Please allow that there is enough space around the SatKing PRO MAX for flat antenna section to complete a full 360° scan of the sky and return to the HOME position.

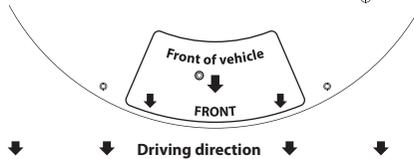


8-2. Equipment for installation



- 1 Sikaflex
- 2 Receiver cables
- 3 Spanner
- 4 Controller bracket
- 5 Controller cable
- 6 Controller
- 7 Electrical tape
- 8 M4x20 (11), M8 Self-lock nut (4), Washer (4), Bushing (2)
- 9 Mounting plate, Deflector
- 10 Power input cable
- 11 Cleaner
- 12 Power drill
- 13 2mm drill bit, over 20mm drill bit
- 14 Cable holder & gland

※ Mounting plate direction

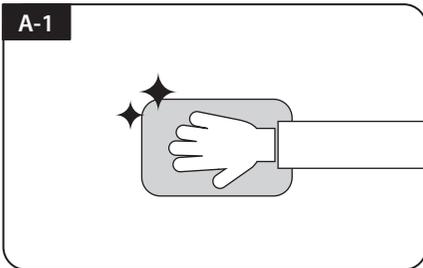


Note: Assemble of the PRO MAX and the mounting plate takes place separately. Once the antenna is mounted you can then use the supplied washers and nuts to secure the antenna to the base plate.

8-3. Installation

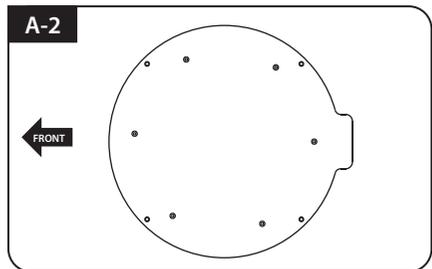
A. Mounting plate installation on a vehicle roof

A-1



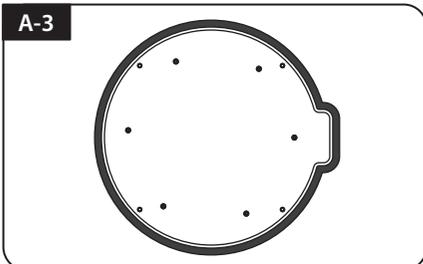
Clean the surface with cleaner

A-2



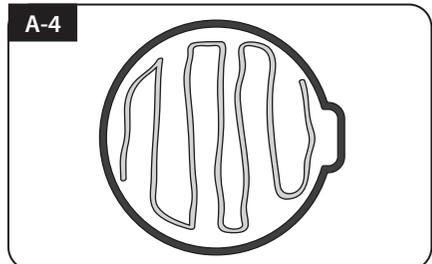
Locate mounting plate in the centre of the vehicle roof

A-3



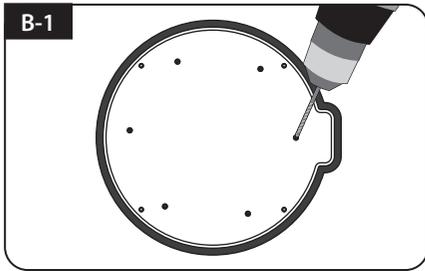
Attach electrical tape outside of the mounting plate by 5mm away from the plate edges

A-4

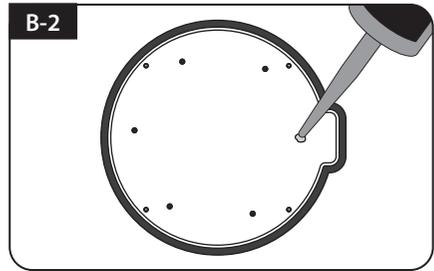


Put aside the mounting plate to apply sikaflex with in the attached tape line but leave 2cm inward gap from the line

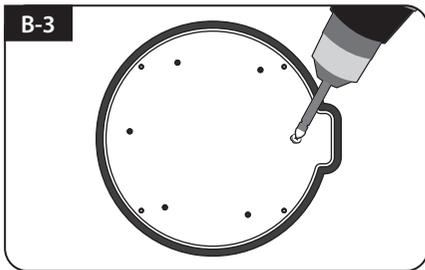
B. Screw 6pcs of M4x20 bolt to fix the mounting plate



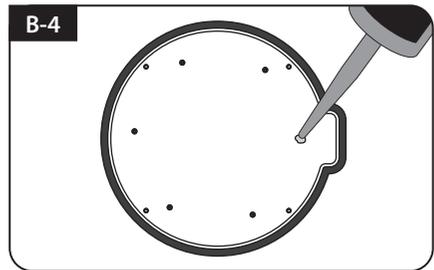
Place the mounting plate on the sikaflex and make 6 holes (2mm) with a power drill



Apply sikaflex on the holes

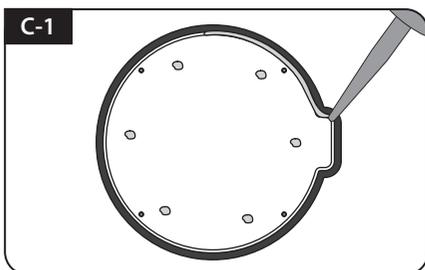


Insert screws

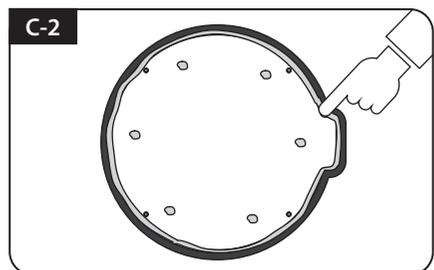


Re-apply sikaflex to cover bolts screwed

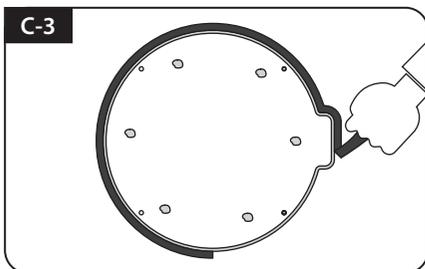
C. Apply sikaflex between mounting plate and electrical tape



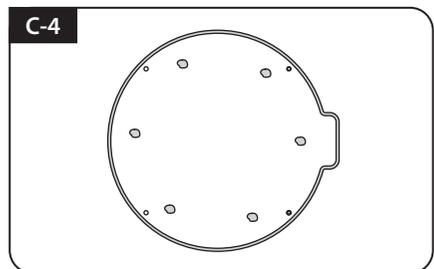
Apply sikaflex around mounting plate edge



Clean away the excess sikaflex



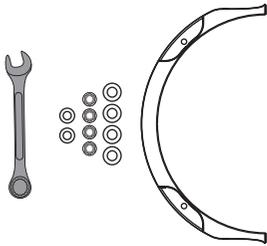
Remove electrical tape and allow to dry



Prepare to place the antenna on to the four upright bolts

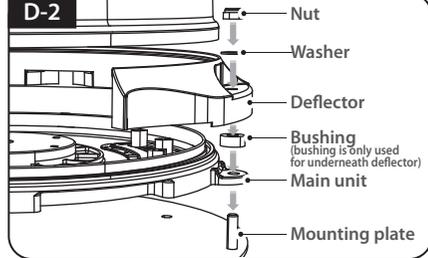
D. Fix the antenna main unit with 4 pcs of nuts and connect GPS module

D-1



Parts required spanner, four(4) nuts and washers, and two(2) bushings

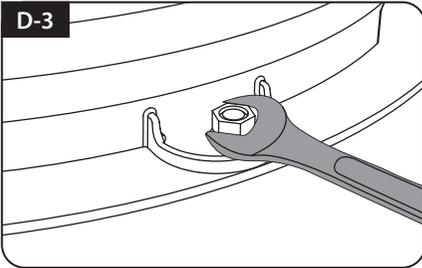
D-2



Place the parts on upright bolts in order as below image :

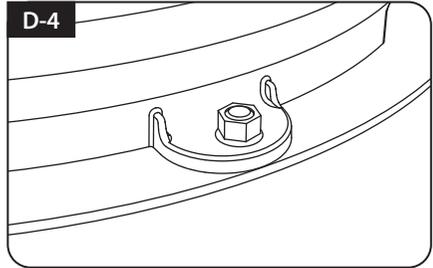
Mounting plate ▷ Main unit ▷ Bushing ▷ Deflector ▷ Washer ▷ Loose-proof nut

D-3



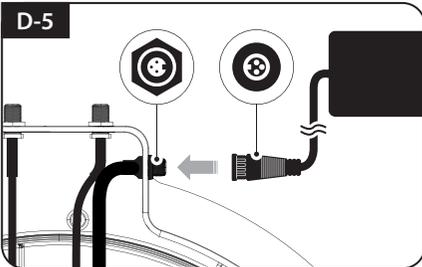
Fit the supplied nuts to each of the four bolts and tighten firmly with spanner

D-4



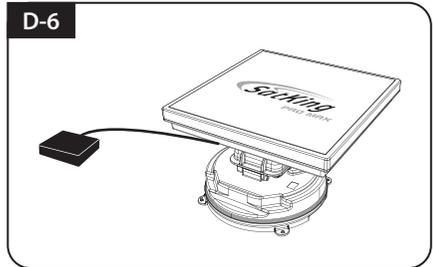
Make sure you check and four (4) nuts are tightened

D-5



Connect the GPS connector to the port and tighten

D-6



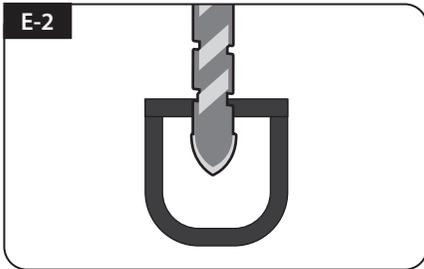
Place the GPS module on the vehicle roof away from the unit and fix using supplied double sided tape

E. Cable holder installation 1

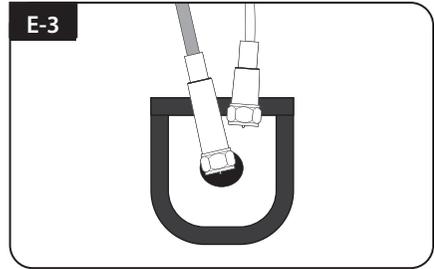
E-1



Place cable holder 30cm away from the rear centre of the antenna. Apply electrical tape 5mm from the outside of the holder

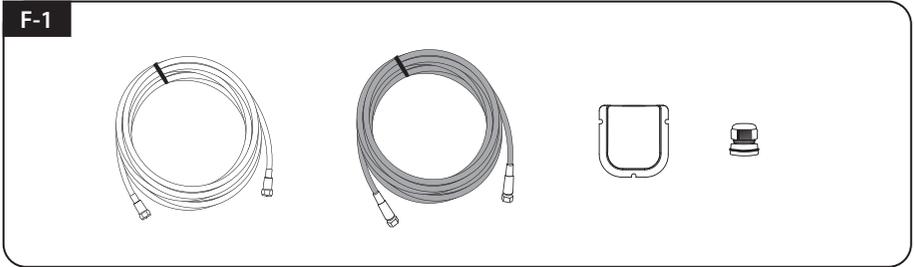


E-2
Drill a 20mm hole (or larger) in the centre of the tape marking

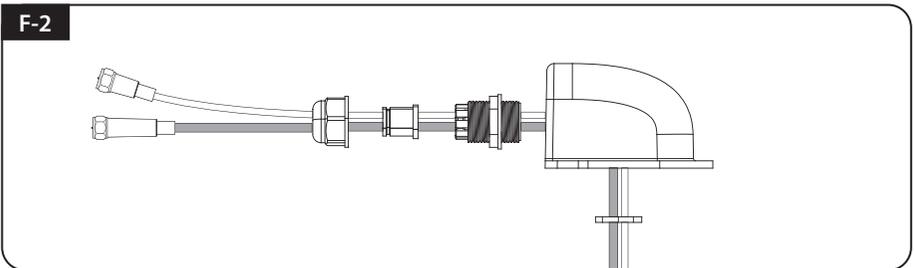


E-3
Make sure that hole size is big enough to insert all cables together by one and one

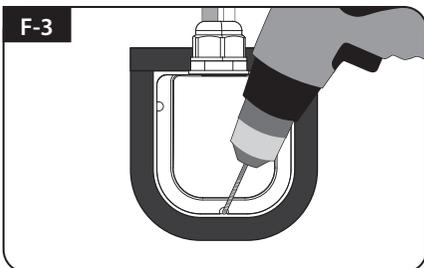
F. Cable holder installation 2



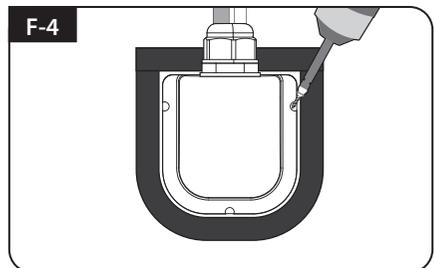
F-1
Controller cable and two(2) of receiver cables, cable holder and gland for installation



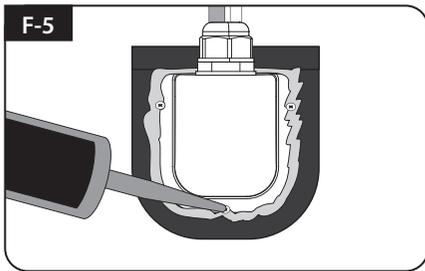
F-2
Puts the cables (controller cable and two of receiver cables) inside the cable holder as above picture



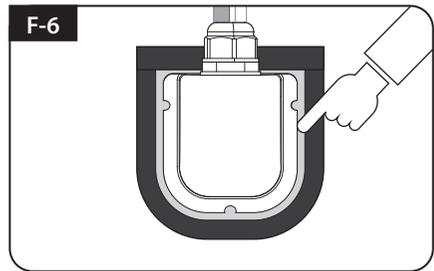
F-3
Place the assembled cable holder inside the tape markings. Drill three(3) 2mm holes



F-4
Fix cable holder on the vehicle roof with three(3) of M4 x 20 screws at drill holes made

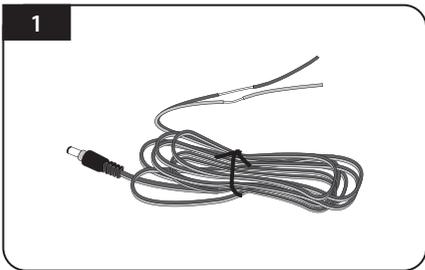


Apply sika-flex around cable holder and on the top of the screws for waterproof

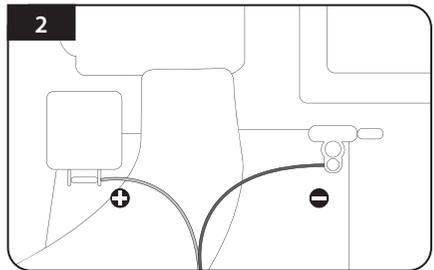


Connect cables to relative ports. Remove electrical tape then tidy sika-flex before dry

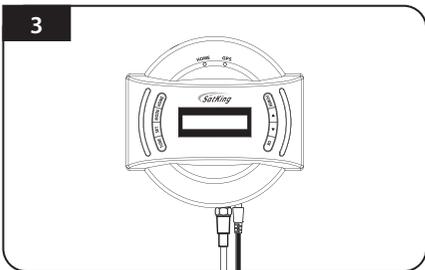
8-4. Battery connection



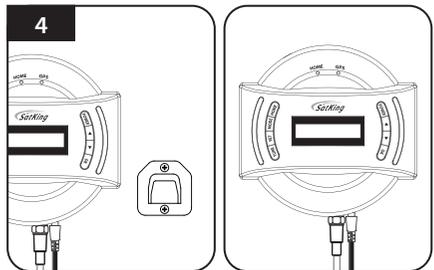
Power input cable



Match the power cables polarities to the battery polarities, red to red and black to black.



Connect to controller using power input cable and controller cable



Fix the controller bracket where you would like to fit the controller

8-5. Options

SKU-9160 SatKing 2x4 Satellite TV Multiswitch

The Satellite TV multiswitch allows you to increase the PRO MAX's twin LNB outputs to 4.

This is required when you wish to use Foxtel IQ and VAST at the same time. Note you will also need to purchase 3x F to F 1 metre cables.

SKU-5569 SatKing PRO MAX mounting kit

If you would like to transfer your PRO MAX to another van you will need this kit, package includes: 1x Mounting plate, 1x Controller cable, 2x Receiver cables, 1x WP gland, 1x Cable holder, 4x Nuts, 1x Spanner, 1x Power cable, 1x Controller bracket.