

# Installation & Operation Manual

## **SOUTHERN CROSS** **52**



***Mobile Entertainment at its Best***

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## **Caution**

**Please read information contained in this manual before you begin to install the Southern Cross 52.**

**Note:** This is a sensitive device. Do not place any weight on the dish arm. Do not manually lift or turn the dish arm; the dish arm may only be moved by the motor.

**Caution:**

Never touch the outdoor unit whilst in operation!

**Note for operation on caravans:**

The 12V power supply system which is generated by voltage transformers built into on some imported caravans is frequently not stable enough for the operation of the satellite system. We recommend the SC52 wiring is attached directly to the house battery only.

## **Contents on Delivery**

The following items are in the carton as supplied:

- Southern Cross 52 Dish
- Main RG6 RF Coax Cable with waterproof entry plate and connector
- Data Box Module
- Controller Display
- Comms Cable (Western cable connector)
- Coax Cable for connection of your satellite TV receiver with control unit.

## **Correct Use and Operation**

This product has been designed for use in a fixed installation on motorhomes and caravans with a maximum speed of no more than 100 Km/h. It is designed to automatically aim a parabolic antenna mounted on a stationary vehicle at geostationary television satellites transmitting directly to NZ using the Optus D1 satellite. The power to the system is supplied by a standard vehicle electric system with a rated voltage of 12 volt.

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

Your SC52 dish is an intelligent satellite TV reception system which can align itself towards a pre-set satellite automatically as long as the system is located within the satellite reception.

Please ensure that the system always has a clear view to the North West. In NZ, the Optus D1 satellite is in an approximate position to the North West (Azimuth 318°). If the satellite's signal beam is interrupted by obstacles such as mountains, buildings or trees, the automatic aiming will not function and no TV signal will be received.

Please also note the following instructions from the manufacturer:

- It is not permitted to change the overall device by removing or adding individual components.
- It is not permitted to use other parabolic antennas or LNBS than those installed originally on the equipment.
- The installation must only be performed by a qualified technician.
- All of the relevant and approved guidelines of the automotive industry must be observed and complied with.
- The equipment must only be installed on hard vehicle roofs which are sufficiently strong and inherently stable.
- No regular maintenance is required other than cleaning. All housings and enclosures must not be opened. Only a qualified professional should carry out any maintenance work.

## **Mounting Preparation**

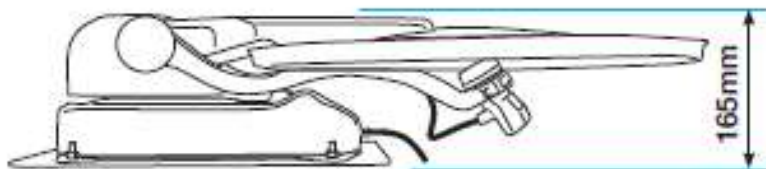
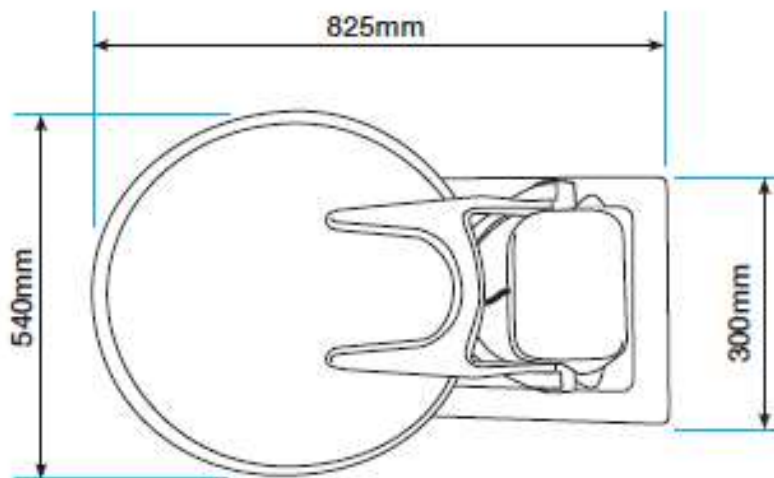
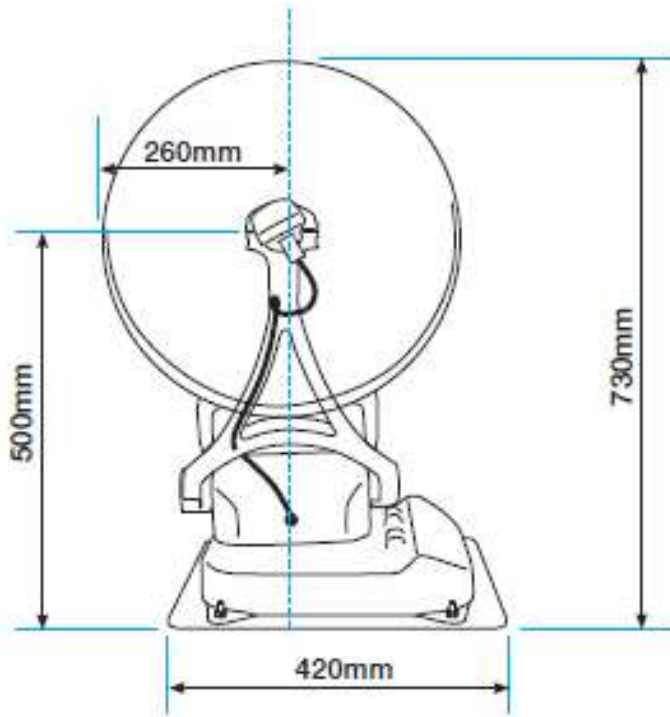
This dish system must be installed on the roof of the motorhome/caravan. Care must be taken to ensure adequate space is provided to allow for the operation and rotation of the system. Allow for clearance from vents, roof hatches and air conditioning units. Where possible ensure the system is installed on a level section of the roof line as this will ensure the minimum acquisition time. Listed below are the parameters of surface area required.

From the centre of the dish rotation pivot a radius of 260 mm is required to a height of 500 mm from the roof.

### **Overall Dimensions**

Base length	420 mm
Width	300 mm
Overall length (including dish)	825 mm
Overall width (including dish)	540 mm
Overall height (closed)	165 mm
Overall height (open)	730 mm
Weight	11.3Kg

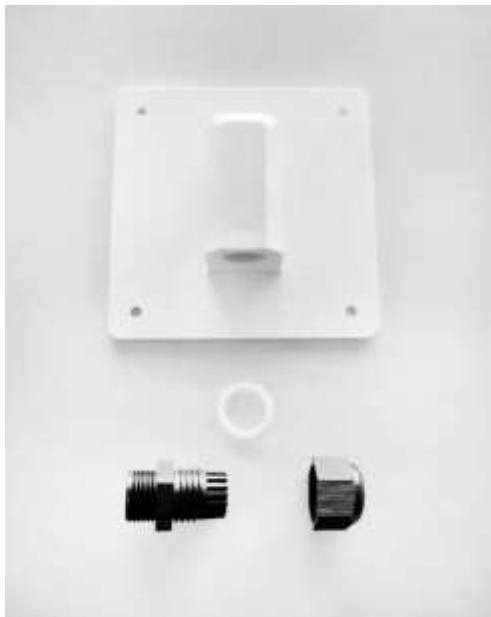
Before installation, ensure the roof base has sufficient strength for the support of the dish system. The mounting plate can be drilled, screwed and sealed to the roof, (ensure adequate sealing to prevent any water leaks) **OR** it can be fixed using an adhesive sealant ensuring all of the manufacturer's directions are followed and sufficient time for the product to cure correctly is allowed. Alternatively a 3M bonding tape and primer spray can be used, for more information on this product please contact RSE.



## Main Cable Installation

1. Select the location for roof entry plate and drill a 13 mm hole.
2. Insert the cable through the roof entry plate and then the cable through the roof line.
3. Slide the cable through the roof gland to allow for correct length from gland to dish.
4. Install the roof entry waterproof plate as is now attached to the cable ensuring adequate sealing of the plate and screws.
5. Tighten the gland to ensure good waterproof seal.
6. Connect waterproof twist connector to dish base and saddle cable as necessary.
7. The cable length can be altered to suit an individual installation, i.e. excess cable can be shortened, however care must be taken to ensure that a high quality satellite F connector is used to refit to the satellite cable.

**Note: RSE cannot be held responsible if this cable length is altered as if not done correctly this could affect the satellite antenna operation and further if it has been altered and it does impact on the antenna operation, it would not be covered under warranty.**



## **Electrical Connections**

**Note:** This system is 12V operation. Mount the main control unit at the selected location and connect the RF coax cable from the antenna. Connect the antenna cable to the “Dish In” connector on the control unit.

Mount the Display controller using the screws provided and connect the Display loom (Western Jack type connector) to both the Display controller and Data Box. The main power supply plug (4 pin connector) can now be wired as below.

The colours are as below:

### **Red 12V Positive**

This should be on an unswitched constant 12V DC supply as close to the battery as possible to ensure no voltage drop. Alternatively connect to a reliable 12V supply directly from the battery, i.e. main switchboard supply, fuse box etc.

### **Black 12V Neg/Earth**

This should be a good ground supply to the battery or main earth connection at switchboard.

### **Yellow 12V Ign/Switched**

This is the Auto Shut Down circuit. It must be connected to either a switched ignition source or Alternator D+ connection from the vehicle charging system OR if the unit is installed in a caravan it can be connected to the stop light circuit.

The circuit only needs a momentary supply to activate the auto close operation.

Once these connections have been made the main loom containing the relay and fuse holder can be connected to the Data Box.

## **To The Installer**

Once the SC52 Satellite antenna installation is completed, check the operating voltage whilst the dish is searching. Optimum operating voltage is 12.00V DC – 14.8V DC, minimum threshold is 10.5V DC. Any voltage lower than this can cause the Antenna to not operate correctly.



## **Data Box Installation**

Locate a position best suited to your individual installation and run the appropriate antenna cables and power supply cables as supplied. Mount the Data Box using the 4 x mounting lugs.

Ensure that the master ON/OFF reset switch is accessible. The box can be hidden just ensure that once located, the switch can be easily turned on and off in the future.

## **ON/OFF Display Panel Mounting**

Select a location that best suits your installation. The cable provided to connect the Data Box to the Display is 5M in length.

Simply snap the connectors into both ends. To mount the Display unclick the fascia off the display cradle, mount the cradle using the holes provided and “click” the 5m data cable into place and then “click” the fascia into place.

## **Receiver Connection**

Connect to the receiver/TV using the RF Coax cable provided and plug into the “TV Out” connection on the Data Box. The other end is connected to the “LNB in” or “Sat In” of the satellite set top box receiver or satellite TV.

Please note: Ensure that the TV or set top box is switched off when making this connection.

## Operation of SC52 Automatic Satellite Dish

Turn ON the Master/Reset switch that is located on the side of the Data Box. When first turned on the dish will respond with a short self-test. The dish will raise several cm's then retract and "CLOSING" will appear on the screen. This will time out quickly and "POWER OFF" will appear on the screen.

This antenna is now ready for operation, the Master Reset switch can be left on continually. Should the motorhome or caravan suffer from low house battery voltage or an electrical "event" occurs that affects the dish operation, simply turn the reset button off then on again. This will reset the dish software.

To operate the antenna press the On/Off button on the display once and the display will boot up and the second press will start the dish. The word OPENING will show.

Once the dish is fully open and begins to rotate SEARCHING will appear on the display along with the preset search satellite and also the signal strength.

The dish will locate the satellite and the display will change to TRACKING. At this point the dish will fine tune itself incrementally to receive maximum signal gain. Once this is achieved the display will read SIGNAL LOCKED and signal display will show a reading of between 48 – 52 (this will vary due to location and atmospheric conditions). This acquisition time will take between 45 – 55 seconds, however may vary according to location.

The LED next to the ON/OFF button on the display will appear red during all functions and will turn to green when the dish is locked on the satellite.

After 90 seconds the display will time out. To bring the display on press the ON/OFF button. Then press the button a second time for the desired operation.



## **Service Operation**

Should you require the dish to be in the up position yet stationary for cleaning or service, whilst the dish is rotating simply press the “Tick” button. This will stop the dish immediately. To restart the dish press the “Tick” button and the dish will restart the search process.

**Note:** If you press the ON/OFF BUTTON IN ERROR you will need to access the RESET switch to restart the dish operation.

If the dish has achieved signal locked position and you wish to do a “retune” press the “Tick” button once to bring on the display, it will read SIGNAL LOCKED. Then press the Tick button twice in short succession and the antenna will do an automatic fine tune. Once completed the display will show SIGNAL LOCKED.

## **Auto Up Function**

The SC52 has the ability to be programmed to open the antenna automatically if the TV remote “ON” button is pressed or alternatively the Satellite Decoder remote ON button is pressed. The dish will open and set.

If you wish to dish to retract (i.e. if you are watching a DVD or streaming, simply press the ON/OFF button on the SC52 Display and the dish will retract. **Note:** It will not retract if you turn the TV/Decoder off.

If this function is not activated or you wish to deactivate it please contact RSE between 8 am and 5 pm Monday to Friday to assist you with this process.

## **Technical Information**

**Note:** The SC52 settings should not be altered other than by a qualified technician.

The LNB setting is 10750

The primary search transponder frequency is 12483 Freeview.

The symbol rate is 22500

Polarization is Horizontal

Standby current draw: 200 milliamps

Operating draw (stationary locked onto satellite): 350 milliamps

## **Warranty**

The Southern Cross 52 has a 24 month warranty. After this period this product can then be returned to RSE (NZ) Ltd in Auckland, phone 0800 639 822 for a service at a cost of \$160 + GST. Once this service is completed the product will then carry a further 12 month warranty.

If any problems occur it must be taken back to the installer or retailer for inspection/service or contact RSE on 0800 639 822 for advice.