

Installation and Operation Manual

Southern Cross 45



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Assembly Instructions

Please read information contained in this manual before you begin to install the Southern Cross 45.

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/trailers:

The 12V power supply system which is generated by voltage transformers built into caravans is frequently not stable enough for the operation of the satellite system. We recommend the SC45 wiring is attached directly to the house battery only.

Contents on Delivery

The following items should now be in front of you:

- Southern Cross 45 Dish
- Main Cable
- Master Control Module
- Power Relay Loom
- Controller Display and Screws
- Controller Cable (Western cable)
- Roof Plate and Screws
- 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. 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 SC45 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. 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 for the product. All housings and enclosures must not be opened. Always ask a qualified professional to carry out any maintenance work.
- The SC45 has a 12 month warranty. If any problems occur it must be taken back to the installer or retailer for inspection/service.

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 300 mm is required to a height of 200 mm from the roof. This increases to a radius of 400 mm (with the dish laid back and searching) to a height of 600 mm from the roof.

Overall Dimensions

Base length	410 mm
Width	290mm
Overall length (including dish)	660 mm
Overall width (including dish)	480 mm
Overall height	225 mm

Before installation, ensure the roof base has sufficient strength for the support of the dish system. The mounting plate can be 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.

Main Cable Installation

Connect the cable to the dish and tighten, connect the RF cable to dish base. Select the location for roof entry plate and drill a 25 mm hole. Insert the cable through the roof line and install the roof plate as supplied, ensuring adequate sealing of the plate and screws.

If there is over 1m between the dish assembly and roof entry plate it may be necessary to saddle the main loom to prevent movement.

Electrical Connections

Note: This system is 12V operation. Mount the main control unit at the selected location and connect the main roof cable (10 pin connector). Connect the antenna cable to the “IF In” connector.

Mount the Display controller using the screws provided and connect the Display loom (Western type connector) to both the Display controller and Main controller. The main power supply plug (4 pin connector) can now be connected.

The colours are as below:

Red 12V Positive

This should be on an unswitched constant 12V supply as close to the battery as possible or to a reliable 12V supply from the battery, i.e. main switchboard supply. This connection can be made via an “ON/OFF” switch to ensure that there is no standby draw from the battery when the motorhome is stored. However when the motorhome or caravan is in use the main switch must be left in the ON position to ensure the Auto Shut down operates.

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 Alt 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 Main controller.

Note: When you power the unit UP initially, the dish will open a few degrees then close, then it will move a little in both directions (clockwise and anticlockwise) to check its parameter switches.

Receiver Connection

Connect to the receiver/TV using the RF cable provided. One end is connected to the IF Out connection on the Main controller. The other end is connected to the “LNB in” or “Sat In” of the receiver or TV.

System Operation

CAUTION: Please note the settings for the SC45 operation have been pre-set and the system has been tested in NZ before delivery. There is no requirement to adjust any of the settings in the control unit.

If any of these are changed it may prevent the SC45 from locating the satellite and may require returning to the supplier to reset the controller.

Operation of SC45 Automatic Satellite Dish

Note: After the initial power up, the dish will do an automatic self-test, it will check its limit switches by small movements of the dish then it will come to rest. When it is ready for operation “Power Off” will appear on the Controller Display screen.

To turn on, press the “ON/OFF button”, the dish will stand up and begin its search. When it has found the satellite, it will stop rotating and go to its “fine tune mode”. The dish will make small movements left and right and up and down until it “identifies and locks” onto the strongest signal. This fine tune process may take up to 2 minutes. When the SC45 has located the Optus D1 satellite a * will appear on the right side of the display screen. The above process will occur every time you switch the SC45 on at any given location.

Press the ON/OFF button on the Display controller to send the dish down when you have finished viewing.

Technical Information

Note: The SC45 settings should not be altered other than by a qualified technician.

The LNB setting is 10750

The search transponder frequency is 12483

The symbol rate is 22250

Polarization is Horizontal

Warranty

The Southern Cross comes with an initial 1 year warranty. This product should then be returned to RSE (NZ) Ltd in Auckland, phone (09) 264 0221 or Digital RV in Christchurch (03) 344 5418, for a service at a cost of \$160 + GST. Once this service is completed it then carries a further 1 year warranty.