

RADARC SE550

Specification

The ASCOM SE550 was original used in a trunked radio system and has been modified to work in the 4m (70MHz) amateur radio band.

Frequency Range : 68 – 88 MHz
Channel Spacing : 12.5kHz
Mode : FM
Antenna : BNC 50Ω
TX Power : 25W
Deviation : 2.5kHz
DC Power : Nominal 13.2V (10.8 – 15.6V) (RX approx 1A, TX 6.5A/25W)

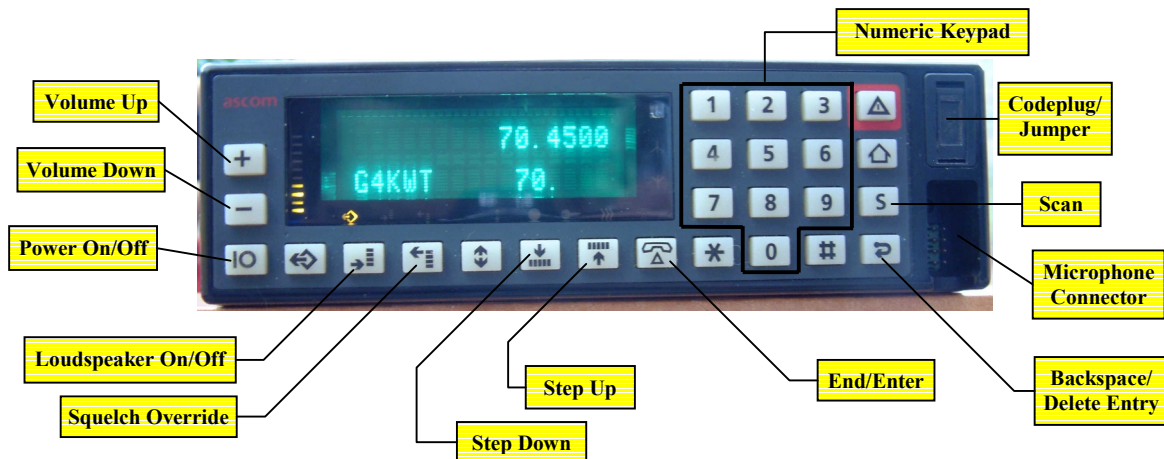
This document is intended as a brief getting started guide to the radio. Further information (circuit diagrams, service information etc) is available at www.blob.demon.co.uk

There is also lots of information on PA3EKI's website at :

<http://home-1.tiscali.nl/~moertje/condor3000/condor.htm>

This document and the radio conversion is based on information kindly supplied by Stephen Tompsett of the Rugby Amateur Transmitting Society (RATS).

Front Panel and Keypad



Operation

- Connect power, loudspeaker and microphone.
- Connect the microphone to the lower front panel connector.
- Ensure that a jumper (link) is fitted to the lower pair of pins in the upper front panel connector (the radio will not power up without this jumper). If the radio has been supplied with a codeplug then this jumper is not required.

Normal Channel Mode

The radio has been programmed with 41 12.5kHz spaced channels covering the entire 4m band. The channel number is the kHz part of the required frequency (ignoring the half-kilohertz) e.g. Channel 0 is 70.000MHz, Channel 250 is 70.250MHz, Channel 487 is 70.4875MHz etc....

To select a channel enter the channel number on the numeric keypad (the digits will be displayed on the bottom right hand side of the display after the 70.). If you enter an incorrect digit it can be erased using the **Backspace/Delete Entry** key. Press the **End/Enter** key to change to the selected channel. The frequency display will show the selected frequency.

You can scroll through the available channels by pressing the **End/Enter** key, the frequency indication will start flashing and you can then use the **Step Up & Step Down** keys to step through the channels.

Scanning

The radio is able to scan all of the FM 12.5kHz channels from 70.300MHz to 70.4875MHz. Press the **1** key followed by the **S (Scan)** key. The display will show **Scanning**. When a busy channel is detected, scanning will stop and the frequency of the channel will be displayed. Scanning may be resumed by pressing the **S (Scan)** key again.

Connections

Power and Loudspeaker [Rear Panel 15 Way 'D' Plug]

Pin	Function
1	+VE Power.
2	+VE Power.
3	Loudspeaker Ground.
4	Signalization [12V, 500mA max – BC817] ?
5	Not Used.
6	Earphone [600Ω].
7	Ground.
8	Ground.
9	RF Power Reduction [-10dB].
10	Loudspeaker [4Ω].
11	PTT [Active = Low]
12	Tx AF input [600mV]
13	Emergency Keying [Active = Low] ?
14	+9V Output.
15	Microphone Input [100mV]

Microphone [Front Panel – 8 way header plug]

Function	Pin	Pin	Function
Microphone [1mV]	1	2	Not used
+9V	3	4	PTT [Active Low]
Earphone Output	5	6	Microphone Ground
General Ground	7	8	Earphone Ground

70MHz [4m] UK Band Plan

70.000MHz to 70.030MHz **Beacons.**

70.030MHz Personal Beacons

70.030MHz to 70.250MHz **SSB/CW.**

70.150MHz Meteor Scatter calling.

70.185MHz Cross-Band activity centre.

70.200MHz SSB/CW calling.

70.250MHz to 70.300MHz **All Modes.**

70.260MHz AM/FM Calling.

70.300MHz to 70.500MHz **Channelised Operation [12.5kHz Channels]**

FM Calling Channel : 70.4500MHz.

FM Simplex – used by GB2RS : 70.4250MHz.

Emergency Communications Priority :

70.3500MHz 70.3750MHz 70.4000MHz.

RTTY/Fax Calling/Working : 70.3000MHz.

Digital Modes :

70.3125MHz 70.3250MHz 70.3375MHz 70.3625MHz 70.3875MHz 70.4125MHz

70.4375MHz 70.4625MHz 70.4875MHz.

Power Limit : 22dBW PEP

Permitted Modes : Morse, Telephony, RTTY, Data, FAX, SSTV.