

RATS SE550 MK2 (B)

Specification

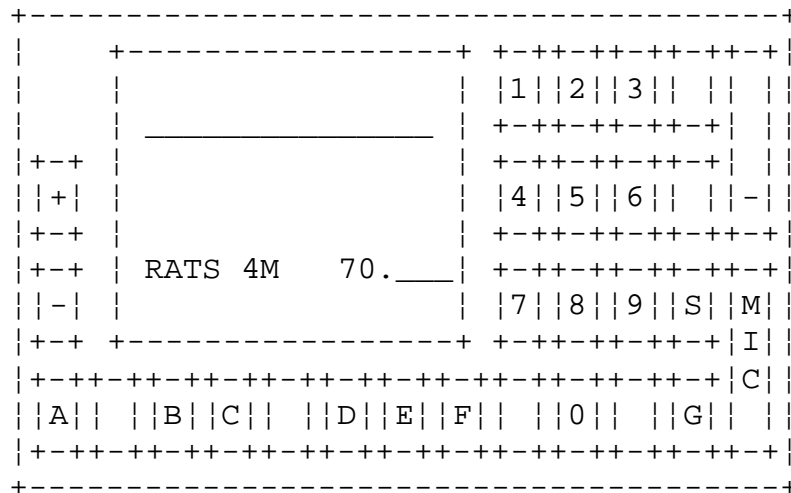
Originally designed for use in a trunk radio system, the units supplied by the Rugby Amateur Transmitting Society are supplied programmed to work in the 4m (70MHz) amateur radio band.

Frequency range	68-88 MHz
Channel spacing	12.5 KHz
Mode	FM
Antenna	BNC 50Ω
TX Power	25W
Deviation	2.5 KHz
DC Power	Nominal 13.2V (10.8-15.6V) (RX approx 1A, TX 6.5A/25W)

This documentation is a brief getting started guide to the equipment; further information (circuit diagrams, service information etc.) will soon be available via the clubs web site: <http://www.rugby-ats.co.uk/>

The MK2 (B) version has a new system EPROM and programming giving greater functionality than the version originally supplied by the RATS.

Front Panel and Keypad



A	Power on/off
B	loudspeaker on/off
C	Squelch on/off
D	Scan Up

E	Scan Down
F	End/ Enter
G	Backspace/delete entry
0-9	Number

Operation

- Connect power, loudspeaker and microphone.
- Connect the microphone to the lower front panel receptacle.
- Ensure that a jumper is fitted to the lower pair of pins in the upper front panel receptacle (the rig will not power up without this jumper).

Normal channel mode

The rig has been programmed with 41 12.5 KHz spaced channels across the 4m Band. The channel number is the KHz part of the corresponding frequency.

e.g.

Channel	Frequency
0	70.000
250	70.250
300	70.300
487	70.4875
500	70.500

To select a channel enter the channel number, 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 with the recall key (bottom right corner key). Press the <telephone/send/end> key to select the channel, the frequency display will indicate the selected frequency.

You may scroll through the available channels by pressing the <telephone/send/end> key, the frequency indication will start flashing and you may then use the scroll up/down keys to select the desired frequency.

Scanning

Enter a number between 1 and 5 then press the <S> key.

Number	Channels Scanned.
1	RATS channels (as original SE550)
2	Calling channels
3	Digital mode channels
4	Standard FM channels
5	Emergency priority channels

The range of channels being scanned can be changed while scanning by using the scroll up/down keys. The display will indicate the group of channels being scanned. 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> key. The classification of channels is according to the standard 4m band plan.

Connections

Power & Loudspeaker (15 way D on back panel)

N.B. An adaptor with power and loudspeaker connections is normally supplied.

Pin	Use
1	+VE power
2	+VE power
3	Loudspeaker +ve 4Ω
4	
5	
6	AF Earpiece 600Ω
7	GROUND
8	GROUND
9	Ground for 10dB RF Power reduction (can fit pot for variable power) (22K = 10W)
10	Loudspeaker -ve 4Ω
11	PTT active=L – ground to TX. (approx 0,5mA at 5V)
12	AF in 600mv
13	
14	+9V out
15	Microphone 100mv

Code Plug Socket (upper front panel)

Use	Pin	Pin	Use
	1	2	
	3	4	
	5	6	
Jumper to pin 8	7	8	Jumper to pin 7

A code plug (EEPROM) is not required for the units supplied by the Rugby Amateur Transmitting Society, but the rig will not power up without a jumper between the bottom two pins of this socket.

Microphone (lower front panel)

Use	Pin	Pin	Use
Microphone B~ 1mV	1	2	Not used
+9V	3	4	PTT
Earphone	5	6	Microphone Ground
General Ground	7	8	Earphone Ground

Reference Information

On the Continent the ASCOM SE550 is often known as a “Condor 3000”.

The EPROM and software used to reprogram the units supplied by the Rugby Amateur Transmitting Society can be found at:

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

There is a lot of useful information on this site, but it is in Dutch!

An alternative set of software (not free!) with additional functionality can be found at:

<http://home.planet.nl/~kolle049/condor.html>

Once again this page is in Dutch!