

User Guide – RP500 Series

v07/10

Professional compact repeater base station

Common Information



RP510/520/580/580-U

Introduction

This guide covers the 'basics' of your base station operation. To meet your exact requirements the radio may have been customised by your Entel authorised dealer. These features will be explained in a separate guide issued by the dealer.

Common

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Certification

CE Compliance Statement

The RP500 base station displays "CE" on the rear label, indicating its compliance with the essential requirements of the EEC directive for Electromagnetic Compatibility.

Declaration of Conformity

We Entel UK Limited
OF:

320 Centennial Avenue
Centennial Park
Elstree
Borehamwood
Hertfordshire
WD6 3TJ
United Kingdom

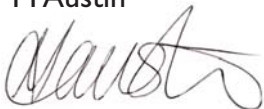
Declare under our sole responsibility that the product:-
RP500 base station transceiver

Serial Number _____

To which this declaration relates, is in accordance with directive 99/5/EC and conforms to the following standard or other nominative documents:-
EN 300 086 (March 2001), EN 301 489-1 VI.3.1:2003, EN 60065:2002

Following provisions of the R&TTE directive.

M Austin



Quality Manager



Radio Care

Warranty

The RP5XX comes with a 12 month warranty, for details see our full terms & conditions.

Advice

- Do not use options or accessories not specified by Entel
- Ensure that the radio is used within the parameters for which it was designed
- Keep dry, do not use in high humidity areas

Warning

- Disconnect from the mains before fitting any accessories or removing any cover

Do not install the transceiver in the following locations:

- In explosive atmospheres (flammable gas, dust including metallic & grain powders etc)
- Near explosives or blasting sites

Caution

- Do not disassemble or modify the transceiver for any reason
- Do not transmit without an antenna fitted, be aware the base station will automatically transmit when talk-through is enabled
- Do not transmit while touching the antenna terminal or any exposed metallic parts of the aerial as this may result in a burn
- Do not obstruct the fan/vents
- Always replace fuses with the same rating. Never fit a fuse of a higher rating. Replace the fuse only after investigating and correcting the cause of the blown fuse

End of Life Disposal

- When your Entel transceiver reaches the end of its useful life, please ensure that the unit is disposed of in an environmentally friendly way.
For country specific information please see www.entel.co.uk/recycling/index.htm.

Packing list

- RP500 Base Station Transceiver
- Mains IEC power lead
- UG500 User guide

Optional Accessories

Common

Power Options

CNB550	Internal rechargeable lithium ion battery
RP5DCL	External DC cable for connection to external battery

Hardware Options

RPBRAK	Wall mount installation bracket
MPX70	Internally mounted UHF duplexer for single antenna operation
MPX26	Internally mounted VHF High Band duplexer for single antenna operation
DPF4/6	Externally mounted VHF Mid Band duplexer for single antenna operation
RPSCR	Voice scrambler

Audio Accessory Options

CMP550	Heavy duty speaker microphone
DMP550	Desk microphone
DMP550BT	Desk microphone with bluetooth

Preparing the base station for use

Before use check the following:

The external antenna connection is correctly fitted to the base station before it is switched on. Dependent upon configuration either one or both 'N Type' sockets may be used. Check with your dealer.

The antenna plug must be screwed fully on to the socket. Failure to attach the antenna correctly can lead to poor performance and damage the unit.

Turn the base station on/off

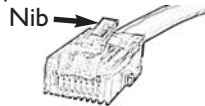
When powered from the mains, use the rear mounted isolator switch to power the base. To turn the base on/off turn the front mounted on/off volume control clockwise.

Receiving calls on the base station

Calls can be monitored on the base station utilising the internal loudspeaker. Use the on/off volume control to set a comfortable listening volume.

Attaching / Removing an optional local control microphone

Calls can be made from the base station using one of the Entel approved microphone options. To insert the optional local control microphone, ensure that the plug with the locking nib is uppermost and push the plug in to the socket until it clicks in to place. To remove the plug, push down the nib on the plug and pull out.



Talk Through enable/disable

Talk Through facility can be enabled or disabled from the front of the base station. To enable press the talk through button and the LED will illuminate to show the feature is active. To disable press the talk through button again (the LED will extinguish)

Common

RP500

Standard Features:

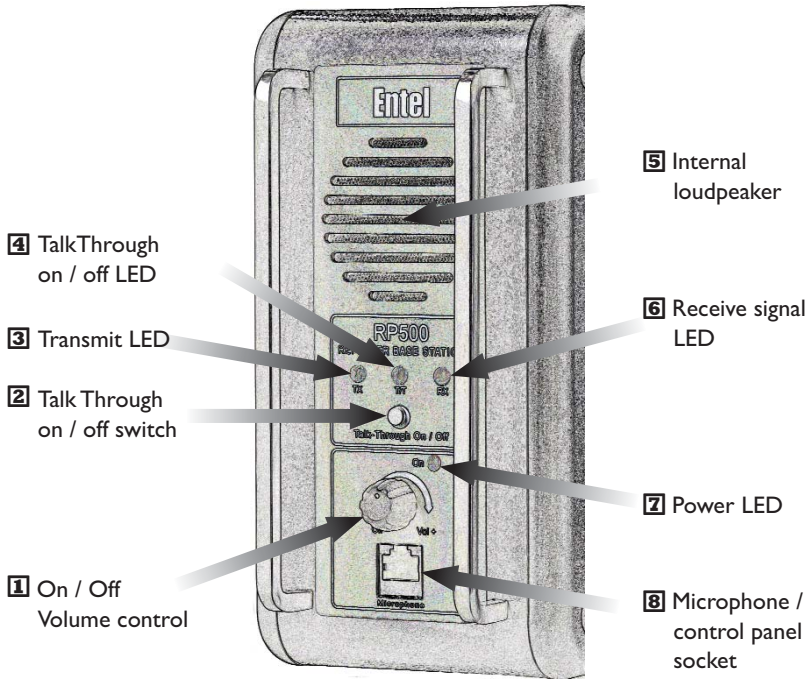
- Single channel
- Transmit power output 5 Watts VHF, 4 Watts UHF, 1 Watt low power
- 100% duty cycle
- CTCSS & DCS (Analogue & Digital squelch) with squelch tail elimination
- Second receiver (for country specific licensing requirements)
- Dealer adjustable transmit tail with pip tones
- Exceptionally loud and clear audio
- Talk through on / off button
- Local control with optional microphone
- Mains failure alert indicates when optional back-up battery is in use

Dealer fit options:

- Voice scrambler (when local control is required on an encrypted system)
- Internal Duplexer for single antenna operation (external on RP510)
- Internal 3.6AH Lithium Ion battery



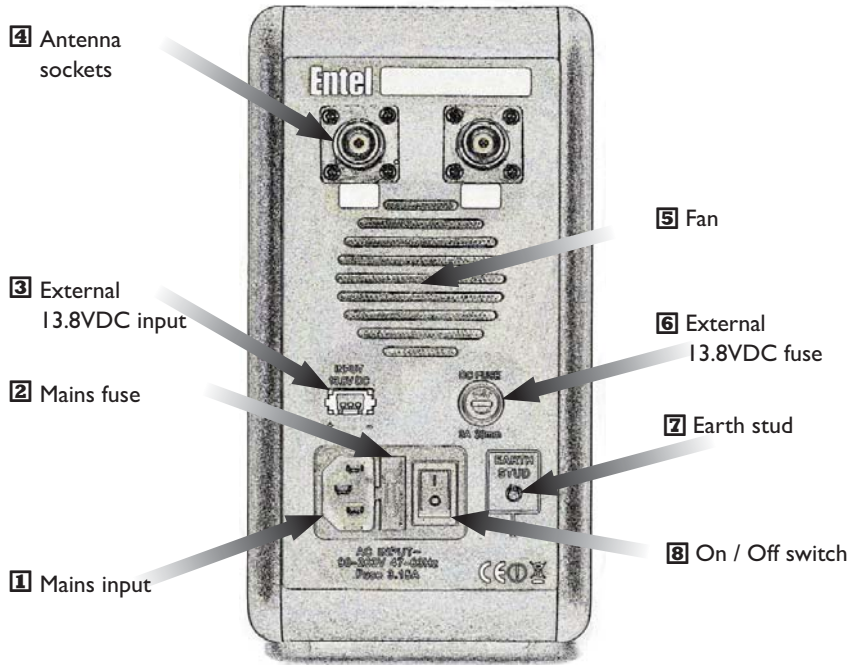
Controls & Indicators



RP500

- 1** On / Off Volume control - Rotate clockwise to turn on and increase volume, anticlockwise to decrease and turn off.
- 2** Talk Through switch - Press to select / deselect talk through
- 3** Transmit LED - will illuminate red when the base is transmitting
- 4** Talk Through LED - will illuminate white when talk through is enabled
- 5** Internal loudspeaker - to monitor transmissions through the base station
- 6** Receive signal LED - will illuminate green when a transmission is being received
- 7** Power LED - will illuminate blue when the base is switched on
- 8** Microphone socket - Insert optional microphone to enable local control use

Controls and Indicators Cont



RP500

- 1 Mains input - I 10-240 IEC mains power input socket
- 2 Mains fuse - 3.15A 20mm mains protection fuse
- 3 External 13.8VDC input - to provide an external source to power the base station
- 4 Antenna sockets - One or both sockets may be used dependant upon configuration
- 5 Extractor fan - Dealer configurable, continuous - temperature - or transmit operation
- 6 External 13.8VDC fuse - External power input 3A DC protection fuse
- 7 Earth stud
- 8 On / Off switch - AC mains power switch

Feature Operation

12V Operation

There are 2 methods to operate your base station from 12VDC.

External back-up battery

Using the optional RP5DCL lead, an external 12V lead acid back-up battery can be connected. The base station will float charge the battery whilst powered from a mains source. The maximum charge current the base will deliver is 3A.

Internal Lithium Ion battery option

A dealer fit 3.6AH lithium ion rechargeable battery can be fitted. Whilst powered from the mains, the base station will charge the internal battery.

Mains Failure / 12V Operation Warning

If an optional mains failure back-up battery is fitted or if base is only powered from 12V battery then a low level pip tone will sound on all transmissions to alert users that the base station is not mains powered. (This feature is dealer programmable and can be disabled).

Talk Through & Local Control

The base station has a front mounted talk through on/off button. When talk through is on, this will allow users to communicate using the base as a relay. Turning talk through off will prevent users talking to each other and will only allow communication to the base. Using an optional microphone allows the base to be used as an additional radio.

Cooling Fan

The rear mounted cooling fan has 3 dealer configurable operating modes.

- 1 Fan operates continuous while base is switched on
- 2 Fan operates only when base is transmitting
- 3 Fan disabled.

Transmit Tail & Pip Tones

When used in talk through, the base station has an adjustable transmit tail length, dealer adjustable between 3 - 46 seconds. The transmit tail will keep the base station on transmit for the pre-set time after a radio user has ended their transmission. To indicate the transmit tail to all users on the radio system the base will generate pip tones for the duration of the transmit tail. If you transmit during the transmit tail, the pip tones will stop and your transmission will be heard.

Dual Receiver

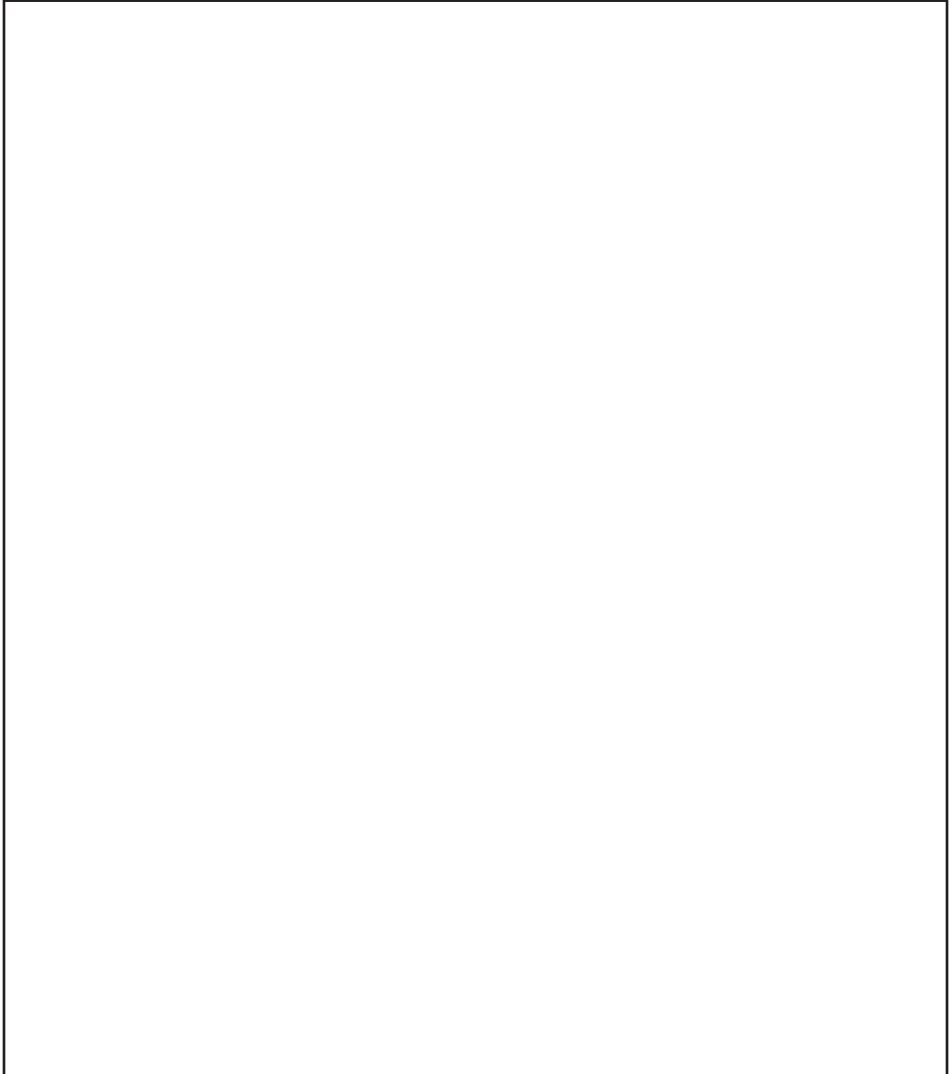
Your base station is fitted with two receivers. Where country licensing dictates, the second receiver will be used to monitor for transmissions on the base stations transmit channel. If a signal is detected on this channel the base will be prevented from transmitting. The second receiver cannot be used to monitor transmissions, it is used only to lock out the transmitter function.

Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	SOLUTION
Radios cannot talk to each other through the base station	Talk Through is switched off	Turn Talk Through on using button on front panel of base station.
I am operating on batteries and the range has suddenly dropped	The base has automatically switched to low power as the batteries are getting low	Recharge battery / plug in to mains supply if available
The base station does not transmit and talk through is switched on	The base has the dual receiver active	Wait for a short period and try again
The base station is pipping when in use	This is a mains failure alert to indicate that the base is operating from a battery	The alert will end when the base is powered from the mains
Radio emits screeching noise.	A channel has been selected which has not been programmed by your dealer with a suitable frequency.	Check that you have not accidentally switched to an unused channel & select a programmed channel.

Notes

Use this page to record important information, such as the serial number of your repeater, and any private channels programmed by your dealer.



'the
professional's
choice'

<Intended Country Of Use>

- | | | | |
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| <input type="checkbox"/> BE | <input type="checkbox"/> DE | <input type="checkbox"/> LU | <input type="checkbox"/> SI |
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| <input type="checkbox"/> FI | <input type="checkbox"/> LV | <input type="checkbox"/> RO | |

CE 0891 Ⓢ

Registered Community Design Application 000810890

U.S. Design Patent Pending No. 23/182,829

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