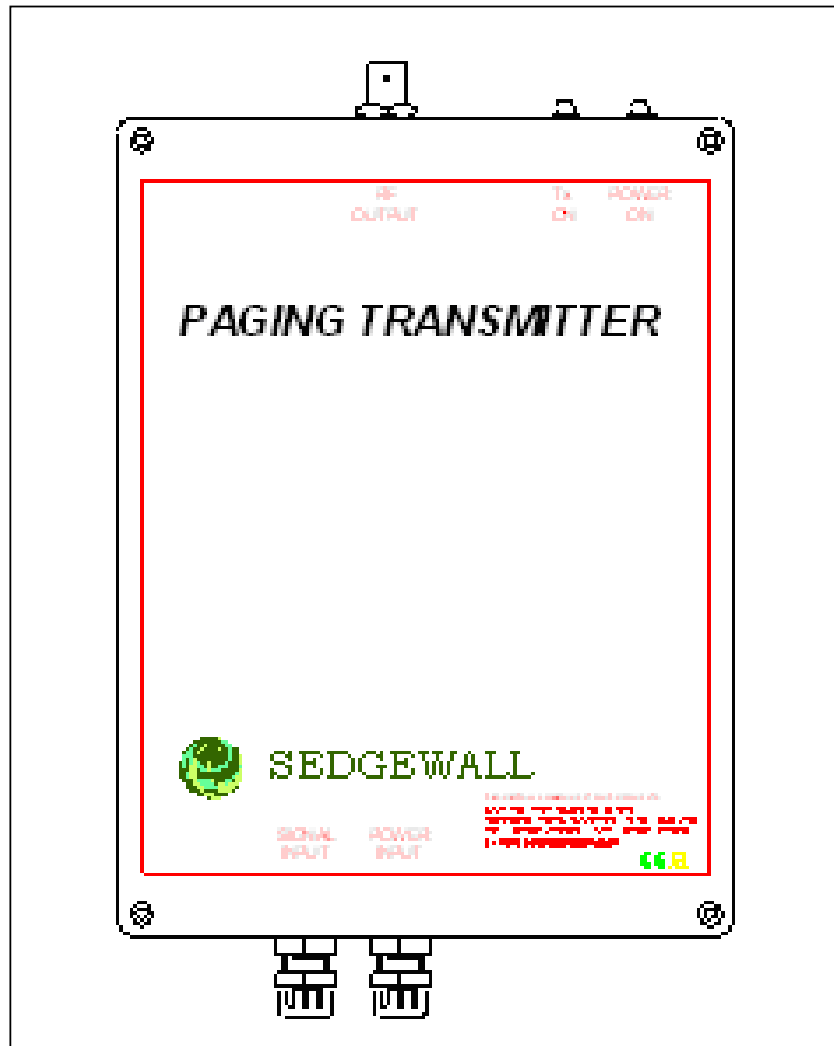




SEDGEWALL

UHF PAGING TRANSMITTER MANUAL

Product Number: 21500029



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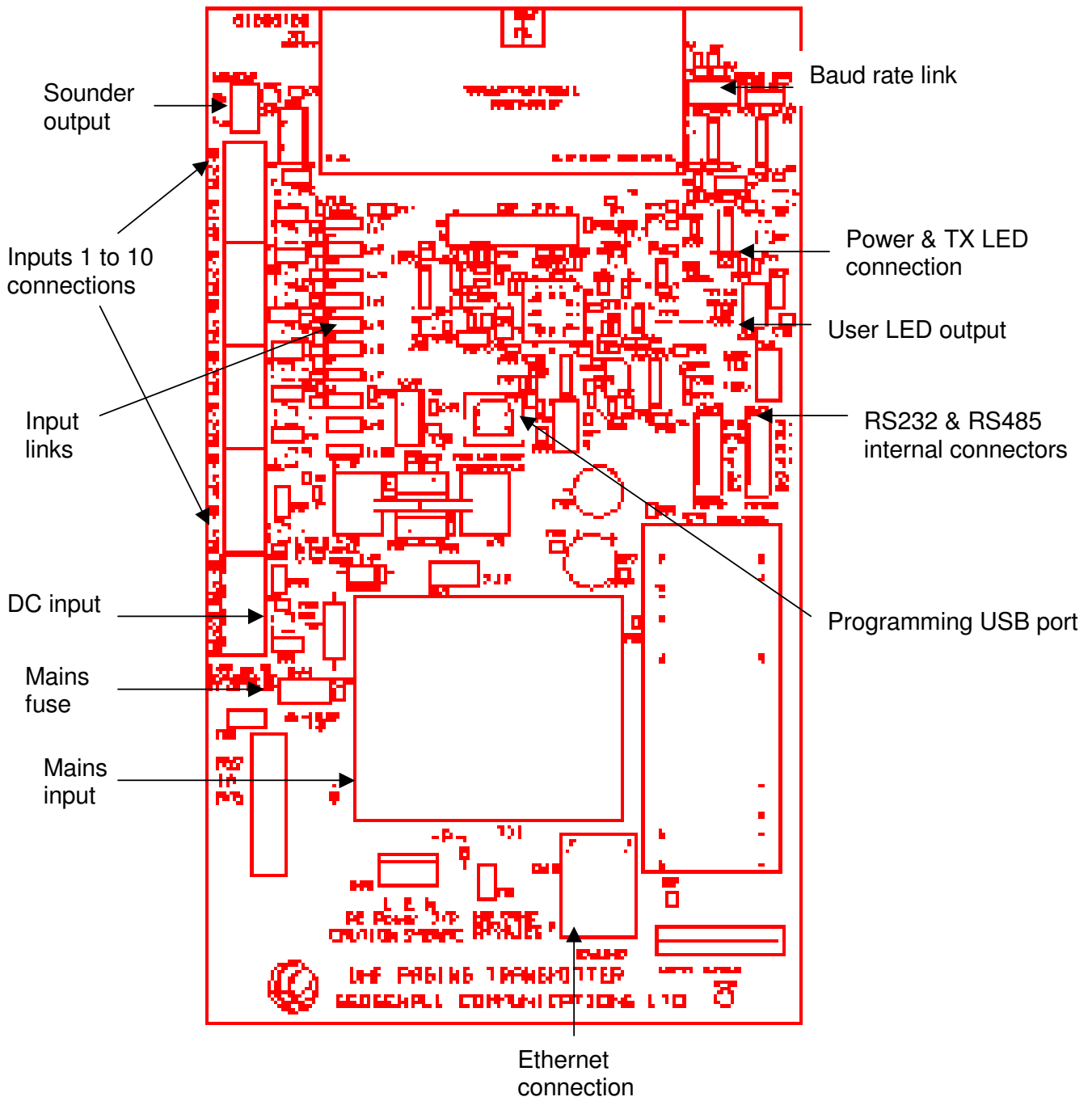
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Technical Specifications:

Power input:	200 to 250VAC, 45 to 65Hz, 12VA
	DC power input +10 to +18VDC 1A
UHF output:	458.375 to 459.275MHz, 0.4 to 0.6W,
	BNC connector, Stub & UHF antenna supplied.
Inputs:	10 separate inputs, either volt free contacts or +4 to +18VDC input.
Paging initiated on:	Closing contact and Opening Contact
	Armed open and Armed Closed
	Change of state
	Until reset
Page message:	Alphanumeric
	Up to 255 characters
	Numeric or Tone
Coding:	POCSAG
	512 or 1200 baud
Page repeats:	0, 1, 2 or until reset
	Settable trigger delay
Programming:	Via USB B serial port
	Programming CD supplied (part no. 00690040)
Computer requirements:	Windows XP & USB port
User LED output:	8mA from 12VDC
Open collector output:	Switching maximum +18VDC 1A
Compliance/Standards:	WeeeCare Compliance number WEE/KJ1149YY
	CE & RoHS Compliant

Optional Extras:

Interface:	RS232
	RS485
	Ethernet
Power Input:	100 to 125VAC 45 to 65hz
Optional Accessories:	Wall mounting kit
	External UHF antenna
	Internal UHF antenna
	Lightning protection unit BNC connectors
	BNC connector for RG213 co-axial cable
	Replacement stub antenna



Main PCB layout

Mains power connections:

Mains input: The unit is normally supplied with a 13A plug already connected.

If the unit needs to be wired directly into the mains or an alternative plug needs to be fitted, connect the brown wire to L terminal, the blue wire connected to N terminal and the green/yellow wire connected to the Earth connection.

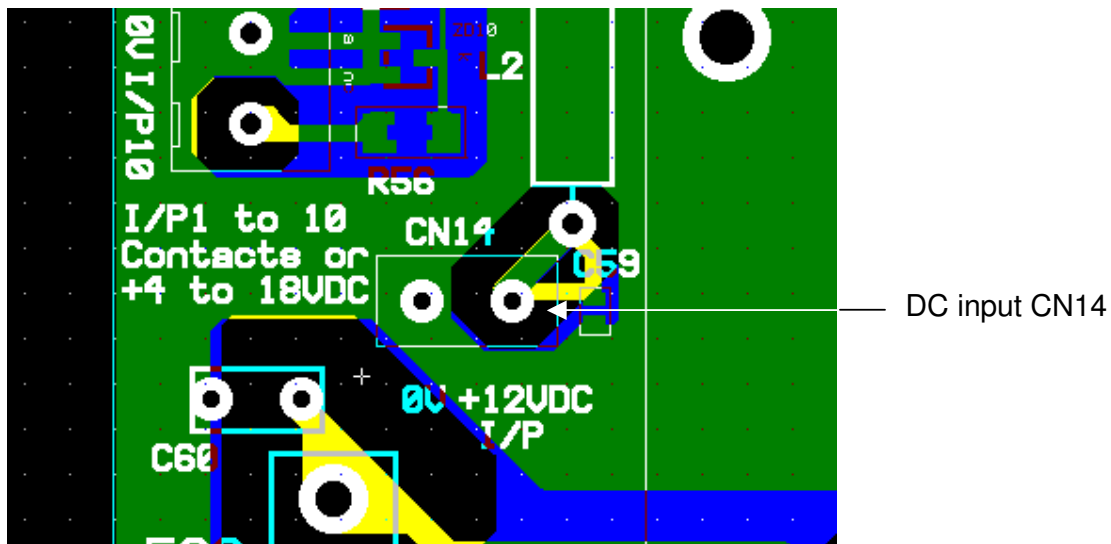
Fusing: 3A fuse is normally fitted to the mains plug.

The mains fuse on the PCB is a 20 x 50mm 1A anti-surge fuse.

DC power input:

Connect +10 to +18VDC to CN14 +12VI/P, -ve return to 0V

The DC power input connector is found on the left hand side of the transformer, above the mains fuse.



DC input connector CN14

Antenna

The paging transmitter must have an antenna connected, (either the supplied stub antenna or an external antenna connected using RG58 (or RG213 if there is long length of cable to the antenna) co-axial cable).

The antenna should be at least 300mm from any other electronic equipment. An internal UHF antenna can be mounted away from the paging transmitter. This often gives better coverage than the stub antenna.

BNC connectors that take RG213 co-axial cable can be obtained from Sedgewall Communications Ltd. or Farnell, part no: 105-6236.

If an external antenna is fitted, it is recommended that a lightning protection device be fitted.

The lightning protection unit should be earthed to a good ground point or an earth rod should be used.

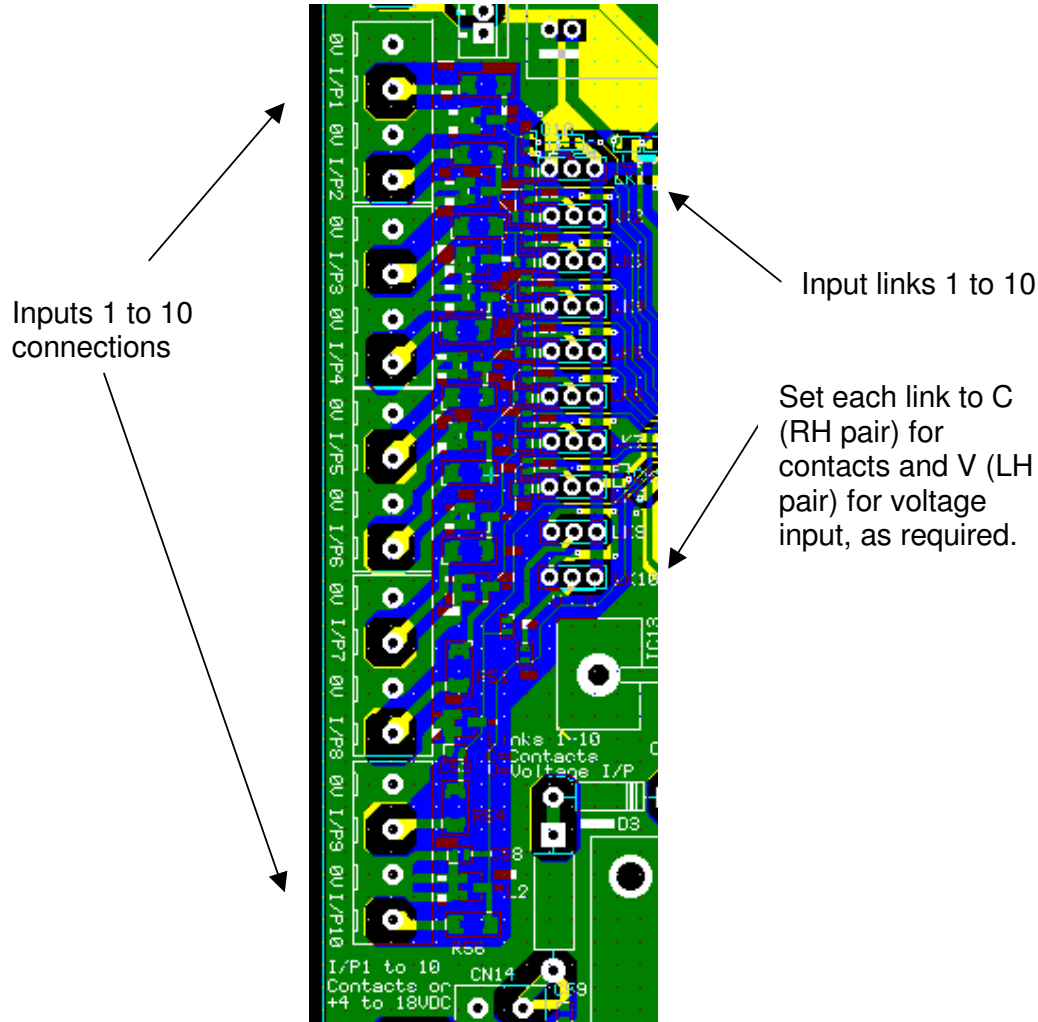
Antenna and lightning protection device diagram



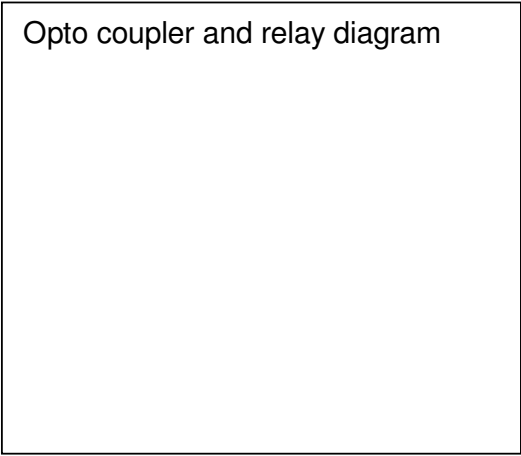
Input connections:

There are 10 sets of connectors to allow up to 10 inputs to be connected, these are found on the left hand side of the main PCB and are labelled input 1 to input 10. Associated with each input is a selector link. This enables the input to be a closing contact or to accept a positive DC input of 4 to 18V. LK1 applies to input 1 etc. to LK10 and input 10. One side of each input is connected to the earth connection of the unit. If an isolated input is required, use an Opto coupler or a relay. Fit links to closing contacts. Telecom wire is suitable for making the input connections.

When an input is applied, the transmitter will send a page, and at the same time the yellow transmit LED will light to show that the transmitter is active.

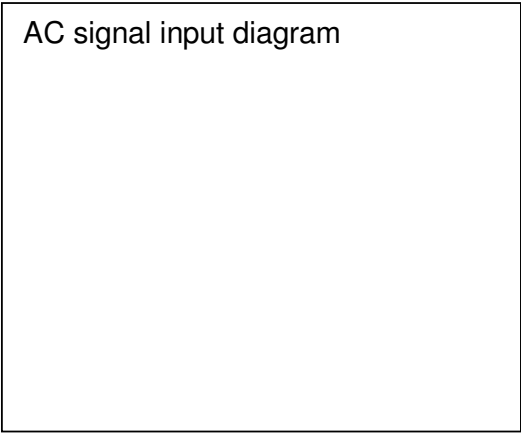


Opto coupler and relay diagram



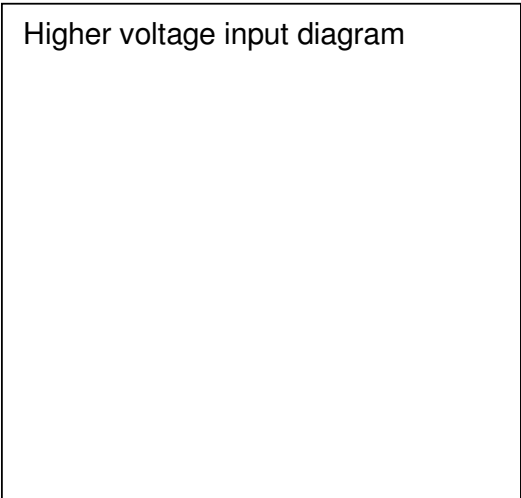
If an AC input is used, a bridge rectifier and capacitor are required.

AC signal input diagram



If a higher input voltage is to be used, a resistor and zener diode are required to reduce the voltage to 12V.

Higher voltage input diagram



Programming - Loading software on a PC.

Do not connect the PC to the paging transmitter until the software has been loaded.

The installation software includes the files to install the POCSAG Pager base unit PC configuration tool and Microsoft NET framework 3.5 is required.

Locate the file driver\setup.exe. Follow the wizard through to completion.

When the installation has completed, open the POCSAG pager base unit PC configuration tool application by going to start>programming>pocsag pager base config tool

In the lower left hand of the application the status should say, "USB not connected".

Now connect the USB cable to the PC and the powered UHF transmitter.

USB B connector is in the middle of the PCB and labelled CN9, USB programming port.

Windows should detect the device and bring up an installation wizard.

When it says "can windows connect to Windows update to search for software?" say NO.

In next screen, select "Install from a specific location"

In following screen locate the driver under C:\program files\raycomm\pocsag pager base unit PC configuration tool\driver. Select OK.

The driver installation will now complete. Click on FINISH and the application will now show USB connection established.

The above procedure only needs to be done the first time the PC is used.

Enter the UHF frequency that you are using.

For each zone, select the type of input to be used.

Select the type of pager to be used (alphanumeric, numeric or tone only).

Type the message to be sent (note; some options allow two different messages to be sent).

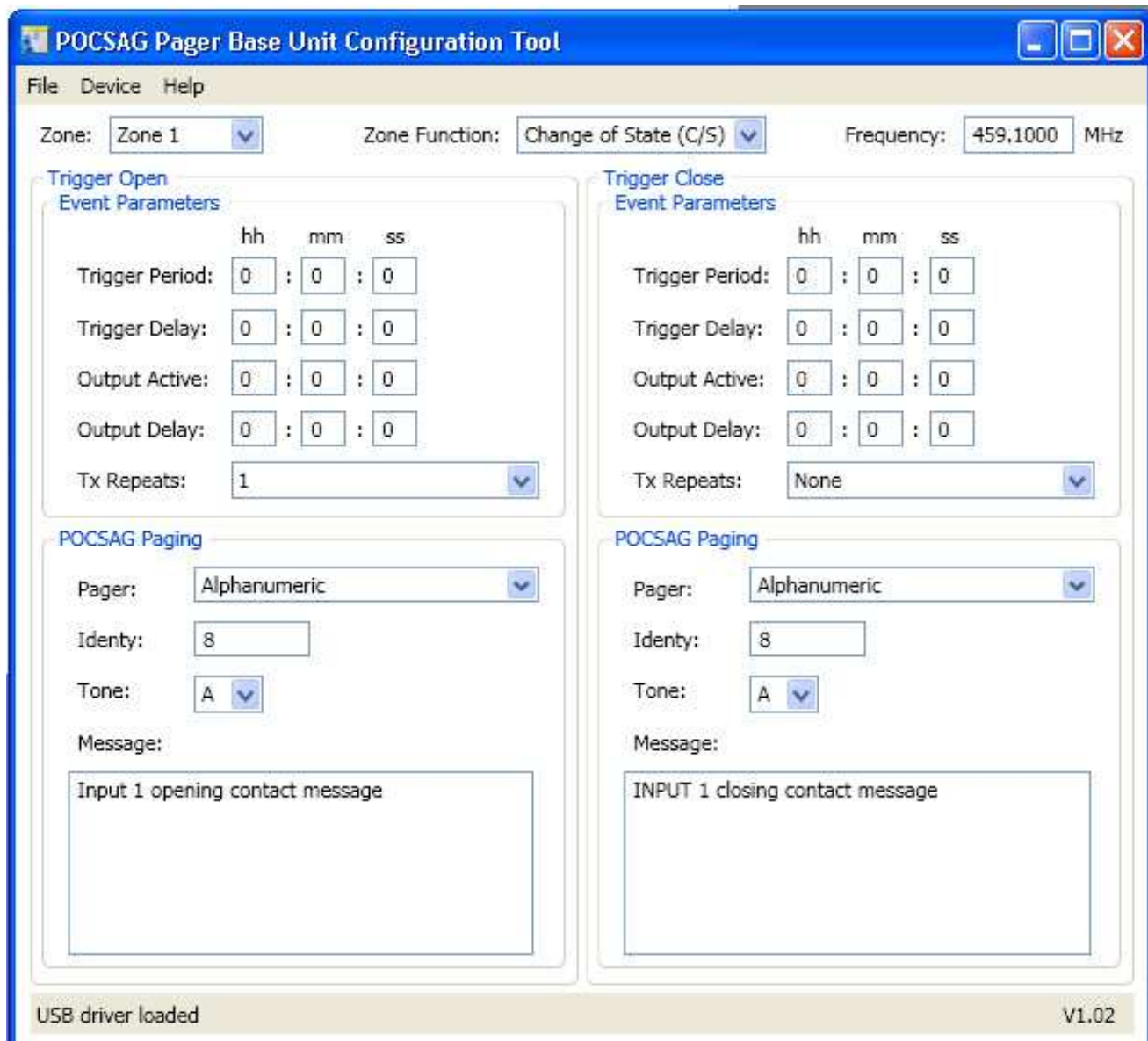
If required, input the trigger time or delay and the time that the outputs will be on.

Go to options and select send. The PC will send the messages to the transmitter.

For subsequent unit programming, open the POCSAG pager base software and just connect the USB lead to a power pager transmitter.

The software will detect the pager transmitter and will now say, "USB connected" in the bottom left hand corner of the screen.

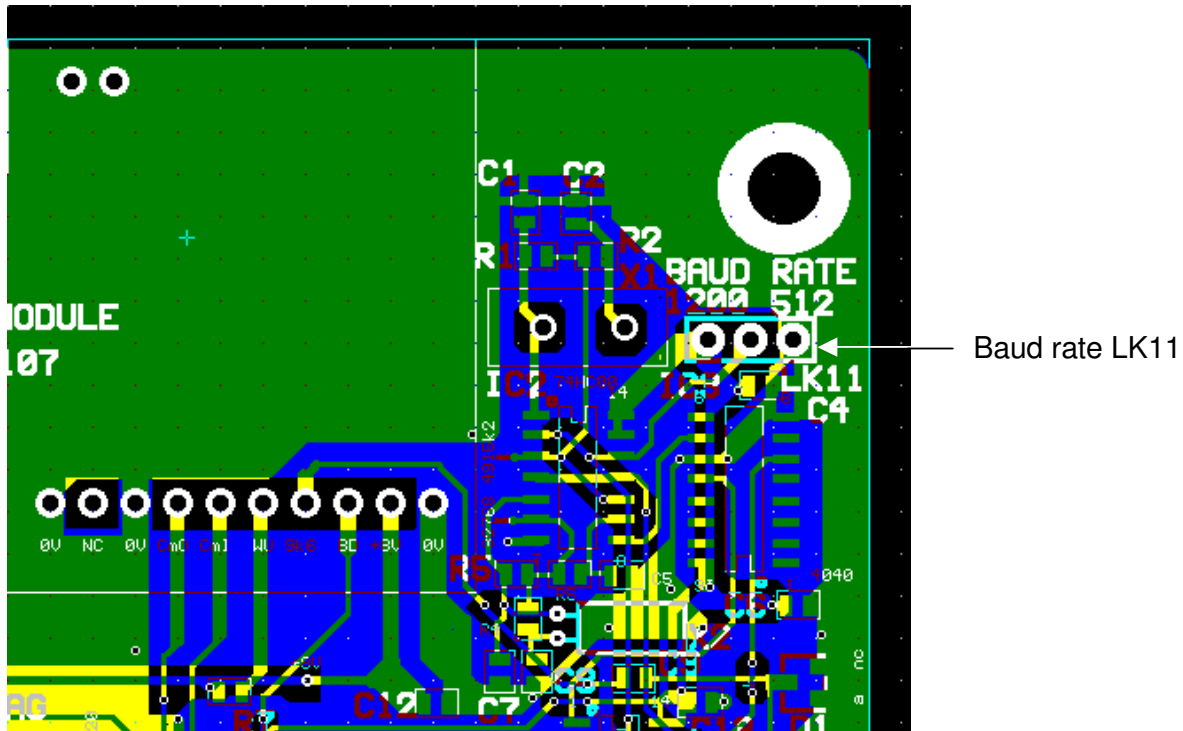
User set up



Typical PC screen

Baud rate

This is set by LK11, at the top on the right hand side of the main PCB. Fit the link between the centre pin and either 512 or 1200 baud.



Battery back-up

The unit can be run as a mains unit with battery backup. Connect the back-up 12V battery to CN14 the 12VDC input connections. (Note the unit does NOT have any battery charging facility. The battery must be charged by an external power supply.)

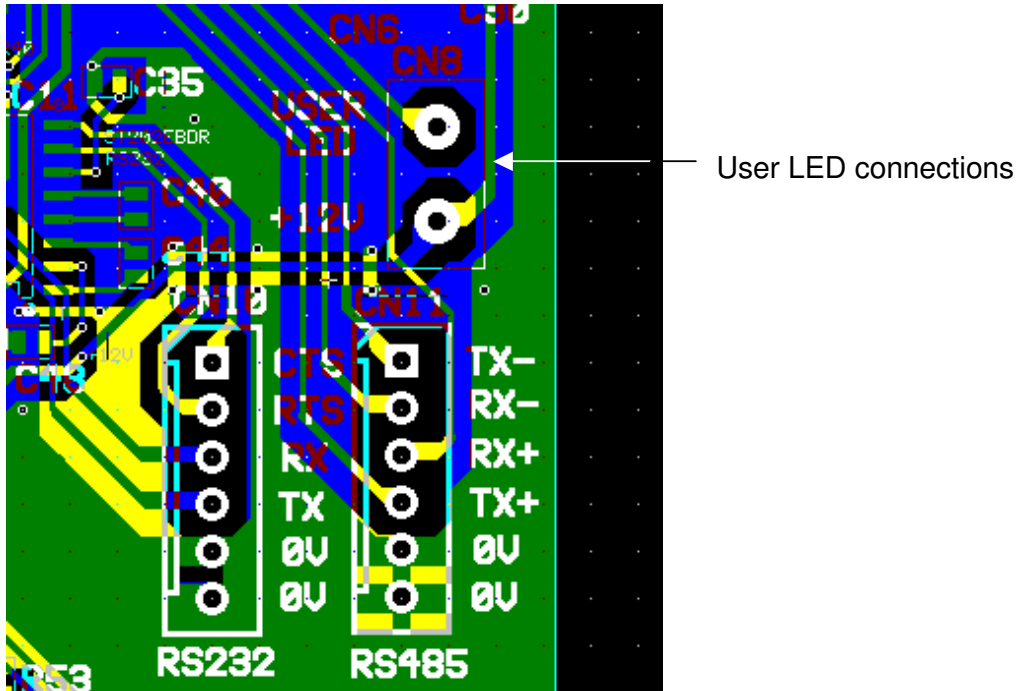
Diagram battery back up

Output connections - External user LED indicator

The paging transmitter will give a LED output or an open collect to ground connection when a page is sent.

This connector CN8 is on the right hand side of the main PCB.

The PCB has a current limiting resistor fitted to restrict the LED current to about 8mA.



Sounder output

This is an open collector to enable an external sounder or relay to be operated.

Also this can be used as a second LED output by using an external supply and a limiting resistor.
Maximum rating: +18VDC 1A.

This connector, CN1, is located on the left hand side of the main PCB at the top.

If a relay or inductive device is used on the open collector output, a diode must be connected across the coil

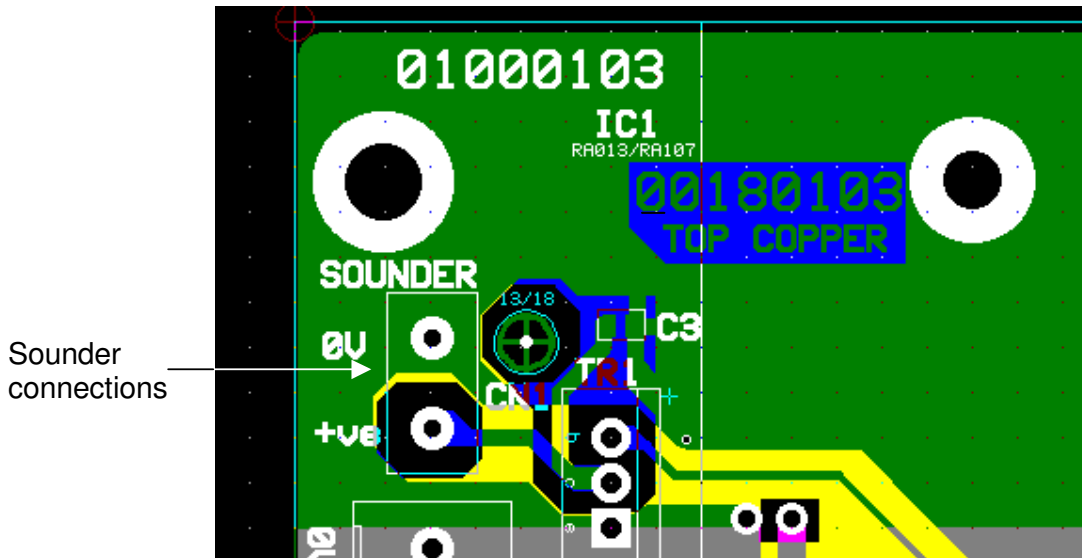


Diagram of relay connection open collector.

RS232/RS485 connections (where fitted)

Table of RS232/RS485 connections (9 way D type plug)

Function RS232	Function RS485	9W D pin
RTS	RX-	7
CTS	TX-	8
RX data	RX+	2
TX data	TX+	3
0V	0V	5
Screen /ground	Screen/ground	Shell

Note; shell is connected to 0V internally.

Ethernet connections (where fitted)

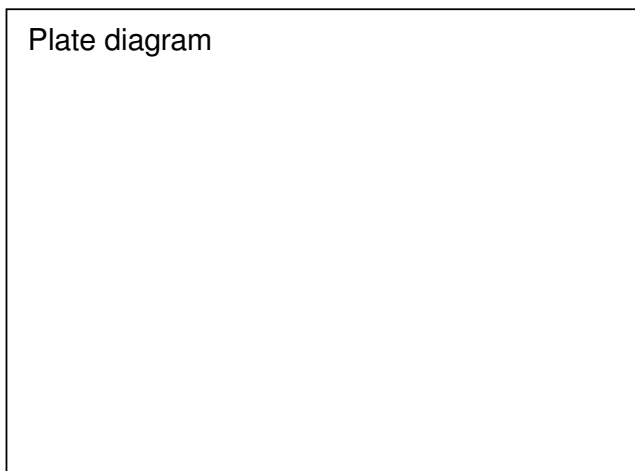
Table of Ethernet connections CN15.

RJ45 pin	Function
1	TX+
2	TX-
3	RX+
6	RX-

All other RJ45 pins have no connection

Wall mounting the paging transmitter to a wall

The paging transmitter can be fixed to the wall by using the optional fixing kit. Alternatively, use an aluminium plate larger than the paging transmitter (say 300 x 150mm or larger if required. and drill four 3.5mm holes, on a grid 125mm by 180mm. Also drill four fixing holes, which can be accessed when the transmitter is attached to the plate. Use self-tapping screws, size no6 by 6mm, and fix the transmitter to the plate. Then fix the transmitter and plate to the wall.



How to Change the Mains Power Input Voltage for use on 100-125VAC supply.

Units are normally supplied set for 200-250VAC mains power.

Remove power before changing the links.

Remove the lid observing antistatic precautions.

Remove the mains input connector CN16 and LED indicator connector CN6.

If fitted, remove the RS232 or RS485 lead from CN10 or CN11.

Undo the four screws that hold the main PCB into the case, and then carefully remove the PCB.

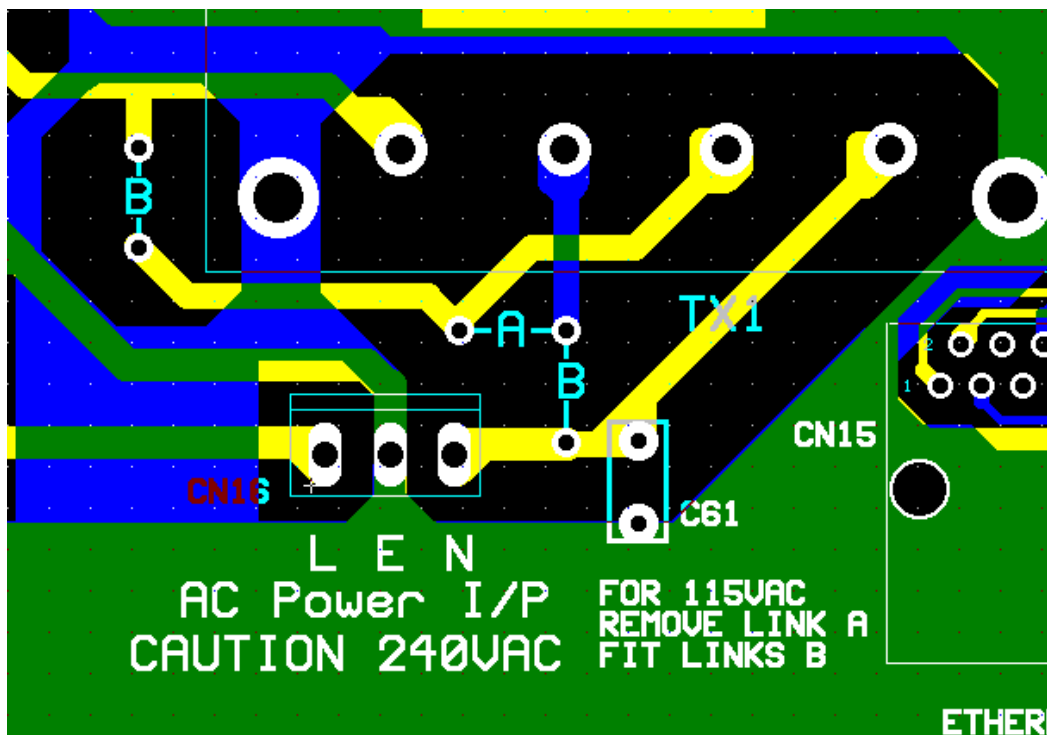
Units supplied on 200-250 VAC input, have one link fitted in position A (no wire links fitted to B (two places)). See diagram below for details.

For 100-125 VAC input, remove link A, fit two separate links to B in two places. Replace the PCB and the four screws that hold the PCB into the case.

Replace the LED indicator connector to CN6 and the mains input connector to CN16.
If fitted, replace the RS232/485 connector. CN10 is for RS232, CN11 is for RS485.

Replace the lid. It is advisable to add a label saying that the unit is now configured for 100-125VAC input.

Diagram of links A & B





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