

SIMPLEX REPEATER

Sim peater

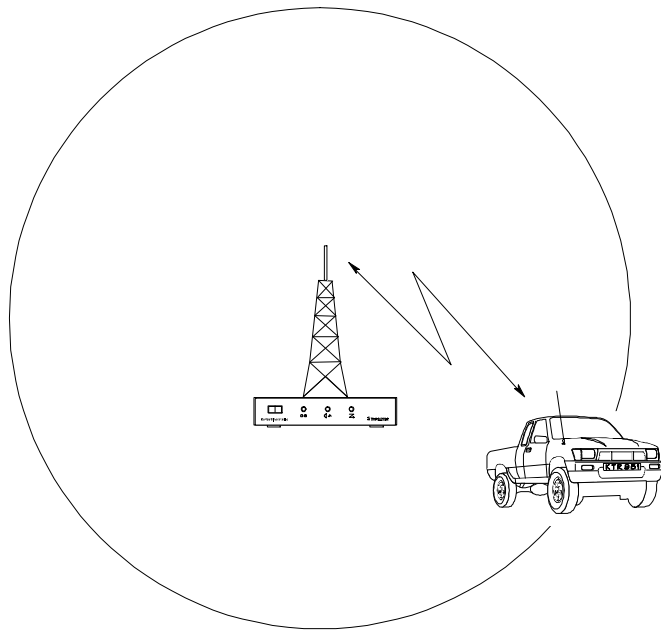
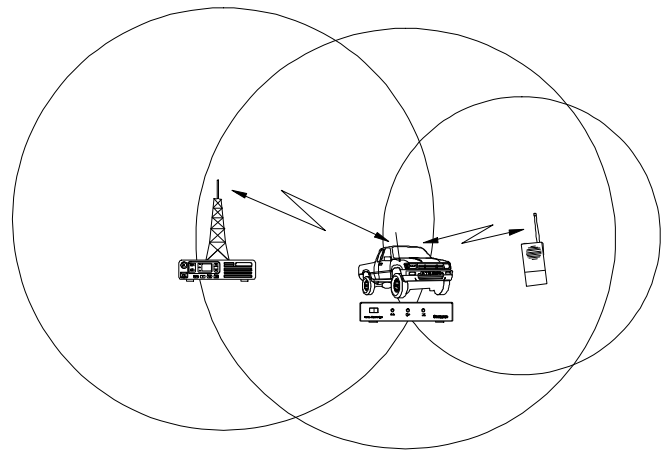
A simplex repeater is a device for extending radio range without the need for a second frequency. It achieves this by recording an incoming message and then replaying it.

The Simpeater uses digital recording coupled with microprocessor control in such a way that it offers high audio quality and simple installation and operation.

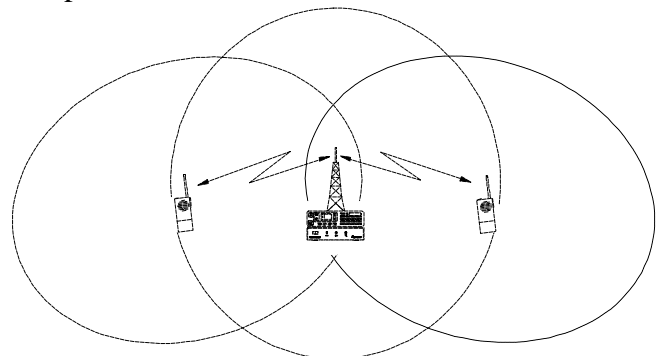
The Simpeater has been designed to reproduce speech as well as demanding radio signalling such as 5 tone which can easily be lost or severely degraded by some recording methods.

Typical applications are for extending the range of a mobile radio, the Simpeater is fitted into the vehicle and is enabled and disabled by the vehicles ignition circuit so it only operates when the user is away from the vehicle. This allows the user to stay in contact by using a hand portable which would normally not have sufficient power to communicate with base.

- ! High Quality Audio Reproduction
- ! Suitable for 5 Tone, 2 Tone and DTMF
- ! Storage Time of 60 or 90 Seconds
- ! Optional Automatic Gain Control
- ! CTCSS, PL and DPL Audio Filter
- ! Low Current, Suitable for Battery and Solar Powered Applications



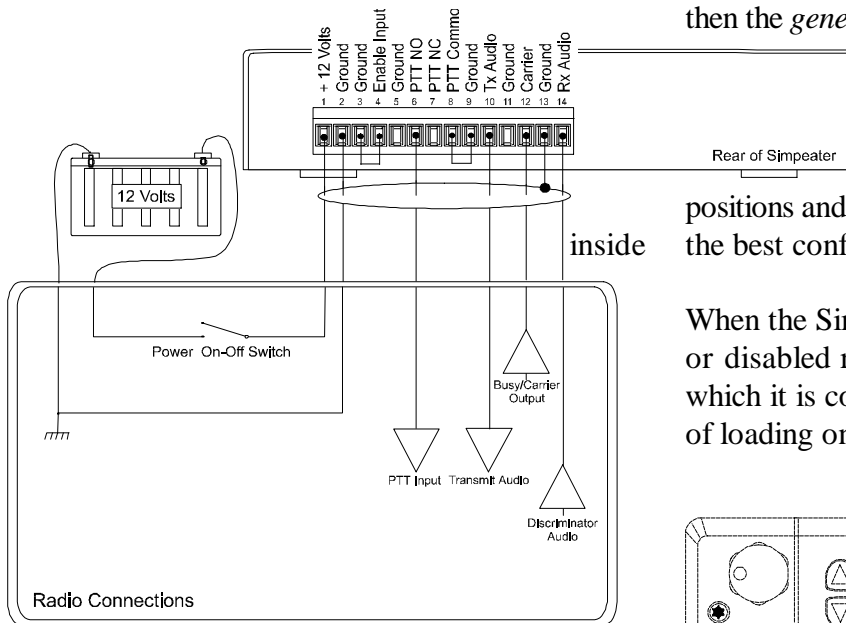
A radio survey is often required for new system and confirming existing ones are performing as expected. This usually takes two people, one at the base station while the coverage is confirmed by another driving or walking through the required coverage area. The Simpeater removes the need to have the base station occupied.



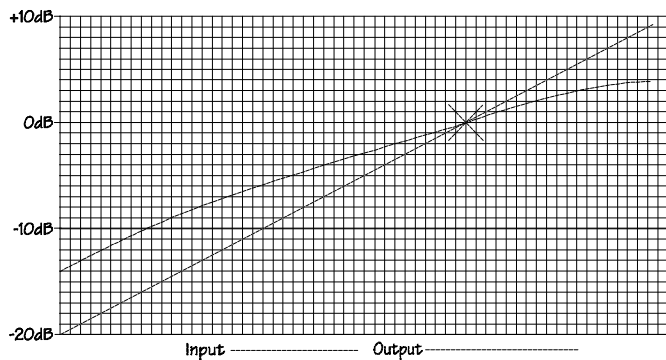
When installed with a simplex base it need only be enabled when the base is unattended. This will allow both hand portable and mobile radio's to communicate through the base taking advantage of its location and aerial height.

The Simpeater can be used for increasing range for any radio based speech or speech band signalling. For signalling applications the 60 second version offers a frequency response often better than that of the radio. For speech the 90 second version will allow *long overs* to be recorded. If the user should talk for longer than 90 seconds then the Simpeater will sound a warning double beep before replaying its message

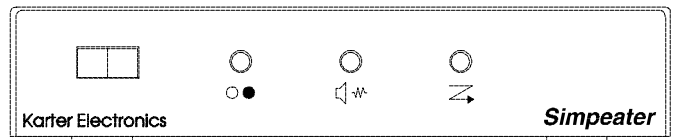
The Simpeater has been designed to be installed along side virtually any radio, it can even be fitted



the Motorola GR300 base station. Connection leads are available for many popular radios please contact Karter Electronics for availability and pricing.



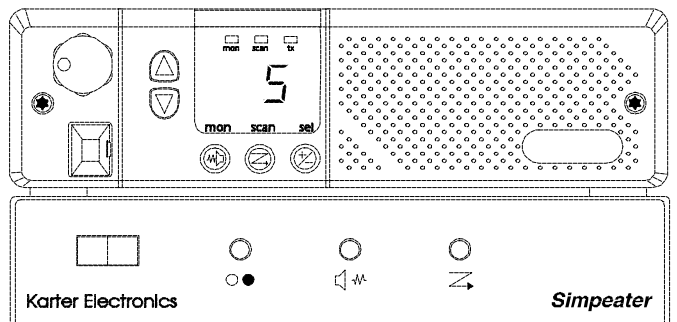
In order to use a simplex repeater with most forms of in-band radio signalling it is necessary to have a good frequency response. It should be at least as good that of the radio and preferably better. The Simpeater offers two recording durations allowing the purchaser to select the best option for each specific requirement.



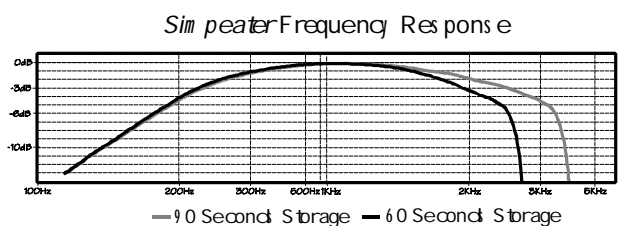
Great care has been taken to ensure that the Simpeater is easy to install and operate. It comes with a comprehensive installation and service manual which is supplied free with your first Simpeater order. Even if your choice of radio is not currently detailed then the *generic* installation information will assist in its rapid installation.

Programmable parameters are preset and can be selected by jumper positions and the manual has details of how to select the best configuration for specific application.

When the Simpeater is not operational, switched off or disabled remotely, then it will allow the radio to which it is connected to be used without any effects of loading on the radios normal microphone.



AGC (Automatic Gain Control) is a feature often found in good quality duplex base stations and is fitted as standard in the Simpeater. This reduces the dynamic range of the input signal and in so doing, improving the systems usability. If not required it can be disabled by a simple jumper setting.



Sim peater - Specifications

Electrical

Voices storage	Non volatile memory cells
Microprocessor Clock Speed	4 MHz
Supply Voltage	Better than 8 to 18 Volts DC
Supply Current	Less than 10mA Standby
	Less than 45mA Recording
	Less than 110mA Playback
Receive Level	10mV to 8Volt Peak to Peak
Transmit Level	10mV to 2Volt Peak to Peak
COR Input	Active State
	Level Change
	Hold Period
Transmitter lead in delay	Link Selectable - 0.2, 0.5, 1 and 1.5 seconds
Distortion	150mS
Frequency Error	Less than 25%
	Less than 0.5% per message
	Less than 25% across full temperature range
Frequency Response	60 Second Better than 300Hz to 3.4 KHz +/- 3dB
	90 Second Better than 300Hz to 23 KHz +/- 3dB
Signal to Noise	Better than 45 dB
Low pass filter	Better than 6 dB per octave
Temperature Range	-10.C to +50.C

Physical

Construction	Two parts metal case with internal PCB mounted on pillars
Dimensions	220mm x 178mm x 33mm
Front Panel	Power On Off switch
	Power - Green LED
	Carrier - Yellow LED
	Transmit - Red LED
Connections	15 way screw terminal plug and socket
Tx Level	Level jumper and potentiometer
Rx Level	Level jumper and potentiometer
Carrier	Phase jumper and threshold potentiometer
AGC (Automatic Gain Control)	Jumper Selectable ON or OFF
Carrier Hold	Four jumper Selectable settings
Fittings	4 small adhesive feet are provided for desk top operation

Options

60 or 90 second recording duration
Mounting bracket
A range of radio specific connection leads
Please consult our price list for option details

This information is believed to be accurate. However, no responsibility is assumed by Karter Electronics for inaccuracies, changes or enhancements which may be introduced during the life of this product. This product has been designed to comply with the European EMC directive.

Karter Electronics

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FLYER2DOC, Rev 1.6, 20 Sept 1997