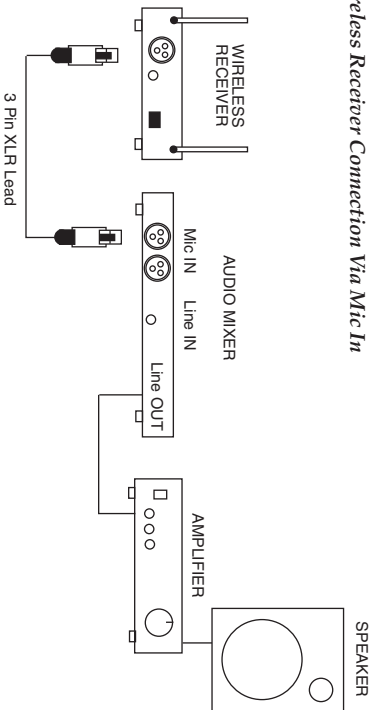
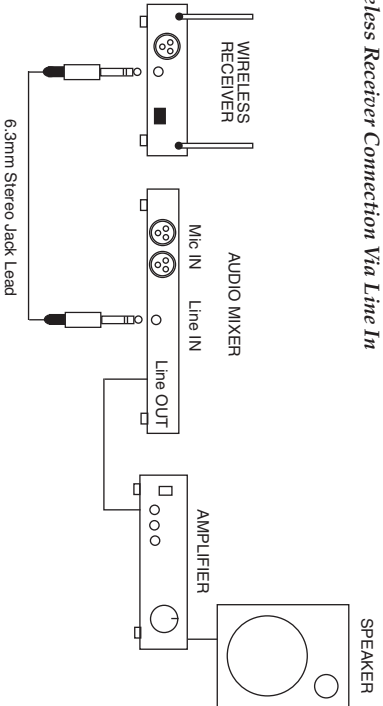


*Fig 6. Wireless Receiver Connection Via Mic In*

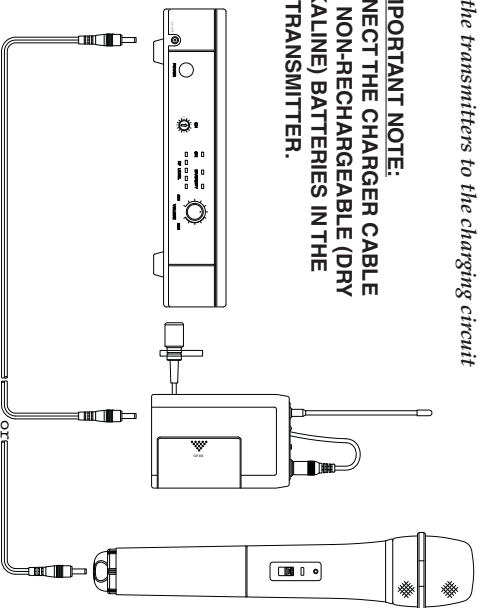


*Fig 7. Wireless Receiver Connection Via Line In*



*Fig 8. Connecting the transmitters to the charging circuit*

**IMPORTANT NOTE:  
DO NOT CONNECT THE CHARGER CABLE  
WHEN USING NON-RECHARGEABLE (DRY  
CELL / ALKALINE) BATTERIES IN THE  
TRANSMITTER.**



# UHF BAND TRUE DIVERSITY WIRELESS MICROPHONE SYSTEM

## OPERATING INSTRUCTIONS

Distributed by Altronic Distributors Pty. Ltd. Perth, Western Australia.  
 Phone: 1300 780 999 Fax: 1300 790 999  
 Internet: [www.altronics.com.au](http://www.altronics.com.au)

Congratulations on purchasing a REDBACK PLL Synthesized True Diversity Wireless Microphone System. The PLL synthesized true diversity wireless microphone system operates on UHF frequency band: 540-570MHz with 16 selectable channels. Please read this instruction manual completely before operating the system. These instructions cover the transmitters, plus receiver model C 8870D

**System Features:**

- Operates on UHF frequency band range 540-570MHz.
- PLL (Phase Locked Loop) synthesized wireless microphone system with 16 selectable frequencies making it easy to choose interference free channels.
- Excellent reception system ensures super high sensitivity.
- Units are supplied with SMT assembled PCB modules ensuring high reliability, and easy serviceability.
- High signal-noise ratio, high sensitivity & wide dynamic range.

**Receiver Features:**

- 12V-18V DC Power Supply (supplied)
- Easy rotary switch selection of frequencies all hidden from users view.
- 1/2 19" size case with power & RF indicators. Rack Ears available for mounting one or two systems into 19" rack equipment.
- Removable aerials making the unit suitable for portable or fixed installations. Aerials are fitted with TNC connectors.
- Includes in-built power supply for C 8842 antenna booster.

**Receiver Specifications:**

<b>Carrier Frequency Range:</b> .....	UHF band 540-570MHz
<b>Frequency Stability:</b> .....	±0.005% with PLL synthesized controlled
<b>S/N Ratio:</b> .....	at 8dB/µV over 80dB
<b>Image and Spurious Rejection:</b> .....	80 dB minimum.
<b>Receiving Sensitivity:</b> .....	8 dB/µV, at 80 dB S/N ratio.
<b>Selectivity:</b> .....	More than 50dB
<b>Dynamic Range:</b> .....	More than 96dB
<b>Modulation Mode:</b> .....	FM.
<b>IF Frequency:</b> .....	1ST : 56MHz 2ND: 10.7MHz
<b>Service Area:</b> .....	Over 50 metres
<b>AF Response:</b> .....	50Hz to 15KHz(±3dB)
<b>T.H.D.:</b> .....	Less than 1% (at 1KHz)
<b>Receiver Audio Output:</b> .....	Unbalanced: max. 1000mV (0dB=-1V) at 5KΩ Load.
	Balanced: max. 100mV at 660Ω Load.
<b>Receiver Power Supply:</b> .....	DC 12-18V Adaptor

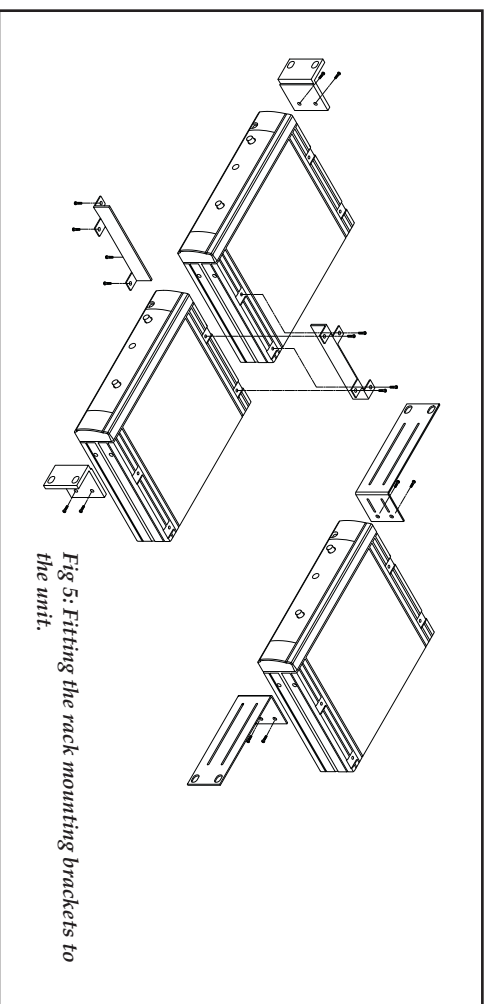
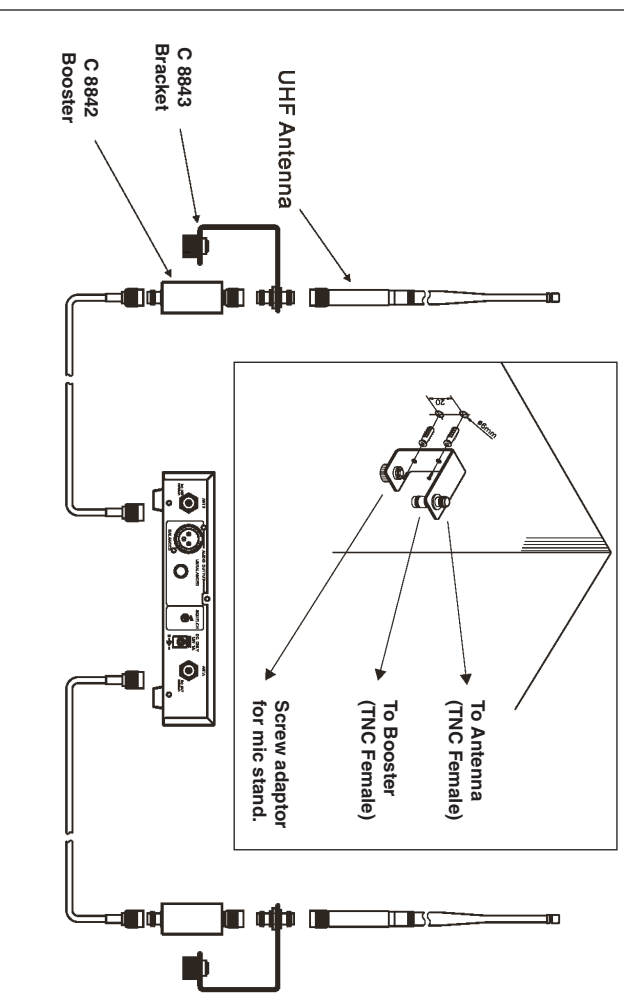
**NOTE: TWO OR MORE WIRELESS MICROPHONES (HANDHELD AND/OR LAVALLIER) WHICH TRANSMIT AT THE SAME FREQUENCY CAN NOT BE USED IN THE SAME LOCATION.**

**DESIGN AND SPECIFICATIONS SUBJECT TO BE CHANGED WITHOUT NOTICE.**

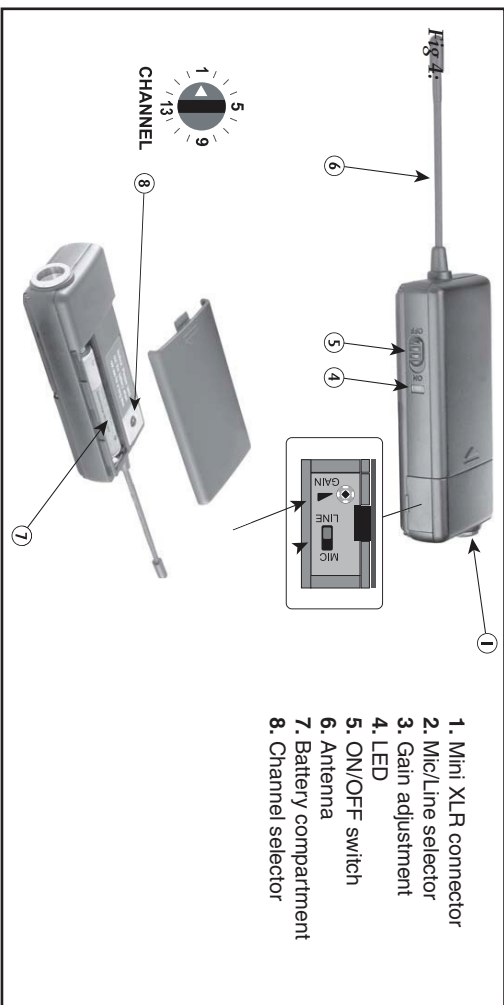
**PRECAUTIONS:**

- \* AVOID EXTREMELY DIRTY OR DUSTY ENVIRONMENTS.
- \* AVOID AREAS WHERE THERE IS EXTREMELY HIGH HUMIDITY.

*Fig 4: An antenna booster is highly recommended for long distance requirements such as in stadiums and auditoriums. The antenna booster (C 8842) can be wall or mic stand mounted to with an optional bracket (C 8843).*



PLEASE NOTE: ALL TRANSMITTERS ARE SOLD SEPARATELY



1. Mini XLR connector
2. Mic/Line selector
3. Gain adjustment
4. LED
5. ON/OFF switch
6. Antenna
7. Battery compartment
8. Channel selector

**C 8874D Beltpack Transmitter:**

This compact, lightweight beltpack transmitter is designed for use in situations where a the larger C 8875D is impractical. It may be used with tie clip mic, lecture type headset, aerobics type headset or guitar pickup. Due to the small size of this transmitter average battery life is 5-6 hours and the range is 40-50m in ideal conditions.

**Operation:** (See Fig 4.)

1. Push to open the battery cover.
2. Insert 1 x 1.5V AAAA battery into the battery holder according to polarity (+) and (-) indication marked on the battery housing.
3. Replace Battery Cover.
4. Connect the microphone or guitar pickup to the unit.
5. Set the line / mic switch to match the sound source (line / mic). Line is for guitar input.
6. After setting the chosen frequency to the same frequency as the receiver, push the power switch to "ON". The LED indicator will flash to indicate the unit is operational.
7. Push the power button to "OFF" when mic is not used, and remove the battery in microphone if not used for a long time. This will prevent damage to the unit that a defective "leaking" battery may cause.
8. If the LED indicator is permanently illuminated, the battery needs to be replaced.
9. If the LED indicator does not flash at all when first switched on then check battery is inserted correctly and batteries are not completely flat.

Group A		Group B		Group C		Group D	
Ch	Frequency	Ch	Frequency	Ch	Frequency	Ch	Frequency
1	540.125MHz	2	540.825MHz	1	540.125MHz	2	540.825MHz
3	541.925MHz	5	545.925MHz	3	541.925MHz	4	545.025MHz
4	545.025MHz	6	549.425MHz	5	545.925MHz	8	554.225MHz
6	549.425MHz	7	552.325MHz	7	552.325MHz	9	555.625MHz
7	552.325MHz	9	556.625MHz	9	556.625MHz	10	561.125MHz
9	556.625MHz	10	561.125MHz	10	561.125MHz	14	565.725MHz
10	561.125MHz	14	566.725MHz	11	563.225MHz	15	567.825MHz
16	569.525MHz	16	569.525MHz	13	564.825MHz	16	569.525MHz

*Use only these channels in the same location at the same time. Other channels used together will not provide interference free transmission.*

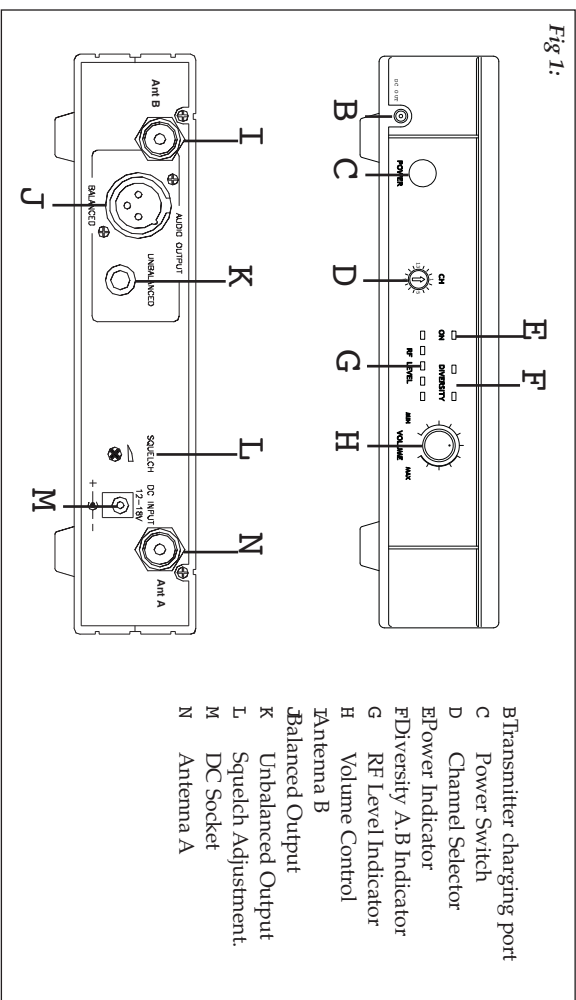


Fig 1:

- B Transmitter charging port
- C Power Switch
- D Channel Selector
- E Power Indicator
- F Diversity A/B Indicator
- G RF Level Indicator
- H Volume Control
- I Antenna B
- J Antenna A
- K Balanced Output
- L Unbalanced Output
- M DC Socket
- N Antenna A

**Operation:** (See Fig 1.)

1. Connect the cable, one end to the balanced or unbalanced output jack of the receiver, the other end to the mic mixing input of amplifier, audio mixer etc.
2. Please set the same frequency (see Table 1 & 2) on the transmitter and receiver. If interference occurs from an outside source, change the frequency.
3. For best results set the output volume control at three quarter level (3 o'clock position) and adjust mixer / amplifier level to suit.
4. The squelch level is adjustable by the squelch adjustment at the back of the unit. Adjust the squelch level to prevent external noise. Note: setting the squelch high (towards max) will reduce the range of the system.
5. When the receiver is not in use disconnect from mains power.



**PLEASE NOTE: There are 2 types of transmitters available, both are compatible with this unit. Series 1 transmitters have a DIP switch for frequency selection. Series 2 transmitters have a rotary switch for frequency selection. Please refer to table 1 "Frequency cross reference chart" for details.**

A maximum number of 6 Redback systems can be used in the one location at the same time. To use the maximum number of frequencies in the one location at the same time the consult channel guide below.

Table 1 : Frequency Cross Reference Chart.

CH 1	540.125MHz	CH 9	555.625MHz
CH 2	540.825MHz	CH 10	561.125MHz
CH 3	541.925MHz	CH 11	563.225MHz
CH 4	545.025MHz	CH 12	564.125MHz
CH 5	545.925MHz	CH 13	564.825MHz
CH 6	549.425MHz	CH 14	565.725MHz
CH 7	552.325MHz	CH 15	567.825MHz
CH 8	554.225MHz	CH 16	569.525MHz

**Series 2 Transmitters, Rotary Switch (MHz)**

**PLEASE NOTE: ALL TRANSMITTERS ARE SOLD SEPARATELY**

**C 8872D Handheld Transmitter Features:**

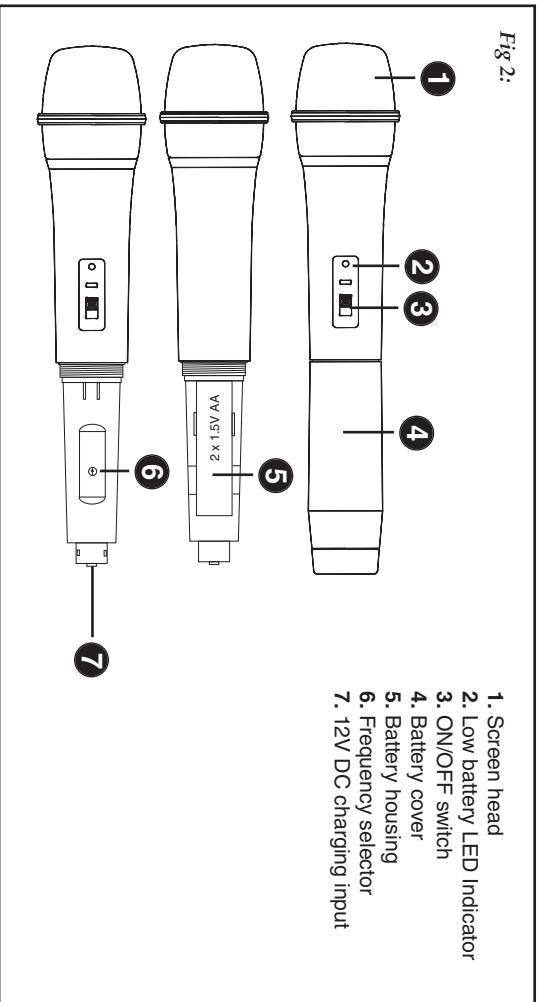
- High sensitivity cardioid capsule reduces unwanted handling noise to a minimum
- Special noise absorption parts inside the barrel, which eliminate switch shock noise and handling noise.
- PLL synthesized control circuitry.
- Easy-opening battery compartment for quick replacement. Requires 2 x AA batteries (not supplied).
- Low battery LED indicator..

**Specifications:**

- Carrier Frequency Range:..... UHF band 540-570MHz
- RF Power Output:..... 2mW (max.)
- Spurious Emission:..... More than 45dB below carrier frequency.
- Frequency Stability:..... Within  $\pm 0.005\%$  with PLL synthesized controlled
- AF Response:..... 40Hz to 15KHz (+/-3dB)
- Maximum Deviation:.....  $\pm 15$ KHz within limiting compressor.
- Signal to Noise Ratio:..... 60dB(A-Weighted).
- Microphone Capsule:..... Uni-directional condenser microphone
- Operating voltage:..... DC1.5Vx2 (UM-3 type)
- Current consumption:..... About 65mA (max.)
- LED Indicator:..... Power On-Off and low battery

**Operation:** (See Fig 2.)

1. Unscrew the bottom half of the microphone, to access the battery compartment and channel selector.
2. Insert 2 x AA Size 1.5V batteries into the battery holder according to polarity (+) and (-) indicator marked on the battery housing.
3. Screw the battery cover back onto the microphone..
4. After setting the chosen frequency to the same frequency as the receiver, push the power switch to "ON". The LED indicator will flash once to indicate the unit is operational.
5. Push the power button to "OFF" when mic is not in use. Remove the batteries from the unit if not to be used for a long time. This will prevent damage to the unit that a defective "leaking" battery may cause.
6. If the LED indicator is permanently illuminated, the battery needs to be replaced.



**PLEASE NOTE: ALL TRANSMITTERS ARE SOLD SEPARATELY**

**C 8875D Backpack Microphone:**

A range of microphones and pickups are available for the belt pack transmitter including the clip mic, lecture type headset, aerobics type headset, and guitar pickup. The belt pack microphone is equipped with a line/mic switch.

**Operation:** (See Fig 3.)

1. Push to open the battery cover.
2. Insert 2 x AA 1.5V batteries into the battery holder according to polarity (+) and (-) indication marked on the battery housing.
3. Replace Battery Cover.
4. Connect the microphone or guitar pickup to the unit.
5. Set the line / mic switch to match the sound source (line / mic). Line is for guitar input.
6. After setting the chosen frequency to the same frequency as the receiver, push the power switch to "ON". The LED indicator will flash to indicate the unit is operational.
7. Push the power button to "OFF" when mic is not used, and remove the battery in microphone if not used for a long time. This will prevent damage to the unit that a defective "leaking" battery may cause.
8. If the LED indicator is permanently illuminated, the battery needs to be replaced.
9. If the LED indicator does not flash at all when first switched on then check battery is inserted correctly and batteries are not completely flat.

**PRECAUTIONS:**

- \* AVOID EXTREMELY DIRTY OR DUSTY ENVIRONMENTS.
- \* AVOID AREAS WHERE THERE IS EXTREMELY HIGH HUMIDITY.
- \* TWO OR MORE WIRELESS MICROPHONES (HANDHELD AND/OR LAVALIERS) WHICH TRANSMIT AT THE SAME FREQUENCY CAN NOT BE USED IN THE SAME LOCATION AS THIS WILL CAUSE INTERFERENCE.

