

**WARRANTY**

Altronic Distributors warrants this product for 1 year from date of purchase from Altronic or its resellers to the consumer.

During the warranty period, we undertake to repair or replace your product at no charge if found to be defective due to a manufacturing fault. The warranty excludes damage by misuse or incorrect installation (i.e. failure to install and operate device according to specifications in the supplied instruction manual), neglect, shipping accident, or no fault found, nor by use in a way or manner not intended by the supplier.

For repair or service please contact your PLACE OF PURCHASE.

If this item was purchased directly from Altronic please make a warranty claim by:

1. FOR MAIL ORDER CUSTOMERS (includes school and trade orders),
  - a) Ringing us on 1300 797 007 and quoting your tax invoice number.
  - b) Upon contacting Altronic, we will issue an R.A. (Return Authorisation).  
As Altronic have a number of service agents throughout Australia, a copy of the R.A. will be emailed, faxed or mailed to you with full instructions of how and where to send the goods. The freight for shipping goods back to Altronic for all repairs is at the customer's expense.
  - c) A copy of the R.A. form, (or at the very minimum, the R.A. number) must accompany the goods to effect the repair.
  - d) Altronic will pay the return freight to the customer where the warranty claim has been accepted.
  - e) Please quote the R.A. number in any correspondence to us.
2. FOR OVER THE COUNTER PURCHASES to make a warranty claim, please return the goods to us in any of our stores, with a copy of your proof of purchase (tax invoice).
  - a) Upon leaving the goods at one of our stores, an R.A. number will be issued to you.
  - b) Once repaired, you will be contacted, advising that the goods are ready to be collected from the store.

It is at Altronic discretion as to whether the goods will be repaired or replaced (whilst under warranty); and as to whether identical goods will be used to replace the item due to changes of models / products.

Note: Under no circumstances should you attempt to repair the device yourself or via a non-authorized Altronic service centre, as this will invalidate the warranty! Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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**Operating Instructions**

- C 7281** UHF Dual Channel Wireless Link Receiver
- C 7282** UHF Wireless Link Transmitter
- C 7192B** Handheld Transmitter
- C 7195B** Beltpack transmitter



The C 7281 and C 7282 wireless receiver and transmitter combination provides an ideal solution for extending a PA system to a nearby building where cabling is impossible or impractical to install.

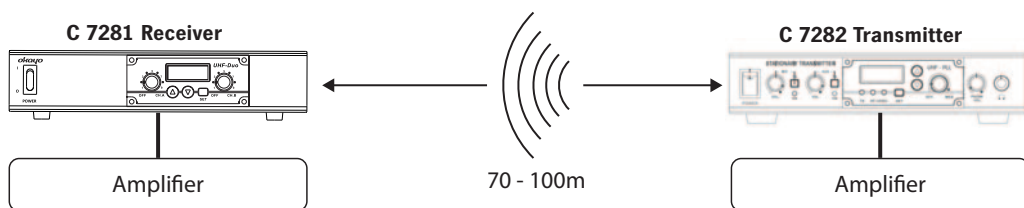
The desktop transmitter accepts a standard paging microphone or line level feed from the existing PA system and transmits it to the receiver unit in the remote location. This then feeds the signal into the amplifier at that location. This allows any program source fed into the primary amplifier to be relayed to the remote PA system. Ideal for both permanent or temporary installations such as PA systems at carnivals, sporting events, mine sites, construction sites, agricultural shows etc. Transmission range up to 100m line of sight in ideal conditions.

**Setup**

The C 7281 receiver unit integrates with the “B” series Okayo handheld & beltpack lavalier transmitters for use as a standard UHF wireless system for direct connection to an amplifier. It may also be used with Okayo portable PA units fitted with the C 7189B wireless link transmitter.

When used with the C 7282 transmitter it allows you to send the audio signal from one PA system to another without the use of cables (up to 100m away - in ideal conditions). See Fig. 1 below.

**Figure 1: Extending a PA system Wirelessly**



**Receiver Operation**

**Switch on/Switch off**

- Turn Channel A / B knob (2) / (5) clockwise until a click occurs. The LCD will then display the text “On”. After a few seconds, the LCD window will show a channel number and a signal strength.
- Turn Channel A / B knob (2) / (5) counter clockwise until a click occurs. The screen will then show “OFF” for about three seconds, and then go dark.

**Setting and Selection of Channels:**

*NOTE: Channel A and Channel B cannot be set with the same channel number at the same time.*

- Press and hold SET (4) to enter the channel selection mode. If Channel A is on, the channel number of Channel A that is shown on the screen starts to blink. Press the Up or Down Frequency arrows (3) to choose your preferred channel number. Press SET again to confirm the channel setting.
- Perform the same process on Channel B after switching that channel on.
- If you don't press any button on the panel within 10 seconds, the receiver will exit the channel setting mode and retain the channel number.

**Specifications**

**Overall System**

Carrier frequency range: .....640-664MHz (16 - 96 channels)  
 LCD indication: .....Channel, Signal strength  
 Frequency selection:.....SET, UP, DOWN Arrows  
 Frequency modulation .....24MHz (max)  
 Dynamic range: .....110dB  
 Total harmonic distortion: .....Less than 0.5%  
 Pre/de-emphasis: .....50µs  
 Silent mode: .....Tone key and noise lock dual-squelch  
 Frequency response: .....70Hz - 17kHz  
 Range: .....70-100m

**C 7281 Receiver Unit**

Antenna connection: .....TNC  
 Audio output: .....6.35mm jack, 3 pin XLR balanced  
 Output level:.....XLR: 1V / 600 Ω (@AF input 300 mV)  
 Hi: 730 mV / 2k Ω (@AF input 300 mV)  
 Low: 80 mV / 2k Ω (@AF input 300 mV)  
 Power supply: .....12V DC. 0.6A plugpack  
 Size: .....210D x 215W x 44Hmm  
 Weight .....1.2kg

**C 7282 Transmitter Unit**

Antenna connection: .....TNC  
 Audio input: .....6.35mm jack, 3 pin XLR balanced, stereo RCA  
 Audio output:.....Stereo RCA & 6.35mm headphone jack  
 RF output: .....10-30mW  
 Aux input: .....700mV  
 Aux output:.....1V  
 Mic input sensitivity: .....10mV  
 Headphone output:.....0.5W/32Ω  
 Power supply: .....12V d.c. 1A plugpack  
 Size: .....214D x 187W x 44Hmm

**Beltpack Transmitter (C 7195B)**

Mic Insert: .....Condenser  
 RF Output: .....10mW  
 Spurious Emission:.....<250mW  
 Audio Input: .....Mic in, Aux in  
 AF Controls: .....Mute switch, hi/mid/lo switch  
 Battery: .....1.2V NiMH rechargeable x 2 or 1.5V Alkaline x 2  
 Operating Life (fully charged) 11 hrs (NiMH) or 14 hrs (Alkaline)  
 Dimensions: .....88 x 64 x 24mm  
 Weight (with batteries):.....170g

**Handheld Transmitter (C 7192B)**

Mic Insert: .....Dynamic  
 RF Output: .....10mW  
 Spurious Emission:.....<250mW  
 AF Controls: .....Hi/lo/mute switch  
 Battery: .....1.2V NiMH rechargeable x 2 or 1.5V Alkaline x 2  
 Operating Life (fully charged) 11 hrs (NiMH) or 14 hrs (Alkaline)  
 Dimensions: .....46Ø x 264mm  
 Weight (with batteries):.....280g

**IMPORTANT**

**Maintenance / Operation Guidelines**

- Avoid excessive heat:** Do not leave units in direct sun for extended periods, in front of heaters or any source of high temperature
- Avoid rough handling:** Transmitter or receiver may be damaged if dropped
- Remove batteries:** Remove batteries from transmitters when not in use.
- Replace batteries:** Ensure replacement batteries are the same or equivalent to existing. Batteries may explode under charge or unit may malfunction if incorrect batteries are used.
- Battery terminals:** Ensure battery contacts are clean and free of corrosion before operation. If corrosion occurs it could be a sign of faulty batteries. Return to your place of purchase if service is required.

**Table 1: UHF Wireless Channel Guide**

640-664MHz Frequency											
1	640.1	17	640.9	33	640.4	49	641.1	65	640.6	81	641.4
2	641.6	18	642.4	34	641.9	50	642.6	66	642.1	82	642.9
3	643.1	19	643.8	35	643.3	51	644	67	643.5	83	644.3
4	644.5	20	645.3	36	644.8	52	645.5	68	645	84	645.8
5	646.1	21	646.9	37	646.4	53	647.1	69	646.6	85	647.4
6	647.6	22	648.4	38	647.9	54	648.6	70	648.1	86	648.9
7	649.1	23	649.8	39	649.3	55	650	71	649.5	87	650.3
8	650.5	24	651.3	40	650.8	56	651.5	72	651	88	651.9
9	651.7	25	652.6	41	652.1	57	652.8	73	652.3	89	653.1
10	653.3	26	654.1	42	653.6	58	654.3	74	653.8	90	654.6
11	655.2	27	656	43	655.5	59	656.2	75	655.7	91	656.5
12	656.7	28	657.5	44	657	60	657.7	76	657.2	92	658
13	658.2	29	658.9	45	658.4	61	659.1	77	658.6	93	659.4
14	659.6	30	660.4	46	659.9	62	660.6	78	660.1	94	660.9
15	661.2	31	662	47	661.5	63	662.2	79	661.7	95	662.5
16	662.7	32	663.4	48	662.9	64	663.6	80	663.1	96	663.9

**Frequency Combinations 640-664MHz**

**1. If using 4 channels at the same time**

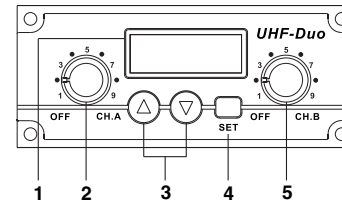
- (1) 19 20 35 36      (2) 10 57 58 59      (3) 19 34 36 39      (4) 20 35 39 69
- (5) 59 75 77 90      (6) 11 44 45 57      (7) 07 53 84 87

**2. If using 8 channels at the same time**

- (1) 06 39 42 45 55 70 89 90      (2) 17 18 20 33 34 36 37 89
- (3) 01 02 06 37 49 50 70 84      (4) 02 49 50 52 68 69 71 87
- (5) 34 40 52 57 68 69 81 82

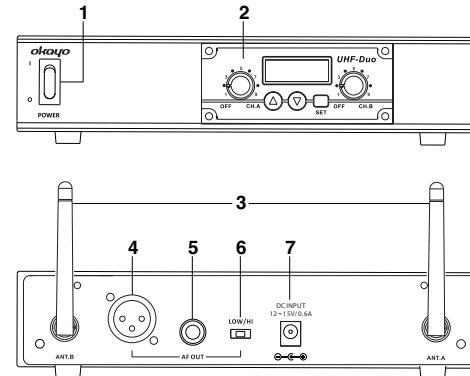
**3. If using 12 channels at the same time**

- (1) 05 21 49 50 52 58 65 66 75 85 87 91
- (2) 02 17 22 25 26 36 41 42 67 82 86 92



**Fig. 2: Receiver Controls**

1. LCD screen
2. Channel A power switch and volume control
3. Up/Down frequency selector
4. Frequency set buttons
5. Channel B power switch and volume control



**Fig. 3: Receiver Front and Rear Panel**

1. Power switch
2. Receiver module (see Fig. 2 detail)
3. Antennae A & B TNC connectors
4. Balanced 3 pin XLR output
5. Unbalanced 6.35mm jack output
6. Low/high impedance switch for 6.35mm output
7. DC power input socket

**Display of Frequency Value:**

Press either the Up or Down arrows on the Frequency Selector and the frequency value of Channel A or B will be displayed for two seconds before reverting back to showing the channel number.

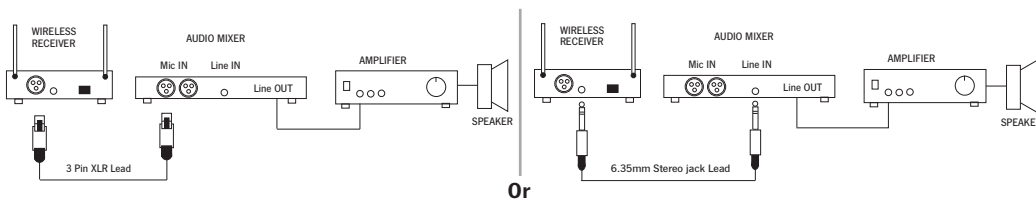
**Scan - Searching for available channels automatically:**

1. Press Up and Down arrows (3) together for more than a second. The LCD window will show "SCAN" without blinking. Channel A and Channel B will be switched to any available channels automatically. If there is no channel available, the current channel numbers will remain the same.
2. Using two UHF Duo wireless receiver modules simultaneously:
  - Set the group number as F2 for these two wireless receiver modules.
  - Wireless Receiver Module 1 will search for available channel automatically as described in step 1.
  - Switch on the Transmitter used for Wireless Receiver Module 1 and adjust the channel number accordingly.
  - Wireless Receiver Module 2 will search for available channel automatically.
  - Switch on the Transmitter used for Wireless Receiver Module 2 and adjust the channel number accordingly.

**Setting of Group Number and SQ Value:**

1. Press Set (4) and then switch on Channel A or Channel B to enter Group setting. The LCD window would show 'F1' (number will keep blinking).
2. Press Up or Down arrow buttons (3) to look for your preferred group number.
3. Press SET to confirm the group setting or wait for five seconds to confirm it automatically and then enter setting mode of SQ value.
4. Under setting mode of SQ value, LCD window will show 'F2' (number will keep blinking).
5. Press Up or Down arrows to choose SQ value. The value will not be set in circulation.
6. Press SET again to confirm the group setting or wait for five seconds to confirm it automatically and then back to normal switching-on mode.

**Fig. 4: Receiver Connection To Amplifier/Mixer**



## Receiver Connection

See Fig. 4.

Connection to your amplifier or mixer unit can be made via the 6.35mm unbalanced AF Out jack or 3 pin XLR balanced AF Out socket. Connect the output of the receiver to the input of your amplifier or mixer with an appropriate lead.

The 6.35mm AF Out socket is provided with a high/low impedance switch. This switches between 80mV and 700mV impedance.

- If connecting to a MIC input jack, select LOW. If connecting to a line or aux input jack select HIGH.
- If using an XLR MIC jack, connect it from XLR balanced AF Out to a mixer or amplifier AUX IN socket, which might be XLR or a phono TRS jack.

### AF Impedance Selection (HI / LOW Control)

*Remark: The AF impedance selection only controls the Unbalanced AF Out connection (6.35 mm).*

In order to prevent the impedance being too high thus producing unexpected noise, please set the impedance switch at LOW if you are connecting a jack to a low level input in the subordinate device.

If your subordinate device is configured with a general input socket (e.g., LINE IN, AUX IN , etc), please set the impedance switch to HI to avoid a low-volume output.

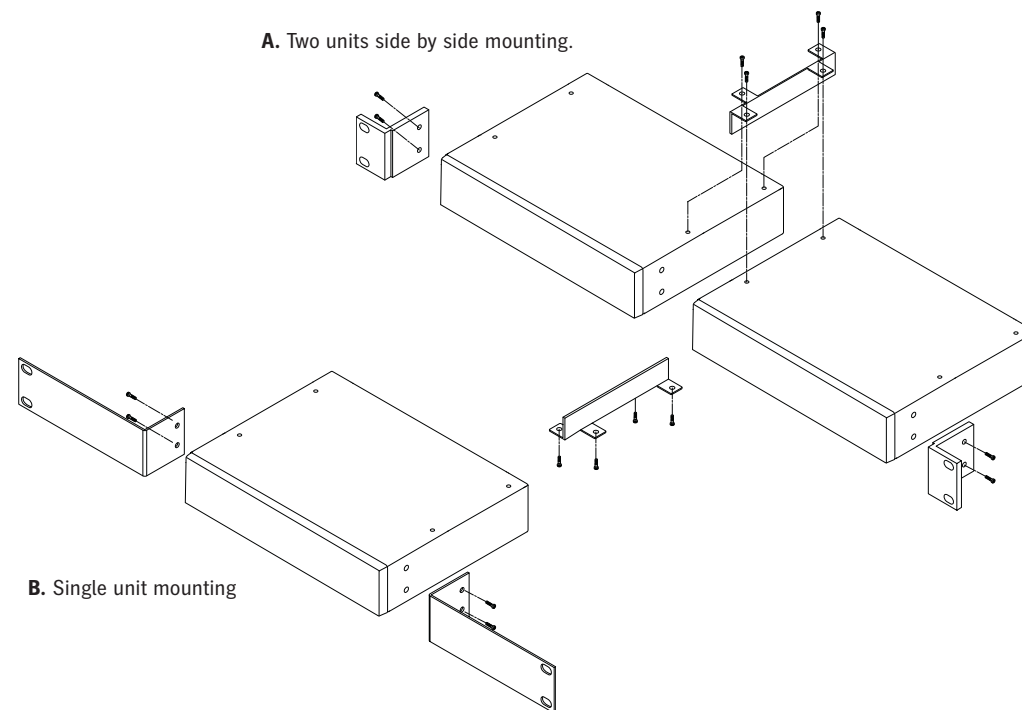
## Transmitter Operation

See Fig. 5 & 6.

1. Turn the main power switch on and turn power switch/AF level knob clockwise to turn the transmitter unit on.
2. The LCD screen will display 'ON' then revert to the factory default channel (or the channel last selected).
3. To select a channel press the SET button. Using the UP/DOWN frequency adjustment buttons you can set the transmitter to match the channel used by the receiver (C 7281).
4. Adjust the AF level to the desired position.
5. The module is now ready to transmit signal to the receiver unit (C 7281). When transmitting audio the TX indicator will light green. The AF indicator displays audio level when users are speaking into a mic or music is playing. In addition individual transmission indicators are provided for wired mic input and aux/line input (number 3 & 5 respectively on Fig. 6). These will illuminate whenever signal from each input is being transmitted.
6. A stereo phone jack and level control is provided on the front panel for local monitoring of aux/line input signal).

## C 7192B and C 7195B Transmitter Troubleshooting

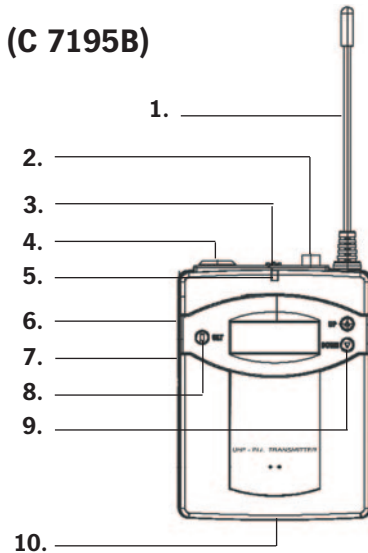
- **Power LED does not illuminate after pressing power switch.**  
Check batteries are charged and inserted correctly.  
For handheld microphone, when pressing power switch ensure you hold it down for 2-3 seconds.
- **LCD shows "Err" when switching off.**  
Contact your place of purchase for information on resetting your transmitter.
- **LCD panel displays garbled information.**  
Remove batteries and re-insert them.
- **No sound output**  
Check frequency of transmitter is the same as the receiver.  
Check volume level of both transmitter and receiver.  
For beltpack transmitter, ensure mute button is not activated.  
Ensure transmitter is within range of the receiver.  
Check for sources of interference, large metal objects etc. within range of the transmitter.
- **Signal disturbance.**  
When operating two transmitters in the same area, ensure frequencies selected are several channels apart. This helps to reduce crosstalk between transmitters. Also note that other wireless devices can cause interference, ensure you adjust your frequency around these devices where possible.



**Fig. 11: Mounting C 7281 & C 7282 In 19" Racking**

**Fig. 10: Beltpack UHF Wireless Transmitter (C 7195B)**

1. Aerial
2. Mute button (top)
3. On/off switch (top)
4. Mini XLR 3 Pin input socket (top)
5. LED power indicator
6. Sensitivity selection switch (side)
7. 3.5mm aux input socket (side)
8. Frequency set button
9. Up/down frequency adjustment buttons
10. Charging jack

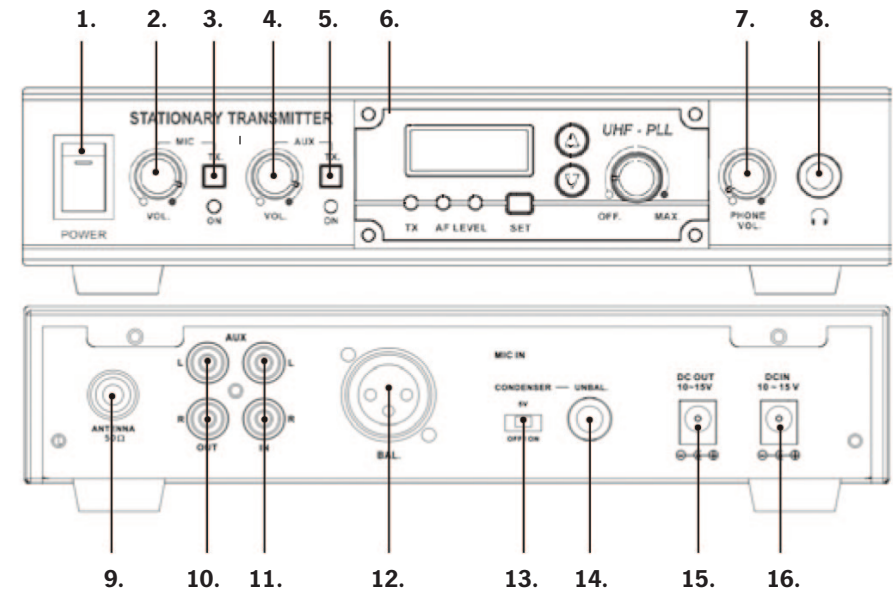
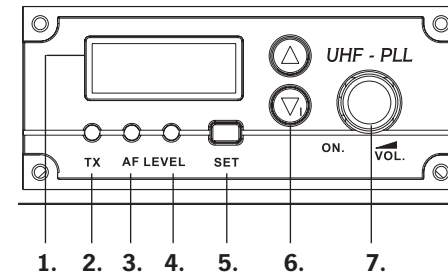


**C 7195B Lavalier Beltpack Transmitter - Figure 10.**

1. Ensure microphone is switched off before inserting batteries.
2. Remove battery clip. Insert two AA batteries (alkaline or rechargeable's are recommended).
3. Switch the top mounted power switch to ON. The power LED will illuminate red and 'ON' will be displayed on the LCD screen.
4. A selection switch on the side of the beltpack provides three level settings (low, mid & high) depending on the application or environment in which it is to be used. The mute button allows beltpack to be put on standby without switching the power off.
5. The LCD screen will display the channel selected. To determine which frequency this channel is operating on, press the UP or DOWN frequency adjustment buttons.
6. Press the frequency set button for one to two seconds. The LCD screen will flash the currently selected channel number. You can cycle through the channels by pressing the UP or DOWN frequency adjustment buttons. Press the frequency set button again to lock in your channel selection.
7. The battery status is displayed on the left of the screen. When battery capacity is critical the icon will flash three times before switching the microphone off automatically.
8. When using with rechargeable NiMH batteries, you can use the C 7196 charging pod. This allows you to put up to two beltpacks on charge at the same time. Charging time is dependant on the capacity of batteries used, typically 10-12 hours charging is required. If battery icon is flashing when charger is connected, ensure rechargeable batteries are inserted in the microphone. If batteries have failed both the battery icon and screen backlight will flash. During normal charging the battery icon will cycle through the charge "bar" icons. Once full capacity is reached the full battery icon and all "bars" will be displayed.

**Fig. 5: Transmitter Module**

1. LCD screen
2. TX transmitting indicator
3. AF transmitting indicator
4. AF audio level indicator
5. Frequency set button
6. Up/down frequency adjustment buttons
7. Power switch & AF level control

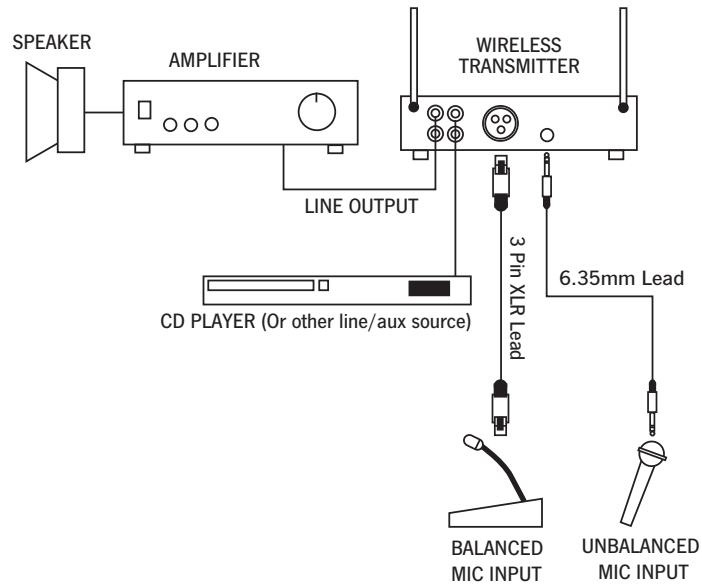


**Fig. 6: Transmitter Front & Rear Panel**

- |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Power switch</li> <li>2. Wired mic volume</li> <li>3. Wired mic transmission indicator</li> <li>4. Aux/Line input volume</li> <li>5. Aux/line input transmission indicator</li> <li>6. Transmitter module (see Fig. 5)</li> <li>7. Headphone volume</li> <li>8. 6.35mm headphone jack</li> </ol> | <ol style="list-style-type: none"> <li>9. Antenna TNC connector</li> <li>10. Aux/Line stereo RCA output</li> <li>11. Aux/Line stereo RCA input</li> <li>12. Balanced 3 pin XLR input</li> <li>13. Condenser mic p/supply selector (5V)</li> <li>14. 6.35mm jack input</li> <li>15. DC power loop output socket</li> <li>16. DC power input socket</li> </ol> |
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**Fig. 7: Transmitter Connection To Amplifier/Mixer and Audio Sources**



**Transmitter Connection**

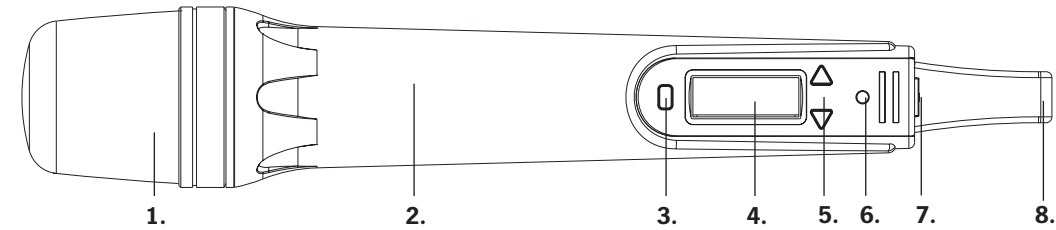
See Fig. 7.

The wireless transmitter can be connected to a local line level input source via stereo RCA connection. In addition two microphone inputs are provided via balanced 3 pin XLR and unbalanced 6.35mm jack connection. A stereo RCA loop output is fitted, this may be connected to a local zone amplifier input.

A 5V phantom power switch for condenser microphones may be selected on the 6.35mm jack input.

**Transmitter Microphone Operation**

C 7192B handheld microphone and C 7195B lavalier beltpack transmitter may be used in conjunction with the C 7280 receiver unit. **Transmitter microphones are sold separately.**



**Figure 9: Handheld UHF Wireless Microphone (C 7192B)**

- 1. Protective screen head
- 2. Rubberised body
- 3. Frequency set button
- 4. LCD screen
- 5. Up/down frequency adjustment buttons
- 6. LED power indicator
- 7. Power switch
- 8. Charging port connection

**C 7192B Handheld Microphone Transmitter - Figure 9.**

1. Ensure microphone is switched off before inserting batteries.
2. Remove lower housing and battery clip. Insert two AA batteries (alkaline or rechargeable's are recommended).
3. Press and hold the power switch for a few seconds (located on the base of the microphone). The power LED will illuminate red and 'ON' will be displayed on the LCD screen. Note: power switch is more easily accessed with lower housing removed.
4. A selection switch on the rear of the microphone provides three level settings (mute, mid & high) depending on the application or environment in which it is to be used. Mute setting allows microphone to be put on standby without switching the power off.
5. The LCD screen will display the channel selected. To determine which frequency this channel is operating on, press the UP or DOWN frequency adjustment buttons.
6. Press the frequency set button for one to two seconds. The LCD screen will flash the currently selected channel number. You can cycle through the channels by pressing the UP or DOWN frequency adjustment buttons. Press the frequency set button again to lock in your channel selection.
7. The battery status is displayed on the left of the screen. When battery capacity is critical the icon will flash three times before switching the microphone off automatically.
8. To turn the microphone off press the power switch for a few seconds until the LCD screen displays 'OFF'
9. When using with rechargeable NiMH batteries, connect a DC 5V plugpack (Altronics M 8909A plus M 9187 tip adaptor) to the charging port on the base of the microphone. Charging time is dependant on the capacity of batteries used, typically 10-12 hours charging is required. If battery icon is flashing when charger is connected, ensure rechargeable batteries are inserted in the microphone. If batteries have failed, both the battery icon and screen backlight will flash.
10. During normal charging the battery icon will cycle through the charge "bar" icons. Once full capacity is reached the full battery icon and all "bars" will be displayed.

Note: Microphone is unable to be used during charge process.