

IMPORTANT

Maintenance / Operation Guidelines

Avoid excessive heat

Do not leave transmitters or portable PA receiver in direct sun for extended periods, in front of heaters or any source of high temperature

Avoid rough handling

Transmitter or portable PA receiver may be damaged if dropped

Fully charge portable PA battery

Ensure battery is fully charged before placing into storage for long periods. Ensure battery is charged once per month thereafter to ensure long life and optimum battery reliability.

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.



Operating Instructions

C 7180	<i>Basic PA</i>
C 7182	<i>PA with UHF Wireless Mic</i>
C 7184	<i>PA with UHF Wireless Mic & CD Player</i>
C 7192	<i>Wireless Handheld Microphone</i>
C 7195	<i>Beltpack Transmitter</i>



This operating guide also includes instructions for the following portable PA accessories:

- C 7187: Additional UHF wireless microphone receiver
- C 7189: Wireless link transmitter
- C 7190: Karaoke echo module
- C 7196: Beltpack charging pod
- C 7197: Lapel microphone to suit beltpack transmitter
- C 7198: Headset microphone to suit beltpack transmitter
- C-7180A: Replacement battery 2.9Ah.

This compact portable PA system features a sturdy, lightweight injection moulded cabinet. The system includes a high power 50W (RMS) amplifier and can be supplied with an MP3 compatible anti-skip CD player and up to two wireless microphone receivers. The in-built amplifier has balanced or unbalanced wired microphone inputs, plus line in and line out RCA connections. The radio microphone receivers are 96 channel, allowing easy selection of non-interfering frequencies. Each receiver includes individual frequency adjustment and volume control. The system is supplied with in-built batteries and charging facility to provide 3-4 hours continuous use. The two way speaker system comprising an 8 inch woofer and high frequency horn ensures excellent sound quality for both music and speech reproduction. Weighing only 12kgs it is truly portable allowing a wide range of use in schools, places of worship, clubs, auctions etc. Sets up in just seconds for instantaneous use.

C 7189 Optional wireless link transmitter: For larger venues or audiences, the addition of this module allows several units to be used in the same area without the need for speaker or signal wiring. In this application you have a master and as many slave units as required for the venue. The wireless link module is fitted to the master unit which then transmits any audio signal (including wireless mic, CD player or wired mic) to the slave units, which are fitted with a UHF wireless microphone receiver adjusted to receive the signal from the wireless link.

C 7187 Optional UHF wireless microphone receiver: Installation of this module adds a second wireless microphone to the Portable PA.

C 7190 Optional karaoke echo module: For karaoke applications this module includes adjustable repeat and delay, plus two local wired 6.35mm mic inputs.

Features

- Compact design sets up in just seconds
- Rugged lightweight cabinet
- MP3 compatible CD player
- Inbuilt carry handle
- High performance 50W RMS amplifier
- Built in backup battery
- Optional radio microphone receivers (794-806MHz)
- Suitable for desk or speaker stand mounting
- Optional wireless link for cable free transmission to additional systems
- Optional karaoke echo module
- Provision for 8 ohm extension speaker
- RCA line input/output
- 6.35mm / XLR combination wired microphone input.
- 240VAC mains or battery operation

Operation

Power & Charging Functions

The portable PA system is powered by 240V AC mains via IEC socket (see figure 2 for location) or via the internal battery pack. When operating for the first time the internal battery will require charging for up to 8 hours. Charging will occur whenever the unit is plugged into the 240VAC mains supply. The charge status indicator (shown in figure 2) will illuminate red when charging. Once battery is 80-90% charged the indicator will flash red and green. Once charging is complete the indicator will illuminate green.

When in use without mains power the LED built into the power switch provides indication of battery status:

100% to 30% capacity: no illumination

30% to 10% capacity: red illumination

<10% capacity: flashing red illumination

Specifications

Portable PA Amplifier

Sensitivity	95dB 1W @ 1m
Maximum SPL	112dB
Frequency Response	20Hz to 20kHz
Output Power	50W RMS
Signal to Noise Ratio	<70dB
Inputs.....	XLR 3 pin, 6.35mm TRS, stereo RCA
Outputs	Stereo RCA line out, Speaker out 6.35mm (8 ohm)
Controls.....	Master volume, bass, treble, line volume, wired mic volume
Power.....	96-264V AC/32V DC switching power supply
Battery	12V, 2.9Ah x 2 (sealed lead acid)
Operating Life (fully charged)	3-4hrs
Charging Time	4-6hrs
Dimensions	300 x 230 x 470mm
Weight.....	12kg

Beltpack Transmitter (C 7195)

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)
Dimensions88 x 64 x 24mm
Weight (with batteries)	170g

Handheld Transmitter (C 7192)

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.....	.460 x 264mm
Weight (with batteries)	280g

Audio Link Transmitter Module (C 7189)

RF Output.....	10mW
Spurious Emission	<250mW
Antenna	Internal
Dimensions88 x 64 x 24mm
Weight	170g

UHF Wireless Receiver Module (C 7187)

Antenna Mode.....	Diversity
Spurious Rejection	70dB
Adjacent Channel Performance.....	68dB @ 250kHz
Antenna	Internal
Dimensions	128 x 88 x 37mm
Weight	110g

Digital Echo Module (C 7190)

Input Sensitivity.....	10mV
Delay Time	340ms - 110ms
Audio Input.....	6.3mm TRS x 2
Controls	Echo, repeat, delay, mic 1 volume, mic 2 volume

Overall System

Frequency Range.....	PLL synthesised control, 794-806MHz (96 channels)
Switching Bandwidth	Max 12MHz
Dynamic Range	110dB
THD	Less than 0.5%
Frequency Response (wireless)	70Hz-16kHz
Operating Range.....	50-70m (line of sight)

C 7195 Beltpack Transmitter

1. Ensure microphone is switched off before inserting batteries.
 2. Remove battery clip. Insert 2 x 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 the portable PA 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 1-2 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 3 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 2 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 "block" icons. Once full capacity is reached the full battery icon and all "blocks" will be displayed.

Troubleshooting

- **Power LED does not illuminate after switching on**
Check batteries are charged and inserted correctly.
- **LCD shows "Err" when switching off**
Contact your place of purchase for information on resetting your beltpack.
- **LCD panel displays garbled information**
Remove batteries and re-insert them
- **No sound output**
Check frequency of transmitter is the same as the portable PA receiver
Check volume level of both transmitter and portable PA receiver
Check mute button is not activated
Ensure beltpack is within range of the receiver
Check for sources of interference, large metal objects etc within range of the beltpack
- **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.

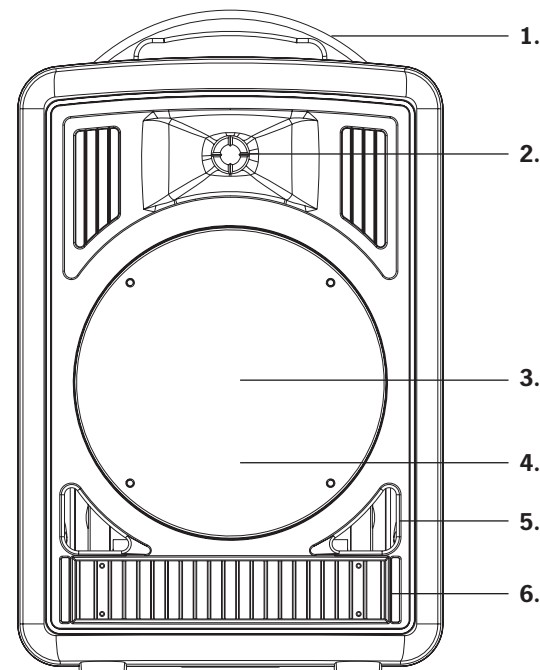


Figure 1: Front

1. Handle
2. Horn Tweeter
3. Woofer
4. Speaker Grill
5. Port
6. Heatsink

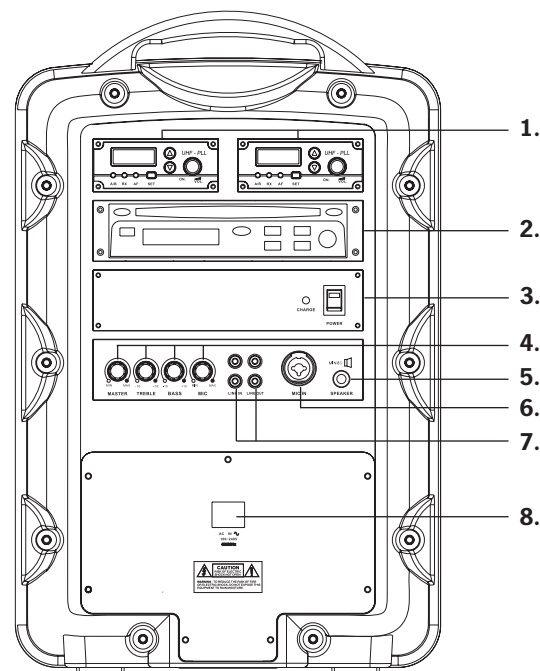


Figure 2: Rear

(shown configured with 2 x UHF wireless microphones & CD player)

1. UHF receiver modules (blanking panels fitted in base models)
2. CD/MP3 player
3. Power switch & charge indicator (this panel is replaced when adding a wireless link or digital echo module).
4. Level, treble & bass controls
5. Speaker out (8Ω)
6. Mic input (6.35mm / 3 pin XLR)
7. RCA line in/out
8. 240V AC input

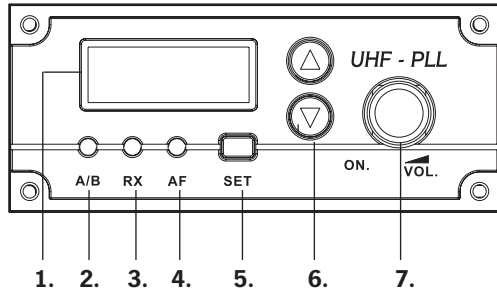


Figure 3: UHF Wireless Mic Module (C 7187)

1. LCD screen
2. A/B diversity indicator
3. RX audio indicator
4. AF audio level indicator
5. Frequency set button
6. Up/down frequency adjustment buttons
7. Power switch & mic level control

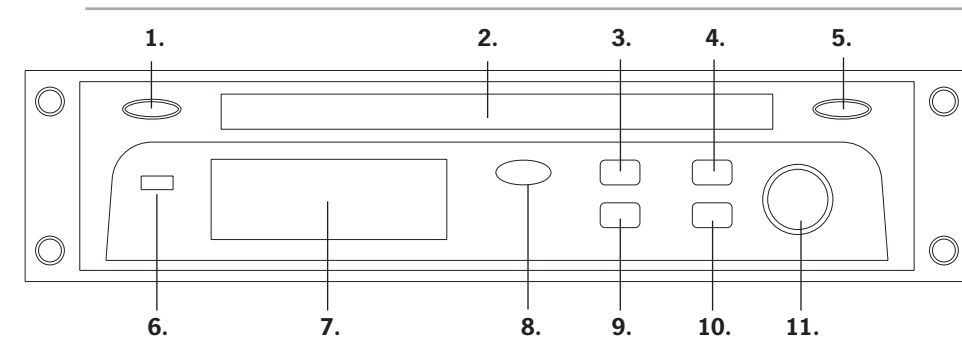


Figure 4: CD/MP3 Player Module

1. Track program button
2. CD slot
3. Shuffle / repeat button
4. Play / pause button
5. Stop / eject button
6. Power switch
7. LCD screen
8. Folder selection button
9. << Search / previous track
10. >> Search / next track
11. CD level control

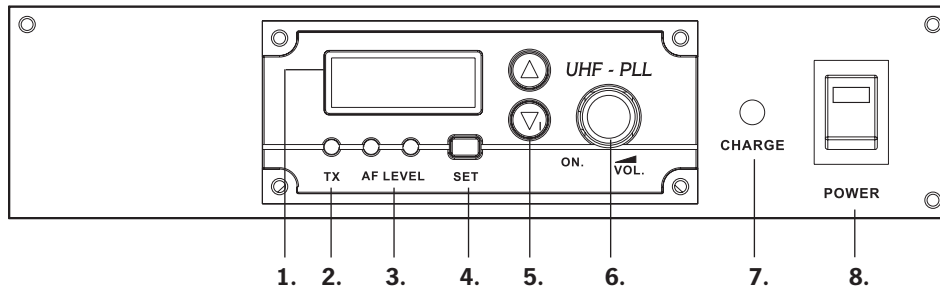


Figure 5: Audio Link Transmitter (C 7189)

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

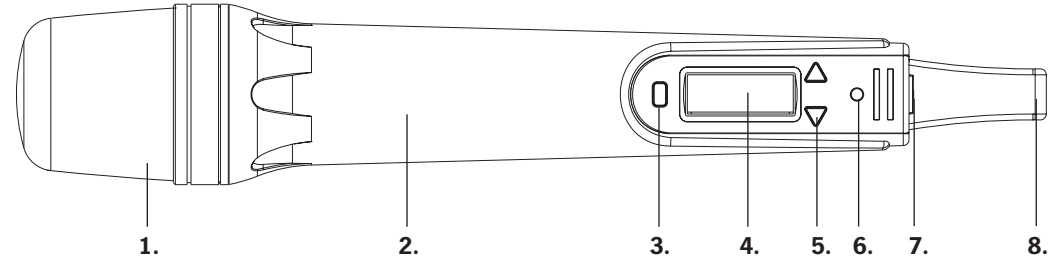
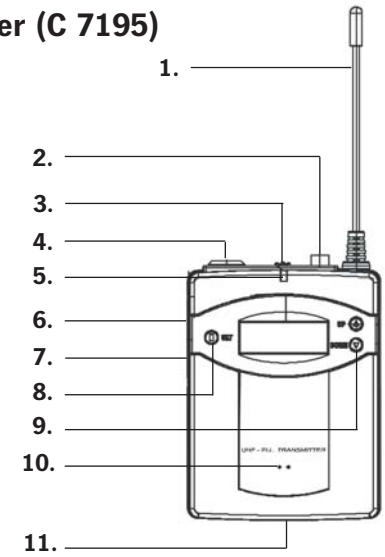


Figure 8: Handheld UHF Wireless Microphone (C 7192)

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

Figure 9: Beltpack UHF Wireless Transmitter (C 7195)

1. Aerial
2. Mute button (top)
3. On/off switch (top)
4. 3.5mm mic 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. Inbuilt mic
11. Charging jack



Transmitter Operation

All portable PA's equipped with a UHF wireless microphone module are compatible with the C 7192 handheld and C 7195 backpack transmitters. **All transmitters are sold separately.**

C 7192 Handheld Microphone Transmitter - Figure 8.

1. Ensure microphone is switched off before inserting batteries.
 2. Remove lower housing and battery clip. Insert 2 x AA batteries (alkaline or rechargeable's are recommended).
 3. Press and hold the power switch for 2-3 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 the portable PA is to be used. Mute setting allows microphone to be put on stand-by 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 1-2 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 3 times before switching the microphone off automatically.
 8. To turn the microphone off press the power switch for 2-3 seconds until the LCD screen displays "OFF"
 9. When using with rechargeable NiMH batteries, connect a DC 5V plugpack (Altronics M 8909 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.
- During normal charging the battery icon will cycle through the charge "block" icons. Once full capacity is reached the full battery icon and all "blocks" will be displayed.

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

Troubleshooting

- **Power LED does not illuminate after pressing power switch**
Check batteries are charged and inserted correctly.
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 microphone.
- **LCD panel displays garbled information**
Remove batteries and re-insert them
- **No sound output**
Check frequency of transmitter is the same as the portable PA receiver
Check volume level of both transmitter and portable PA receiver
Ensure microphone is within range of the receiver
Check for sources of interference, large metal objects etc within range of the microphone
- **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.

Wireless Microphone Module - Figure 3.

The portable PA system can be equipped with one or two UHF microphone modules. Each module features 96 selectable channels for interference free operation with multiple microphones or PA systems.

(See page 7 for installation guidelines for this module)

1. Turn the power switch/volume knob clockwise to turn the receiver 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 receiver to match the channel used by the transmitter.
4. Adjust the volume level to the desired position.
5. The module is now ready to receive signal from either a handheld or backpack transmitter. When receiving signal the A/B diversity indicator will illuminate red or green to show the diversity status. The RX indicator will illuminate when signal from the transmitters is being received. The AF indicator displays audio level when users are speaking into the microphone.

CD/MP3 Player (C 7184 model only) - Figure 4.

This anti-shock CD/MP3 player allows playback of both standard CD's and data CD's containing MP3 files.

1. To operate push the power button. Insert a CD into the CD slot and press play/pause button.
2. Adjust volume to desired level
3. To skip forward a whole track press the next track button (>>|). To skip backwards a whole track press the previous track button (|<<). To search through tracks, press and hold either of these buttons until you reach the desired point in the sound track.
4. Repeat allows repeating of single songs or all songs. Shuffle plays tracks in a random order.
5. To program specific tracks for playback press the track program button. Select the song you wish to program on the disc using the next track (>>|) and previous track buttons (|<<). Press repeat to enter the track into the program. Repeat as necessary. To playback programmed tracks press the play/pause button. Note: program will be reset whenever the track program button is pressed.
6. For use with MP3 discs you can select folders of music on the CD. Press the folder button and use the next track (>>|) and previous track buttons (|<<) to select your desired folder. Note: this function searches the disc in alphanumeric order.

Audio Link Transmitter (C 7189) - Figure 5.

For larger venues or audiences, the addition of this module allows several units to be used in the same area without the need for speaker or signal wiring. In this application you have a master and as many slave units as required for the venue. The wireless link module is fitted to the master unit which then transmits any audio signal (including wireless mic, CD player or wired mic) to the slave units, which are fitted with a UHF wireless microphone receiver.

(See page 7 for installation guidelines for this module)

1. On the master unit turn the power switch / volume level control clockwise to turn the transmitter 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 select the desired channel.
4. On the slave unit turn the UHF receiver module on. Press "SET" and use the UP/DOWN frequency adjustment buttons to set the unit to the same channel as the master unit.
5. When transmitting audio from the master to slave unit the TX indicator will light green. The AF indicator displays audio level when users are speaking into the microphone or music is playing.

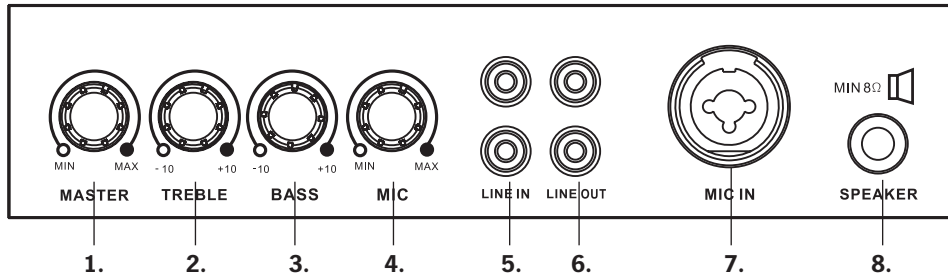


Figure 6: Level Adjustment & Input/Output Module

- | | |
|---------------------------|-------------------------------------|
| 1. Master volume level | 5. RCA stereo line input |
| 2. Treble level | 6. RCA stereo line output |
| 3. Bass level | 7. XLR / 6.35mm TRS wired mic input |
| 4. Wired mic volume level | 8. Speaker out (8 Ohm) |

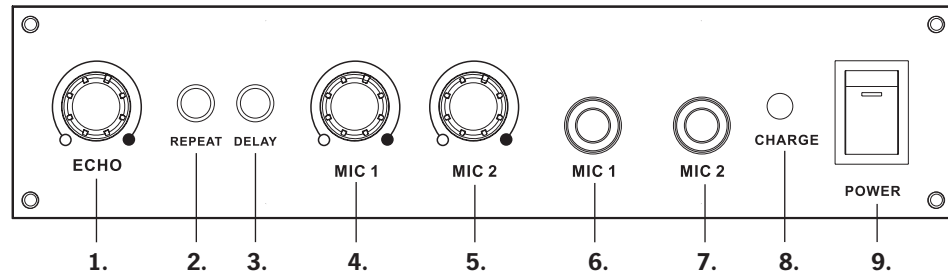


Figure 7: Digital Echo Module (C 7190)

- | | |
|------------------------------|-----------------------------------|
| 1. Echo control | 6. Wired mic 1 input (6.35mm TRS) |
| 2. Repeat control | 7. Wired mic 2 input (6.35mm TRS) |
| 3. Delay control | 8. Battery charging indicator |
| 4. Wired mic 1 level control | 9. System power switch |
| 5. Wired mic 2 level control | |

Level Adjustments & Input/Output Connection - Figure 6.

System inputs, outputs and levels can be controlled via this module. Master volume adjusts overall system level from all inputs (ie: UHF, CD/MP3 player, RCA stereo input and wired microphones). Treble and bass controls effect all system inputs, when set to half way sound output will be flat.

RCA stereo jacks are provided for an external audio source. This allows connection of a CD player, iPod or other audio source.

An RCA output is provided for use with external zone amplifiers or other PA systems if required. This output signal is combined from all inputs (ie: UHF, CD/MP3 player, RCA stereo input and wired microphones).

If an external speaker is required, it can be connected to the portable PA system via 6.35mm jack. Note: this feature is designed for 8 ohm minimum impedance speakers. Overall amplifier output will be split between both speakers when in use.

Digital Echo Module (C 7190) - Figure 7.

The digital echo module is designed for karaoke requirements where tailoring of sound output is required.

1. Turn the power switch & level control clockwise to turn the unit on.
2. Adjust the repeat and delay levels to tailor the amount of echo effect.
3. Two 6.35mm TRS (tip, ring, sleeve) wired microphone inputs are provided on the front panel. The echo effect operates on these inputs only.
4. Once microphones are connected volume can be adjusted via the mic 1 and mic 2 level controls on the front panel.

Fitting Additional Modules

Fitting C 7187 UHF Wireless Microphone Receiver Module

1. Ensure portable PA is NOT connected to mains power. Disconnect all input cables.
2. Unscrew the 'half width' blanking panel at the top of the rear panel (see figure 2).
3. Slide the UHF wireless microphone module in, ensuring the board slots into the connector at the rear of the empty expansion bay.
4. Screw the module into the rear panel.

All PA models feature a blanking panel with the system power switch mounted on it (see figure 2). This panel is replaced by the C 7189 or C 7190 modules.

Fitting C 7190 Digital Echo Module

1. Ensure portable PA is NOT connected to mains power. Disconnect all input cables.
2. Unscrew the blanking panel and disconnect the power cables from the main board.
3. Locate switch SW200 on the main board inside and slide it to "EFFECT" setting.
4. Locate jumpers J201(07P) and CON204 on the main board inside. Connect the power cable for the digital echo module to J201(07P) and the signal cable to CON204.
5. Screw unit back together.

Fitting C 7189 Audio Link Transmitter

1. Ensure portable PA is NOT connected to mains power. Disconnect all input cables.
2. Unscrew the blanking panel and disconnect the power cables from the main board.
3. Locate switch SW200 on the main board inside and ensure it is set to "NORMAL" (factory default).
4. Locate jumpers J201(07P) and J204 on the main board inside. Connect the power cable for the wireless link transmitter to J201(07P) and the signal cable to J204.
5. Screw unit back together.