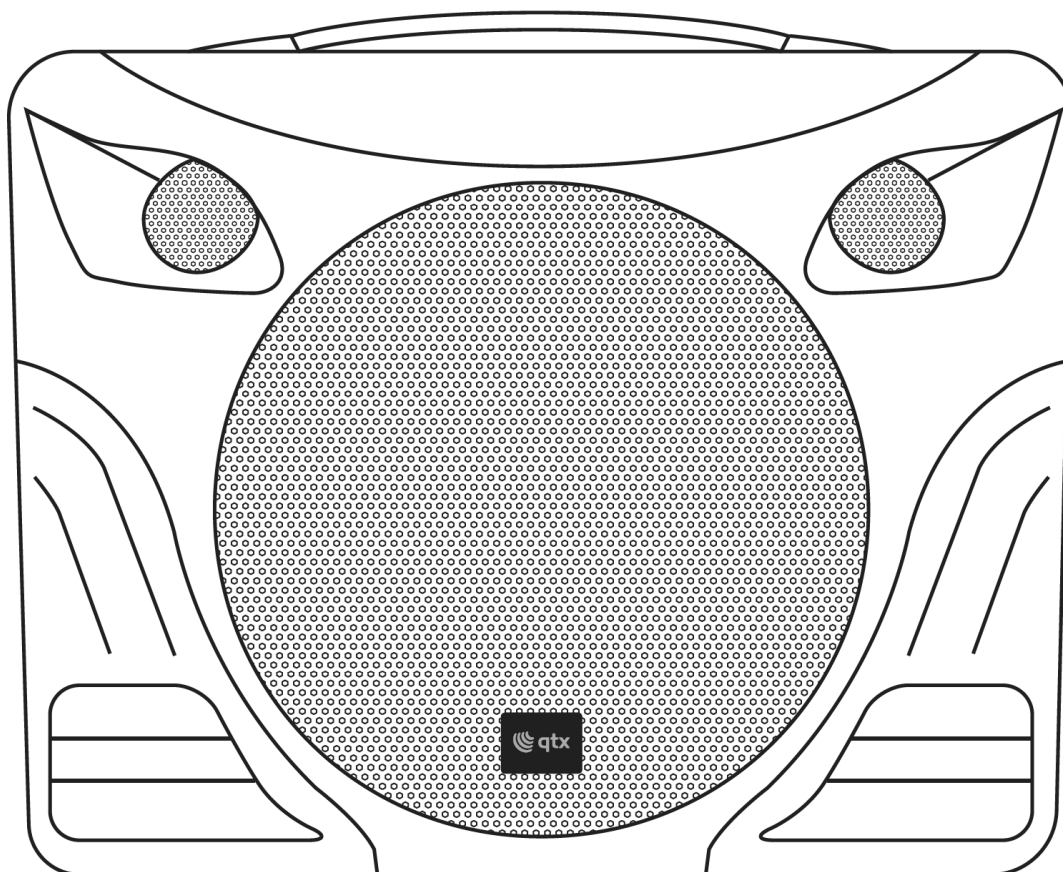# DELTA-200

Performance PA with Bluetooth®

Item ref: 178.812UK

User Manual

Version 1.1

⚠ Caution: Please read this manual carefully before operating
Damage caused by misuse is not covered by the warranty

Introduction

Thank you for choosing the DELTA-200 performance PA unit. Please read this manual prior to use to gain the best from your product and to avoid damage through misuse.

- Internal 12V rechargeable battery
- 2 x UHF handheld microphones included
- Additional wired mic/line input
- 2 x dedicated instrument input channels
- Separate keyboard, e-drum or line input
- 2 wired microphone inputs (6.3mm jack)
- Echo effect for microphones and instruments
- Internal USB/SD/FM media player with Bluetooth
- Dedicated USB recorder for real-time demos
- Infra red remote control for media player
- Wheel assembly and retractable trolley handle

Package Contents

Please check the contents to ensure that the product has been received in good condition.

- DELTA-200 portable PA unit
- 2 x UHF handheld microphone transmitters
- IR Remote control for media player
- IEC mains power lead(s)
- User manual

If you find any accessory is missing or the product has arrived with any problems, please contact your retailer at once.

This product contains no user-serviceable parts so make no attempt to try to fix or modify this item yourself as this will invalidate the warranty. We recommend you keep the original package and proof of purchase for any possible replacement or returned demand.

Warning

To prevent the risk of fire or electric shock, do not expose this appliance to rain or moisture. To prevent electric shock do not remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

Safety

Prior to connecting mains, ensure that the supply voltage is correct and the IEC mains lead is in good condition.
Avoid ingress of water or particles into the enclosure.
If the UHF microphones are to be unused for a long period of time, remove the battery and store for later use.
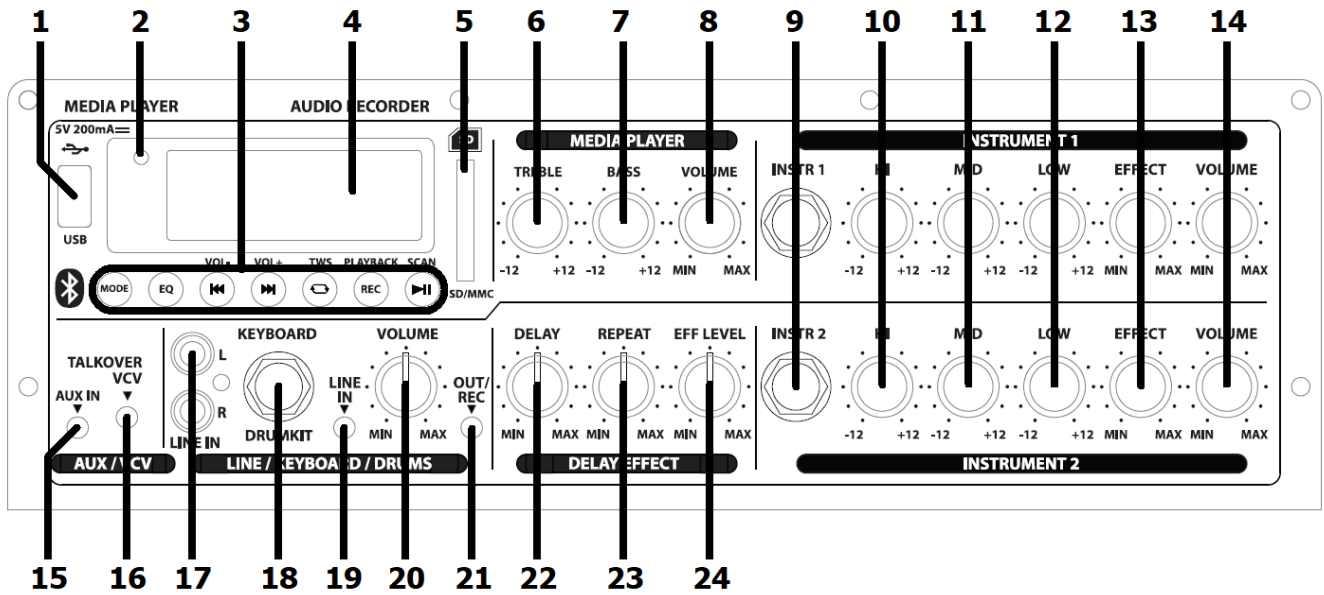
Placement

Keep the unit out of direct sunlight and away from heat sources.
Place the unit in an upright position during use and storage.
Keep the unit away from moisture or dusty environments.
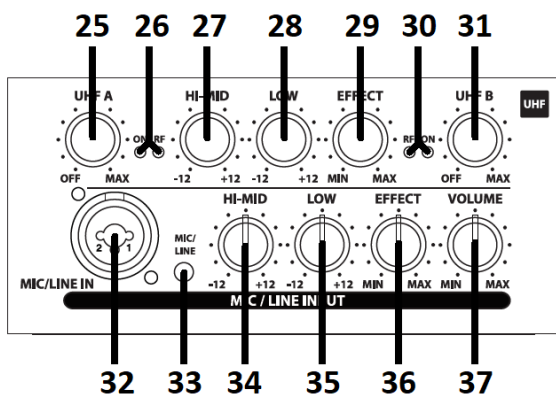
Cleaning

Use a soft cloth with a neutral detergent to clean the cabinet, panel and controls.
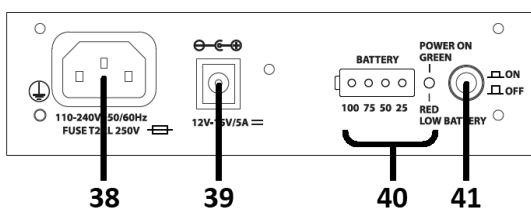To avoid damage, do not use solvents to clean this equipment.

Top panel

1	Media player USB port
2	Media player IR receiver
3	Media player playback controls
4	Media player LCD display
5	Media player SD card slot
6	Media player TREBLE EQ
7	Media player BASS EQ
8	Media player VOLUME
9	Instrument 1+2 jack inputs (6.3mm)
10	Instrument 1+2 HI EQ
11	Instrument 1+2 MID EQ
12	Instrument 1+2 LOW EQ
13	Instrument 1+2 echo EFFECT level
14	Instrument 1+2 VOLUME
15	AUX IN 3.5mm jack input
16	TALKOVER VCV Voice Controlled Volume switch
17	L+R RCA LINE IN
18	KEYBOARD / DRUMKIT 6.3mm jack input
19	3.5mm jack LINE IN
20	KEYBOARD / DRUMKIT / LINE IN VOLUME level
21	3.5mm jack OUT/REC line output
22	DELAY EFFECT DELAY time
23	DELAY EFFECT REPEAT setting
24	DELAY EFFECT master EFF. LEVEL

Rear panel

25	UHF A microphone ON/OFF/VOLUME
26	UHF A microphone ON/RF indicators
27	UHF microphones HI-MID EQ
28	UHF microphones LOW EQ
29	UHF microphones echo EFFECT level
30	UHF B microphone ON/RF indicators
31	UHF B microphone ON/OFF/VOLUME
32	Mic/Line combo XLR/jack input
33	Mic/Line input type switch
34	Mic/Line input HI-MID EQ
35	Mic/Line input LOW EQ
36	Mic/Line input echo EFFECT level
37	Mic/Line input VOLUME level

Power input

38	IEC mains power inlet
39	12-15Vdc alternative power input
40	Power on / battery charge status indicators
41	Power ON/OFF switch

Operation

Your new DELTA-200 portable PA unit may arrive with you with the internal battery charged. Before connecting the unit to the mains supply, switch the unit on and see if the power LED lights. If not, you will need to charge the battery before using away from a mains supply (see "**Charging the battery**" below)

Connect the DELTA-200 to the mains supply (38) using the supplied IEC power lead or alternatively, by connecting a battery or power adaptor to the 12-15Vdc power input (39). Observe the LEDs (40) adjacent to the DC power input. The POWER LED shows green when power is on and red when the battery is low.

Power Up

Turn all VOLUME controls down or off (8, 14 20, 25, 31, 37) and turn the POWER switch (41) on
All BASS, TREBLE and EQ controls (7, 8, 10, 11, 12, 27, 28, 34, 35) should remain pointing vertically (12-o-clock position)
These can be altered later to adjust the tone character of each input.
Your DELTA-200 portable PA unit should now be ready to operate.

Instrument Input Channels

The DELTA-200 has 2 dedicated input channels for electric instruments, such as electric or electro-acoustic guitars, basses, mandolins or ukuleles, which have magnetic or piezo pickups. Note: these are more sensitive than line inputs.

Connection from the instrument is via 6.3mm jack (9). Once connected, ensure that the volume is turned up on the instrument and gradually increase the channel VOLUME for the relevant input (14), checking for output to the speaker.

Each instrument channel has 3-band EQ for tone shaping.
The HI control (10) adjusts the level of high frequency content (treble) for the relevant instrument input.
The MID control (11) adjusts the level of mid frequency content (middle) for the relevant instrument input.
The LOW control (12) adjusts the level of low frequency content (bass) for the relevant instrument input.
Turning any of these controls anti-clockwise will cut these frequencies or clockwise will boost these frequencies.
The 12 o'clock position is the neutral, unaffected setting.

Both instrument inputs are also served by an EFFECT level control.
Turning the EFFECT (13) control clockwise introduces more of the echo level. MIN = no echo and MAX = full echo.
For further information, see the "Delay Effect" section further along in this document.

UHF Handheld Microphones

Insert the supplied AA batteries into the handheld microphones by carefully unscrewing the base of each and aligning the "+" and "-" ends of each cell as imprinted in the battery compartment. Take care to observe the correct polarity.

On the rear panel, turn the UHF A and UHF B controls (25, 31) clockwise to switch power on to the receivers.
The "ON" LED for each UHF receiver should now be lit (26, 30) – the "RF" LEDs are only lit when the handheld mic is on.
Turn up each of these controls part way for checking each UHF microphone.
Switch on each handheld mic by sliding up the switch fully (halfway is "muted") – the "RF" LEDs (26, 30) for UHF A and B should light in turn. If the LED on the handset does not light or stays on dimly lit, change the batteries and try again.

Gradually increase UHF A and UHF B controls, testing each microphone in turn for output through the speaker.
Take care not to incur "feedback" (howling or screeching sound through the speaker) by keeping the microphone a sensible distance from the speaker and pointing away from the speaker so that it doesn't "*hear*" the speaker output.

Both UHF A and B microphones are served by a pair of EQ controls and an EFFECT level control.

The HI-MID control (27) adjusts the level of high and mid frequency content (treble + middle) for both microphones.
The LOW control (28) adjusts the level of low frequency content (bass) for both microphones.
The 12 o'clock position is the neutral, unaffected setting. Clockwise boosts the EQ. Anticlockwise cuts the EQ.
The EFFECT level control adjusts the amount of UHF mics signal feed to the delay section, from no effect up to full effect.

When not in use, switch the UHF wireless microphones off. Remove batteries if not being used for long periods of time.

Additional Inputs

In addition to the unit's own wireless UHF microphones, a MIC/LINE IN combo XLR/jack input (32) is provided to connect an external microphone or line input. A MIC/LINE switch (33) sets the input sensitivity to suit which type of input is used.

On the top panel, a VCV switch (16) activates the Voice Controlled Volume feature when pressed in.
This function gives priority to microphones over playback, so that announcements are more easily heard
When the VCV is on, any sound through the UHF microphones or Mic/Line input will cause the playback to be muted.
The music volume is restored after there is no sound through the UHF or mic/line input after a short time.

Alongside the VCV switch is a 3.5mm AUX stereo jack input (15), which may be used to connect a smart phone or mp3 player for playback of audio tracks. This input is played through the media player, selected via the MODE button.

A further input is provided for connecting an electronic KEYBOARD or DRUMKIT via 6.3mm jack (18). This can instead be used simply as a LINE input (e.g. CD, radio tuner, mp3 player) via the L+R RCA sockets (17) or 3.5mm jack (19).
This input is shared by all three input types and is governed by a single VOLUME control (20).

Alongside the KEYBOARD / DRUMKIT / LINE VOLUME control is an OUT/REC 3.5mm jack line output (21), which can be used to connect onto a recorder or further amplifier, carrying a mix of all inputs heard through the DELTA-200 speaker.

Delay Effect

The DELTA-200 is equipped with an internal digital delay effect unit for microphones and instrument inputs to share.
There are separate EFFECT level controls on each input channel that control how much signal is fed to the delay section.
The overall delay effect level to the output is determined by the EFF LEVEL control (24). MIN = off, MAX = full output.
The DELAY control (22) changes the time between echo repeats. MIN = short slap-back echo, MAX = long delay.
The REPEAT control (23) varies the number of regenerated repeats. MIN = single repeat, MAX = many fading repeats.

Internal Media Player

The DELTA-200 onboard media player can play audio from USB/SD media, FM radio, AUX input or a Bluetooth device.
Any audio source from the media player is governed by the media player VOLUME control (8).

The media player also has dedicated TREBLE (6) and BASS (7) EQ controls to adjust the tone character.
The 12 o'clock position is the neutral, unaffected setting.
Turn the TREBLE control anticlockwise to cut high frequencies or clockwise to boost high frequencies.
Turn the BASS control anticlockwise to cut low frequencies or clockwise to boost low frequencies.

The backlit LCD display (4) has a row of controls beneath it for control of playback sources (3)

		VOL-	VOL+	TWS	PLAYBACK	SCAN
MODE	EQ	◄◄	►►|	⟳	REC	►||

MODE	switches input between USB/SD media, FM radio, AUX input or Bluetooth
EQ	steps through the equalization profiles: POP / ROCK / CLASSIC / EQ OFF
◄◄	press for previous track, hold for fast-reverse search
►►|	press for next track, hold for fast-forward search
⟳	Repeat mode – RPT ONE = repeat current track, RPT ALL = repeat all tracks
REC	Record overall mix to memory device
►||	Play/Pause playback or scan FM radio stations

To play mp3 or wma files stored on a USB pen drive or SD card, insert the USB memory stick (1) or an SD card (5) into the relevant slot on the top panel. Playback will start automatically from the last media inserted (USB or SD).
If playback does not start, press the MODE or ►|| button or try removing and re-inserting the memory device.

During USB or SD playback, pressing the ◄◄ and ►►| buttons will navigate tracks in the folder on the sending device.
Pressing the ►|| will pause or play the current track.

Press the EQ control to step through POP, ROCK or CLASSIC tonal profiles or select "EQ OFF" for the unaffected option.

To repeat the current track, press the ⟳ button so that the display shows "RPT ONE". Otherwise, select "RPT ALL"

To listen to FM radio, press the MODE button repeatedly until the display shows "RADIO" and then the FM frequency. There are 3 bands of FM memories – FM1, FM2, FM3, which can be selected in turn by a short press of the ▶II button. Tune in available stations by holding the ▶II button for 3 seconds, which initiates a scan through all frequencies. Once fully scanned, the stored stations can be accessed via the I◀◀ and ▶▶I buttons.

To connect a smart phone or other Bluetooth device to the DELTA-200 media player, press the MODE button repeatedly until the display shows "BT" then "PHONE". Open the Bluetooth menu on your device and search for "PA SYSTEM TSR12". Pair with this ID and connect in order to be able to play audio from the Bluetooth device to the DELTA-200.

During Bluetooth playback, pressing the I◀◀ and ▶▶I buttons will navigate tracks in the folder on the sending device. Pressing the ▶II will pause or play the current track.
The EQ button can also apply the POP, ROCK or CLASSIC tonal profile or select "EQ OFF" for the unaffected option.

To play audio from the 3.5mm AUX IN jack, press the MODE button repeatedly until the display shows "AUX IN"

It is recommended to turn down all volume controls before powering down to avoid loud pops through the speaker.

For stereo Bluetooth playback, press and hold the ↻ button on 2 separate DELTA-200 units and they will pair as a wireless left and right pair.
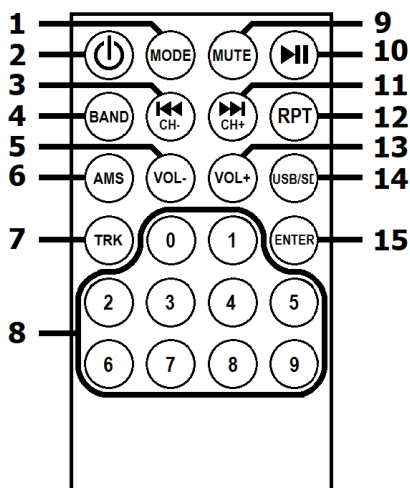
Audio Recorder

The mix output of the DELTA-200 can be recorded to an SD card and played back as an audio file.

Press the "REC" button to start recording and the recording LED will flash whilst audio is recorded to the pen drive in standard .wav audio format. Press the "REC button again to stop recording and the recorded track will be stored as a .wav audio file named by numerical order (e.g. 001.wav)

Remote Control

In addition to the panel controls, an infra-red remote control is provided for the USB/SD player which adds some further functions to allow greater control over the media player.

To operate, remove the clear plastic tab from the remote to activate the battery.

1	Media player MODE select
2	Power On / Standby
3	Previous track or FM channel
4	FM tuner band (FM1, FM2, FM3)
5	Decrease volume
6	*not used*
7	Select track by number (first digit - second digit - third digit)
8	Direct access track number keys
9	Mute / Unmute
10	Play / Pause
11	Next track or FM channel
12	Repeat mode (RPT ONE, RPT ALL)
13	Increase volume
14	Select media USB or SD card
15	Enter track selection

Charging the internal battery

When not in use but connected to the mains, if the POWER switch is in the *off* position, the internal battery will be re-charged from the mains supply. This can be observed by the green battery status LEDs being lit.

Note: it is recommended to store the PA unit at an ambient temperature and not with the battery fully discharged.

Specifications

Power supply	110-240Vac, 50/60Hz or 12-15Vdc, 5A
Battery	12V, 7.2Ah sealed lead-acid
Battery life	Up to 6 hours
HF driver	2 x 25mmØ (1") balanced dome
LF driver	300mmØ (12") reinforced paper cone
Output power : rms	200W
S/N ratio	93dB
Construction	Injection-moulded polypropylene
Wireless microphone frequencies	863.1MHz + 864.9MHz
Frequency response : mic	40Hz - 15kHz
Bluetooth version	V4.2 + BR + EDR + BLE
SD/USB format	FAT 32 (32GB max)
Audio format	mp3, wma, wav
Recording mode	wav format
Dimensions	515 x 435 x 325mm
Weight	13.45kg

Troubleshooting

No output and no LEDs lit	Check POWER switch is on
	Check battery is not drained fully
	Check mains lead is connected if not on battery power
Power LED lit but no UHF output	Check AA batteries in handheld transmitters
	Check UHF handheld microphones are switched on
	Check UHF channels are switched on
	Check RF LED is lit for each channel (check transmitter frequency)
Bluetooth not connecting	Ensure that the sending device is paired to "PA System TRS12"
	Check that the sending device is within range – usually 5 to 8m
Power LED lit but no media player output	Check USB or SD has mp3, wma or wav audio files stored
	Check USB or SD is connected properly
	Ensure media is formatted to the FAT32 file system
	Press MODE button and try Play/Pause button
	In FM tuner mode, ensure that a station is tuned in
	Check media player VOLUME is not turned down
	Check volume setting on I.R. remote control handset
	Check LCD display to see moving characters
Power LED lit but no sound from external inputs	Check leads are in good condition and connected properly
	Check volume and on/off switch on external mic or line source
	Check that the input channel volume control is not fully down
	For AUX input, this must be enabled through the media player

Hereby, AVSL Group Ltd. declares that the radio equipment type 178.812UK is in compliance with Directive 2014/53/EU

The full text of the EU declaration of conformity for 178.812UK is available at the following internet address:
http://www.avsl.com/assets/exportdoc/1/7/178812UK%20CE.pdf