



DQM Series UHF Radio Microphone System

User Manual



Order codes:

MIC82 - DQM 800H 823-830Mhz and 863-865Mhz

MIC82A - DQM 800BP 823-830Mhz and 863-865Mhz

MIC81 - DQM 600H 606-614Mhz

MIC81A - DQM 600BP 606-614Mhz



WARNING

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP!

- Before your initial start-up, please make sure that there is no damage caused during transportation.
- Should there be any damage, consult your dealer and do not use the equipment.
- To maintain the equipment in good working condition and to ensure safe operation, it is necessary for the user to follow the safety instructions and warning notes written in this manual.
- Please note that damages caused by user modifications to this equipment are not subject to warranty.



IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorised modification to the equipment.

- Never let the power cable come into contact with other cables. Handle the power cable and all mains voltage connections with particular caution!
- Never remove warning or informative labels from the unit.
- Do not open the equipment and do not modify the unit.
- Do not connect this equipment to a dimmer pack.
- Do not switch the equipment on and off in short intervals, as this will reduce the system's life.
- Only use the equipment indoors.
- Do not expose to flammable sources, liquids or gases.
- Always disconnect the power from the mains when equipment is not in use or before cleaning! Only handle the power-cable by the plug. Never pull out the plug by pulling the power-cable.
- Make sure that the available voltage 14V DC, 1200mA. (240V AC~50Hz power supply included)
- Make sure that the power cable is never crimped or damaged. Check the equipment and the power cable periodically.
- If the equipment is dropped or damaged, disconnect the mains power supply immediately and have a qualified engineer inspect the equipment before operating again.
- If the equipment has been exposed to drastic temperature fluctuation (e.g. after transportation), do not connect power or switch it on immediately. The arising condensation might damage the equipment. Leave the equipment switched off until it has reached room temperature.
- If your product fails to function correctly, stop use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Pro Light dealer for service.
- Only use fuses of same type and rating.
- Repairs, servicing and power connection must only be carried out by a qualified technician. THIS UNIT CONTAINS NO USER SERVICEABLE PARTS.
- This fixture is for professional use only - it is not designed for or suitable for household use. The product must be installed by a qualified technician in accordance with local territory regulations. The safety of the installation is the responsibility of the installer. The fixture presents risks of severe injury or death due to fire hazards, electric shock and falls.
- WARRANTY: One year from date of purchase.

OPERATING DETERMINATIONS

If this equipment is operated in any other way, than those described in this manual, the product may suffer damage and the warranty becomes void. Incorrect operation may lead to danger e.g: short-circuit, burns and electric shocks etc.

In case of malfunction this unit should be returned for service or inspection.

Do not endanger your own safety and the safety of others!

Incorrect installation or use can cause serious damage to people and/or property.

DQM Series UHF Radio Microphone System

DQM series wireless microphones are quad UHF handheld systems designed for the professional user. Available in two versions, the systems offer either 8MHz across 110 selectable frequencies for the 606-614Mhz Channel 38 band (DQM 600) or 9MHz+2Mhz across 99 selectable frequencies for the 823-832Mhz Channel 65 and 863-865Mhz Channel 70 band (DQM 800); both systems utilise a diversity, full width receiver for the ultimate in RF stability.

Outstanding vocal reproduction and stable wireless connectivity allow freedom of movement on stage. These systems offer crystal clear sound reproduction and rock solid reliability. Handheld transmitters feature ergonomic design with a rugged housing to stand up to the rigours of the road. The flexibility of the handheld systems may be increased by purchasing the additional DQM 600BP or DQM 800BP.

- UHF band, Phase Lock Loop (PLL) offering stable RF transmission
- Frequency groups and a group of users set their own frequencies and storage, multiple sets of compatible frequency presets
- Tuning bandwidth up to 8MHz can provide 110 selectable frequencies for the 606-614Mhz CH38 band and 9MHz+2Mhz with 99 selectable frequencies for the 823-832Mhz CH65 and 863-865Mhz CH70 band
- OLED display offers a wide viewing angle while remaining bright in darkened conditions
- Frequency, Channel, RF and AF signal strength meters
- 1U rack metal housing with integrated brackets, include antenna cable interface for front-mount antenna
- Combined use Jog Dial button operation for fast menu navigation
- Integrated antenna splitter for reduced RF interference
- Balanced XLR output for each channel plus unbalanced mixed output
- Automatic frequency SCAN function
- IR infrared frequency synchronisation via infrared interface
- Noise locking
- Mute circuitry for reduced noise
- Flat frequency response: 50Hz-16KHz
- Dynamic, cardioid handheld microphone capsule
- Battery type: AA 1.5V DC Alkaline (not supplied)
- 1U full width rack mount receiver



Receiver specifications

- Radio frequency sensitivity: 6dBμV, S/N>80dB
- Working range: Straight line distance 60 m (Note: The actual range depends on RF signal absorption, reflection and interference)
- Mute control mode: Noise locking
- Combined frequency response: 50Hz-16KHz (±3dB)
- Total harmonic distortion (THD): <0.5% @ 1KHz
- Panel display: OLED display x 4
- Receiver dimensions (H x W x D): 45 x 482 x 215mm
- Weight: 2.0kg

Specifications	DQM 800H	DQM 600H
Operating frequency	823Mhz-830Mhz and 863Mhz-865Mhz	606.0Mhz-614.0Mhz
Power supply	14V 1.2A (adaptor supplied)	
Order code	MIC82	MIC81

In the handheld system box:
1 x receiver, 2 x removable antenna, 2 x antenna extension cables, 4 x handheld transmitters, 1 x 14V 1.2A mains PSU & 1 x user manual

In the beltpack box:
1 x beltpack transmitter, 1 x lavalier (tie clip) microphone, 1 x headset microphone & 1 x user manual

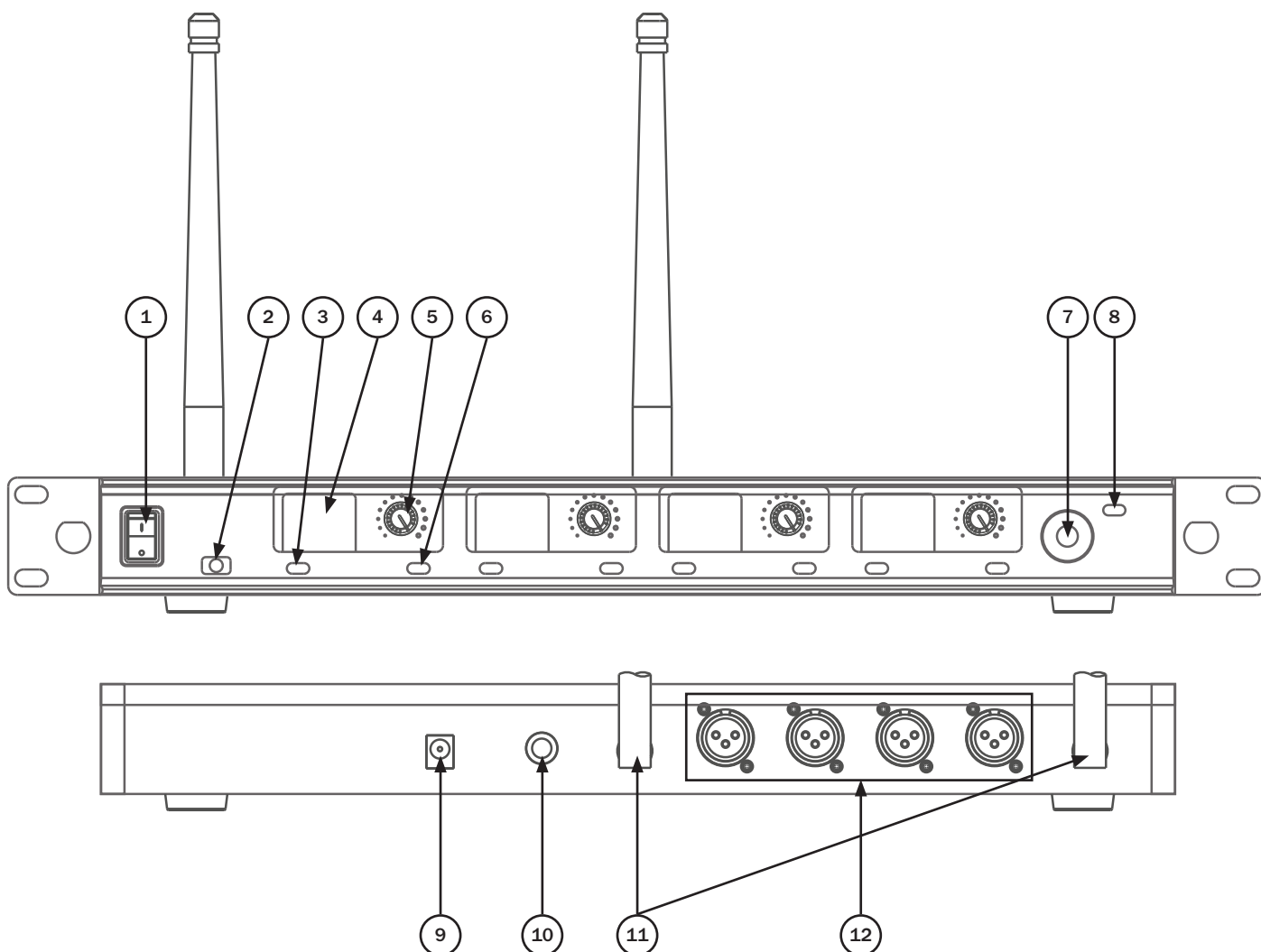
Receiver front panel identification:

1. Power Switch
On/Off control for the system receiver.
2. IR Transceiver
The IR transceiver is used to communicate with the systems transmitters during setup.
3. ACT Button
Allows the user to activate the IR sync function for the selected channel.
4. OLED Display
The receiver features a backlit display allowing the user to see information about the receiver including frequency, channels, audio and RF status.

5. Volume Control
The receivers output volume is adjustable. Turn the level control anti clockwise to the lowest setting, or turn clockwise to adjust to the highest setting. Each channel features an independent volume control.
6. SCAN button
Press the SCAN button to active the receivers scan function, the receiver will survey the wireless signals available within reception range.
7. MENU Control
Rotary jog wheel with push to enter function. This allows the user to navigate the receivers menu system.
8. SW Button
Press the SW select button to access the menu for each individual receiver or all of the receivers. The display will dim/highlight to show which receiver channels are selected.

Receiver rear panel identification:

9. DC Power Input
The receiver is powered by a standard DC power input 12-18V DC, 800mA regulated voltage supply.
10. Audio (MIX) Output
6.35mm (1/4") jack socket outputting an unbalanced, line level audio output featuring both audio channels.
11. Antenna – Channel A/B & C/D
The antenna receives the RF radio signal from the transmitter unit. For optimum reception, orientate vertically. Keep away from obstacles such as walls, floors, power amplifiers and steelwork.
12. Balanced Audio Outputs A/B/C/D
Individual, balanced audio outputs via 3 pin XLR for audio channel.



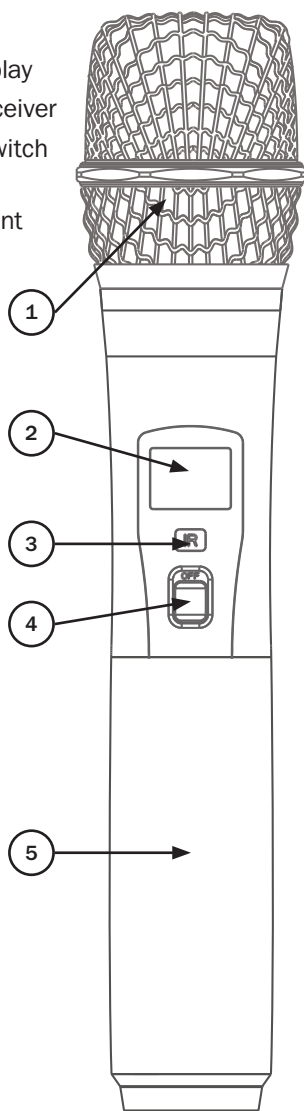
Operation:

- Carefully, connect the antennae and lift into the vertical position ensuring clear line of sight to the transmitter.
- RF Signals may be affected by many factors. Avoid placing the receiver near metallic objects or near other sources of RF transmission including IEM transmitters and WiFi access points. The receivers should be located as close to stage as possible to minimise signal degradation due to large crowds, stage structures or long distances.
- Connect the included power supply to a suitable 240V AC~ 50Hz mains voltage outlet and plug the DC connector into the DC Power Input on the rear panel of the receiver (12-18V DC, 800mA minimum)
- Using the supplied audio cable, connect the MIX OUT on the rear panel of the receiver for all four audio channels to the mixer's audio line input, alternatively the receiver also features balanced XLR outputs, one for each channel allowing full control of each channel.
- Switch on the power to the receiver, checking the display backlight illuminates
- Open the battery compartment on the transmitter (Beltpack – squeeze the buttons on the side and open the battery door forwards away from the belt clip. Handheld - unscrew the lower portion). Install the appropriate batteries into the transmitter, taking care to observe the orientation and polarity. Only use high quality, alkaline type batteries. Refit the battery compartment cover carefully.
- Switch on the transmitter, when switched on the display on the transmitter will illuminate. If the display does illuminate or glows dimly, the battery will require replacement.
- Follow the IR Sync and Frequency Setup Operation fully to ensure the transmitters are linked correctly to the receiver unit. Failure to follow this fully will prevent the microphone system from operating correctly. Factory presets may not be suitable for use.
- Adjust the volume on the front panel of the receiver for each of the channels to suit the gain structure of the mixer they are to be connected into.
- Channel (Frequency) Setup:
Press the SW button to access the menu function and select a channel to be configured. As each channel is selected the display will remain illuminated and the other channels will dim. Press the MENU dial to select the GROUP and CHANNEL. The full list of selectable frequencies, groups and channels can be found on page 7 of this manual. Group "U" will allow the user to advanced access to tune the receiver by selecting either 1Mhz or 25Khz frequency steps. This mode may allow selection of frequencies which overlap or cause inter modulation with other receiver channels.
- IR Sync Operation:
After making changes to the settings on the receiver, the IR Sync operation should be carried out to ensure the settings are replicated into the transmitter to ensure correct operation.
Place the transmitter within 0.5m of the receiver with the IR receiver pointed towards the receiver's IR window ensuring both transmitter and receiver are powered on. Press the ACT button and the receiver will begin IR Sync. When completed the receiver will show "Success" and the transmitter will then change to match the settings on the receiver. The microphone is now ready for use. Each transmitter should be synchronised individually.
- Frequency Scan Mode:
To allow the user to select a frequency free from interference, the receiver features a frequency scan mode. Firstly, switch on any transmitters from other systems in the vicinity. Ensuring any transmitters are powered on, press the SCAN button to activate the receivers scan function on each of the individual channels one at a time.
Once the receiver has completed the scan function and located a frequency suitable for use the display will show "Scan Complete". Should the receiver be unable to detect a clear frequency, the receiver will show "Scan Fail". In this instance, either manual selection of frequency may be required or if the local environment is busy with RF transmissions (i.e. if many other radio microphones are in use) then a change of location or equipment may be required.



Handheld transmitter identification:

1. Grille
2. LCD Display
3. IR Transceiver
4. Power Switch
5. Battery compartment

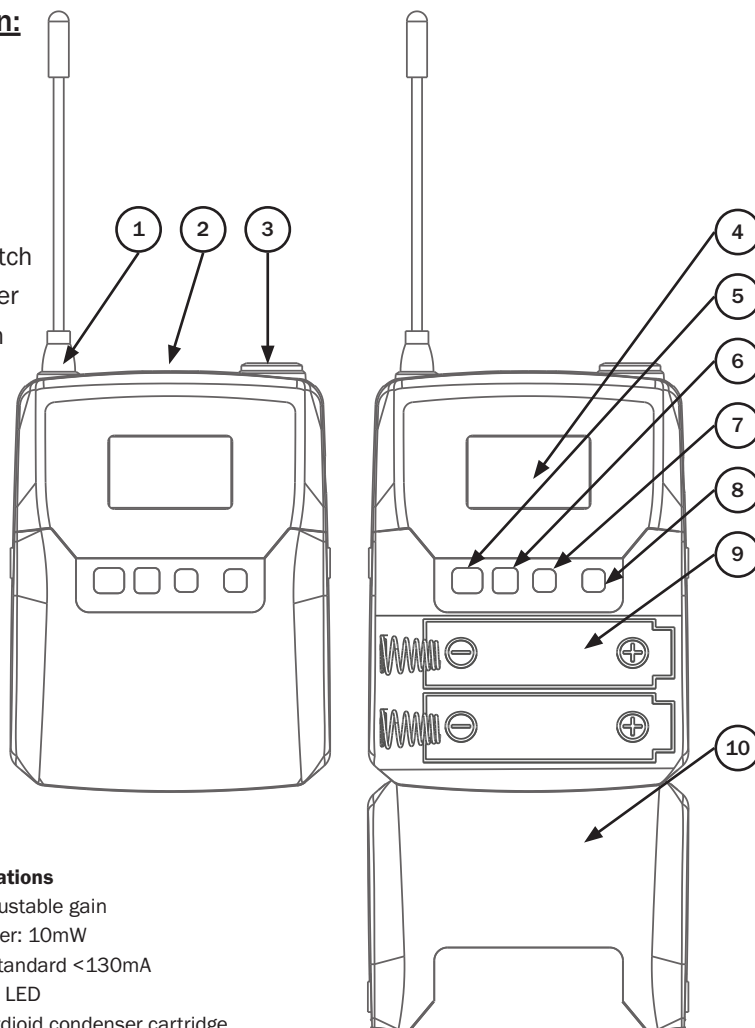


Handheld microphone specifications

- Handheld Transmitter
- Pickup gain: Fixed
- Transmitter power: 10mW
- Current drain: Standard <130mA
- Display method : LCD
- Cartridge: Dynamic cardioid cartridge

Beltpack transmitter identification:

1. Antenna
2. Mute Button
3. Microphone Input
4. LCD Display
5. On / Off Switch
6. IR Transceiver
7. Mode Button
8. Set Button
9. Battery compartment (care should be taken to observe battery polarity)
10. Battery Cover



Beltpack specifications

- Pickup gain: Adjustable gain
- Transmitter power: 10mW
- Current drain: Standard <130mA
- Display method: LED
- Pickup type: Cardioid condenser cartridge

Optional DQM Series Add On Beltpack Kits

Belt pack transmitter plus headset and lavalier microphones to be used in place of the handheld transmitter.

Specifications	DQM 800BP	DQM 600BP
Operating band and frequency	823Mhz to 830Mhz and 863Mhz to 865Mhz	606.0Mhz-614.0Mhz
Battery type	2 x 1.5V AA (not supplied)	
Order code	MIC82A	MIC81A

NOTE:

The DQM 600/800 system is shipped with four handheld transmitters. The receiver in this system features a quad channel receiver allowing four handheld microphones to be used simultaneously, an additional belt pack kit maybe purchased if required to be used in place of the handheld transmitters. Each receiver channel in this system may only be used with one transmitter at any one time. If the user attempts to power on, and use two transmitters on the same receiver frequency the system will malfunction and not operate correctly as one transmitter will cut out the RF Radio signal to the second transmitter.

Available in two frequency ranges, the DQM 800 series is for use in the 823-832Mhz CH65 and 863-865Mhz CH70 band (CH70 is license free in the UK) while the DQM 600 series is for use in the 606-614Mhz CH38 band. To operate microphones in the 823-832Mhz CH65 or 606-614Mhz CH38 band the user must obtain a license from the relevant authorities in the UK before using the product. Outside of the UK, the user must clarify the frequencies with their local government office responsible for radio microphone frequencies.

Troubleshooting:

Problem	Possible cause	Solution
Receiver – no sound	No RF signal	Check antenna placement for interference from metallic objects (e.g. rack enclosures) or other sources of RF interference (e.g. in ear monitor transmitters) IR Sync operation has not been carried out successfully. Complete channel selection and IR sync in accordance with this manual.
Receiver – no LED	Power button is in the OFF position. DC power adapter is not plugged in	Turn on the power button plug in the power adapter
Microphone - no sound but LED indicators are lit	Mic transmitter is out of range. Mic is switched off. Mic volume it turned down. Batteries in mic are not installed properly. Receiver is not connected to an amp or mixer.	Ensure that the mic is within range. Turn on the mic switch. Turn up the mic volume on the receiver. Reinstall or use new batteries. Connect an output cable to an amp or mixer
Distorted sound or feedback	The 4 mics may be too close together. Batteries are running out of charge. Mic volume may be too high. Possible interference from another source.	Increase the distance between mics. Replace the batteries. Reduce the volume. Move the system away from other electric sources.

Frequencies:

DQM 800H Series Frequencies:

Channel	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10
CH1	823.000	823.000	823.000	823.100	823.200	864.100	864.950	863.425		
CH2	864.100	864.950	823.875	823.500	823.600	863.000	863.975	864.975		
CH3	826.125	824.500	824.500	824.100	824.200	865.000	864.625	864.300		
CH4	863.000	827.175	827.175	824.900	825.000	863.700	863.150	863.025		
CH5	827.975	831.800	829.625	826.100	826.200	823.000	823.875	823.100		
CH6	831.800	863.975	831.800	827.700	827.800	826.575	830.350	827.700		
CH7	865.000	824.900	865.000	829.900	830.000	827.975	827.975	826.100		
CH8	824.900	864.625	823.375	864.700	864.800	831.800	829.625	828.400		
CH9	863.700	826.575	824.900	825.275	825.375			825.275		
CH10	829.625	827.975	825.425	826.575	826.675			826.575		
CH11	830.350	829.625	826.125	828.400	828.500			828.400		
CH12	823.875	830.350	826.575	830.950	831.050			830.950		
CH13	825.425	863.150	827.975							
CH14	828.525	864.900	828.525							
CH15		825.425	830.350							
CH16		826.125	864.050							
CH17		828.525								

DQM 600H Series Frequencies:

Channel	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10
CH1	606.175	607.000	606.275	606.825	607.000	606.625	606.500	608.000	606.975	606.500
CH2	608.050	607.350	606.875	607.250	607.625	607.675	607.350	608.925	607.600	606.875
CH3	609.125	608.400	607.800	607.975	608.975	608.525	608.000	610.075	609.675	607.375
CH4	609.525	608.850	608.200	608.900	609.500	610.175	611.000	611.475	612.725	608.000
CH5	611.775	610.875	610.925	610.350	610.750	610.625	611.400	613.125	606.475	608.425
CH6	612.600	611.625	611.725	611.175	612.250	611.575	613.275	606.500	608.000	609.375
CH7	613.100	612.175	613.350	612.525	612.975	612.175	606.875	606.875	608.525	609.775
CH8	613.825	613.825	613.850	613.150	613.400	613.375	609.325	607.375	609.225	610.475
CH9	606.775	613.175	610.475	611.550	611.775	607.275	609.775	608.400	610.275	611.000
CH10	607.550	606.475	612.050	608.350	606.550	611.275	610.475	609.625	611.075	611.400
CH11	611.200						612.000	610.675	611.625	612.200
CH12								612.025	613.450	612.800
CH13									606.100	613.275



***Correct Disposal of this Product
(Waste Electrical & Electronic Equipment)***

**(Applicable in the European Union and other European countries
with separate collection systems)**

This marking shown on the product or its literature, indicates that it should not be disposed of with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

