

OPERATING INSTRUCTIONS



OPERATING INSTRUCTIONS

Ashdown FreeBASS
Modelling Bass Diversity Wireless System



Thank you for purchasing your Ashdown Engineering Amplifier. If you live in the UK, please register your purchase by completing this form and return it to the following address:

Ashdown Engineering, The Stables, Stevens Farm, Chignal St James, Chelmsford, Essex CM1 4TX, England

(Alternatively you can register online at <http://www.ashdownmusic.com>)

If you live outside the UK, the local Ashdown distributor may have included a specific registration form for your country.

Your Ashdown Engineering product details:

Model
Colour
Voltage
Tested by
Serial number
Date

1 YEAR WARRANTY

Your Ashdown Engineering amplifier has been manufactured to the highest standards, using the best-selected materials. To ensure its optimum performance, please ensure your amplifier is regularly serviced. This product carries a one year warranty, against defects in materials and workmanship, for the original purchaser. Ashdown Engineering will, at their discretion, replace or repair any product or part thereof, which is found by Ashdown Engineering to be defective. This warranty shall not apply to the damage of covering, fittings or finishes when affected by carelessness, accident or extreme climate changes. Nor does it apply to normal wear and tear of parts such as valves, fuses, light bulbs, speakers, controls etc.

Please complete the lower section of this warranty and return it within 10 days of purchase to Ashdown Engineering Ltd. at the above address. In the unlikely event of any defect, please contact an authorised Ashdown Engineering dealer. All transport charges are to be pre-paid by the Owner. Unless the registration card is returned normal country warranty laws apply.

IMPORTANT - REGISTRATION CARD

Please complete and return this warranty within 10 days of purchase. Include any comments if possible.

Name	Purchased from
Address	Date
.....	Model
.....	Serial Number
.....	
Email	
Age	
Comments	
.....	
.....	
.....	

Important Safety Instructions

BASIC PRECAUTIONS

WARNING - When using electrical products, basic precautions should be followed, including the following:

1. Read all the instructions before using the product.
2. Do not use this product near water – for example, near a bathtub, washbowl, kitchen sink, in a wet basement or near a swimming pool.
3. This product may cause permanent hearing loss. Do not operate for long periods of time at a high volume level or at any level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
4. Make sure nothing interferes with the ventilation of the product when in use.
5. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
6. The product should be connected to a power supply of the type described in the operating instructions or as marked on the product.
7. The power supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
8. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
9. The product should be serviced by qualified personnel when:
 - a. The power supply cord or the plug has been damaged; or
 - b. Objects have fallen, or liquid has been spilled into the product; or
 - c. The product has been exposed to rain or moisture; or
 - d. The product does not appear to operate normally or exhibits marked change in performance; or
 - e. The product has been dropped, or the enclosure damaged.

10. Do not attempt to service the product. All servicing should be referred to qualified service personnel.

11. For continued protection against the risk of fire, replace fuses only with those of the same type and rating as indicated on the back of the product.

WARNINGS USED ON THE EQUIPMENT

WARNING TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

WARNING - ATTENTION
THIS APPARATUS MUST BE EARTHED FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE. UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE ET CALIBRE.



The lightning flash with the arrow head symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated 'dangerous voltage' within this product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this product.

GROUNDING INSTRUCTIONS

This product must be grounded (earthed). If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a supply cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with the local codes and ordinances.

DANGER - Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product – if it will not fit the outlet, have a suitable outlet fitted.

The wires in this mains cord are coloured in accordance with the following code:

Green & Yellow - Earth
Blue - Neutral
Brown - Live

CE MARK FOR EUROPEAN HARMONISED STANDARDS



The CE mark which is attached to these products means it conforms to EMC Directive (89/69/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (72/23/EEC).



Introduction

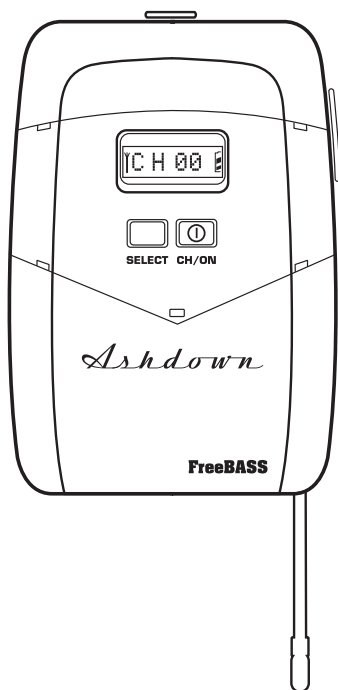
The Ashdown Freebass is a UHF Diversity wireless system specifically engineered for use with bass instruments. Probably the first in the world created expressly for this particular application.

Many wireless systems prove inadequate when used for BASS because the instruments signal can be extremely dynamic. This combined with the very low frequencies involved produce a waveform that is exceedingly difficult to reproduce faithfully over a wireless link.

In addition to being the first wireless system specifically for Bass the Ashdown Freebass also includes in the receiver unique Modelling technology, 16 special models have been created exclusively for BASS and can be dialled into your system from the front panel 16 way rotary control adding sonic versatility to an already outstanding Bass Wireless System.

Each Freebass system consists of two parts, the battery powered Belt Pack transmitter that comes supplied with a Jack plug cable for connecting to your instrument and the mains powered Receiver unit that features both Balanced XLR and Unbalanced Jack audio output sockets for connection to your amplification system.

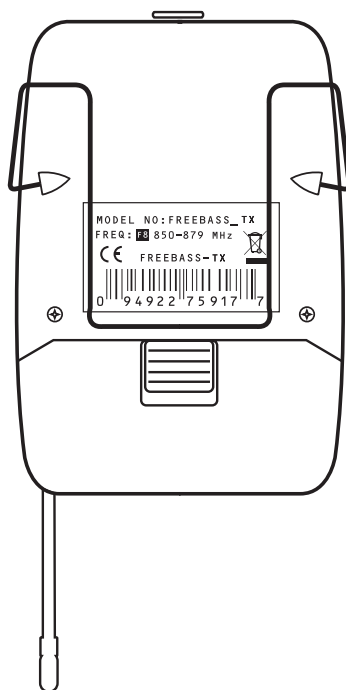
Belt Pack UHF Transmitter with connection cable



INSTRUMENT CABLE - The belt pack transmitter comes supplied with a cable for connecting to your instrument. One end of this has a mini (4 pin) connector, this plugs directly into the top end of the belt pack transmitter. To insert - rotate the plug so the locating key lines up with the socket and gently push until it latches into position. To remove - push the button on the back of the plug to unlatch it and gently pull to release the plug from the socket.

BELT CLIP - The transmitter has a Belt Clip fixed to the back of the unit for attaching it to a belt or clipping to the waistband of your trousers. Once the belt pack transmitter has been secured in position on your person make sure the small flexible antenna is free and not covered or obscured by clothing etc.

BATTERY COMPARTMENT - On the rear of the belt pack transmitter, just below the belt clip is the battery compartment, this can be opened by sliding the latch towards the base of the unit. 2 x AA 1.5v batteries are required to be fitted for the unit to operate. Please note the orientation of the batteries printed inside the battery compartment when inserting these.



LCD DISPLAY - The front of the unit features an LCD display with blue backlighting for showing the various parameters of the belt pack transmitter that can be selected using the SELECT & CH/ON keys below it.

CH/ON KEY - Press and hold the CH/ON key for a few seconds to turn the transmitter ON. The unit will BEEP to indicate it is active. The LCD display will be back lit for a few seconds. Initially the current Channel Number will be shown along with the battery condition indicator. The transmitter will always revert to this display after a few seconds from any other parameter display.

Press and hold the CH/ON key again to turn the transmitter OFF. A BEEP will be heard as the CH/ON key is pressed and a longer BEEP to confirm the unit has turned OFF.

CH/ON KEY - Turn the transmitter ON by using the CH/ON key. Once the transmitter is turned ON subsequent presses of the CH/ON key will cycle through 4 x operation modes, in order these are:

1. Channel Digit One
2. Channel Digit Two
3. RF Power Level
4. Lock/Unlock

A further press of the CH/ON key will return you once again to Mode 1. and the cycle continues round again. No matter what display you are on if you wait more than a few seconds without pressing another key your current choice of parameter will be automatically saved and the display returned to the initial display of Channel Number and Battery Condition.

The SELECT key is used to cycle through the parameter selections available in each of the 4 modes.

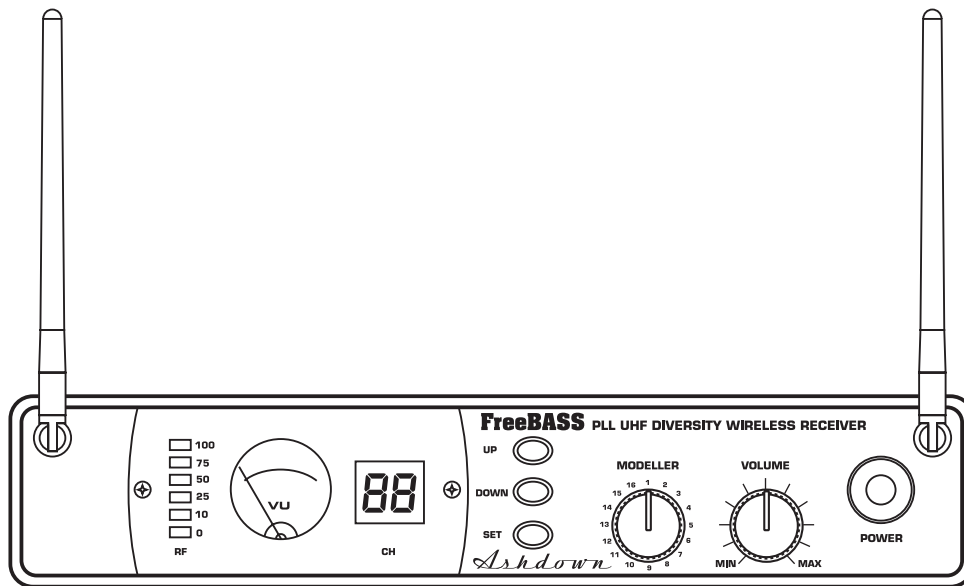
Channel Digit One and **Channel Digit Two** modes are used to select the Channel number the transmitter is operating on, for details of the specific frequency of each Channel Number see the chart at the end of these instructions. The selected Channel Number is remembered when the unit is turned OFF and will be recalled next time the unit is turned ON for use. The same Channel Number must be used on receiver and transmitter for the system to operate.

RF Power Level mode is used to select the RF output power in the following ranges:
PL.0 - the output power = 3dBm
PL.1 - the output power = 5dBm
PL.2 - the output power = 12dBm

Lock/Unlock mode - pressing the SELECT key while in Lock/Unlock mode will alternate between the Lock and Unlock settings. If Lock is selected then no other parameters can be changed without first entering into Lock/Unlock mode and selecting Unlock first. This is to prevent accidental modifications of the parameters whilst the transmitter is in use.

SELECT KEY - The Belt Pack Transmitter has a MUTE function to allow the signal to be muted silently without having to turn the transmitter OFF and ON again. MUTE is operated anytime by pressing and holding the SELECT key for a few seconds. To UNMUTE the signal, again press and hold the SELECT key for a few seconds.

UHF Diversity Wireless Receiver



Front

MAINS ADAPTER & DC JACK (rear panel) -

The Ashdown Freebass UHF diversity receiver is supplied with a mains adapter to power the unit. This plugs into the DC jack on the rear panel of the unit. Use only the mains adapter that is supplied with the system. Using any other mains adapter may result in damage to your system.

POWER BUTTON - Turn the receiver ON by pressing the POWER button on right hand side of the front panel. This will light up blue, the UP, DOWN & SET buttons will light up green, the Channel Number display will illuminate showing the currently selected UHF Frequency Channel and the Audio VU meter will be back lit.

ANTENNA - The receiver has two antennas each feeding a separate wireless input stage for true diversity operation. Before using the system raise these antennas to allow for optimum reception.

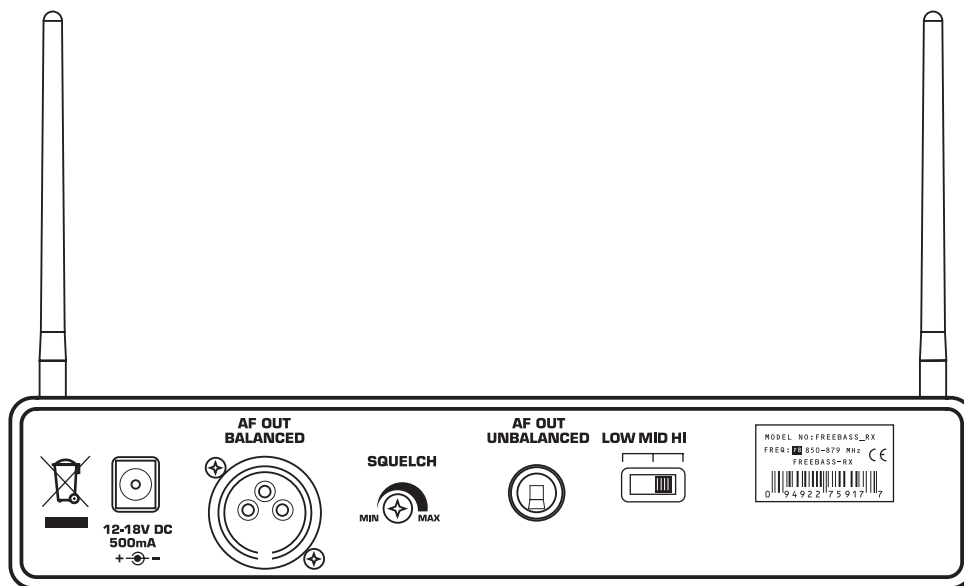
UP, DOWN & SET BUTTONS - To select the Channel Number use the UP and DOWN buttons to reach the desired number as shown on the CH display and then press the SET button to select it. The selected Channel Number will be remembered next time the unit is powered up to be used. For details of the specific frequency of each Channel Number see the chart at the end of these instructions.

The same Channel Number must be used on receiver and transmitter for the system to operate.

RF DISPLAY - The RF LED display shows the level of incoming UHF radio signal being received from the Belt Pack Transmitter. When all LEDs are illuminated it indicates you have optimum signal reception, this is what you need to try to achieve. If only a few LEDs are illuminated the system may still function but it shows you are in a poor reception mode so try to improve this with antenna positioning and reducing the distance between transmitter and receiver.

VU METER - This indicates the level of incoming audio signal. As long as the meter indicates below 0dB then the signal will be clean and undistorted. If the meter is indicating in the RED region above 0dB then the signal into the Belt Pack Transmitter will have to be reduced to prevent overload of the system and distortion occurring. This is only ever likely to happen if you are using an active bass with a very high signal output level. In this case reduce the setting of the instruments volume control to the optimum level for the Freebass system.

VOLUME - This rotary control sets the level of audio signal to the unbalanced Jack socket and the Balanced XLR located on the rear panel. The rear panel HI-MID-LOW slide switch selects from 3 ranges of signal level to the balanced XLR.



Back

AUDIO OUTPUT (rear panel) - Audio output is provided on unbalanced Jack socket and balanced XLR socket located on the rear panel. Use either one of these for connection to your amplification system.

SQUELCH (rear panel) - A SQUELCH circuit is like a noise gate for a wireless system. It is to prevent noise during operation of the system and it does this by muting the receiver signal every time the audio signal drops below a certain threshold. The threshold for the circuits operation is set using the rear panel SQUELCH control.

This control must be set with care, for if the threshold is set too high the squelch circuit will mute low level audio signals as well as noise.

Use a small screwdriver to adjust this control, once adjusted to the optimum for your system it can be left in this position for future use.

MODELLER - 16 bass Models have been created and integrated into the Ashdown Freebass wireless system. These are selected from the MODELLER 16 way rotary switch on the front panel of the receiver.

Position 1 is BYPASS so this is the actual true sound of your instrument before any modelling is applied.

Positions 2 to 16 provide a variety of modelled pre-sets that can be dialled into the system adding further sound modification facilities to your amplification system.

Try each one with your instruments to find out which works best for you. Once familiar with them it is a simple matter to dial in a specific model as and when you chose.

FREQUENCY BAND SELECTION - Most countries closely regulate the radio frequencies used in the transmission of wireless information. These regulations state which devices can use which frequencies and help to limit the amount of RF(radio frequency) interference in all wireless communications. To be flexible enough to operate worldwide Ashdown Freebass is available in a number of models, each with a fixed frequency range. Each frequency range or band spans up to 24MHz of the wireless broadcast spectrum.

UHF Frequency Ranges

F7:798.000-822.000(799-827)MHz

CH	MHz	CH	MHz	CH	MHz	CH	MHz	CH	MHz
0	798.125	20	802.125	40	806.125	60	810.125	80	814.125
1	798.325	21	802.325	41	806.325	61	810.325	81	814.325
2	798.525	22	802.525	42	806.525	62	810.525	82	814.525
3	798.725	23	802.725	43	806.725	63	810.725	83	814.725
4	798.925	24	802.925	44	806.925	64	810.925	84	814.925
5	799.125	25	803.125	45	807.125	65	811.125	85	815.125
6	799.325	26	803.325	46	807.325	66	811.325	86	815.325
7	799.525	27	803.525	47	807.525	67	811.525	87	815.525
8	799.725	28	803.725	48	807.725	68	811.725	88	815.725
9	799.925	29	803.925	49	807.925	69	811.925	89	815.925
10	800.125	30	804.125	50	808.125	70	812.125	90	816.125
11	800.325	31	804.325	51	808.325	71	812.325	91	816.325
12	800.525	32	804.525	52	808.525	72	812.525	92	816.525
13	800.725	33	804.725	53	808.725	73	812.725	93	816.725
14	800.925	34	804.925	54	808.925	74	812.925	94	816.925
15	801.125	35	805.125	55	809.125	75	813.125	95	817.125
16	801.325	36	805.325	56	809.325	76	813.325	96	817.325
17	801.525	37	805.525	57	809.525	77	813.525	97	817.525
18	801.725	38	805.725	58	809.725	78	813.725	98	817.725
19	801.925	39	805.925	59	809.925	79	813.925	99	817.925

F7:798.000-822.000(799-827)MHz

CH	MHz	CH	MHz	CH	MHz	CH	MHz	CH	MHz
0	850.125	20	854.125	40	858.125	60	862.125	80	866.125
1	850.325	21	854.325	41	858.325	61	862.325	81	866.325
2	850.525	22	854.525	42	858.525	62	862.525	82	866.525
3	850.725	23	854.725	43	858.725	63	862.725	83	866.725
4	850.925	24	854.925	44	858.925	64	862.925	84	866.925
5	851.125	25	855.125	45	859.125	65	863.125	85	867.125
6	851.325	26	855.325	46	859.325	66	863.325	86	867.325
7	851.525	27	855.525	47	859.525	67	863.525	87	867.525
8	851.725	28	855.725	48	859.725	68	863.725	88	867.725
9	851.925	29	855.925	49	859.925	69	863.925	89	867.925
10	852.125	30	856.125	50	860.125	70	864.125	90	868.125
11	852.325	31	856.325	51	860.325	71	864.325	91	868.325
12	852.525	32	856.525	52	860.525	72	864.525	92	868.525
13	852.725	33	856.725	53	860.725	73	864.725	93	868.725
14	852.925	34	856.925	54	860.925	74	864.925	94	868.925
15	853.125	35	857.125	55	861.125	75	865.125	95	869.125
16	853.325	36	857.325	56	861.325	76	865.325	96	869.325
17	853.525	37	857.525	57	861.525	77	865.525	97	869.525
18	853.725	38	857.725	58	861.725	78	865.725	98	869.725
19	853.925	39	857.925	59	861.925	79	865.925	99	869.925

Specifications

TRANSMITTER

Oscillation Mode	PLL UHF Synthesized
Carrier Frequency	UHF 470-900MHz Dependent on applicable country regulations
Frequency Response	50Hz-15kHz +/-3dB
Frequency Stability	+/-0.005% (-10 to 50 degrees C)
THD	1kHz<0.8%
Modulation Mode	FM (F3E)
RF Output Power	5-50mW adjustable 3 bands
Dynamic	>100dB
Tone Frequency	30-33kHz
Max Deviation	+/-35kHz
Battery	AA Type x 2
Current Drain	100mA
Weight	0.082Kg

RECEIVER

Channel	Up to 100 pre-set channels for each frequency band
Frequency Band	UHF 470-900MHz Dependent on applicable country regulations
Receiver Type	PLL UHF Synthesized
Frequency Response	50Hz-15kHz +/-3dB
Frequency Stability	+/-0.005% (-10 to 50 degrees C)
THD	1kHz<0.8%
Modulation Mode	FM (F3E)
S/N Ratio	>90dB
Dynamic	>100dB
RF Sensitivity	-100dBm/30dB SINAD
Audio Output	Unbalanced Jack 550mV Balanced XLR 1.1v
Power Supply	DC 15v 500mA AC adaptor
Dimensions	217(W) 122(D) 44(H)mm 8.2" x 6.1" x 1.7"
Weight	0.385Kg

Notes



www.ashdownmusic.com