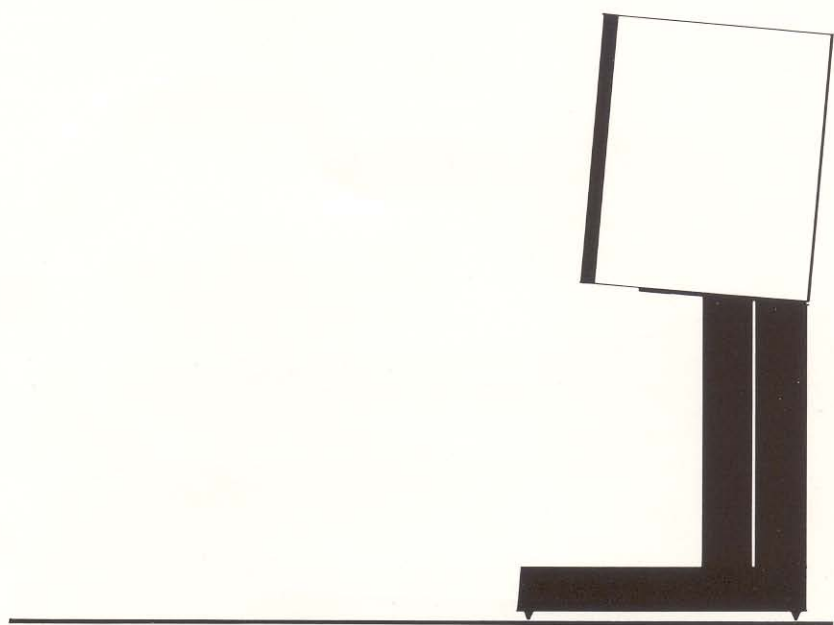


MERIDIAN M30 ACTIVE LOUDSPEAKER INSTRUCTION MANUAL



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INTRODUCTION

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The M30 is a two-way two unit system from Boothroyd Stuart. The design has been developed from the well established M3.

Careful alignment of the long-throw bass-mid driver with the enclosure, the electronic crossover and the committed power amplifiers has resulted in a new low-frequency system giving a sixth order Butterworth response at low frequencies. This results in smooth, firm and powerful bass to below 40 Hz with accurate transients.

The design employs a new high frequency drive unit with ferro-fluid damping. This gives exceptional power handling capacity. A smaller diaphragm results in better dispersion of the extreme high frequencies.

This ingenious loudspeaker benefits from over ten years experience in the design and making of active loudspeakers and represents a true systems approach.

The amplifiers and power supplies and electronic crossovers are all contained within the cabinet.

UNPACKING

Each loudspeaker is packed in an individual inner and shared outer carton spaced with sturdy chip-foam corners. DO NOT SLIT THE SEALING TAPE ON THE INNER CARTON; this can result in damage to the loudspeaker.

One of the loudspeaker cartons contains the connecting cables and accessories consisting of

1. A balanced twisted unscreened directional audio cable (UK market only).
2. Two three-core power cords, one for each loudspeaker.
3. Two wire clips for retaining the power cords.
4. Hex wrench (Allen key).

Where possible, retain the packing for future transportation.

CONNECTIONS

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First check the power voltage setting indicated at the voltage selector switch (where fitted) on the back of the speaker adjacent to the AC inlet. DO NOT SWITCH VOLTAGE WITH THE POWER CORD ATTACHED.

To set the speaker to the European voltage (220 volts), an internal wiring change is needed. The switch should then be set to the 240 position. Units pre-adjusted for 220 as opposed to 240 volts carry a label indicating this adjustment has been made. Similarly for operation at 100 volts, an internal wiring change is needed. The switch should then be set to the 120 position. Units pre-adjusted for 100 as opposed to 120 volts carry a label indicating this adjustment has been made.

Separate power cords are provided for each speaker, and these should be directly connected to a wall outlet. Where the supply is two-wire (with no grounding or earthing connection), switch number 8 (adjacent to the audio input at the back of the speaker) must be switched ON.

The audio connection is made to the phono socket (top back centre) on the speaker. The twisted directional lead (where supplied) is suitable for use with the MERIDIAN control units 101, 101B and MLP (MCLP). It may also be suitable for the more conventional unbalanced outputs from ordinary preamplifiers, provided that the output impedance is sufficiently low to ensure hum- and interference-free sound. No harm will come from experimenting with the audio lead to find out if it is suitable.

Where a lead is supplied, a RED coding indicates RIGHT channel.

With conventional (unbalanced) preamps it will often be necessary to employ screened connecting audio leads. Advice on suitable cable types should be sought from your dealer.

IMPORTANT: Always use the spring clip to retain the mains cord. This inhibits removal by small animals, human, domestic or wild.

INSTALLATION

The siting of the loudspeakers in your room plays a very important part in obtaining the best possible results from the system. Priorities vary. Decor needs may deny the speakers their best acoustic position, and this will result in a compromised performance. Having said this, the M30 has been designed to present sound on a readily interpreted scale by having a radiation pattern similar to the speaking human being. In consequence, the M30 is less susceptible to room placement than most other designs.

The M30 should be placed so that they form an equilateral triangle with the listener. They should be angled so that the axes of the speakers cross at the listener.

For best results, the speakers should be mounted on stands. (optional extra) using the spikes provided with the stand kit to control the coupling of the speaker to the floor, and positioned three feet (1m) or more from any side wall, with two feet (0.6m) or more clearance behind. A really substantial space behind the speakers can help realize the astonishing imaging and sound stage capabilities of the speakers.

Rooms with large plate glass windows can be difficult, and damping in the form of upholstered chairs and sofas, heavy lined curtains and substantial carpets or rugs can greatly improve the sound. Unglazed pictures can help break up reflections from walls.

The wall behind the speakers should not be glazed doors. If possible, do not have the speakers facing glazed doors either.

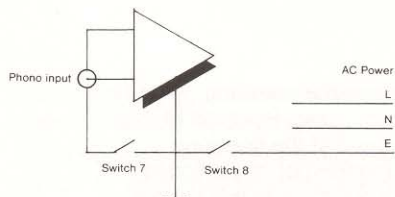
When the speakers are shelf mounted the desirability of angling the speakers towards the listener is not so pronounced, since the ultimate imaging capabilities of the speakers cannot be realized with shelf mounting.

For two-wire AC supply (no grounding lead) switches 7 and 8 should be ON.

For three-wire supply and balanced audio signal, switch 7 should be OFF and switch 8 ON.

For three-wire supply and unbalanced (screened or coaxial) audio signal, start with switch 8 OFF and switch 8 ON. In some installations superior sound may be achieved by reversing these, that is switch 8 ON and switch 8 OFF.

The diagram shows how these switches are connected.



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The M30 is provided with 'equalizing' controls for final adjustment of the sound. These controls are the switches 2 through 6 (top back) on the speakers. The table below (and on the back of the speakers) shows the effects of the switches on the response. At first sight this may seem confusing, but the procedure for selecting your preferred sound is quite straightforward. Start with response B + Y. This is achieved by turning 2 OFF, 3 ON, 4 OFF, 5 ON.

Switch 6 equalizes for Stand or Shelf mounting.

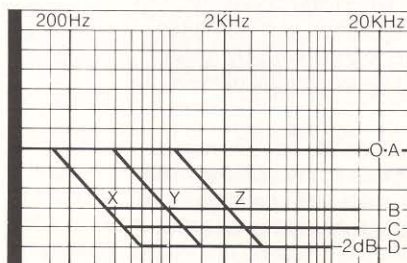
SWITCH	ON	OFF
1		Music Sense

Tilt Freq	X	Y	Z	
2	on	off	on	
3	on	on	off	

Amount	A	B	C	D
4	off	off	on	on
5	off	on	off	on

	ON	OFF
6	Freestanding	Shelf

Input		
7	Unbalanced	Balanced
8	Grounded	Ungrounded



For listening material it is advisable to include the speaking human voice together with different sorts of music. Because of the great familiarity we all have with the sound of the speaking voice, it is possible to detect artificiality in the form of 'boominess', 'chestiness' and excessive sibilants more quickly with this source (provided of course that the original microphone techniques used in the recording or broadcast are up to standard). When you have become familiar with the sound in the B + Y response setting, it is time to experiment by altering the position of the switches one at a time. Do not attempt to arrive at your final choice by altering more than one parameter at once. When you have selected your preferred setting, it is advisable to return to B + Y for a direct comparison with the starting point. This procedure is not difficult, but requires patience which will be well rewarded. We strongly recommend that each speaker be adjusted with the same final setting.

The two six-way sockets (top back) on the speakers are designed for "networking" operation. A facility provided with this type of operation will include remote volume control as well as other sophisticated applications. Explanations of these sockets will follow the availability of the necessary ancillary equipment.

The M30 is provided with "music sensing". This music sensing facility may be by-passed using switch 1 (top, back) on the speaker. Normally the AC supply can be left connected to the speakers and they will be in "stand-by" mode until any music signal is fed to them. The stand-by state is indicated by a green lamp behind the badge on the grille. As soon as a signal is received (for example by playing a Compact Disc), the speakers automatically move to the operating state. This transition is indicated by the lamps changing to red. When first connected the speakers move to the operating state (red lamp), and only after some minutes of no signal do they move to the stand-by (green lamp) state. After using the equipment it takes several minutes for the speakers to revert to stand-by.

Note that the Music Sensing circuits produce the faintest noise which can be heard when you are very close to the speaker. The exact tone of this noise is dependent on the switch settings. The level of the noise is below the threshold from a normal listening position.

Due to the settling of the cabinet front baffle, it is advisable to tighten the bolts which hold the bass-mid drive unit. Use the hex wrench provided for this purpose. Looseness of these bolts deteriorates the sound quality by reducing definition and detail. Care and common sense must be employed when tightening these bolts to ensure that they are not overtightened. The tightness of the drive unit bolts should be checked after three, six and twelve months. Thereafter an annual check should suffice.

There are no user-serviceable parts inside the cabinet. ON NO ACCOUNT SHOULD THE BACK PANEL BE REMOVED WHILE THE POWER CORD IS CONNECTED.

FAULT FINDING

If you suspect a fault, there are a few simple tests which you can carry out to help your dealer diagnose the problem. Fault diagnosis can be confusing, and it helps to write down the results.

No sound from one channel

1. Check lamp is lit—if unlit check AC power is on and connected.
2. Check balance control on pre-amp is not swung over to one side.
3. If the lamp stays green, by-pass the music sensing by switching switch 1 ON. If lamp still stays green, speaker has fault. If lamp goes red and speaker works, there is a fault only in the sensing circuits of the speaker. If lamp goes red and speaker does not work, switch off and swop the audio connection between the speakers. If the original suspected speaker works now, fault lies in audio lead pre-amp or source. If the original suspected speaker still does not work, it has a fault.

Sound distorted or lacking bass or treble

Try an alternative source, eg radio or tape.

Speaker switches itself into Stand-by

If the speaker gets too hot through over-driving or improper siting, it will switch to Stand-by automatically.

TECHNICAL SPECIFICATION

Response	38Hz - 20kHz $\pm$ 3dB
Sensitivity	0dBm (775mV) over 22k balanced or unbalanced
Power amplifiers	70 watt bass + 70 watt tweeter
Noise	<20dB spl @ 1m
Distortion	<0.01 %, 38Hz - 20kHz all power levels
Crossover	2kHz
Frequency response shape	24dB/octave double Butterworth acoustic slopes. Roll off at 38Hz 6th order Butterworth. Roll off at 35Hz 2nd order Bessel.
Music sensing	switchable
Controls	music sensing on free-standing/wall input balanced/unbalanced chassis ground/unground 10 response settings for room acoustics matching.
Transducers	1 $\times$ 165mm doped paper cone high power bass-mid unit. 1 $\times$ 35mm soft domed ferrofluid damped tweeter.
Consumption	max: 200VA idle: 30VA stand-by: 6VA
Protection	internal fuse, 1.6AT, plus thermal detectors
Indicator	two-colour LED at front shows green stand-by and red operating
Cabinet size	15 $\frac{1}{4}$ "H $\times$ 7 $\frac{1}{8}$ "W $\times$ 12 $\frac{5}{8}$ "D 385 $\times$ 180 $\times$ 320mm)
Weight	26lbs (12kg)

SAFETY

The line socket which plugs into the speakers is unshuttered. Because the socket is used near ground level special care should be taken if young children or animals may play with the cords. USE THE SPRING CLIP PROVIDED TO SECURE THE AC CORD IN THE BACK OF THE LOUDSPEAKER.

DO NOT MAKE ANY CONNECTIONS TO THE SPEAKERS OR TO YOUR AMPLIFIER OR PRE-AMPLIFIER WHILE THE AC SUPPLY IS CONNECTED.

DO NOT REMOVE THE ELECTRONICS WHILE THE AC CORD IS CONNECTED. THERE ARE NO USER-SERVICEABLE PARTS WITHIN.

SITE THE SPEAKER SO THAT THE BACK PLATE (HEAT DISSIPATOR) RECEIVES CIRCULATED AIR, OR HAS A SUFFICIENT SPACE BEHIND IT. DO NOT SITE IMMEDIATELY IN FRONT OF A RADIATOR OR WHERE IT IS SUBJECT TO DIRECT SUNLIGHT.

BOOTHROYD STUART LIMITED

13 CLIFTON ROAD
HUNTINGDON, CAMBS PE18 7EJ
TEL (0480) 57339
TELEX 32577 MERIDN