

BEOMASTER 3400

BANG & OLUFSEN

”?”

SERIAL #

Stereo today - 4-channel tomorrow.

That is the underlying idea of the Beomaster 3400 - a sensitive FM stereo tuner-amplifier with a large dial and five pretuned programs. The amplifier section has four channels, so it is prepared for the future. You can have stereo in one room, in two rooms at the same time, or 4-channel sound in one room.

The Beomaster 3400 is designed for simplicity and ease of operation.

All controls which you operate daily are located for ease of access. The more secondary controls are concealed behind two sliding panels.

One detail is not visible but will give you added operating convenience: the amplifier is momentarily silenced while switching from one program to another, thus eliminating troublesome clicks from the loudspeakers.

Congratulations on your Beomaster 3400. We hope the following instructions will help you to realise the full benefit of your entire music system so that you will have no problems in attaining your objective:

Listening to music.

Yours faithfully,

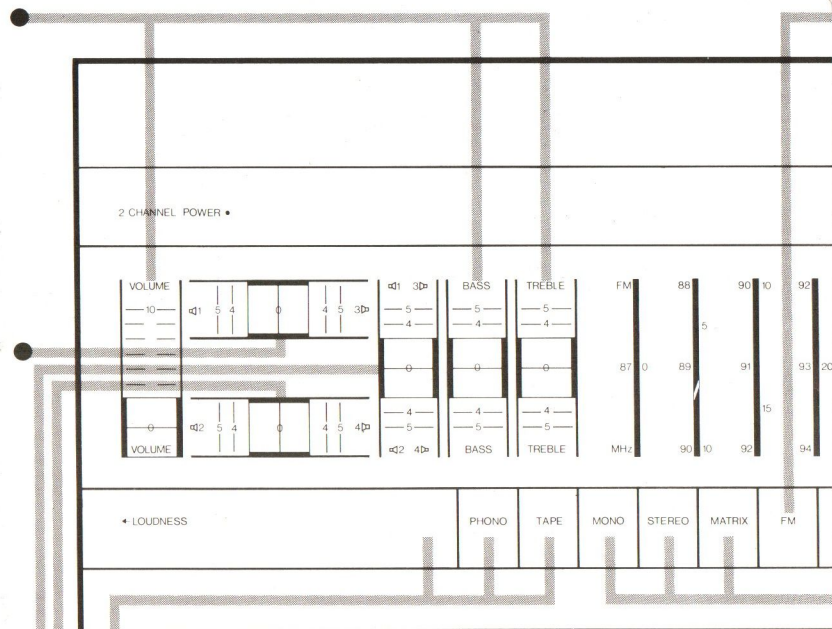
Bang & Olufsen



VOLUME. Controls all speakers.  
BASS and TREBLE. Control all speakers.

Balance between the two front speakers: 1 left and 3 right.

Balance between front and rear speakers: 1 and 3 are the front ones, 2 and 4 the rear ones.  
Normal stereo setting: 1 - 3 with the 2-CHANNEL POWER indicator lighted.

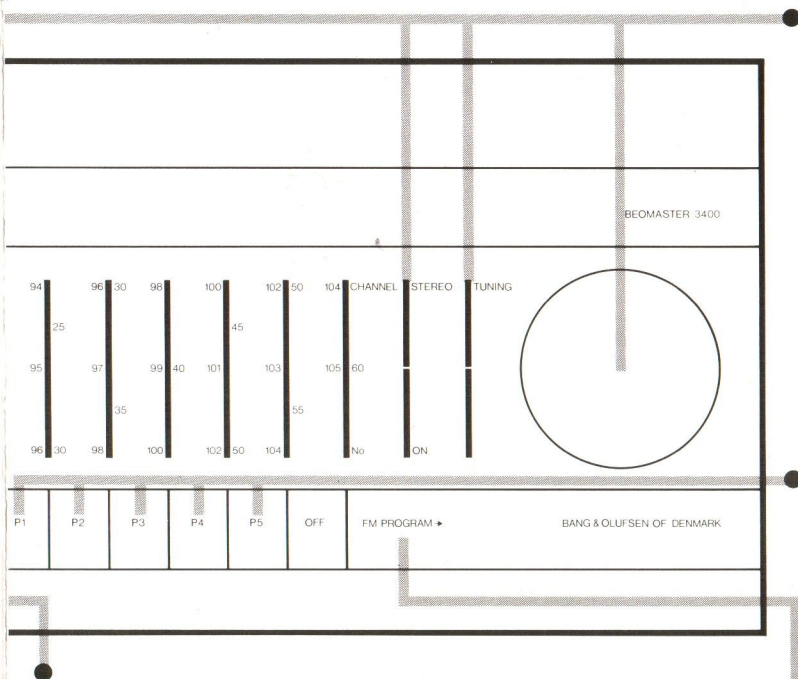


**PHONO.** Playing records. The record-player function is selected with the button under the slide panel: Button depressed, stereo record player for stereo and matrix records. Button released, 4-channel record player with CD-4 demodulator.

**TAPE.** Tape playback, 2- or 4-channel.

**LOUDNESS** (under slide panel). Button depressed: bass rise at low volume levels. Button released: flat response when bass and treble are at 0.

Balance between the two rear speakers: 2 left and 4 right.

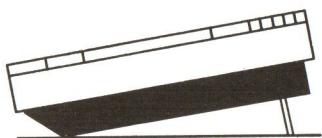


FM tuning, 88 - 104 MHz, large knob.  
TUNING indicator light. Your station is tuned in correctly when the two halves show equal brilliance.  
STEREO indicator light. Indicates presence of FM stereo program.

P1 to P5, preselected FM programs. For pretuning these, see page 3.

STEREO depressed: Stereo sound through all four speakers.  
MONO depressed: Mono sound through all four speakers.  
Both buttons released: 4 channel sound.  
SQ records: MATRIX depressed, MONO and STEREO released.

AFC (under slide panel). ON: Automatic tuning operative, OFF inoperative.  
MUTING (under slide panel). ON: No interstation hiss while tuning in on the large FM dial. OFF inoperative.



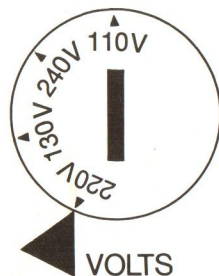
## SETTING UP

Your Beomaster 3400 should be placed horizontally on a table or shelf system.

Alternatively, you may place it at an angle, using the leg supports under the bottom, which can be tilted out.

In order to allow heat to drain away, the ventilation apertures on the upper side should be accessible for air circulation.

Avoid placing the set immediately above a radiator, where the temperature is considerably higher than in the rest of the room.

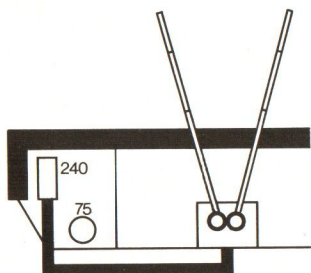


## Mains

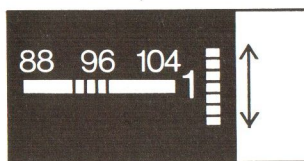
Your Beomaster 3400 is switchable between mains voltages of 110, 130, 220 and 240 volts AC.

## FM Aerial

Your Beomaster 3400 has connector sockets for both 75- and 240- (300) ohm FM aerial systems. If you live near an FM broadcasting station you may use a Bang & Olufsen type 8902010 FM indoor aerial. On the back of the set is a holder which accepts the aerial, and the short length of cable plugs into the 240-ohm socket.



# PROGRAM 1



## Pretuned FM Programs

Buttons P1 to P5 permit you to choose quickly between your favourite programs. Before you can use these push-buttons you must set the small FM dials under the slide panel to the right to the FM stations you can receive in your locality.

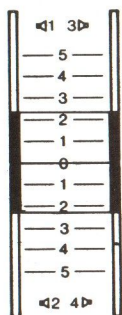
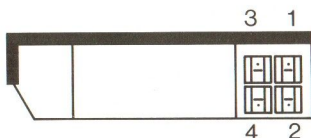
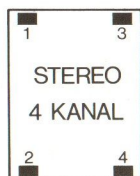
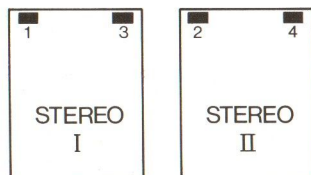
Depress P1, set AFC at OFF and, using the dial 1 knob, tune in the FM station you want to be program 1. Use the TUNING indicator light as when tuning in on the large dial. Similarly tune P2 to P5 to the other programs and set the AFC knob to ON so that you will always be sure that the station of your choice is tuned in correctly.

## What Speakers?

Your Beomaster 3400 is capable of delivering 30 watts of RMS power for stereo operation in a room. The speakers connected to it should therefore have a minimum rating of 30 watts continuous power.

Use the VOLUME control with discretion. The output rating is a minimum value, and if you turn the VOLUME control too far up you have every chance of coming across sound passages of considerably higher power level.

# 30 WATT



### Connections

A total of four speakers may be connected to your Beomaster 3400:  
Either stereo in two rooms at the same time.

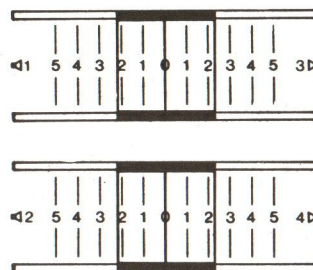
or  
stereo and 4-channel in the same room.

The connector sockets are on the back of the set.  
1 and 3 are the two front speakers for stereo, 1 is left and 3 right.  
2 and 4 may either be used for stereo in another room, or for the rear speakers during 4-channel reproduction. 2 is left and 4 right.

### Stereo or MONO in Two Rooms

Depress the STEREO or MONO button.  
VOLUME controls the volume level in both rooms.  
Balance between the two rooms is adjusted with this knob.  
When the balance knob is at mid-scale, 0, all speakers will deliver the same volume level.

To turn down the volume level in room I, slide the knob towards 2 - 4.  
To turn down the volume level in room II, slide the knob towards 1 - 3.

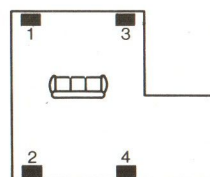


Stereo balance in room I is controlled with this knob, 1 - 3.

Stereo balance in room II is controlled with this knob, 2 - 4.

### Stereo or 4-channel in One Room

The three balance controls enable you to get optimum sound dispersion in your room, also if the two or four speakers are placed under rather different conditions on account of the room furnishings.



In an example like this one the rear right speaker will probably sound weaker than the three other ones because the distance to the listening area is greater, and it is not placed in a corner of the room.

Sound balance is adjusted by sliding one or both knobs towards symbol 4.

### Sound Through Front Speakers Only

### 2 CHANNEL POWER

When you want to listen to the front speakers only, regardless of whether it is a program in mono, stereo, or four channels, slide this knob up to 1 - 3. The 2-CHANNEL POWER indicator light will turn on, indicating that output power is being fed to the two front speakers.





### Headphones

One or two pairs of stereo headphones, or a pair of 4-channel phones, may be connected to your Beomaster 3400. Headphone impedance is fairly uncritical; 4 - 2000 ohms will provide normal volume level; for higher impedances you will have to advance the VOLUME setting. The connector sockets are on the right side of the set. FRONT is the normal stereo socket, and if you want to use REAR for stereo too, depress the STEREO button. The speakers switch off automatically when the headphone plug is inserted.

### Muting

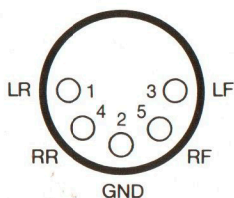
When a music system is turned on and off, or when switching between programs, troublesome clicks are often heard in the speakers.

Your Beomaster 3400 incorporates a muting circuit which momentarily silences the amplifier while switching between programs.

### Record Player

A low-impedance stereo record player plugs into the socket marked 2.

The socket marked 4 is intended for a 4-channel record player with a built-in CD-4 demodulator or with a separately connected demodulator box.



4CH ↑  
PHONO  
2CH ↓

FRONT

Socket connections are shown in this sketch.

LF, left front channel.  
LR, left rear channel.  
RF, right front channel.  
RR, right rear channel.  
GND, ground.

On this record player you will be able to play both 4-channel and stereo records.

Both types of record player may be left connected to the set at the same time, and switching between them is carried out with a knob under the slide panel:

Stereo record player, button depressed.  
4-channel record player, button released.

### Matrix

Your Beomaster 3400 has a built-in demodulator for SQ matrix records. To cut it in, press the MATRIX button. SQ recordings will then be played back as 4-channel ones, whether discs, tapes, or FM stereo.

### TAPE RECORDER, STEREO

The FRONT socket is intended for a stereo tape recorder, either a cassette or reel-to-reel tape recorder. You can play back and record on two tracks, and you can have off-the-tape monitoring if your tape recorder has this facility.



Index numbers of original  
Bang & Olufsen stereo tape  
recorder cables:

Record / playback	0961014
Off-the-tape monitoring	6270019

### Tape Playback

Depress TAPE button. You can now play tapes back through the amplifier section of your Beomaster 3400.

The STEREO, MATRIX and MONO buttons may be used as described on page 2.

### Making Tape Recordings

Set your Beomaster 3400 to the program you want to record on tape: FM, P1 to P5, or PHONO.

You do not have to depress the TAPE button, and it is immaterial whether STEREO and MATRIX are depressed or released.

Depressing the MONO button will cause a stereo program to become a mono recording on the tape.

SQ records, too, can be taped as follows: Play them on a stereo records player while recording them on a stereo tape recorder. Only while the tape is being played back must the MATRIX button be depressed.

### Off-the-tape Monitoring

Depress the TAPE button and also depress the desired program button: FM, P1 to P5, or PHONO.

### Simultaneous Playback on Two Stereo Tape Recorders

Two stereo tape recorders may be connected at the FRONT and REAR sockets at the same time. This enables simultaneous listening to two stereo programs in two rooms.

The STEREO button must be in upper position.

### TAPE RECORDER, 4-CHANNEL

The REAR socket is for the two rear channels. A 4-channel tape recorder must be connected at both the FRONT and REAR sockets. Since no international standardisation for cables for 4-channel equipment has yet been provided, you will probably have to have your dealer make a special set of cables for this purpose.

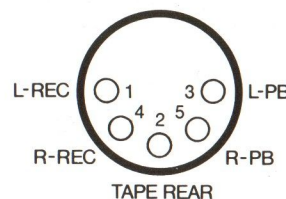
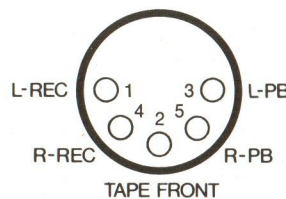
The relevant socket connections are shown in the sketch.

L, left channel.  
R, right channel.  
REC, recording on tape.  
PB, tape playback.

4-channel off-the-tape monitoring is possible too if your tape recorder has this facility.

### Tape Playback, 4-Channel

Depress Tape button but leave STEREO, MATRIX and MONO released.



#### **Making Tape Recordings, 4-Channel**

Put a program with four separate channels, say a CD-4 record, on a record player connected to your Beomaster 3400. The record player must be equipped with a CD-4 demodulator. Depress PHONO. The selector under the left slide panel should be in its upper position, 4 CH.

#### **OFF-the-tape Monitoring, 4-Channel**

Depress the PHONO and TAPE buttons together.

#### **MAINTENANCE**

The external surfaces of your Beomaster 3400 can normally be kept clean with a dry cloth. More thorough treatment can be performed as follows:

**Metal surfaces and white-lacquered wood.** Use a soft cloth moistened in a lukewarm solution of detergent in water. Do not use alcohol as this may cause the transparent portions of the slide knobs to become dull.

**Teak and rosewood cabinets.** If the cabinet surfaces seem grey and dry you may apply a thin film of teak or rosewood oil, but not more than once or twice a year. Use a thin grade of oil, especially for rosewood.

**Blond oak cabinet.** Acetone may be used for the removal of dark spots. Do not use oil under any circumstances - even non-oil detergent or wax can cause discoloration of the surface. More extensive treatment or repairs, if required, should be left to your dealer.

<b>TECHNICAL DATA</b>		<b>BEOMASTER 3400</b>
<b>Type no.</b>		<b>2802</b>
Sound system and loudspeakers		Stereo and quadro or 2 sets of stereo
Features		4 channel, SQ decoder
Radio ranges		FM
FM pretuning		5 stations
Tuning indicator		Dual light
Muting FM		Yes
Loudness		Yes
Headphone socket		4 channel / 2 sets of Stereo
Tape recorder sockets		2
Monitor		Yes
Amplifier		
Power output at specified distortion 1000 Hz RMS		2 x 30, 4 x 20 watts / 4 ohms 2 x 20, 4 x 16 watts / 8 ohms
Music power		2 x 40, 4 x 40 watts / 4 ohms 2 x 23, 4 x 23 watts / 8 ohms
Speaker impedance		4 ohms
Harmonic distortion		
1000 Hz 50 mW DIN 45 500	<	0,06%
1000 Hz at stated output	<	0,1%
Intermodulation DIN 45 500	<	0,3%
Frequency range $\pm 1,5$ dB DIN 45 500		20 - 30.000 Hz
Power bandwidth DIN 45 500		10 - 40,000 Hz
Damping factor 1000 Hz DIN 45 500	>	36

Input pickup low impedance		3.2 - 2.6 mV / 47 kohms (30-20 W)
2 channel high impedance		225 - 185 mV / 1Mohm (30-20 W)
4 channel		185 mV / 1 Mohm
Signal-to-noise ratio DIN 45 500		
50 mW, pickup low impedance	>	60 dB
50 mW high impedance	>	60 dB
Channel separation 1000 Hz DIN 45 500	>	56 dB
250 - 10,000 Hz	>	40 dB
Output tape recorder 1000 Hz DIN 45 500		15 mV / 20 k ohms
Headphones		Max. 5.5 V / 200 ohms
Bass control at 40 Hz	$\pm$	17 dB
Treble control at 12,500 Hz	$\pm$	14 dB
FM tuner		
Range		87.5 - 104 MHz
Sensitivity 26 dB, $\pm 40$ kHz	<	1.5 $\mu$ V / 75 ohms
Sensitivity IHF	<	2 $\mu$ V / 75 ohms
Limiting, $-3$ dB $\pm 40$ kHz	<	1 $\mu$ V / 75 ohms
Signal-to-noise ratio DIN 45 500	>	65 dB
Selectivity IHF	>	62 dB
Frequency range $\pm 1,5$ dB DIN 45 500		20 - 15.000 Hz
Harmonic distortion DIN 45 500	<	0.4%
Stereo channel separation DIN 45 500	>	35 dB
Pilot suppression 19 kHz	>	48 dB
38 kHz	>	35 dB
Other data		
Power supply		110-130-220- 240 volts
Power consumption		20 - 250 watts
Dimensions W x H x D		68.5 x 7.5 x 27 cm
Weight		8.2 kg
<b>Subject to change without notice</b>		



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