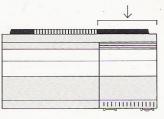
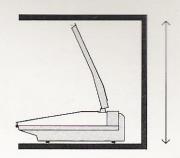
Where to put your Beocenter



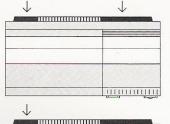
The Beocenter must be placed on a firm surface. Allow a space of at least 5 cm at the sides and behind the Beocenter for adequate ventilation. The ventilation grilles behind the radio section must not be covered. Avoid placing the Beocenter in direct sunlight or near radiators or other sources of heat

Leave at least 35 cm of free space above the Beocenter to allow the dust cover to open freely.

Before putting the Beocenter in its final place, carry out the setting up procedure described in the following paragraphs.



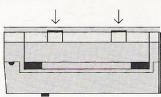
Setting up your Beocenter



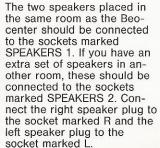
THEFTHE

To gain access to the various sockets you must first remove the two covers at the rear. Place your thumbs in the recesses and press gently.

We recommend that you connect loudspeakers, antennae and other units, if any, to the Beocenter before connecting it to the mains supply.

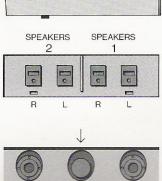


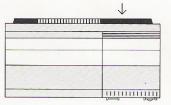
Loudspeakers



If you intend to connect two sets of speakers, neither set should have an impedance of less than 8 ohms.

To cut in the speakers in the SPEAKERS 2 sockets, press the button SPEAKERS 2 under the operating panel.



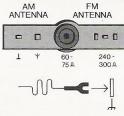


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Antennae

The Beocenter is provided with three different antenna sockets: AM antenna, FM antenna (60-75 ohms, coax), and FM antenna (240-300 ohms, IEC).

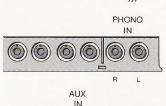
If your area is favourable for receiving FM radio signals, you may find an indoor FM antenna is adequate. The indoor antenna (part no. 8902010) and a special antenna bracket (part no. 3152006) to mount on the Beocenter are available as optional accessories from your Bang & Olufsen dealer.



Turntable

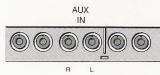
A turntable may be connected to the Beocenter through the sockets marked PHONO IN.

After switching on press the button PHONO to select the turntable as source.



Compact disc player

A compact disc player may be connected to the Beocenter through the sockets marked AUX IN. After switching on press the button AUX to select the compact disc player as source.





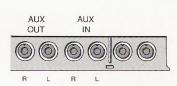
111111111111111

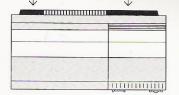
Auxiliary tape deck

An auxiliary tape deck may be connected to the Beocenter through the sockets marked AUX IN and AUX OUT.

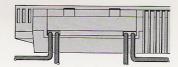
To play back a tape on the auxiliary tape deck, switch on the Beocenter, press AUX and operate the tape deck as usual.

To record a tape on the auxiliary tape deck, switch on the Beocenter, select the appropriate source, e.g. radio, and then operate the auxiliary tape deck as usual.





When you have connected all the necessary cables to the sockets, replace the two removable covers by pressing them firmly into place. The cables should be run through the openings provided at the base of the covers.

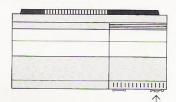


Power supply

Connect the electric lead to the mains supply. The Beocenter is designed for an AC

current of 240 V (220 V in countries other than the UK and Australia).

Switching on and off



OTTO DESIGNATION

To switch on the Beocenter press ON. Press ON again to switch it off.

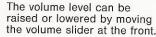
When the Beocenter is switched on, the display lights up and you can see the AM and FM frequency scales. The indicators of the various functions also light up.

Whenever you switch on, you will hear the FM station preset on P1 (see the section »Presetting FM stations«).



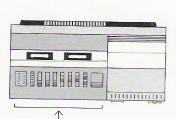
Sound adjustments





Pushing it to the right (+) raises the volume level, pushing it to the left (-) lowers it.

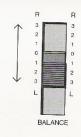


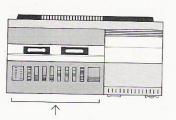


Loudspeaker balance

The loudspeaker balance is used to distribute the sound between whichever speakers are in operation. You may adjust the balance with the slider BALANCE under the dust cover. If the slider is set to 0, the sound is evenly distributed between the two speakers. This means that the optimum listening position is at a point equidistant from the two loudspeakers.

By pushing the slider upwards, the right-hand speaker will produce more sound, and by pushing the slider downwards, the left-hand speaker will produce more sound. This adjustment enables you to shift the optimum listening point according to your favourite listening position.

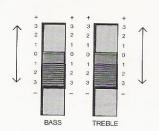




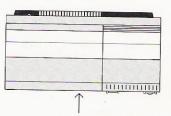
Bass and treble

The bass and treble tones may be adjusted with the sliders BASS and TREBLE under the dust cover. The neutral position of both sliders lies at 0.

Pushing the sliders upwards increases the bass and treble tones, pushing the sliders downwards reduces them.



Connecting headphones

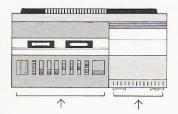


Connect your headphones to the socket marked HEAD-PHONES under the operating panel.

If headphones are connected, the speakers connected to SPEAKERS 1 will be cut out.



Radio section in general





The Beocenter gives you access to AM stations, i.e. LW and MW stations, and FM stations, and you may preset up to four FM stations on P1, P2, P3 and P4.

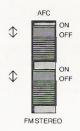
The radio section is also provided with automatic frequency control (AFC) of FM stations, which means that the receiver automatically compensates for tuning drift on FM. The AFC switch is located under the dust cover.

You may also switch from stereo to mono when listening to FM stations by using the FM STEREO switch under the dust cover. If the switch is set to »ON«, any stereo sound from an FM station will be reproduced (note the green

stereo indicator) and you will experience what is usually referred to as silent tuning, meaning that weak radio signals will not be heard when you are searching for stations. If the switch is set to »OFF«, both the stereo sound and the silent tuning facility disappear. This enables you to hear both weak and strong signals when you are searching for stations.

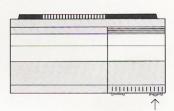
The signal strength of both AM and FM stations can be read off on the signal meter in the left-hand side of the display. The signal strength is indicated by green lights.

Optimum signal strength lies



STEREO

Tuning in on FM stations



Press FM. Cut out the AFC by setting AFC to "OFF" and find the station desired using the tuning wheel at the right-hand side of the Beocenter.

The frequency indicator, consisting of a tiny red dot

will move across the horizontal scale situated at the lower edge of the display.

Once you have found the station desired, set AFC back to "ON".

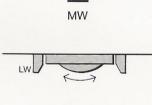


Tuning in on AM stations



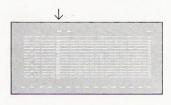
Press AM to switch to the AM bands. The AM indicator above the AM button lights up. Note that your choice of wavelength is indicated by a light in the upper right-hand corner of the frequency scale.

Use the frequency wheel to find the MW station desired. The frequency indicator consisting of a tiny red dot will move across the vertical scale on the right-hand side.



I W

LW



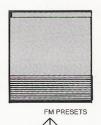
Press AM to switch to the AM bands. The AM indicator above the AM button lights up. Press the LW/MW switch LW next to the frequency wheel to switch to the LW band. Check that the LW indicator in the upper left-hand corner of the frequency scale lights up.

Use the frequency wheel to find the LW station desired. The frequency pointer consisting of a tiny red dot moves across the vertical scale on the left-hand side.

To switch to the MW band release the LW button.



Presetting FM stations



The buttons P1, P2, P3 and P4 work in conjunction with the four tiny FM scales under the FM PRESETS cover under the dust cover to the right. These four buttons enable you to preset four FM stations.

To gain access to the four FM scales remove the cover by pushing it slightly forward.

There is one frequency wheel for each FM preset. Set AFC to »OFF« and then press P1. Turn the P1 wheel to find the station you want on P1.

Proceed to preset P2, P3 and P4 using the appropriate buttons and wheels in the same way.

Set AFC back to »ON«

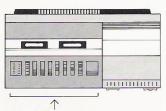


when you have finished the presetting procedure.

Replace the cover by first inserting the upper edge and then pushing the grooved lower edge downwards so that the cover is firmly in its place.

Now you just have to press [P1], [P2], etc. to hear your preset FM stations.

Tape deck functions and definitions



The double tape deck under the dust cover offers you a number of facilities which enable you to not only record and play back tapes as with an ordinary tape deck, but also to copy, edit and dub tapes. The following paragraphs describe all the functions one by one. But first a few words to define some basic terms.

TAPE 1

TAPE 2

- The right-hand tape deck is referred to as TAPE 1.
 On TAPE 1 you can both play back and record tapes. TAPE 1 has priority over TAPE 2 if there is a tape in both of them.
- The left-hand tape deck is referred to as TAPE 2.
 TAPE 2 is for playback only.
- AUTO REVERSE is a function which enables you to play back or record on both sides of a tape without having to turn the tape manually. At the end of one side, i.e. immediately before the tape lead-in, the tape recorder simply

turns its tape head 180° and the tape starts running in the opposite direction. The AUTO REVERSE function indicator is located on the left-hand side of the operating panel. It can be cut in and out as you like with the button AUTO REVERSE.

• The tape recorder always regards the tape side facing upwards as side 1 and the tape side facing downwards of course as side 2. The indicators marked »2<« and »>1« show you which side is being played and also the direction in which the tape is running. They apply to TAPE 1 only.



MODE

TURN

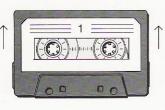
AUTO REVERS

HX PRO

 HX-PROFESSIONAL is a recording system developed by Bang & Olufsen in cooperation with the Dolby Laboratories. It enhances the sound quality of your recordings considerably and does not require any adjustment. Dolby B NR* is a noise reduction system removing tape hiss in cassette recordings.



How to play back a tape



TAPE 1

Playback in TAPE 1: Place a cassette in TAPE 1 with the tape slots pointing towards yourself and with

side 1 upwards.

Set DOLBY NR to »ON« if the tape has been recorded with Dolby NR.

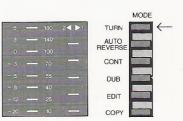
Then press TAPE to start playing.

Note that the auto reverse function is cut in meaning that the tape will be turned automatically at the end of side 1. The auto reverse function is cut out automatically as soon as side 2 starts playing.

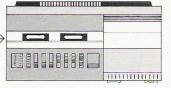
You can turn the tape whenever you like by pressing TURN. The indicators "2< " and ">1" show you which side is being played.

To stop playing press STOP. If you want to switch to another source, e.g. to a radio station, just press the appropriate button while playing the tape.

Playback can be resumed at any time at the exact point at which you stopped providing you don't remove the cassette and don't use any controls other than TAPE to resume listening to your tape.



Trademark of Dolby Laboratories Licensing Corporation.
 Noise reduction system manufactured under License from Dolby Laboratories Licensing Corporation.



TAPE 2

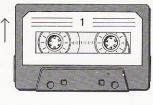
Playback in TAPE 2: Place a cassette in TAPE 2 with the tape slots pointing towards yourself and with the appropriate side upwards.

Set DOLBY NR to »ON« if the tape has been recorded with Dolby NR.

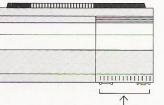
Press TAPE to start play-

To stop playing press STOP. If you want to switch to another source, e.g. to a radio station, just press the appropriate button while playing the tape.

TAPE 1 takes priority over TAPE 2, so if there is a tape in both tape decks, only the tape in TAPE 1 will be played.



Rewinding and winding tapes



The buttons << and >> rewind and wind the tape.

TAPE 1 takes priority over TAPE 2, so if there is a tape in both tape decks, only the tape in TAPE 1 will be rewound or wound.

Note that <a> means rewinding towards the start of the tape side concerned and <a> means winding towards the end of the tape side con-

cerned. So in TAPE 1 the tape direction indicated by <a> and <a> may not always correspond with the direction the tape is actually running.

To stop the tape press STOP or [TAPE]. If you press TAPE], playback starts immediately. Rewinding or winding stops automatically at tape end.

How to find specific music tracks

Tapes are often recorded with blanks between the various music tracks. Provided they are of at least four sec., such blanks can be sought out by the tape deck. This enables you to find quickly the beginning of each music track on your tape.

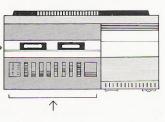
If you press NEXT, the tape is wound to the next music track and playing starts

once the beginning of the track has been found.

If you press RETURN, the tape is rewound to the start of the music track you are listening to. Press RETURN

immediately again to find the start of the preceding track. Playing starts once the beginning of the track has been found.

Continuous playback



TAPE 2 TAPE 1

Continuous playback is a function enabling you to play back up to 3 different tape sides over and over again.

Place a cassette in TAPE 2 with the appropriate side upwards. Place another cassette in TAPE 1. Press CONT to start playback. First side 1 and then side 2 of TAPE 1 will be played and finally the side of TAPE 2 facing upwards will be played.

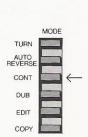
When TAPE 2 has been played, side 1 of TAPE 1 starts playing again, and in the meantime TAPE 2 is rewound so that it is ready to be played again.

Using NEXT or RETURN to find specific tracks or winding or rewinding the tapes does not stop the continuous playback function.

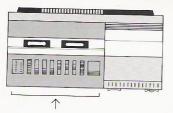
It will only be stopped if you press STOP or if you switch to another source, e.g. a radio programme.

If you want a sequence of only two tape sides, place your cassette in TAPE 1 and press CONT. Side 1 and 2 of that tape will then be played over and over again.

Note: the continuous playback function is not applicable if you are using TAPE 2 only.



How to record a tape



TAPE 1



Getting ready to record

Place a blank cassette in TAPE 1 with the tape slots facing yourself and side 1 upwards.

If you want to record on side 1 only, press

AUTO REVERSE to cut out the auto reverse function. If you want to start recording on side 2, press TURN (note the side indicators). In the latter case, however, the auto reverse function is deactivated.

Set DOLBY NR to »ON« if you want Dolby noise reduction.

Now press the RECORD button. The tape deck is now in so-called record pause mode, meaning that you can take your time to monitor your recording. Note the red RECORD indicator, which blinks when the tape deck is in record pause mode.

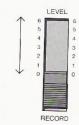
Select the source from which you want to record,

e.g. radio or turntable. If you want to record from an LP or single, don't forget to start the turntable.

Now you can read off the signal strength on the RECORD LEVEL meter on the left-hand side of the operating panel. If you want to adjust the recording level, you can do so with the RECORD LEVEL slider. The signal strength, i.e. the recording level, is adequate when the red indicator against the 0 dB point (=100%) blinks regularly. Occasional blinks in the 3 dB indicator, which in fact shows that the tape is being slightly overloaded, cannot be avoided. They only indicate peaks in the music.

You may now proceed to record.

If you want to get out of the record pause mode, however, you have to press STOPI.



RECORD I EVEL

CONT

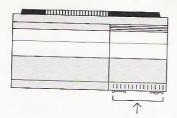
DUB

EDIT

Start recording

When you have adjusted the recording level, press RECORD again. If you want to record from an LP or single,

you must of course also start the turntable immediately before you press RECORD for the second time.



Pause during recording

You may stop the recording temporarily by pressing STOP. The tape deck automatically inserts a blank of about four sec. on the tape before it stops. During these four sec. the TAPE indicator blinks. Then the TAPE indicator goes off and the RECORD

indicator blinks instead, indicating that the tape deck is in record pause mode. The RECORD indicator will blink as long as the tape deck is in record pause mode.

To resume your recording press RECORD again.

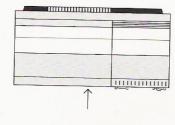
Stop recording

You may stop your recording by pressing STOP once, in which case a blank of four sec. will be inserted on the tape and the tape deck will go into record pause mode (as described in the previous paragraph). Then press STOP again. The tape deck

now slips out of its record mode and you can play any programme you like.

A recording may also be stopped instantly by pressing STOP and STOP quickly again. If you do so, no blank will be inserted on the tape.

How to record via microphone



We recommend you to read the paragraph »How to record a tape« before recording via microphone.

Connect the microphone (mono) to the socket marked MICROPHONE under the operating panel. Place a blank cassette in TAPE 1 and set DOLBY NR] to »ON« if you want Dolby noise reduction.

Press RECORD and then TAPE to select the microphone as your source. (Note: the TAPE indicator lights up only during recording). The tape deck is now in record pause mode.

Now you can read off the microphone level on the record level meter in the left-hand side of the operating panel. If you want to adjust





RECORD LEVEL

the microphone level, you can do so with the MIC LEVEL slider. The microphone level is adequate when the red indicator against the 0 dB point (=100%) blinks regularly. Occasional blinks in the 3 dB indicator, which in fact shows that the tape is being slightly

overloaded, cannot be avoided. They only indicate peaks in the sound.

When you are ready to record, press RECORD again and the recording will start.

To stop the recording follow the instructions in the previous paragraph.



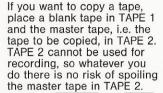
Copying a tape

For the UK market only:

WARNING: Under United Kingdom law, it is illegal to record copyright material including most commercial disc records and pre-recorded tapes, without the prior consent of the copyright owner. (That applies to discs and tapes you may have bought, or borrowed from a library or friend, as well as to pre-recorded broadcast material. You may, however,

live broadcasts of material which is out of copyright for your own private and domestic use). For further information, you may apply to the Mechanical-Copyright Protection Society, 41 Streatham High Road, London SW16, or to the British Phonographic Industry Limited, 273 Regent Street, London W1

record live performances or



Press RECORD and COPY. The tape deck is now in the copying mode: the COPY

indicator is lit and the RECORD indicator blinks. Rewind both tapes with . After rewinding TAPE 1 automatically winds past the tape lead-in.

Finally press RECORD again to start copying.

To get out of the copying mode press STOP.

You don't have to monitor

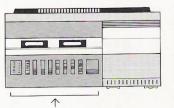


the copying process in any way - the recording will be

copied exactly as it is:

- The recording level will be transferred automatically from the master tape in TAPE 2 to TAPE 1.
- If the master tape has been recorded with Dolby NR, this will also be transferred to TAPE 1, even if DOLBY NR is set to »OFF«. Likewise, you cannot cut in Dolby NR.
- The auto reverse function ensures that the tape in TAPE 1 is turned automatically when the first side has come to an end. This is useful if TAPE 1 is shorter than the master tape in TAPE 2.
- Once either of the two tapes runs out, the copying process stops automatically.
- If you pause during the copying process with STOP, no blanks will be inserted on the tape in TAPE 1 (cf. »Pause during recording«).
- You can even listen to the radio or e.g. play a record while copying a tape.

Editing a tape



The editing function enables you to transfer specific music tracks from one tape to another, and in the order you like. Moreover, you can leave out any speech introducing the various tracks.

Place the master tape, i.e. the tape to be edited, in TAPE 2 and a blank tape in TAPE 1.

Press RECORD and EDIT. The tape deck is now in the editing mode: the EDIT indicator is lit and the RECORD indicator blinks.

Press TAPE to play the master tape in TAPE 2. Now >>, <<, NEXT, RETURN and STOP apply to TAPE 2 only and you can use them to find the music track you want to transfer from TAPE 2 to TAPE

The recording level and



Dolby NR, if any, will be transferred automatically from TAPE 2 to TAPE 1.

When you have found the music track you want, press RECORD. Now TAPE 2 starts playback and TAPE 1 starts recording.

Stop recording by pres-

sing STOP. A blank of four sec. will be inserted on the tape in TAPE 1 and you can proceed to finding the next music track on TAPE 2 you want to transfer to TAPE 1.
To get out of the editing

mode press STOP twice.

Dubbing a tape

Dubbing means that you can mix sound from a microphone with e.g. a tape in TAPE 2 or some other source.

You may find that in some circumstances the sound produced by the loudspeakers connected to SPEAKERS 1

Suppose you want to mix a tape with your own speech through a microphone: Place a blank tape in TAPE 1 and the master tape in TAPE

Connect the microphone and press RECORD and DUB. The tape deck is now in the dubbing mode: the DUB indicator is lit and the RECORD indicator blinks. Adjust the microphone level with MIC LEVEL

Now select TAPE 2 as the other signal source by pressing TAPE. Adjust the recording level with RECORD LEVEL . While adjusting the recording

have a bad effect on your recording because it is also recorded via the microphone. To avoid this you have to use headphones, in which case the loudspeakers connected to SPEAKERS 1 will also be cut out

Press STOP to pause the recording. Press STOP twice to stop recording.

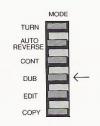
Suppose you want to mix the sound of e.g. a turntable or a radio programme with your own speech through the microphone:

Place a blank tape in TAPE 1.

Connect the microphone. Press [RECORD] and [DUB] and adjust the microphone level with MIC LEVEL

Now select PHONO (or a radio programme as the case may be) as the other signal

Adjust the recording level



level you may turn down the volume level so as to prevent the loudspeaker sound from entering through the microphone and thus interfere with the recording level read-off.

DOLBY NR is not applicable - if the master tape has been recorded with Dolby NR, this will be transferred automatically.

Press STOP to stop TAPE 2 and then return to the point on the master tape where you want to record from.

Press RECORD again to start recording. The sound from the microphone will now be mixed with the sound from TAPE 2 and recorded on TAPE 1

The RECORD LEVEL and MIC LEVEL sliders can be used to fade the music and your speech in and out during recording.

with RECORD LEVEL. While adjusting the recording level you may turn down the volume level so as to prevent the loudspeaker sound from entering through the microphone and thus interfere with the recording level read-off.

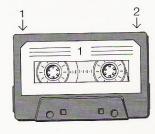
Set DOLBY NR to »ON« if you want Dolby NR.

Press RECORD again to start recording. The sound from the microphone will now be mixed with the sound recorded from the turntable (or radio).

The RECORD LEVEL and MIC LEVEL sliders can be used to fade the music and your speech in and out during recording

Press STOP to pause recording. Press STOP twice to stop recording.

Safeguarding recordings



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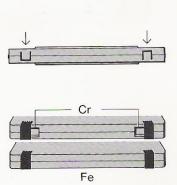
The tape cassette is provided with two latches on the edge opposite the tape slots. If one or both of these two latches are removed, the correspon-ding tape side or both sides cannot be used for new recordings, and you don't have to worry about erasing some irreplaceable piece of recording.

To remove the latches press them gently with a

screwdriver or similar object until they come off.

Should you want to restore your tape in order to use it for new recordings, you can do so just by placing a piece of adhesive tape over the gaps.

In the case of chrome tapes take care not to cover the holes used by the tape deck to distinguish between ferro and chrome tapes.



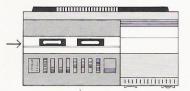
Maintenance

Surfaces

Use a dry, soft cloth to clean the surfaces of the Beocenter. You may use a window cleaner on a dry cloth to clean the dust cover. Grease stains may be wiped off with

a soft cloth dipped in a solution of lukewarm water and a mild detergent and firmly wrung. Note: never use alcohol to clean your Beocenter.

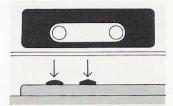
Tape heads



The tape heads, i.e. the recording head and playback heads, should be cleaned now and then to ensure optimum sound quality.

Special tape head cleaning kits are available with instructions included. You may also use an ordinary cotton wool stick dipped in a special

rinsing fluid for tape heads. Wipe the tape heads carefully a couple of times. Never use denatured alcohol - it may contain ingredients liable to damage the tape heads. Cleaning the tape heads once every one or two months is adequate, depending on how much you use the tape deck.



Technical specifications

Beocenter 4000	
Type No.	2431-2432
Amplifier	
Power output RMS DIN/IEC	2 x 25 watts/4 ohms
	2 x 20 watts/8 ohms
Harmonic distortion	< 0.2%
Intermodulation	< 0.4%
Frequency range 1,5 dB	20-20,000 Hz
Turntable input	2 mV/47 kohms
Microphone input	0.17 mV/2 kohms
AUX IN	200 mV/82 kohms
Signal-to-noise ratio	>78 dB
Channel separation 1000 Hz	>50 dB

Tuner	
FM frequency range	87.5-108 MHz
FM sensitivity, stereo, 46 dB	<35 uV/75 ohms
LW frequency range	147-350 kHz
MW frequency range	520-1610 kHz
Tape deck	
Compact cassette	C46-C60-C90-C120
Wow and flutter	$< \pm 0.2\%$
Frequency range	30-15.000 Hz
Signal-to-noise ratio CCIR/ARM	Л:
Metal Dolby NR	>67 dB TDK-MA
Chrome Dolby NR	>65 dB TDK-SA
Ferro Dolby NR	>63 dB BASF LH I
Metal	>59 dB
Chrome	>57 dB
Power supply	Type No. 2431: 220 V
	Type No. 2432: 240 V
Power consumption	25-140 watts
Dimensions WxHxD	64 x 9.5 x 33 cm
Weight	10 kg

This Beocenter fulfils the conditions stated in the EEC directive 82/499 concerning radio frequency interference.

For the UK market only: IMPORTANT

The wires in the mains lead supplied with this apparatus are coloured in accordance with the following code:

Blue: Neutral Brown: Live

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your unit, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Ensure that your equipment is connected correctly. If you are in any doubt, consult a qualified electrician.

International guarantee

This Bang & Olufsen product carries a guarantee against defects in workmanship and materials. It is a national guarantee, extended by Bang & Olufsen in the country in which the product was bought. The terms of the guarantee apply principally to the country of purchase but will

be met by authorized Bang & Olufsen dealers in other countries.

In order to obtain service under this guarantee from a dealer in a country other than that in which the product was bought, the guarantee form must be completed in full and presented to the dealer.

BANG & OLUFSEN DK-7600 STRUER DENMARK