

IMPORTANT SAFEGUARDS

WARNING : To prevent fire or shock hazard do not expose this unit to rain or moisture.

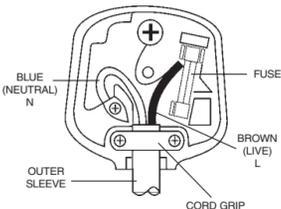
CAUTION : DANGEROUS VOLTAGES EXIST INSIDE THIS UNIT, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. DISCONNECT FROM MAINS SUPPLY WHEN NOT IN USE.

PRE FITTED MAINS PLUGS

For your convenience a mains plug with a fuse has been fitted to this appliance. For your safety please observe the following information.

1. Should the fuse fail in the plug remove the plug from the wall socket and replace the fuse with a 3 Amp **ASTA** approved to **BS1362** fuse.
2. Never use the plug without the fuse cover fitted. Replacement fuse covers are available from your dealer or most electrical retail outlets.
3. If the mains plug is cut off from the cable, rewire the replacement plug in accordance with the instruction given in this manual.
4. **CAUTION:** Under no circumstances should the discarded plug be inserted into the mains socket. To prevent a shock hazard remove the fuse and carefully dispose of the discarded plug. Do not leave the plug lying around where children might see it.

MAINS PLUG WIRING DETAILS



The wires in this mains lead are coloured in accordance with the following wiring codes:
 Blue Neutral
 Brown Live
 The wires in this mains lead must be connected to the terminals in the plugs as follows:
 Blue Wire N or Black
 Brown Wire L or Red

Only a 3 Amp fuse should be fitted in the plug or a 5 Amp fuse at the distribution board.

WARNING : UNDER NO CIRCUMSTANCES MUST THE LIVE OR NEUTRAL WIRES BE CONNECTED TO THE EARTH TERMINAL IN A 3-PIN MAINS PLUG.

CAUTION : WHEN OPERATING THIS UNIT ON 230V MAINS SUPPLY, PLEASE NOTE THAT WHEN THE POWER SWITCH IS IN THE OFF MODE, THIS DOES NOT DISCONNECT THE UNIT FROM THE MAINS SUPPLY HOWEVER, PLEASE BE ASSURED THAT IT IS PERFECTLY SAFE TO LEAVE THE UNIT CONNECTED TO THE MAINS SUPPLY.



This symbol means that this unit is double insulated. An earth connection is not required.

CAUTION

CLASS 1 LASER PRODUCT
 Use of Controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

LASER SAFETY

This unit employs a laser, only qualified service personnel should attempt repair.



DANGER: INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION: HAZARDOUS LASER RADITION WHEN OPEN AND INTERLOCK DEFEATED.

SPECIFICATIONS

CD Section

Frequency Response : 20Hz ~ 20KHz (± 3dB)
 S/N Ratio : 65dB
 Wow and Flutter : immeasurable
 D/A converter : 1 bit DAC with 8 times oversampling digital filter
 Number of Program : 19 Steps Random Access Programme

CDG Section System

System : PAL I
 RF output level : 1 volt

TAPE Section

Tape Speed : 4.75 cm/sec.
 Track System : 4 Track, 2 Channel Stereo
 Recording System : DC Bias
 Erasing System : Magnetic Erasing
 Output Power : 5 W RMS 8 Ohm (in series) 10% THD
 20 W PMPO
 Power Source : AC 230 V 50 Hz

Notes: (1) Only compact disc's marked with the disc logo



are guaranteed to work on this player. Home recorded discs (CDR) recorded on home PC's may not play or operate correctly. This player cannot play CD-RW, DVD's including PHOTO CDs, data sections in the CD-Extras, DVD-ROMs etc.

- (2) Should the player lock up during playing of a disc or certain CD function key does not operate during playback, switch off the power and wait for a moment then switch the power on again. If the problem continues replace the disc.

SOME DO'S AND DON'TS ON THE SAFE USE OF EQUIPMENT

This equipment has been designed and manufactured to meet European safety standards but like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

DO read the operating instructions before you attempt to use the equipment.

DO ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

DO consult your dealer if you are ever in doubt of the installation, operation, or safety of your equipment.

DO be careful with glass panels or doors on equipment.

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way - switch off, withdraw the mains plug and consult your dealer.

DON'T remove any fixed cover as this may expose dangerous voltages.

DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode. Switch off using the switch on the equipment and make sure that your family knows how to do this. Special arrangements may need to be made for infirm or handicapped people.

DON'T listen to headphones at high volume, as such use can permanently damage your hearing.

DON'T obstruct the ventilation of the equipment, for example with curtains or soft furnishings. Overheating will cause damage and shorten the life of the equipment.

DON'T allow electrical equipment to be exposed to rain or moisture.

Above all

- Never let anyone, especially children, push anything into holes, slots or any other opening in the case-this could result in a fatal electric shock.
- Never guess or take chances with electrical equipment of any kind.
- It is better to be safe than sorry!

CLEANING THE UNIT

WARNING

AS WITH ALL MAINS POWERED UNITS, ALWAYS DISCONNECT THE MAINS PLUG FROM ITS SOCKET, BEFORE ATTEMPTING TO CLEAN THE UNIT. ONLY USE A SOFT CLOTH MOISTENED WITH WARM SOAPY WATER, DO NOT USE HARSH ABRASIVES OR CHEMICALS TO CLEAN WITH AS THIS WILL DAMAGE THE UNIT GRAPHICS OR FINISHING.

TROUBLE SHOOTING

SYMPTOM	REMEDY
TAPE	
1. No Audio from tape.	Tape function has not been selected, Volume has not been set.
2. Poor Voice sound from tape.	Tape heads are dirty, clean heads with a proprietary tape head cleaner.
3. No Audio from microphones.	Ensure microphone switch is ON and adjust mic volume.
4. Poor voice recording from microphone.	Position microphone closer to your mouth or speaking louder. Increase mic volume level.
5. Howlback whistling when using microphone.	Stand to the side or behind the main unit when using the microphone, reduce mic volume control and/or reduce the master volume control.
CD	
Will not play disc	Check that disc is clean and free from finger prints/scartches. Try another disc. Disc has been loaded upside down.
CDG	
No picture on TV screen	Check cable/plug connection as detailed in this manual. See Connecting Up. The CD+G System. Ensure CDG disc has been used and that the disc is playing (audio should be heard through the speakers). Normal audio CD does not contain graphics. Check that A/V channel has been selected on the TV. If the VCR is being used to view the graphics on the TV check that the Aux/AV channel has been selected on the VCR and TV.

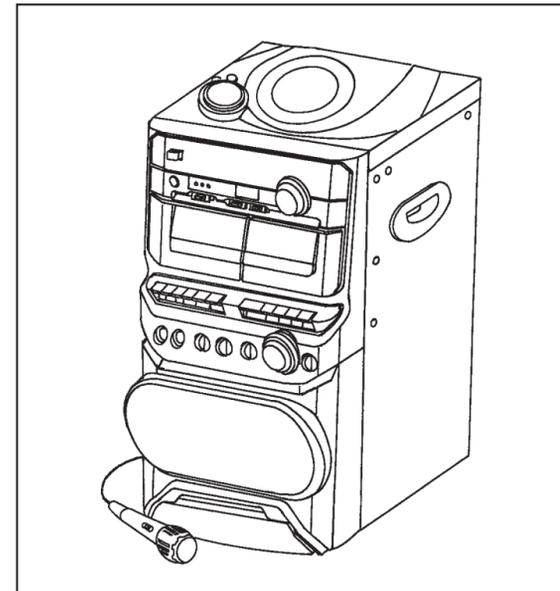
Note: The auto vocal cut circuitry will only operate on special karaoke tapes. Vocal cut will not operate on ordinary pre-recorded tapes.

Goodmans

XB-20 CDG

Karaoke System

**CDG TV GRAPHICS SYSTEM
 CASSETTE - VIDEO READY**



CONTENTS

This product includes the following accessories
 1 x Microphone
 1 x Demo Disc
 1 x Scart to scart cable

Before operating this unit, please read this Owners Manual carefully

GOODMANS Product Information Helpline : (02392) 391100

IMPORTANT NOTES

Hearing is very important to you and to us so please take care when operating this equipment. It is strongly recommended that you follow the listed guidelines in order to prevent possible damage or loss of hearing:

ESTABLISH A SAFE SOUND LEVEL

- Over time your hearing will adapt to continuous loud sounds and will give the impression that the volume has in fact been reduced. What seems normal to you may in fact be harmful. To guard against this **BEFORE YOUR HEARING ADAPTS** set the volume at a low level.
- Slowly increase the level until you can hear comfortably and clearly and without distortion.
- Damage to your hearing is accumulative and is irreversible.
- Any ringing or discomfort in the ears indicates that the volume is too loud.
- Remember listening for prolonged period of time at high volume levels will harm your hearing.

Once you have established a comfortable listening level, DO NOT INCREASE THE SOUND LEVEL FURTHER.

The following list of typical sound levels may assist you in recognising just how loud you have set the volume level.

DECIBEL Level (dB)	Example
30dB	Quiet library, soft whisper.
40	Living room, fridge, freezer, bedroom away from traffic.
50	Normal conversation, quiet office, light traffic.
60	Electric sewing machine.
70	Vacuum cleaner, hair dryer, noisy restaurant.

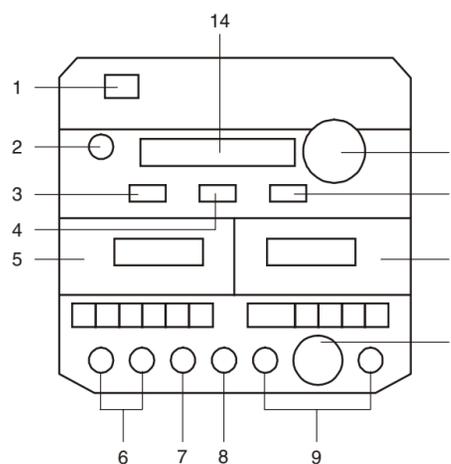
THE FOLLOWING NOISE CAN BE HARMFUL UNDER CONSTANT EXPOSURE

80dB	Average city traffic, alarm clock buzzer at 2 feet, food mixer.
90dB	Motorcycle, heavy goods vehicle, petrol lawn mower.
100	Pneumatic drill, chain saw, garbage truck, discotheque / night-club.
120	Rock band concert, thunderclap, fast train passing by.

PERMANENT LOSS OF HEARING

140	THRESHOLD OF PAIN Gunshot 2 feet away, jet plane taking off.
180	Rocket Launching pad.

FRONT PANEL



FRONT PANEL

1. Power ON/OFF switch
2. Dynamic Bass Boost Switch (DBBS)
3. Tape High/Normal speed dubbing switch
4. Auto Vocal ON/OFF switch
5. Tape A record/playback cassette deck
6. MIC 1, 2 input socket
7. ECHO Control knob
8. MIC MIXING control knob
9. MIC 1, 2 Volume Control knobs
10. Master Volume knob
11. Tape B playback cassette deck
12. Function selection switch (CDG-TAPE-AUX)
13. Tone Control
14. LED Display (Function Indicators + Track No)

4. To add ambience to your voice adjust the ECHO control as required.
5. The voice may be recorded on tape simply press the record/play key of tape A.

NOTE: Prevent howling/whistle occurring ensure that the XB-20 is facing away from the person using the microphone.

SINGING TO MUSIC

The microphone can operate together with the TAPE, AUX, CD functions.

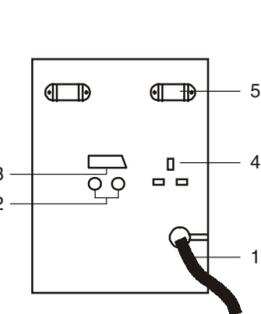
1. Select the desired function and operate that function according to the instructions given.
2. Insert the supplied microphone into either MIC input socket.
3. Move the microphone ON/OFF switch to the ON position and operate the microphone according to the instructions given in the PA section.
4. Use the auto vocal switch to cut the vocals from the music being played.

Special KARAOKE cassette may be purchased from many hi-fi retail outlets or record shops. This type of karaoke tape contains popular music/instrumentals recorded on one side of the tape and predominantly vocals on the other side of the tape. With these it is possible to sing along (lyric are supplied with the cassettes) to the music or vocal recordings. The priority of vocal recorded on tape verses music being played through the XB-20 speaker can be altered to suit your own requirements by adjusting the MIC MIX control to music or vocals.

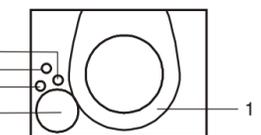
PROTECTING YOUR RECORDINGS

All non pre-recorded cassette tapes can be made record proof. On the back edge of the cassette can be found two square tabs, if a recording is to be protected from accidental erasure, remove the corresponding tab applicable to that side of the tape as shown in the diagram. Use a small screwdriver, nail file or similar implement to break the tab.

BACK COVER



CD TOP PANEL



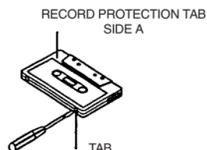
BACK PANEL

1. AC power cord
2. AUX-OUT socket
3. Scart socket
4. BS plug storage slot
5. MIC hook

CD TOP PANEL

1. CD Door OPEN/CLOSE
2. CD Operation button (PLAY/PAUSE/STOP/SKIP)
3. PROGRAM button
4. REPEAT button
5. Random button + LED

Once the tab has been removed, recording on that particular side of the tape will be prevented, the tape mechanism will detect that the tab is missing and will prevent the record key from being pressed.



To record a tape that has its tabs removed, place a piece of sticky tape over the holes, this will allow recordings to take place.

Recommended Cassette Tapes

In order to obtain optimum performance with the built-in cassette tape deck, it is essential to use only high quality cassette tapes. The bias and equalization of this tape deck is adjusted to yield excellent results if used with brand name tapes. Use C-30, C-60 and C-90 cassette tapes only. We do not recommend the C-120 cassettes because they can be subject to mechanical instability and proper, constant tape tension cannot be controlled.

Checking the Cassette (Slack Tape)

Make sure that the cassette tape has no slack prior to inserting it into the cassette compartment. Use a pencil as shown to take up slack on one of the reels.



MAINTENANCE TAPE MECHANISM

CLEANING THE TAPE MECHANISM

As the tape runs through the tape mechanism, magnetic powder and dust naturally accumulate on the tape deck heads, capstans and pinch roller. When they become too dirty:

INTRODUCTION

The XB-20 operates on a power supply of 230V 50Hz AC

The XB-20 contains the following facilities:

- * Digital audio CD and Graphic player
- * A twin cassette player with high speed dubbing, one touch record and sequential playback capability.
- * 2 microphone input sockets (1 mic is supplied)
- * PA (Public Address) facility
- * Talk or sing along to music (demo disc supplied)
- * Separate variable microphone volume and system volume controls
- * Microphone ECHO control, mic mixing facility, DBBS and switchable auto vocal cut control.
- * The AUX IN - AUX OUT are stereo sources but are played in mono through the double speakers located on the XB-20

NOTE: Whilst the AUXILIARY input sockets may be used with a variety of external units already described in the manual. The use with a bass guitar is NOT recommended, if used damage may occur to the in built speaker.

INSTALLATION

Carefully remove the unit from its packaging and place it on a firm flat surface. Avoid installation near heaters or in area subject to direct sunlight. Ensure good air circulation. Protect the unit from dust, moisture and water. Avoid strong magnetic fields, eg near TVs or speakers. Insert the mains plug into a 230 Volt 50 Hz AC mains supply socket.

NOTE: Save the carton and packing material, they will be useful if you ever have to transport the unit.

- * Sound quality deteriorates
- * The output sound level drops
- * The previous recording is not completely erased
- * Recording is not performed satisfactory
- * The Cassette tape may stick to the pinch roller and cause damages to both the tape and player itself.

To ensure the continued high performance of your unit, periodically clean the heads and pinch roller to prevent the accumulation of dust or tape oxide deposits, we recommended to use a special tape cleaning cassette that enables a completed and simplified cleaning operation. Such tape cleaning cassette is available at most Hi-Fi retail outlets or record shops.

OPERATING THE CD

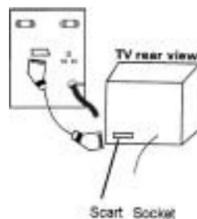
CONNECTING UP THE CD+G SYSTEM

The CD+G (CD music+Graphics) player will allow standard audio CD and CDG disc to be played through the system. When special Karaoke CDG disc are used, such as the one provided words of the song will appear on your TV screen.

CONNECTING TO THE TV

Connect one end of the supplied scart cable to your TV and the other end to the scart jack at the rear of the XB-20. Make sure you select "AV" channel on your TV.

Connect scart lead to TV and XB-20 and select AV on your TV.



CD OR CD+G PLAY

- 1 Set function switch to the CDG.
2. Open CD door (Push OPEN/CLOSE marking on CD door).

AUX-IN AND AUX-OUT

SCART SOCKET and CABLE

This unit is supplied with a scart cable. Connect this scart cable to your TV and you can obtain the audio of the TV programme on the XB-20 if it is switched ON and function set to AUX.

AUXILIARY AUDIO OUTPUT (AUX-OUT)

There is a pair of RCA sockets at the rear of the unit marked AUX OUT L/R. This allows the audio signal generated by the XB to be connected to a separate audio amplifier for further amplification. Output level 1 volt max.

OPERATING THE TAPE SECTION

Both deck A and deck B may be used for playing back tapes. Only Deck A can be used for recording of tapes:

Both tape mechanisms employ auto stop facilities. This means that the tape and mechanism will automatically stop only when playing or recording tapes.

NOTE: When fast forward or rewinding a tape press the STOP/EJECT key when the tape has reached its end.

PLAYING CASSETTE TAPES

Both DECK A and DECK B mechanisms may be used for playing back prerecorded cassettes.

1. Set the function control switch to TAPE position.
2. Press the POWER switch to turn on the unit.
3. Press the STOP/EJECT key on either of the cassette decks.
4. Insert a Pre-recorded cassette with the exposed tape facing downward and the full spool to the left.
5. Gently push the cassette door closed.
6. Press the PLAY key to start the tape playing.
7. Adjust the VOLUME control as desired and make sure that MIX control is in the central position.

3. Insert CD disc with silver face down (Label sticker upward).
4. Close CD door.
5. The display will show total number of tracks.
6. Press Play/Pause button to start play. A green Play/Pause LED will illuminate.
7. Press Play/Pause button to stop the CD play temporary and the Play LED indicator will flash. Press Play/Pause button a second time to resume normal play.
8. Adjust volume/DBBS controls as desired.
9. Press Skip Up/Down to play other tracks on the disc.
10. Press the Repeat button once to repeat one track, a red Repeat LED indicator will flash. Press again to repeat all tracks on the disc, the LED indicator will illuminate on. Press a third time to cancel the repeat mode; the LED indicator will be off.

NOTE: When a CD Graphic discs is loaded, the words of the song will appear on TV screen when it is being played.

CD SYNCHRO RECORDING

1. Repeat steps 1 - 5 above.
2. Insert a blank tape in DECK A with full spool to the left.
3. Select the track that is going to be recorded by pressing skip up/down button.
4. Press the RECORD and PLAY key on deck A, the recording will commence from the beginning of that track.
5. When the track/song reaches its end, press STOP key on deck A to stop recording.

PROGRAMME PLAY

Up to 19 tracks can be programmed to play in any desired order. Programming can only be performed with a disc inserted and in the stop mode.

- 1 Press the Program button. Both Program LED indicator and track number "0" will flash.

8. The AUTO STOP mechanism will activate when the end of tape is reached. Playback may be stopped at any time by pressing the STOP/EJECT key or the tape may be temporarily stopped by pressing the PAUSE key. Release the PAUSE key to continue play. **NOTE:** Mechanism will not activate when using fast forward or rewind function, please ensure you press the STOP/EJECT key.
9. Press the F.FWD key to rapidly move the tape in a forward direction, press the STOP key and then the PLAY key to recommence tape play. Press the REWIND key to rapidly move the tape in the reverse direction. Press the STOP/EJECT key and then the PLAY key to recommence tape play.

SEQUENTIAL PLAYING OF TAPES

1. Insert a prerecorded tape into DECK A and DECK B ensuring that the full spool is on the left. Gently push the cassette door closed.
2. Press the PLAY key on deck B. Play will now start
3. Press the PAUSE key and then the PLAY key on deck A.
4. When the tape reaches its end in deck B, the tape in deck A will automatically start to play until it reaches its end then it will automatically stop.

RECORDING

Recordings are possible from tape to tape/microphone/CD and auxiliary inputs. Recording level is automatic as the tape utilizes an ALC (Automatic Level Control) circuitry and no adjustment is required.

1. Insert a tape suitable for recording into tape deck A.
2. Set the function switch to the desired source to be recorded. Operate that source according to its instructions.
3. Press the RECORD/PLAY keys of deck A. Recording of the selected source will commence until the STOP/PAUSE key is pressed or when the tape reaches its end.

2. Press the Skip Up/Down button to select the first track. The track number will flash during skip selection.
3. Press Program button to memorize the track and the display will show track number as "0" again and flashing.
4. Press skip up/down button again to select next track.
5. Repeat instructions 3 to 4 above to programme more tracks.
6. When you have completed storing the tracks, press the play button to start play back of programmed tracks.
7. The Program LED indicator will flash during programmed playback.

RANDOM PLAY

1. Repeat steps 1 - 5 same as CD play.
2. Press Random button to start random play. When random play is selected, a red LED indicator near the Random button will illuminate.
3. The unit will choose randomly a track to start play.
4. When all tracks on the disc has being played, the random play will stop.

COMPACT DISC HANDLING

1. Always use compact discs bearing the marks as shown :



2. Notes on handling discs



4. Adjustment of the volume controls during the recording will not affect the recording.

TAPE TO TAPE DUBBING

Allows duplication of tape recording.

1. Set function switch to tape.
2. Set dubbing switch at normal or high speed. High speed dubbing will be performed at approximately 1.5 times normal speed.
3. Insert a prerecorded tape in deck B and a blank tape in deck A.
4. Press the PAUSE and RECORD/PLAY keys of deck A.
5. Start the recording process by pressing the PLAY key of deck B.

NOTE: In high speed dubbing an audio chattering sound will be heard. Turn down the volume control level if listening to the recording is not desired.

COPYRIGHT NOTICE WARNING

Most Compact Disc, pre-recorded audio cassettes and radio broadcasts contain material which is subject to copyright. Generally speaking, it is illegal to record such material in any form whatsoever without the permission of the copyright owner. Any person who makes a recording without the consent of the copyright owner risk paying damages to the copyright owner and even criminal prosecution.

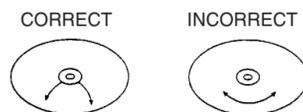
USING THE MICROPHONE

The microphone may be used in conjunction with all other sections of the XB-20

PUBLIC ADDRESS

1. Select AUX function to prevent other noise pickup.
2. Insert microphone into either of the microphone input sockets.
3. Adjust MIC 1 or MIC 2 volume level and master volume control as required.

- * When removing the disc from its casing, do not touch the reflective recorded surface.
- * Do not stick or write anything on the surface.
- * Do not bend the disc.
- 3. Storage
 - * Always keep the CD disc in its storage case.
 - * Do not expose the disc to direct sunlight, high temperatures, high humidity or dusty place.
- 4. Cleaning a disc.
 - * Should the disc become soiled wipe off dust, dirt and finger prints with a soft cloth. The disc should be cleaned from the centre to the edge



FROM THE CENTRE TO THE EDGE

- * Never use benzene, thinners, record leaver fluid or antistatic spray.

8 CM (3 3/16)" CD SINGLES" can be used (without using an adapter) in this unit.

Cleaning the lens

If the lens in the CD pick-up is dirty, dusty, etc. It could degrade the sound or prevent disc play. Use a proprietary cleaning disc available from most HIFI retailers.

