CYBERNET
A2 Image Two Main Amplifier

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Contents

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INSTRUCTION MANUAL

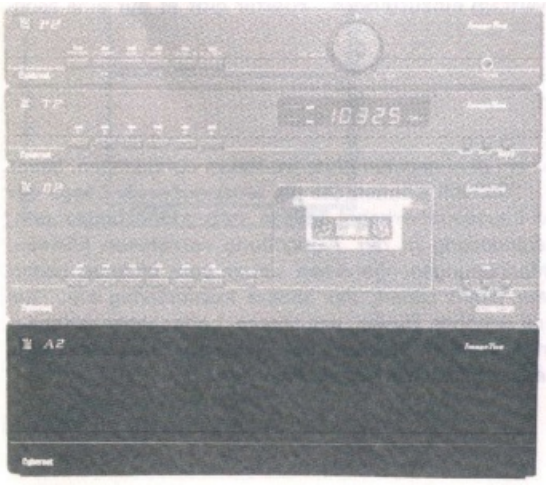
FEATURES

Cybernet Image Two is a unique, highly sophisticated stereophonic high-fidelity system that combines a highly sensitive FM tuner T2, a high-quality separate preamplifier P2, a front-loader logic-controlled cassette deck C2, and a main-amplifier A2 The A2 is specifically designed to conform with other Image Two components into a

complete stereo system. It delivers 2 x 16 dBW IHF audio power [or 19 dEW IHF in monaural BTL operation] and offers the following features:

- Direct-coupled OCL power amplifier stage
- Electronically-controlled power transistor protection
- Automatic shut-offint the absence of input signal for more than 2 minutes
- BTL monaural operation possible, delivering double output power (+3 dBN)
- Contains the power supply for all other Image Two components.

To prevent fire or shock hazards, do not expose this appliance to rain or moisture.



INSTALLATION

Installation of the A2 and other Image Two components is not complicated. However, the following guidelines must be followed for satisfactory performance and ease of system operation:

- Do not attempt to remove the cabinet cover – there are no user-serviceable parts inside the unit
- The equipment must not be exposed to excessive dust, moisture, or direct heat sources
- If mounted where ventilation may be restricted, care must be taken to provide a minimum opening of approximately 320 square-cm for free air movement in and out of the cabinet to the room.

CONNECTIONS

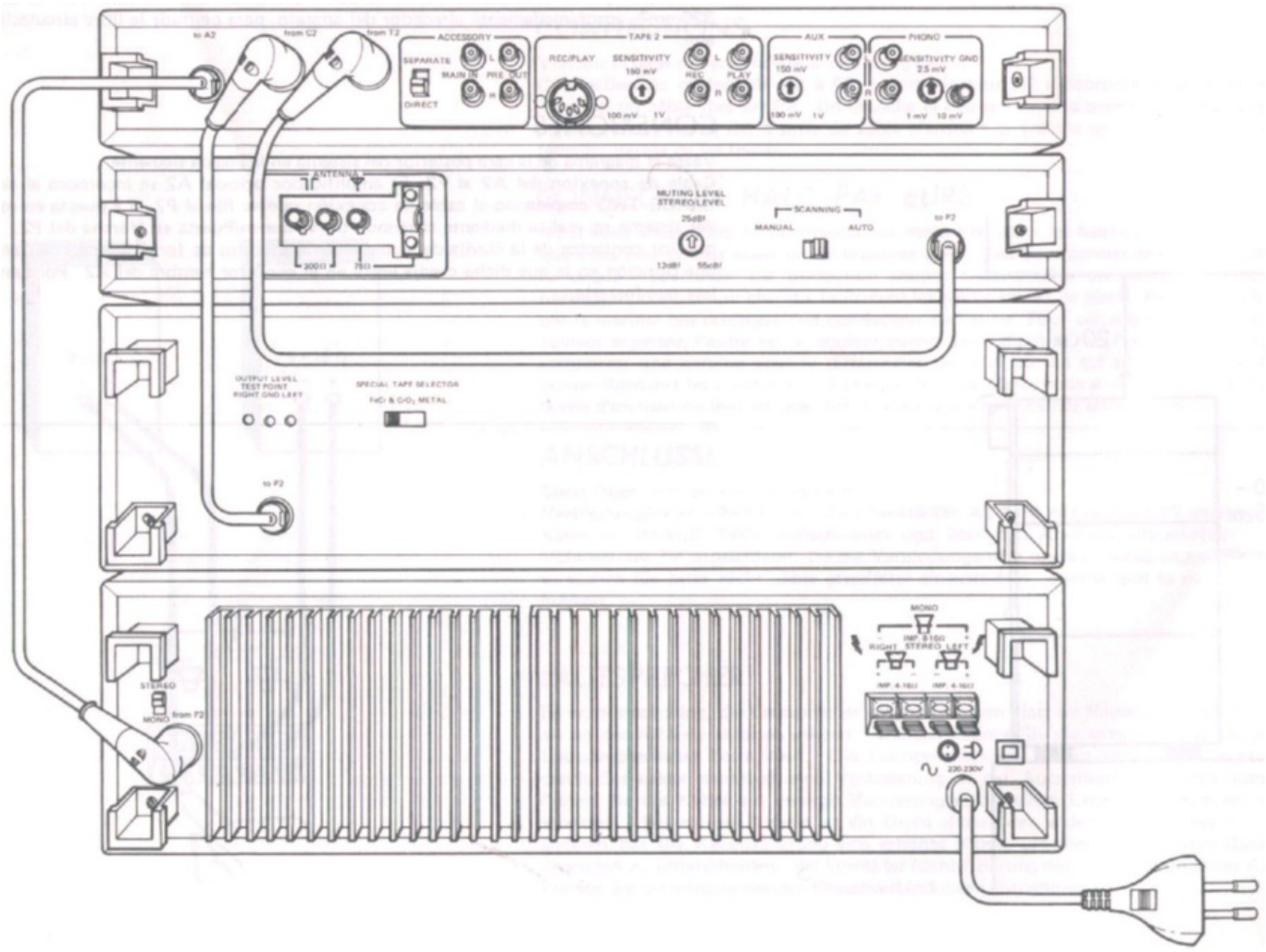
See the pictorial diagram of the stem rear view, page 6. Connecting Cable/A2 to P2:

- The main amplifier A2 is incorporated into the Image Two system by using the connecting cable fixed at the P2.
- The system power is switched on with the Off/Volume control on P2.
- Since the cable set plug pins are unevenly spaced, do not force them into the female connector.
- It will go in only one way.

LOUDSPEAKERS

- We suggest you first position the speakers in their selected locations in the room before connecting them to the A2.
- This will enable you to cut an adequate length of speaker cable for connection to each speaker.

- Make each cable a meter longer than necessary to permit the changing of speaker locations slightly.
- Check the cable for some sort of marking that distinguishes one conductor from another. In some cables, one wire is silver-colored, the other cop- per-colored, etc.
- In other cases, the insulation over one wire may have a raised rib or line on it to differentiate this conductor from the adjacent one. By properly identifying the conductors at each end of a cable, you will be able to make sure that each terminal on a speaker is connected to the proper terminal on the amplifier.
- This will ensure the correct phasing of the speakers in the system, providing optimum imaging and the best bass response. Normal Speaker Connection: Prepare cable lead; Remove approximately 10 mm of insulation from its end and twist the bare strands of exposed wire together.
- The illustration above shows the method used to connect a set of speakers (2 speakers for stereo) to the amplifier. To connect a lead [prepared as stated], press the lever on the terminal and insert the bared section of the lead into the opening as shown. When the lever is released, the lead will be held securely.
- Be sure to observe correct polarity: the positive [+] terminal on the speaker must be connected to the [+] amplifier terminal [red], and the negative terminal on the speaker must be connected to the [-] amplifier terminal [black] in each case.



Single Speaker [Mono BTL Operation] Connection:

- On the amplifier A2, single speaker termination for BTL operation is possible.
- Special care must be taken to ensure proper termination since the method used to connect a single speaker differs from the normal prescribed manner.

- Prepare cable lead ends as prescribed.
- Be sure to connect the positive [+] terminal on the speaker to the right-end [+] red amplifier terminal and the negative [-] terminal on the speaker to the left end [+] red amplifier terminal.
- Two center terminals are not used for single-speaker connection.

Recommendation for Wires Used:
The following chart will help determine what gauge of speaker wire to use:

Distance	Speaker Impedance		
	4 Ohm	8 Ohm	16 Ohm
2m	1.5 mm^2	0.75 mm^2	0.5 mm^2
5m	2.5 mm^2	1.5 mm^2	0.75 mm^2
10m	2.5 mm^2	1.5 mm^2	0.75 mm^2
25m	4 mm^2	2.5 mm^2	1.5 mm^2
50m	6 mm^2	4 mm^2	2.5 mm^2

Impedance of Speakers Used:

- The following table shows the minimum speaker impedance that may be used when selecting one single or a set [two speakers] of speakers.
- In no case does the impedance fall below 4 Ohms for normal stereo operation or 8 Ohms for monaural BTL operation.

Speakers Selected	Acceptable Impedance Range
Single speaker [For BTL mono operation]	8 — 16 Ohm
Two speakers [For normal stereo]	4 — 16 Ohm

MONAURAL BTL OPERATION

- As stated previously, on amplifier A2, the selection of BTL type (balanced, transformerless operation is possible, providing two times higher output power than normal stereo operation into one single speaker.
- To activate this type of amplifier operation, review the esectionunder Single Speaker Connection in the Loudspeakers section first, and simply put the Stereo-Mono switch on the rear panel in the Mono position.
- Do not switch over the Stereo- Mono switch while the unit’s power is on.

TROUBLESHOOTING GUIDE
The following guide is intended as an aid in correcting problems encountered when setting up the stereo system. Although the suggested remedy might seem quite elementary, it may be sufficient to make corrections without returning the unit to your dealer.

Problem

- **The amplifier is inoperative when power is switched on.** Suggested Remedy: Check if the ower cord is properly connected to the powered outlet having 220 Volts AC (#10%).

- **The indicator lights up, but no output of any mode of operation.** Check speaker cables for loose or shorted connections.
- **No output one channel**. Exchange speaker cables to determine if the problem is in the speaker or cables.
- **Only monaural sound output from speakers with excessive loudness.** Check the rear panel Mono-Stereo switch for setting. Stereo

TECHNICAL SPECIFICATIONS

Power Output

DIN	MONO operation: (BTL)	128 Watt	220V AC at 1 kHz 8 Ohm
	STEREO operation :	2 x 64 Watt	over 4 ohm load at 0.05% THD
IHF	MONO operation: (BTL)	19 dBW	220V AC ±1V both channels driven
	STEREO operation:	2 x 16 dBW	20 Hz to 20000 Hz For minimum THD over 8 ohm load.
Total Harmonic Distortion (THD)		0.05%	IHF for rated output
Intermodulation Distortion (IMD)		0.05%	IHF for rated output
Signal-to-Noise Ratio (S/N)		100 dB	ref. nom. power output
Bandwidth		10 – 80000 Hz	at −3 dB
Frequency Response		±0.5 dB	20 to 20000 Hz
Speaker Impedance			
Mono:		8 to 16 Ohm	
Stereo:		4 to 16 Ohm	
Speaker Power Handling Capacity		25 to 100 Watt	
AC Power Requirements		220 Volt 50 Hz	±10% internal switchable to 117V AC
Time Constant of the Auto-Switch-Off Circuit		2 min.	in abcense of input signal
Risetime		2.8 µS	
Power Consumption			
Maximum:		350 Watt	
Dimensions			
Width:		400 mm	
Height:		118 mm	
Depth		225 mm	
		255 mm	with feet
Weight		7.3 kg	

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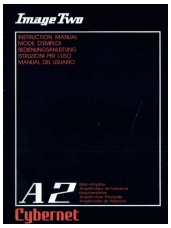
Documents / Resources

	Cybernet A2 Image Two Main Amplifier [pdf] Instruction Manual A2 Image Two Main Amplifier, A2, Image Two Main Amplifier, Two Main Amplifier, Main Amplifier

References

- User Manual