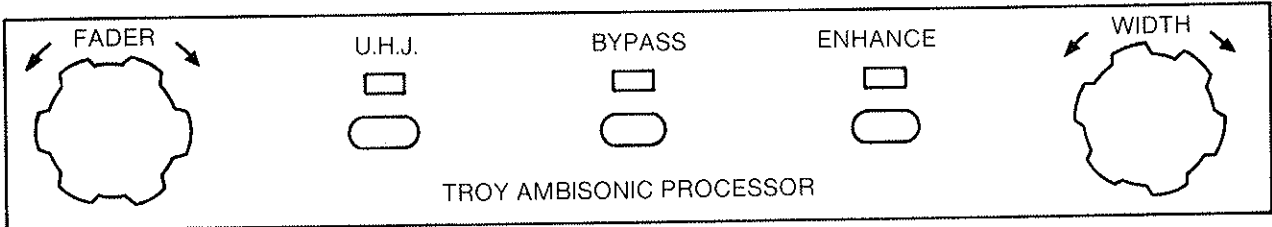


# TROY

## AMBISONIC UHJ SURROUND SOUND PROCESSOR TA-110P



### OWNER'S MANUAL

*Thank you for purchasing this TROY  
AMBISONIC product. For optimum results,  
be sure to read this manual.*

## **THE TROY AMBISONIC PROCESSOR TA-110P**

The TROY AMBISONIC UHJ surround sound processor TA-110P and TA-100W 4 x 25 Watts power amplifier form the basis of a surround sound system capable of creating around the listener a realistic illusion of the soundfield that existed at the original recording.

An all British development, the TROY AMBISONIC processor TA-110P can be connected to any car stereo signal source with a basic integrated amplifier or any car stereo with a suitable pre-amp output.

The TROY AMBISONIC processor is externally energised by switching on the car stereo unit when used with the TROY TA-100W 4 x 25 Watts power amplifier.

*N.B. Before connecting the TROY AMBISONIC processor to your car stereo be sure you have the correct interface lead, as electrical malfunction may otherwise be caused. Contact your TROY AMBISONIC stockist for details.*

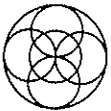
★ Whenever possible, we recommend installation be undertaken by a specialist car stereo installer. In the event of a malfunction, contact your supplier.

## **AMBISONIC UHJ SURROUND SOUND**

Stereo covers only a comparatively narrow front sector and the aural illusion works progressively less well as the speakers are placed further apart. If the speakers are behind, it is discovered that the stereo effect persists but not as well as when the speakers are placed in front. If the listener makes a half turn to left or right then the illusion works very poorly indeed. An attempt to reproduce sounds from any direction by extending ordinary stereo techniques from the front to all sides using four loudspeakers is not ideal because the effect created by the phantom inter-speaker image is then poor. There is a further difficulty. If a sound source is circling the listener, corresponding electrical signals must be fed at each instant to only one pair of speakers and no practicable directional microphone can perform this switching between pairs of speakers accurately.

Thus it is impossible to realise 'discrete quadrophony' from any natural sound field, and the medium is confined to pan-potted multi track material which would restrict artistic possibilities.

A system of surround sound which is able to reproduce the directionality of indirect reverberant sound, as well as direct sources, is termed "AMBISONIC".



AMBISONIC UHJ IS A STEREO COMPATIBLE SURROUND SOUND SYSTEM. PATENTS APPLY.



## INSTALLATION

- ★ Always use screws, nuts and washers supplied. They have been provided to facilitate safe and secure installation.
- ★ The supplied mounting bracket allows flexibility of positioning. However care must be taken to avoid locations which could impair driving safety.
- ★ Secure the mounting bracket in position. Be sure to check that there is sufficient clearance at the rear of the processor for the connecting cables to be inserted.
- ★ The mounting bracket allows the processor to be mounted horizontally or at an angle. Using only the screws provided, secure the processor into the mounting bracket as desired.

## ELECTRICAL CONNECTION

- ★ Before attempting any electrical connections, disconnect the negative terminal of the battery.
- ★ Connect the required interface lead from your car stereo unit to the TA-110P processor (refer to "interface options").
- ★ Connect the 8 pin DIN - DIN lead from the processor output to your TROY amplifier TA-100W.
- ★ Connect the black lead supplied in the accessory pack between the earthing point on the rear of the TA-110P, using the screw provided, and a suitable earth on the vehicle.

## OPERATING INSTRUCTIONS

To ensure total compatibility with all software available, including compact discs and cassettes that have been encoded with Ambisonic UHJ surround sound information, the TA-110P AMBISONIC processor has three modes of operation and two controls governing overall sound reproduction.

- ★ **ENHANCE** The primary position for the near future as it deals with the enhancement of conventional stereo material into AMBISONIC surround sound. When activated, the processor automatically selects the ENHANCE mode.
- ★ **U.H.J.** Select when listening to UHJ encoded FM broadcasts or UHJ encoded cassette tape and compact disc.
- ★ **BYPASS** The BYPASS position can be selected when receiving FM broadcasts in weak signal areas, and offers an effective means of demonstration.
- ★ **FADER** The rotary FADER control adjusts front to rear speaker balance, and should be initially set with the processor in the BYPASS mode.
- ★ **WIDTH** The WIDTH control governs the "sound stage" when in the ENHANCE mode, creating the illusion of being anywhere between the front and rear seats in an auditorium. At the rear of a large auditorium, front stereo image is less defined (Width control fully counter-clockwise). As you approach the "stage" by turning the control clockwise, the stereo image widens. Set this control to your preferred listening position.

## INTERFACE OPTIONS

According to the output level of your car stereo unit, an interface lead will be required for connection to the TA-110P AMBISONIC processor.

The TROY TA-100W 4 x 25 Watts power amplifier is supplied complete with a "regular" interface lead, which allows connection of the TA-110P AMBISONIC processor to a car stereo unit having a power output of around 6 Watts per channel.

For connection to component car stereo systems (line level), high power car stereo systems or a car stereo employing BPTL type output circuit, contact your TROY AMBISONIC stockist for details.

## CONNECTION USING "REGULAR" INTERFACE LEAD

The "regular" interface lead supplied with the TA-100W power amplifier allows connection of a "regular" output car stereo unit to either the TA-110P AMBISONIC processor or, where the amplifier is used as a power booster only, to the TA-15F fader control. *It should not be used where the car stereo employs BPTL type output circuit.*

There are four colour coded wires at one end of the interface lead.

Connect as follows:

- ★ **GREEN**      Connect to LEFT positive speaker lead of car stereo
- ★ **GREY**        Connect to RIGHT positive speaker lead of car stereo
- ★ **BLACK**        Connect to negative speaker leads of car stereo
- ★ **RED**          Disconnect the +12 volt lead of car stereo from its power supply and connect it to this red lead. Power to the AMBISONIC processor and car stereo unit is supplied via the TA-100W amplifier.

Connect the 8 pin DIN plug to the INPUT of your TROY AMBISONIC processor TA-110P.

## TYPICAL SPECIFICATION TA-110P

Distortion (THD)	:	0.1% (Wtd.)
Signal to Noise Ratio	:	65dB
Current consumption	:	100mA
Maximum output level	:	500mV @ 1KHz
Input impedance	:	17K ohms
Output impedance	:	1.5K ohms
Gain	:	0dB (unity)
Cabinet dimensions (H x W x D)	:	25 x 150 x 141 mm

Power source is 14.4 volts D.C. (11 to 16 allowable) and country of origin is the UNITED KINGDOM.

TRADE DESCRIPTION ACT: Products offered for sale may differ from those described due to later production changes in specification, components or place of manufacture and are therefore not to be treated as representations as to the current availability of products as described, or as to products actually offered for sale. In the above Wtd. refers to a 30KHz filter.

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