

# HYDRA II SUPPLEMENTARY INSTRUCTIONS

The Hydra II is essentially the same as a Tucana II in terms of its topology, however, Hydra II is capable of being configured in a variety of ways to best integrate with your system and to allow an upgrade path without having to trade in your existing equipment. There are 3 small toggle switches located on the rear panel, which are used to configure the Hydra II as required.

**It is important to note that the positions of these switches are only “read” during power up and are not active during operation.**

This is a deliberate safety feature to protect your system from accidental mode changes during use. In addition the Hydra II can be used in “Bridged Mode” which changes the amplifiers configuration in to that of a high powered monoblock. Please see the “Bridged Mode” section for more information.

Switch one, on the left, has three settings

- a. LIPS VARIABLE (UP). This sets the amplifier to respond to data such as volume, balance, input selection, power cycling etc, sent by an external LIPS control master such as a Leema Pyxis or a Leema source equipped with LIPS capability. (see 2 below)
- b. FIXED GAIN (CENTRE). Disables the LIPS volume adjustment and other LIPS based commands. Power on/off however is retained  
The volume is set to a pre-set level much like a conventional power amplifier. (see 1 below)
- c. SURROUND (DOWN). This enables the Hydra to be used in a Leema home cinema system for surround channel use.

Switch two, in the centre has two settings

- a. STEREO (UP). This sets the gain structure of the amplifier to match that of it's partnered equipment, for example a Tucana II which is unbridged. This is the normal mode and ensures that volume changes track correctly between units if using LIPS
- b. MONO (DOWN) This reduces the gain of the Hydra II by 6dB. This is to be selected if mixing bridged Hydras with unbridged amplification from the Leema range, using LIPS to control the system. (see “Bridged Mode” section for more information).

Switch Three, on the right has three settings

- a. TWO CHANNEL (UP). This sets the Amplifier to respond to stereo LIPS data specifically “balance” commands sent from a LIPS source such as a Pyxis pre amplifier.
- b. LEFT (CENTRE). Only left hand LIPS data commands will be acknowledged in this mode in a LIPS controlled system. (see 3 and 4 below for more information).
- c. RIGHT (DOWN). As above but for right hand data.

### Configuration examples in unbridged mode. 1 and 2 are the most common

1. Normal fixed gain stereo power amplifier. For use with a conventional pre-amplifier, or a Leema Pyxis set to variable mode, such that the volume is regulated within the pre amplifier. The Hydra II drives the left and right loudspeakers. Also for use when Bi amplifying a Tucana II.



2. LIPS variable mode. As above but for use with a Leema Pyxis pre amplifier or source which outputs volume data via the LIPS connection. In this mode the volume level is regulated in the Hydra II maintaining a high level in the interconnects thereby ensuring the optimum signal to noise ratio in the cable.



3. LIPS Right. This configures the Hydra II to respond to Right hand balance control data and volume data, sent from a Leema Pyxis or any other Leema source with balance capability. The Hydra II could be placed close to or behind the right hand speaker, with one half of the amplifier driving the bass end and the other half driving the top end. This gives the advantages of bi-amplifying and maintains optimum signal to noise in the interconnects,

It also allows the Hydra II to be conveniently located away from a central position.

If using an active two way crossover in your system, use one half of the Hydra II for bass and the other half for Treble, which in this example, is driving only the Right hand loudspeaker.



4. LIPS left. As above but with the left channel data set.
5. The Hydra II could even be used to bi amplify or even tri amplify a Leema Altair monoblock reference amplifier system. The Altairs would be used to drive the bass end of each speaker with a single Hydra II, in stereo lips variable mode, driving the top end of both speakers, presuming the speakers have only dual binding posts. If the speakers have triple binding posts then two Hydra II could be employed, one for each loudspeaker. One channel of the Hydra could drive the midrange and the other could drive the tweeter. The LIPS mode should be set to left or right as appropriate if using LIPS control, or Fixed gain if controlling volume and balance from a conventional preamplifier.
6. Surround mode. This should be selected if the Hydra II is being used as part of a Leema home cinema system and is performing surround duties. It allows the amplifier to be addressed specifically with surround only LIPS data.

## 7. BRIDGED MODE

The Hydra II can also be used in “Bridged mode” by setting a push switch accessed through a hole in the rear panel, shown on the left below. Changing the state of the Normal/Bridged switch **MUST ONLY BE DONE WITH THE UNIT POWERED OFF AND DISCONNECTED FROM THE MAINS**. Failure to do so may result in damage to the amplifier and loudspeakers



Selecting Bridged mode turns the Hydra II in to a high powered monoblock amplifier, capable of very high output. If using a system consisting of both bridged and unbridged amplifiers, the centre LIPS switch should be set to mono to reduce the gain by 6db which equalises the volume structure across the system. **Loudspeakers with a minimum impedance of less than four ohms must not be used with a bridged Hydra II.**

The right hand lips switch should be set to left or right as appropriate.

In bridged mode only the left inputs, illustrated above, are active. This applies to both left and right amplifiers if used as a bridged monoblock pair for stereo. The two **RED** loudspeaker terminals should be used to connect the loudspeaker. Polarity is clearly marked on the rear panel.

### Input connector selection

Please also note in the picture above (on the right) is another push switch accessed through a hole in the rear panel. This selects between either the unbalanced “RCA” type input connectors or the balanced “XLR” type connectors. Please select as appropriate.