

Unico 150



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A.R.I.A. Advanced Research In Audio srl Via E. Barone, 4 31030 Dosso di Casier –TV- italy Phone: +39 0422 633173 / Fax: +39 0422 633550 www.unisonresearch.com
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USER MANUAL

Congratulations on your purchase of a *Unison Research®* - *A.R.I.A. Advanced Research In Audio S.r.l.* audio component.

Every *Unison Research* product is the result of our extensive electronic design experience and of the deep knowledge of vacuum tube technology in audio applications that we have gained over the years. It also expresses our passion for building unique and valuable pieces of audio equipment in which traditional craftsmanship and advanced electronics join together in harmony.

Our products are built using the finest components and materials. Each one is carefully inspected at various stages of the production process and finally tested to satisfy our own high reliability and quality standards.

Please read and observe all warnings and instructions in this owner's manual and all those marked on the unit to get the best performance from your new *Unico 150* for many years to come.

1. UNPACKAGING

Please make sure that the packaging is undamaged and the product has not suffered from rough handling during transportation, otherwise we highly recommend you contact your Authorised Dealer for advice before proceeding with the set-up.

Carefully remove your amplifier and all the accessories from the carton. Inside the package you'll find:

- 1 *Unico150* amplifier
- 1 power supply cable
- 1 user manual
- 1 remote control handset

IMPORTANT! After unpacking please allow at least two hours before operating the device in order for it to adapt to the room temperature. This time is needed to prevent any possible damage caused by the condensation which can form during transportation. Please note, that condensation can form every time the amplifier is moved from a cold to a warm place.

Keep all packing materials: every time you will need to transport the *Unico 150*, its original purpose-designed carton will provide the safest packing.

2. INSTALLATION

The *Unico 150* should be positioned in a safe place on a plane surface.

Adequate clearance must be left above and around the device to guarantee correct ventilation.

We also suggest you leave enough free space behind your *150* to allow the connecting cables sufficient room to bend without crimping or strain, and we strongly recommend not placing the device directly onto a power amplifier or, in general, close to a heat source.

3. CONNECTION TO THE MAINS

The *Unico 150* is set at the factory to the appropriate mains voltage of the country it will be shipped to.

IMPORTANT! The voltage setting may not be changed by the user. Never connect the *Unico 150* to AC mains if the local voltage doesn't match the value indicated on the rear panel!

The mains fuse is located in the fuse-holder integrated in the IEC mains socket and inside the amplifier.

IMPORTANT! Always replace fuses with new ones of the same type and value.

4. OPERATION

SWITCHING ON AND WARM-UP

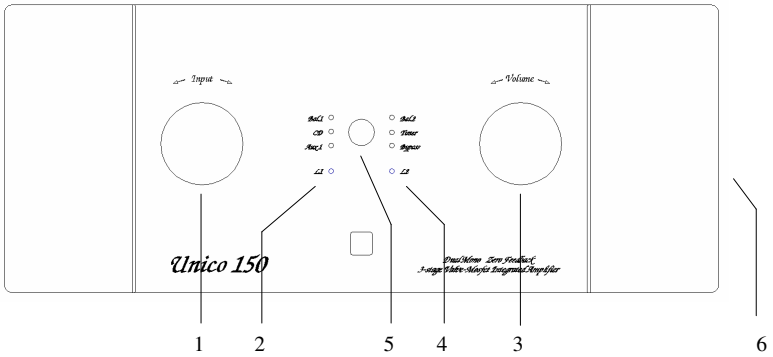
WARNING! Only switch on the *Unico 150* after all the connections have been made and checked.

Before switching on, ensure that the volume control is at zero (fully anti-clockwise), and allow it to remain in that position until the initial automatic start-up phase is complete.

Just after switching on, the *Unico 150* automatically starts a *warm-up* phase, and the front panel LEDs – between the input selection and volume knobs – blink. During this phase the output stages are disabled.

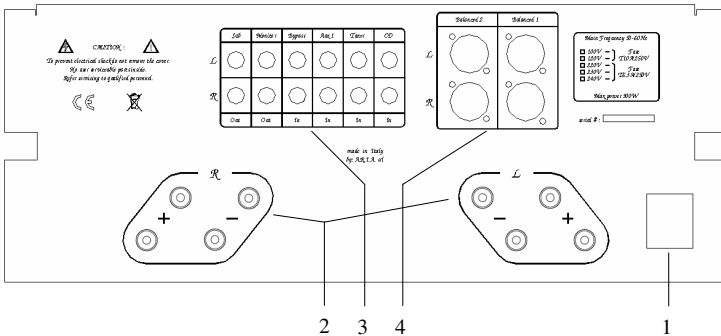
The working temperature for the tubes is reached less than 40 seconds after switching on, but best results will be obtained after at least 10 minutes of warm-up.

FRONT PANEL



- 1) SELECTOR KNOB
- 2) LED INPUT
- 3) VOLUME KNOB
- 4) LED VOLUME
- 5) IR RECEIVER
- 6) MAIN SWITCH (ON THE SIDE)

REAR PANEL



- 1) MAINS PLUG
- 2) SPEAKER OUTPUT TERMINALS
- 3) UNBALANCED LINE-LEVEL INPUT AND OUTPUT CONNECTORS
- 4) BALANCED LINE-LEVEL INPUT CONNECTORS

The *Unico150* has two LEDs that provide the user with important information about the operating condition of the amplifier.

INPUT LED AND VOLUME LED ON:

Indicates normal operation

INPUT LED AND VOLUME LED BLINKING (fast):

Indicates automatic start-up phase (approx 40 seconds)

INPUT LED AND VOLUME LED BLINKING (slow):

Indicates the unit is too hot and the thermal protection device has intervened, which means the power stage has been switched off.

When the internal temperature has returned to normal, the amplifier will switch on automatically and repeat the initial start-up phase. It is advisable to switch off the amplifier if the thermal protection device intervenes; this will speed up the return to normal operation.

INPUT LED ON AND VOLUME LED BLINKING:

Indicates that the amplifier is receiving a signal from the IR remote control (adjusting volume).

If there is a temporary loss of mains electricity (even for a very short duration) the amplifier will restart in automatic start-up mode.

REMOTE CONTROL

Unison Research® amplifiers are supplied with a high-quality infrared remote control.

Your remote control handset is fitted with a CR2032 battery – 3V (lithium battery).

IMPORTANT! The remote control supplied with the *Unico 150* only allows for volume attenuation by pressing the ‘Vol -’ and ‘Vol +’ buttons.

Line outputs:

sub out

This output provides an audio signal buffered from the selected input; the level of output is determined by the position of the volume knob — the output does not have a limited bandwidth.

monitor

This output provides an audio signal buffered from the selected Input; the output level is fixed.

Bypass input:

This input allows the Unico 150 to be used as a power amplifier. The audio signal from this connector goes directly to the mainboard, bypassing the input selector and volume control (i.e. the 'pre-amp' stage).

ATTENTION! :

Only select the bypass input when the amplifier is turned off and the source volume is set to minimum. Turn on the source first, and then the Unico 150.

Selecting the bypass input with the amplifier already turned on may produce noise on the outputs.

Only select the bypass input if it is actually connected to a source.

5. FUSES

Inside the *Unico 150* there are twelve fuses.:

$$F_{s1h}, F_{s2h} = 1AT / 250V$$

$$F_{saf1L}, F_{saf2L} = 1.5AT / 250V$$

$$F_{saf1R}, F_{saf2R} = 1.5AT / 250V$$

$$F_{ssrv1}, F_{ssrv2} = 400mAT / 250V$$

$$F_{sal1L}, F_{sal2L} = 10AT / 250V$$

$$F_{sal1R}, F_{sal2R} = 10AT / 250V$$

The value for the main fuses is:

10AT / 250V (mains voltage 100V/120V) or

6.3AT / 250V (mains voltage 220V/230V/240V).

These fuses are all 5 x 20mm glass fuses. If one of these fuses should blow we advise you to consult your Authorised Dealer or Service Centre for advice.

6. SAFETY AND MAINTENANCE

Never operate the device with either the bottom or top covers removed.

Do not open the amplifier!

There are no user serviceable parts inside. For technical assistance or product service please refer to your Authorised Dealer or to a Unison Research® authorised Service Centre.

Do not spill liquid into the amplifier!

If liquid should be accidentally spilled into the amplifier remove the mains plug from the wall socket immediately and seek assistance from an authorised Service Centre before attempting to operate it again.

Before inserting the mains plug into the wall socket, ensure that the switch on the amplifier is in the “OFF” position.

Valve replacement should be carried out using only valves of the same type and matched in pairs.

The *Unico 150* uses two ECC83 (12AX7) valves and two 6H30 valves. The amplifier has been designed to maximise the valves' life-span: in laboratory tests, 1500 hours of usable life have been exceeded.

IMPORTANT!

Before attempting valve replacement make sure that the amplifier is switched off and remove the mains power cord from the amplifier. If in doubt your Authorised Dealer or Service Centre will be able to assist with this operation.

Cleaning the *Unico 150*.

Cleaning has to be done after switching off the device and allowing the amplifier to cool down. Use a soft dry cloth. Do not use solvents or alcohol-based detergents. Do not rub hard on the screen-printed legends.

**Never operate the amplifier when covered!
Adequate ventilation is essential at all times!**

7. TECHNICAL SPECIFICATIONS

Output power:	150+150 W RMS at 8Ω 220+220 W RMS at 4Ω
Frequency response:	-1dB @ 12Hz & 45kHz, -3 dB @ 6Hz & 80 kHz
Input impedance:	24kΩ // 100pF
Input sensitivity:	860mV RMS
Input stage:	Pure A class, double triode totem pole ECC83
Driver stage:	Pure A class, double triode totem pole 6H30
Output stage:	Class AB thermostable, complementary Hexfet (4 pairs for channel)
Input:	6 line (3 unbalanced, 2 balanced, 1 “bypass” unbalanced)
Line Outputs:	1 tape, 1 sub (volume controlled)
Output connectors:	4 + 4 bi-wiring
Global Feedback factor:	0 dB
Local Feedback factor:	16 dB
THD:	< 0.15% @ 1kHz, 1 W < 0.25% @ 1kHz, 10 W < 0.35% @ 1kHz, 100 W < 0.9% da 20 a 20000 Hz, 150 W
Output resistance:	<0.4Ω, resistive on all audio frequencies
Power Consumption:	550 W (at max power on 8 ohm)
Dimensions:	43.5 cm x 18 cm x 44 cm
Net weight:	25 kg