

ACUHORN

newton

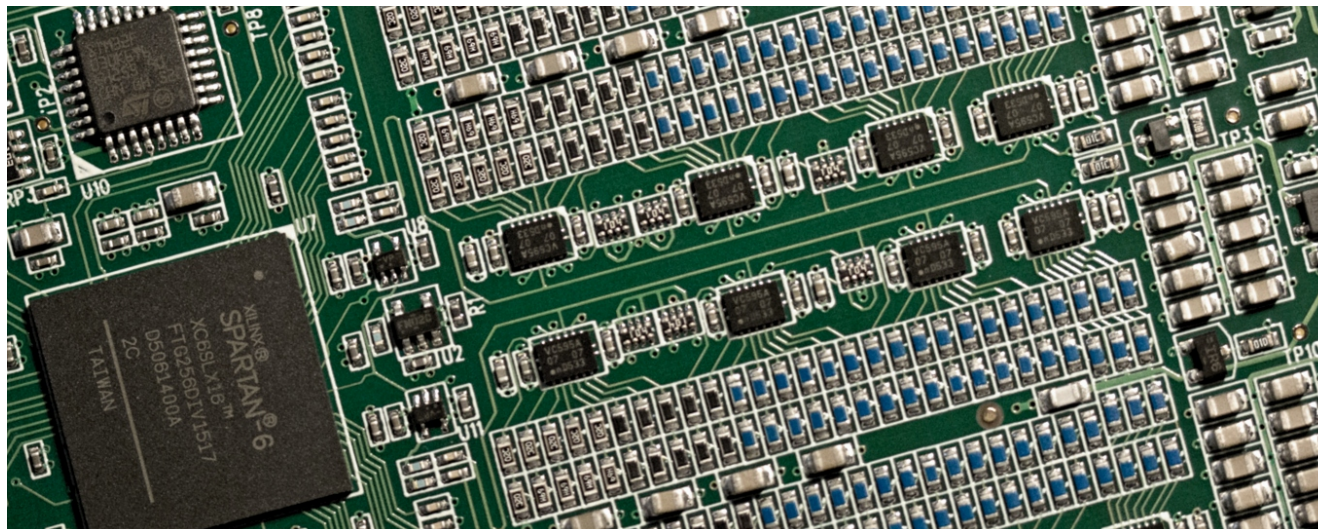
R2R H
ACUHORN

OWNER'S MANUAL
ENGLISH

R2R H

**AUDIOPHILE DAC & DSD CONVERTER
WITH CLASS-A MOSFET HEADPHONE AMPLIFIER
DISCRETE R-2R SIGN MAGNITUDE DAC DESIGN SOEKRIS
FPGA SPARTAN 6 TECHNOLOGY FIFO BUFFERING & RECLOCKING
POWER SUPPLY VICORPOWER**

ACUHORN R2R H WE BUILT THIS CITY ON SOLID STATE TPCA TOSHIBA SUPERFAST TRANSISTOR WITH AWARD STATEMENT IN HIGH FIDELITY WORKING SINGLE ENDED IN PURE CLASS-A AND DIGITAL TO ANALOG CONVERTER LOADED FPGA SPARTAN 6 DISCRETE R2R LADDER WITH AWARD BEST PRODUCT IN HIGH FIDELITY TO ENJOY THE SENSATIONS FOR DIRECT STREAM DIGITAL DSD MUSIC. COMPATIBLE WITH ALL TYPES OF MUSIC FILE FORMATS. FOR COMPUTER AUDIOPHILE BY USB AUDIO OR OTHER AUDIO DEVICE BY OPTIC SPDIF. STATE OF THE ART POWERED BY VICOR MODULES.



FEATURES

R2R LADDER 28 BIT RESOLUTION 384KHZ DAC BY SOEKRIS. LOADED FPGA SPARTAN 6 TECHNOLOGY OVERSAMPLING UP TO 3.072MHZ. FREQUENCY RANGE +0.1DB -1.0DB 20HZ - 20KHZ. TOTAL HARMONIC DISTORTION + NOISE <0.008%. CLOCK JITTER RMS 0.8 PS TYPICAL. RESISTORS PRECISION 28 BIT 0.02% RESISTORS. SIGNAL TO NOISE RATIO 20 KHZ BANDWIDTH 129 DB UNWEIGHTED. INPUT SPDIF UP TO 24 BIT 192 KHZ. INPUT I2S PCM UP TO 24 BIT 384 KHZ. INPUT I2S DSD UP TO DOP128 AND DSD256.

AUTOMATIC INPUT SELECTION OF USB AUDIO DEVICE OR OPTIC SPDIF. R-2R DIRECT SINGLE ENDED OUTPUT: 1.4V RMS ZOUT 640 OHM FOR HIGH IMPEDANCE INPUT TRANSFORMER OR INPUT TUBE AMPLIFIER. BUFFERED SINGLE ENDED OUTPUT: 1.4V RMS ZOUT 10 OHM FOR ANY INPUT AMPLIFIER OR HEADPHONES.

DIGITAL INPUT USB TYPE B AUDIO ADAPTER AMANERO COMBO384 COMPATIBLE WITH MAC OSX®, LINUX AND MICROSOFT WINDOWS®. DIGITAL INPUT OPTICAL TOSLINK. ALL ANALOG OUTPUTS ARE WITH VOLUME CONTROL: 2X STEREO RCA OUTPUTS: R-2R DIRECT AND BUFFERED AND 2X HEADPHONE OUTPUTS: 3.5MM AND 6.3MM.

PURE CLASS-A MOSFET HEADPHONE SINGLE ENDED AMPLIFIER. SOLID STATE TPCA TOSHIBA TRANSISTOR. 2X THICK FILM RESISTORS SMD 3521 1% PER CHANNEL. SEPARATE DUAL MONO POWER SUPPLY.

POWER SUPPLY IS THE BEST VICORPOWER MODULES. DC-DC CONVERTERS PROVIDE HIGH POWER DENSITY AND LOW NOISE HIGH FREQUENCY MHZ SWITCHING. ADVANCED POWER PROCESSING IN A SMALL SIZE. AUTORANGING 90-264VAC NETWORK VOLTAGE, FOR WORLDWIDE USE.



CONNECTING

NECESSARY IS AC POWER PLUGS MUST BE CONNECTED TO THE EARTH (GROUND).

THE DAC & HEADPHONE AMPLIFIER WORKS WITH THE WORLD'S MAIN SUPPLIES ELECTRICITY (AC) VOLTAGES 90 – 265 VAC @50/60 HZ. MAINTENANCE FREE BY AUTORANGING MODULE.

AMPLIFIER IS READY FOR WORK AFTER CONNECTING THE CABLES, ALL THE SUPPORT FOR THIS DEVICE IS ON THE REAR PANEL. REGION SPECIFIC 10A MAINS IEC CABLE, IT IS REQUIRED.

TO OPERATE, MAIN ROCKER SWITCH TO POWER THE DEVICE. IT IS LOCATED NEAR THE POWER CORD.

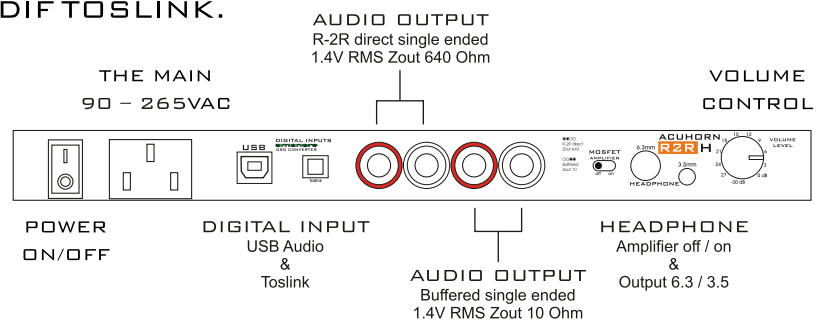
TWO PAIRS OF RCA OUTPUTS TERMINAL IS IN THE BACK. RED RIGHT CHANNEL, WHITE LEFT CHANNEL.

FIRST PAIR S R-2R DIRECT SINGLE ENDED OUTPUT: 1.4V RMS ZOUT 640 OHM
USE WITH HIGH IMPEDANCE INPUT AMPLIFIER

SECOND PAIR BUFFERED SINGLE ENDED OUTPUT: 1.4V RMS ZOUT 10 OHM
USE WITH EACH TYPE INPUT AMPLIFIER

THE MOSFET AMPLIFIER IS FOR 6.3 AND 3.5 TYPES OF HEADPHONES WITH POTENTIOMETER TO USE FOR ANALOG VOLUME CONTROL.

DIGITAL INPUT ARE USB AUDIO AND SPDIF/TOSLINK.



TECHNICAL SPECIFICATIONS

INPUT VOLTAGE MAINS AUTORANGING 90-264VAC

MAXIMUM INPUT POWER 35W

DISCRETE R-2R SIGN MAGNITUDE DAC TYPE

STEPPED ATTENUATOR VOLUME CONTROL

2 SIGNAL INPUT 12S BY USB AND SPDIF TOSLINK

2 AUDIO OUTPUT R-2R DIRECT AND BUFFERED

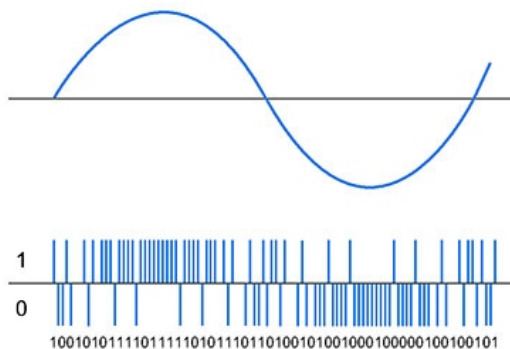
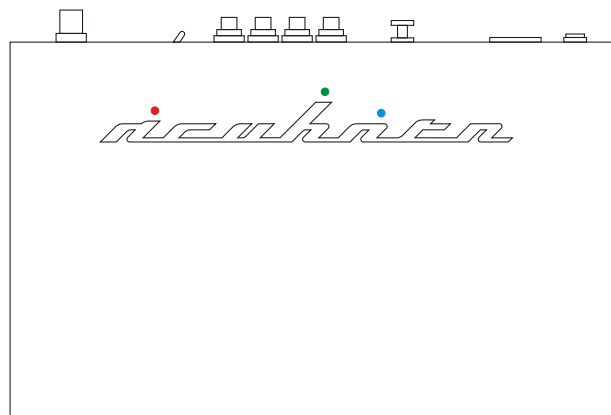
2 HEADPHONE OUTPUT 3.5MM AND 6.3MM

INTERNAL CABLE OCC COPPER

TERMINAL RHODIUM

WEIGHT 1,6KG

DIMENSIONS W 320 X D 200 X H 28MM



BLUE LED INDICATES DSD SIGNAL PROCESSING
GREEN LED FLASHES DAC IS WAITING
GREEN LED LIGHTS UP DAC SIGNAL IS ACCEPTED
RED LED AMPLIFIER MOSFET IS TURNED ON

DSD

Direct Stream Digital

ROON

The music player for music lovers

TIDAL

DXD

Digital eXtreme Definition

Hi-Res AUDIO

qobuz

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ACUHORN PRODUCT HISTORY

2003 ACUHORN SECCO145 CLASSIC

2004 ACUHORN ROSSO135 CLASSIC

2004 ACUHORN NERO125 CLASSIC **AWARD 2004 IN HIGHFIDELITY**

2005 ACUHORN GRAND BIANCORE155 CLASSIC

2006 ACUHORN ROSSO SUPERIORE175 CLASSIC

2007 ACUHORN ROSSO SUPERIORE175 IMPROVED AUDIO **AWARD 2007 IN HIGHFIDELITY**

2007 ACUHORN NERO125 IMPROVED AUDIO

2010 NOWE AUDIO MONO3.5 MONOBLOCK AMPLIFIER MOSFET **AWARD 2010 IN HIGHFIDELITY**

2012 ACUHORN GIOVANE85 SUPERLEGGERA

2012 ACUHORN NERO125 SUPERLEGGERA

2012 ACUHORN ROSSO SUPERIORE175 SUPERLEGGERA

2013 ACUHORN STEREO3 STEREO AMPLIFIER MOSFET

2013 ACUHORN MONO6 MONOBLOCK AMPLIFIER MOSFET

2014 ACUHORN S1 STEREO TUBE AMPLIFIER OTL

2014 ACUHORN S2 STEREO TUBE AMPLIFIER OTL

2014 ACUHORN M2 MONOBLOCK TUBE AMPLIFIER OTL

2014 ACUHORN M4 MONOBLOCK TUBE AMPLIFIER OTL

2016 ACUHORN 15 BASS SPEAKERS

2016 ACUHORN TT ORIGINAL TUBE AMPLIFIER

2017 ACUHORN RATE CLASS-D AMPLIFIER **AWARD RED FINGERPRINT IN HIGH FIDELITY**

2017 ACUHORN R2R HI-TECH STREAMER **AWARD RED FINGERPRINT IN HIGH FIDELITY**

2018 R2R X BALANCED DAC & HI-TECH STREAMER

2018 R2R XD BALANCED DAC & DSD CONVERTER

2018 R2R H HEADPHONE AMP DAC & DSD CONVERTER