

ACUHORN



**R2R XT**  
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OWNER'S MANUAL  
ENGLISH

## R2R XT

**AUDIOPHILE DAC & DSD CONVERTER**

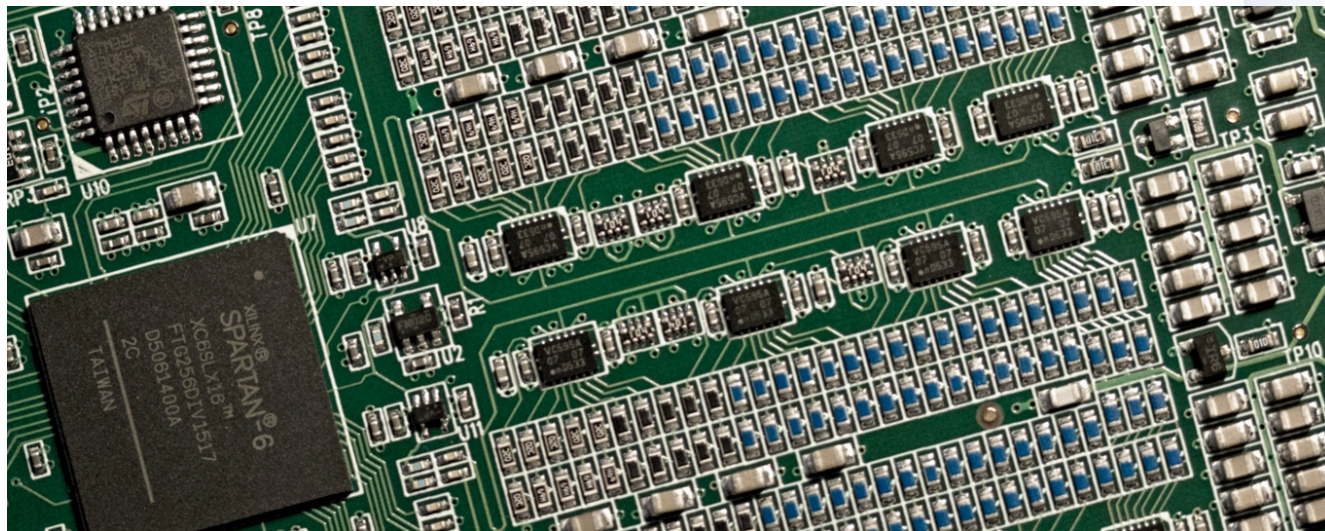
**FULLY BALANCED CONFIGURATION**

**DISCRETE R-2R SIGN MAGNITUDE DAC DESIGN SOEKRIS**

**FPGA SPARTAN 6 TECHNOLOGY FIFO BUFFERING & RECLOCKING**

**POWER SUPPLY VICORPOWER NINE UNITS**

ACUHORN R2R XT THE BOARD DOUBLED FOR DAC IN THE FULLY BALANCED CONFIGURATION. A DEVICE WITH AN OUTSTANDING POWER SUPPLY, SEPARATE FOR EACH UNIT. THE SUPERFAST AND LOW NOISE VICOR MODULES DC-DC CONVERTERS. THE DEVICE IS ENRICHED WITH AMANERO DSD CONVERTER FOR A REAL LISTENING SESSION WITH THE 1-BIT MUSIC STREAM. I INVITE HERE THE BEST SOURCE OF HI-RES SOUND HIGH QUALITY.



**300B**

## FEATURES

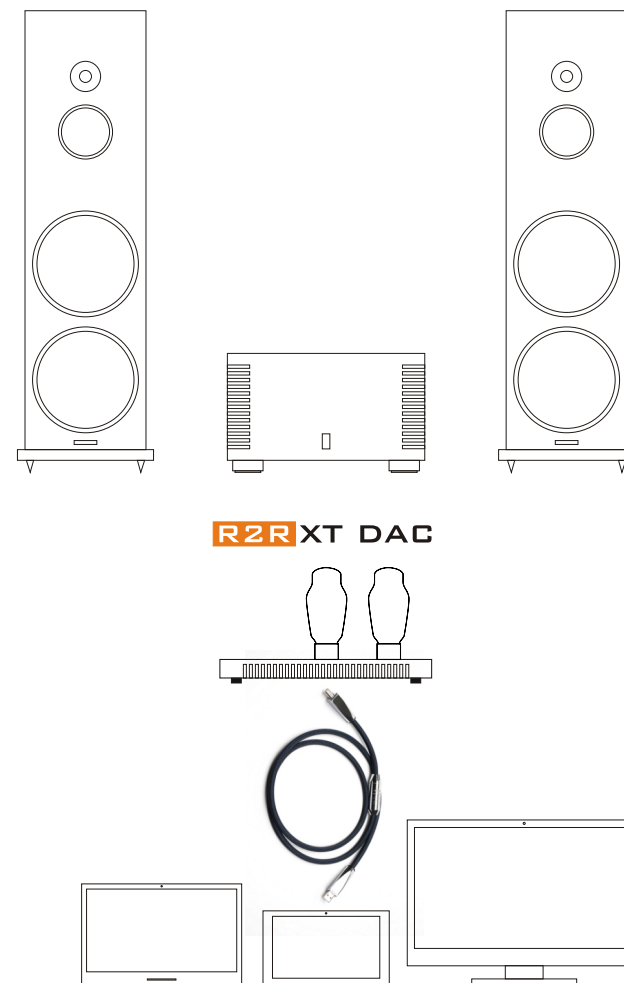
R2R LADDER 28 BIT RESOLUTION 384KHZ DAC BY SOEKRIS. LOADED FPGA SPARTAN 6 TECHNOLOGY OVERSAMPLING UP TO 3.072MHZ. FREQUENCY RANGE +0.1DB -1.0DB 20HZ - 20KHZ. TOTAL HARMONIC DISTORTION + NOISE <0.008%. CLOCK JITTER RMS 0.8 PS TYPICAL. RESISTORS PRECISION 28 BIT 0.02% RESISTORS. SIGNAL TO NOISE RATIO 20 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.

AUTOSELECT BETWEEN THE USB AUDIO DEVICE AND SPDIF INPUTS WITH PRIORITY SPDIF. MANUAL SWITCH OF INPUT SELECTION SPDIF COAX OR OPTIC. RCA SINGLE ENDED TUBE OUTPUT: 2.8V RMS ZOUT 600 OHM.

DIGITAL INPUT USB TYPE B AUDIO ADAPTER AMANERO COMBO384 COMPATIBLE WITH MAC OSX®, LINUX AND MICROSOFT WINDOWS®. DIGITAL INPUT OPTICAL TOSLINK. ANALOG OUTPUTS XLR BALANCED AND RCA.

PURE CLASS-A SINGLE ENDED TUBE STAGE. TYPE 300B, PX25, PX4, 45, 2A3 POWER TRIODE. CADDOCK HIGH PERFORMANCE FILM RESISTORS. 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 WORKS WITH THE WORLD'S MAIN SUPPLIES ELECTRICITY (AC) VOLTAGES 90 – 264 VAC @ 50/60 HZ.

MANUAL CHANGED 90-132 OR 180-264VAC.

THE SWITCH IS LOCATED ON THE BOTTOM OF THE DEVICE

DAC 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.

IT IS POSSIBLE TO USE TUBE TYPE DIRECTLY HEATED TRIODE. MATCHED TO 4 PIN BASE TUBE SOCKET U4A.

MANUAL SWITCH FOR 5 VOLT: 300B OR 4 VOLT: PX25, Px4 OR 2.5VOLT: 45, 2A3

THE SWITCH IS LOCATED ON THE BOTTOM OF THE DEVICE

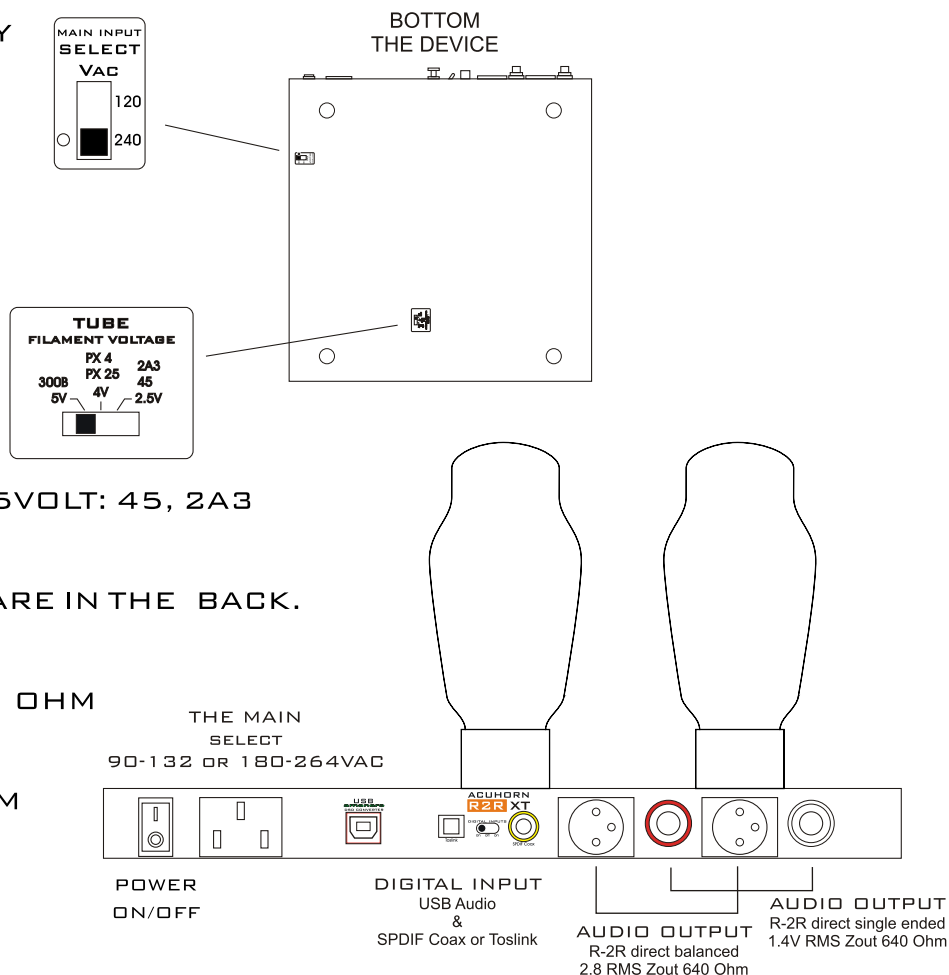
ONE PAIRS OF RCA OUTPUTS TERMINAL AND ONE PAIRS OF XLR ARE IN THE BACK. RED RIGHT CHANNEL, WHITE LEFT CHANNEL.

RCA R-2R DIRECT SINGLE ENDED OUTPUT: 2.8V RMS ZOUT 600 OHM  
USE WITH HIGH IMPEDANCE INPUT AMPLIFIER

XLR R-2R DIRECT BALANCED OUTPUT: 2.8V RMS ZOUT 600 OHM  
USE WITH HIGH IMPEDANCE INPUT AMPLIFIER

DIGITAL INPUT ARE USB AUDIO AND SPDIF COAX OR TOSLINK. INPUT IS SELECTED SWITCH.

UNUSED RECOMMENDED IN THE OFF POSITION.



## TECHNICAL SPECIFICATIONS

INPUT VOLTAGE MAINS SELECT 90-132 OR 180-264VAC

MAXIMUM INPUT POWER 50W

DISCRETE R-2R SIGN MAGNITUDE DAC TYPE

4 PIN BASE TUBE SOCKET U4A

DIRECTLY HEATED TRIODE TYPE 5 VOLT, 4 VOLT OR 2.5VOLT

3 SIGNAL INPUT: USB AUDIO & SPDIF COAX & TOSLINK

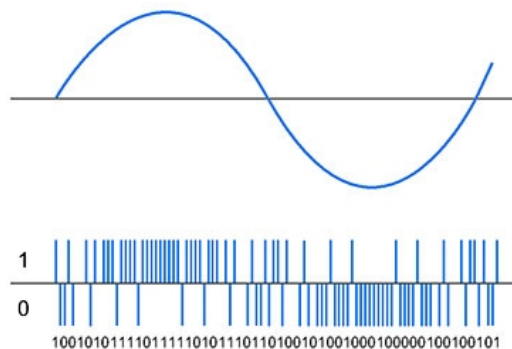
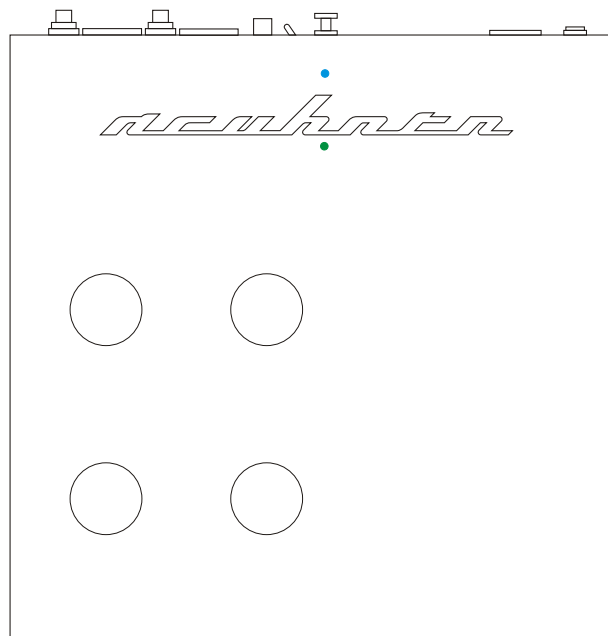
2 AUDIO OUTPUT XLR BALANCED AND RCA

INTERNAL CABLE OCC COPPER

TERMINAL RHODIUM

WEIGHT 2,2KG

DIMENSIONS W 320 X D 320 X H 28MM



BLUE LED INDICATES DSD SIGNAL PROCESSING  
GREEN LED FLASHES DAC IS WAITING  
GREEN LED LIGHTS UP DAC SIGNAL IS ACCEPTED

# DSD

Direct Stream Digital

# roon

The music player for music lovers

# TIDAL

# DXD

Digital eXtreme Definition

Hi-Res  
AUDIO

# qobuz

## WOJCIECH UNTERSCHUETZ

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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

2019 R2R TS SUPER TUBE STAGE DAC & DSD CONVERTER

2019 R2R TTUBE STAGE DAC & DSD CONVERTER

2019 R2R XT BALANCED TUBE STAGE DAC & DSD CONVERTER