

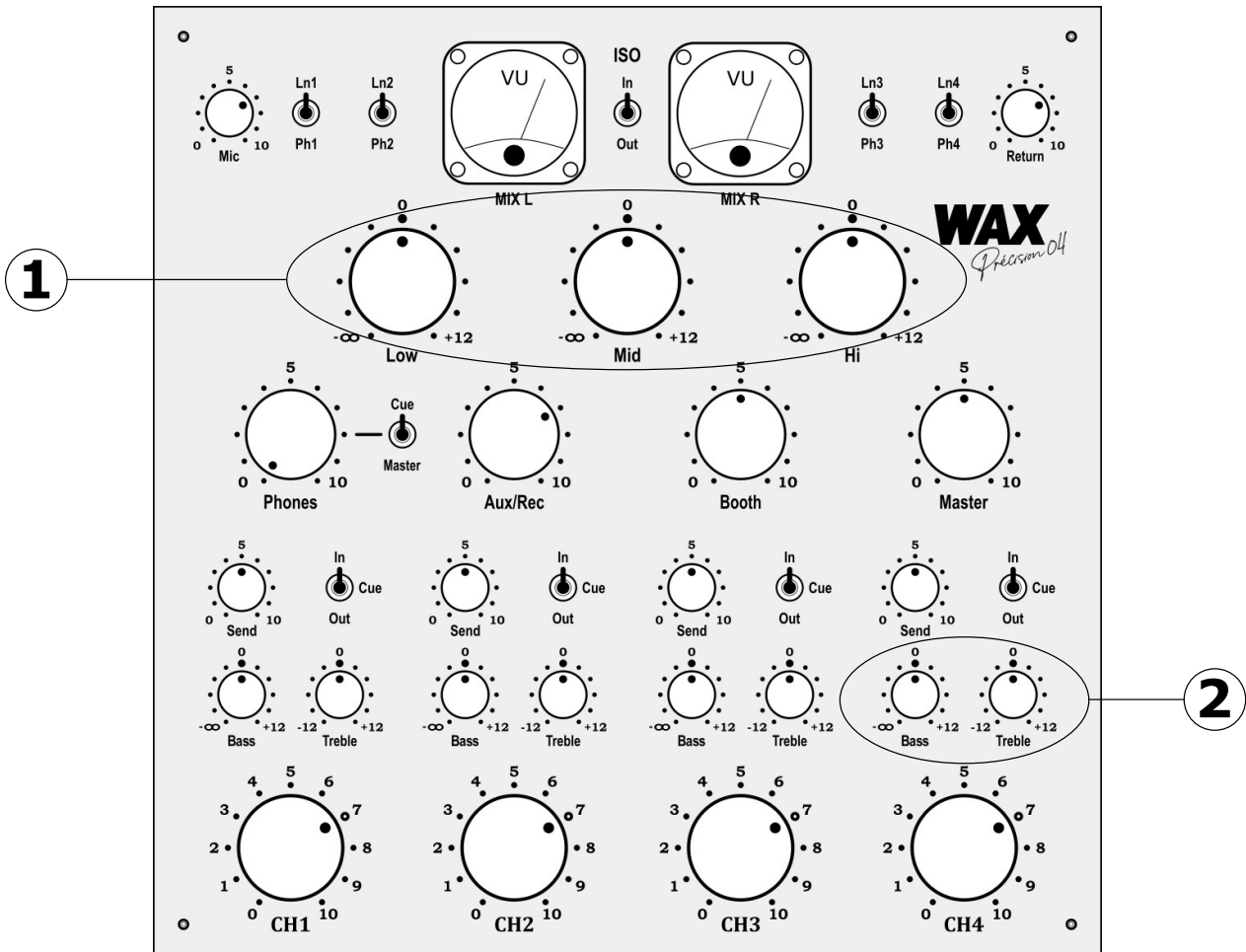


Features:

- 4 Precision Phono preamplifiers
- 3 level adjustable outputs + Phones
- FX send/return per channel
- Independant Mic input
- Asymmetric tone controls
- Phase matched, Linkwitz-Riley Master isolator
- Low noise, low distortion, low impedance design throughout
- Smart power/signal current management on 4 layer boards
- Handpicked ALPS RK27 potentiometers and polypropylene/polystyrene capacitors
- High quality MIYAMA Japan switches
- External low noise linear Power Supply
- Buffered VU metering
- Clean, intuitive layout and rock solid build quality
- Industrial laser engraved anodized aluminium panels, will not wear off
- AW-6061 aluminium knobs
- In depth testing of each stage on every unit
- Travel Case

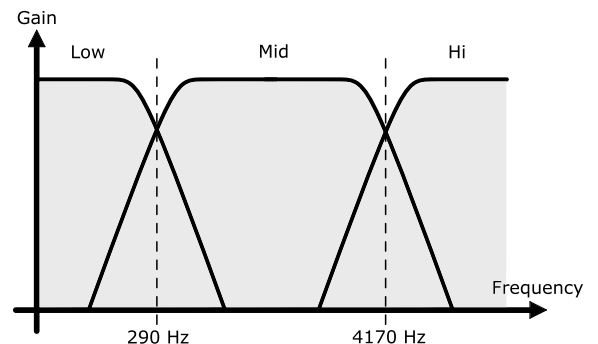
Unity Gain Settings:

0 VU = +4 dBu



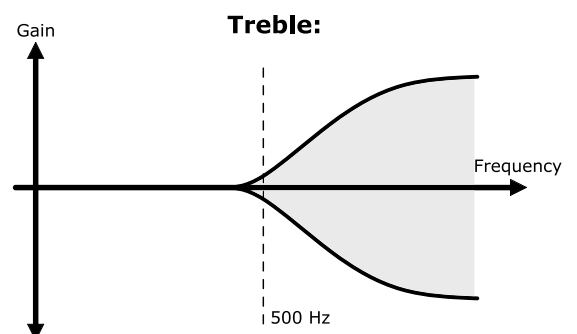
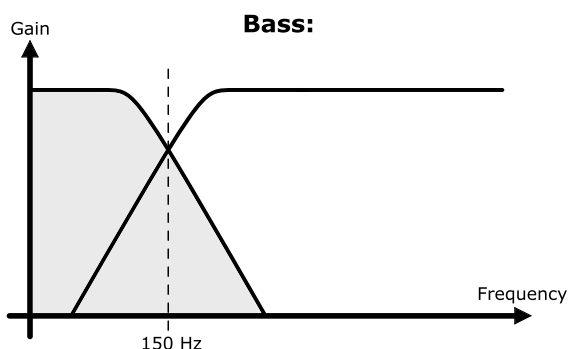
1) Master Isolator:

This powerful, 'filter-esque' Linkwitz-Riley 24 dB/octave crossover provides precise level control over the frequency bands and allows the most demanding artistic cuts/boosts. The three bands will remain in phase at all times and will sum perfectly flat when set to unity gain (the ISO in/out switch guarantees quick, noiseless unity gain recall).

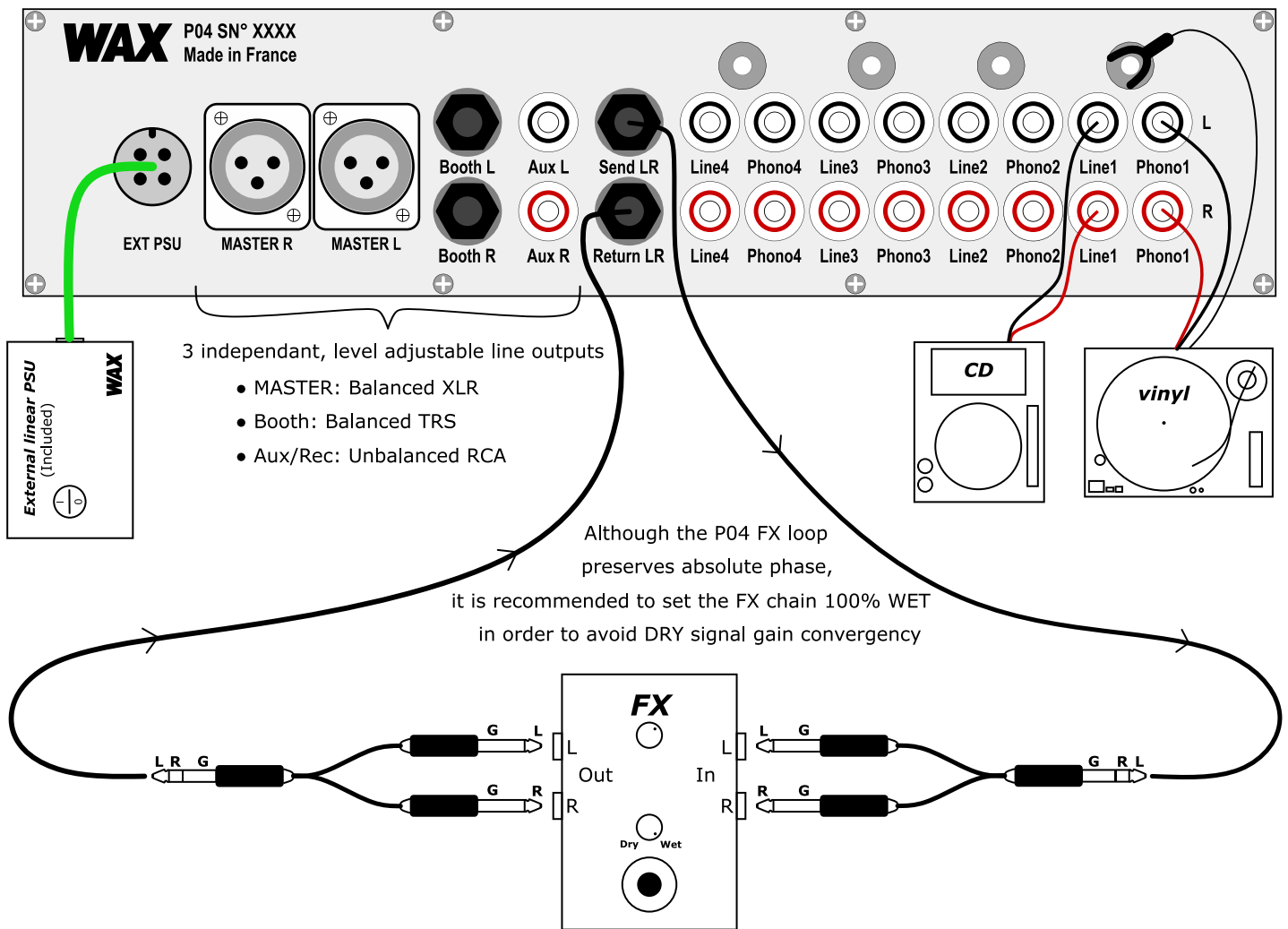


2) Channel EQ:

At 12 dB/octave, the Bass channel isolator is more subtle. Combined with the Treble shelving EQ, it will easily rectify a poor pressing. This asymmetric approach allows much deeper cuts at lower frequencies compared to a standard dual Baxandall design, while preserving a smooth, polished HF correction. Meticulous selection of components and accurate gain staging deliver organic EQing, even at full boost. Just like the Master ISO, the Channel EQ is completely transparent at unity gain. Their noise contribution and distortion are on par with our state-of-the-art test equipment noise floor.



Rear panel connections:



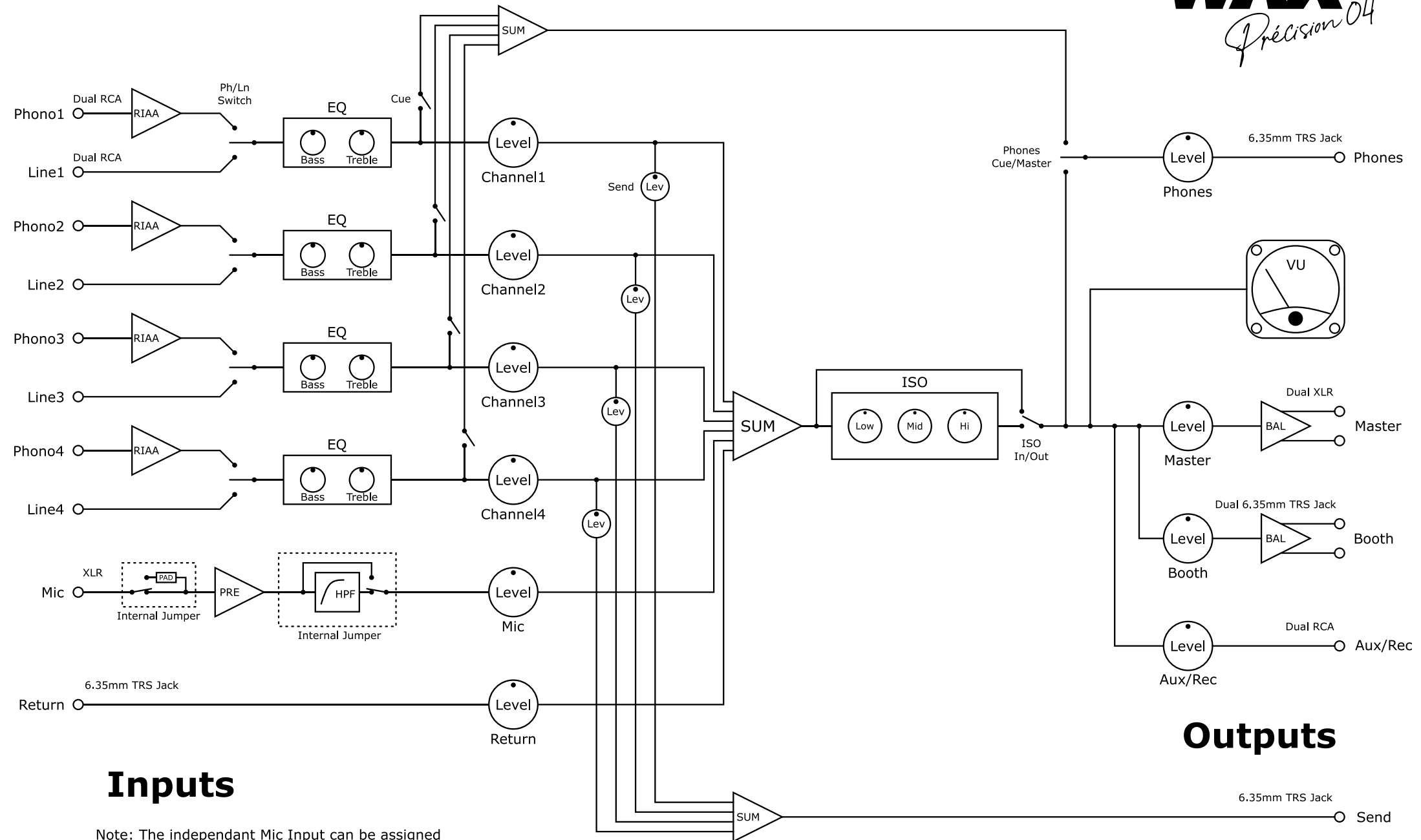
Front connections:



BLOCK DIAGRAM

V1.1 (Simplified)

WAX
Precision 04



Note: The independant Mic Input can be assigned to a Line Input (cue/eq/fx) upon request.

Technical Specifications

WAX Precision04

Last updated October 06 2023



General:

Type: 4 channel, 10in 5out analogue mixer preamplifier
Dimensions: 355x355x95mm
Weight: 5.1 Kg (excl. 1 Kg external linear PSU)
Line voltage: 115 or 230 Vac, 50/60 Hz
Max. power consumption: 35 W

Phono Inputs 1.2.3.4:

Type: Unbalanced, stereo, dual RCA, mm RIAA preamplifiers

Parameter	Value	Comments	Tools
RIAA Tracking	+0.2 / -0.1 dB	20 Hz - 20 kHz	AP SYS-2722 Neumann VMS80 RIAA
Max. Input Level	105 mVrms	1 kHz	WAX Wienbridge osc E1DA Cosmos ADC
THD+N	<0.004 %	at 1 kHz 12 mVrms, 20-20k BW Unweighted	WAX Wienbridge osc E1DA Cosmos ADC
Signal / Noise	>90 dB	12 mVrms ref. , 20-20k BW Unweighted	WAX Wienbridge osc E1DA Cosmos ADC
LR Crosstalk Atten.	>107 dB	at 1 kHz 12 mVrms L	WAX Wienbridge osc E1DA Cosmos ADC
Input Impedance	47 kΩ	200 pF Shunt	Schematic

Line Inputs 1.2.3.4:

Type: Unbalanced, stereo, dual RCA, independant line level stages

Frequ. Response	+0.1 / -0.1 dB	20 Hz - 20 kHz	AP SYS-2722
Max. Input Level	9.1 Vrms	1 kHz	AP SYS-2722
THD+N	<0.001 %	at 1 kHz 2 Vrms, 20-20k BW Unweighted	AP SYS-2722
Signal / Noise	>110 dB	2 Vrms ref. , 20-20k BW Unweighted	AP SYS-2722
LR Crosstalk Atten.	>92 dB	at 1 kHz 2 Vrms L	AP SYS-2722
Input Impedance	100 kΩ		Schematic

Mic Input:

Type: Balanced, mono, XLR, dynamic microphone preamplifier

-6 dB pad (internal switch): disengaged by default
120 Hz high pass filter (internal switch): engaged by default
Frequ. Response: +0.3 / -0.2 dB, 20 Hz - 20 kHz
Max. Input Level: 26 mVrms
Min. Input Impedance: 1.1 k Ω , differential

Return Input:

Type: Unbalanced, stereo, 6.35mm TRS jack, line level stage
Tip: Left
Ring: Right

Frequ. Response: +0.1 / -0.1 dB, 20 Hz - 20 kHz
Max. Input Level: 9 Vrms
Input Impedance: 22 k Ω

Master & Booth Outputs:

Type (Master): Balanced, stereo, dual XLR, line level stage

Type (Booth): Balanced, stereo, dual 6.35mm TRS jack, line level stage

Frequ. Response	+0.1 / -0.1 dB	20 Hz - 20 kHz	AP SYS-2722
Max. Output Level	+27 dBu	1 kHz	AP SYS-2722
THD+N	<0.001 %	at 1 kHz +4 dBu, 20-20k BW Unweighted	AP SYS-2722
Signal / Noise	>115 dB	+27 dBu ref. , 20-20k BW Unweighted	AP SYS-2722
LR Crosstalk Atten.	>100 dB	at 1 kHz +4 dBu L	AP SYS-2722
Output Impedance	125 Ω	Both Leg	Schematic

Aux/Rec Output:

Type: Unbalanced, stereo, dual RCA, line level stage

Frequ. Response	+0.1 / -0.1 dB	20 Hz - 20 kHz	AP SYS-2722
Max. Output Level	+21 dBu	1 kHz	AP SYS-2722
THD+N	<0.001 %	at 1 kHz +4 dBu, 20-20k BW Unweighted	AP SYS-2722
Signal / Noise	>110 dB	+21 dBu ref. , 20-20k BW Unweighted	AP SYS-2722
LR Crosstalk Atten.	>94 dB	at 1 kHz +4 dBu L	AP SYS-2722
Output Impedance	125 Ω		Schematic

Phones output:

Type: Unbalanced, stereo, 6.35mm TRS jack, headphone amplifier
Tip: Left
Ring: Right

Frequ. Response: +0.1 / -0.1 dB, 20 Hz - 20 kHz
Absolute Max. Output Power: 2 x 600 mWrms, 70 Ω load, 1 kHz, THD+N <0.1%
Output Impedance: 68 Ω

Send output:

Type: Unbalanced, stereo, 6.35mm TRS jack, line level stage
Tip: Left
Ring: Right

Frequ. Response: +0.1 / -0.1 dB, 20 Hz - 20 kHz
Absolute Max. Output Level: +21 dBu, 1 kHz, THD+N <0.1%
Output Impedance: 125 Ω

Channel EQ 1.2.3.4:

Type (Bass): 2 band, 12 dB / octave, phase matched, Linkwitz-Riley crossover/isolator

Gain: Full cut to +12 dB
Crossover Frequency: 150 Hz
Inter-band Phase Shift: <0.1°

Type (Treble): HF only Baxandall shelving tone control

Gain: -12 dB to +12 dB
1 dB Break Frequency : 500 Hz

Master Isolator:

Type: 3 band, 24 dB / octave, phase matched, Linkwitz-Riley crossover/isolator

Gain: Full cut to +12 dB
Low / Mid Crossover Frequency: 290 Hz
Mid / Hi Crossover Frequency: 4170 Hz
Inter-band Phase Shift: <0.1°

External Power Supply Unit:

Type: Low noise dual rail linear PSU

Noise Residual: <25 μ Vrms, WAXP04 load, no measurable output ripple

Global Performance:

Total Harmonic Distorsion + Noise: 0.001 %
RCA Line In to XLR Master Out, Channel EQ and Master ISO **engaged**
At 1 kHz 2 Vrms, Unity Gain, 20 Hz - 20 kHz Unweighted Bandwidth,
AP SYS-2722

Inter-channel crosstalk attenuation: >103 dB
At 1 kHz 2 Vrms (Line), at 1 kHz 12 mVrms (Phono), at 1 kHz 4 mVrms (Mic), Unity Gain,
AP SYS-2722, WAX Wienbridge osc