

WATERFALL AUDIO

SOUND DESIGNERS

MADE IN FRANCE



DATA SHEET

ATOHM RS700 AMPLIFIER « WATERFALL AUDIO SPECIAL EDITION » DSP VERSION W1.0 : CINEMA

EXCLUSIVE TECHNOLOGIES :

X-GUARD™ / U-GUARD™ / T-GUARD™ / X-TEND™ / CSC™

KEY POINTS

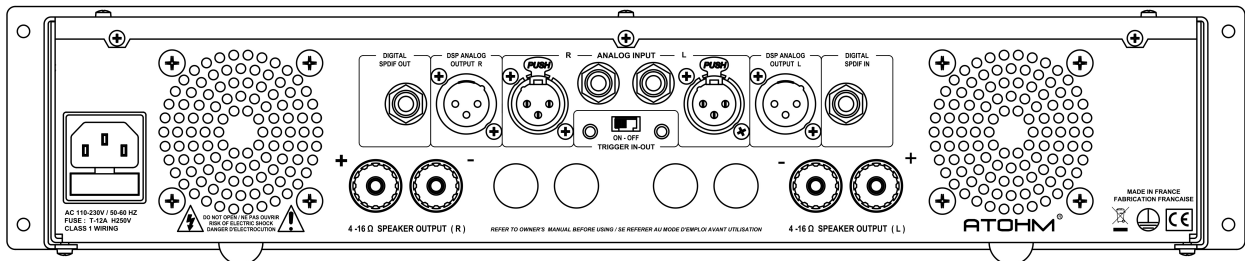
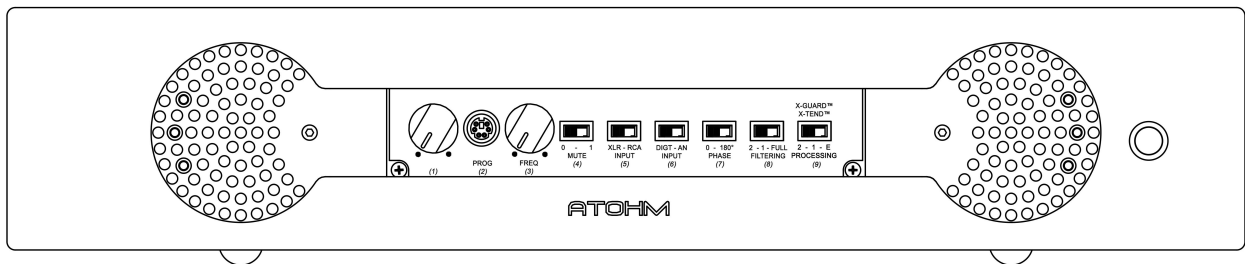
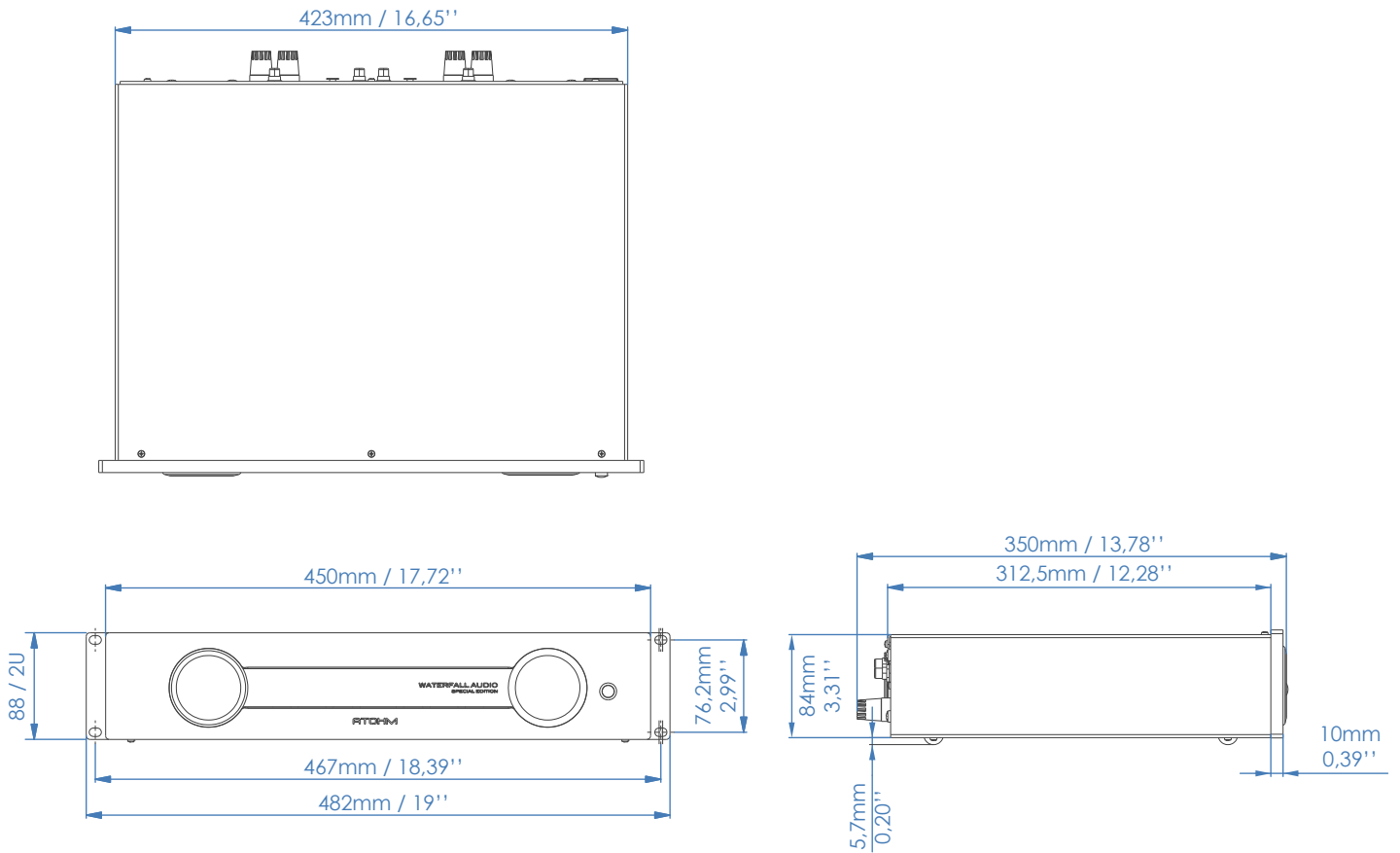
- Amplifier: 19 Inches/2U (removable racking brackets)
- Dual Mono Design (2x700W/4 Ohms), DSP controlled
- DSP version W1.0 optimized for our WATERFALL PRO CUSTOM SERIES range of speakers
"SUB" mode program for SUB600 & SUB600S / "SPEAKER" mode program for LCR300 & LCR500
Providing maximum performance & total driver security: Amp/SUB & Amp/Speakers
- Exclusive technologies driven by the DSP:
 - X-GUARD™** : Real time processing control of driver's cone excursion ("SUB" mode)
 - U-GUARD™** : Real time processing control of power/voltage and advanced soft clipping to protect subs and speakers
 - T-GUARD™** : Real time processing control of thermal level of power stage and voice coil temperature of subs and speakers
 - X-TEND™** : Bass extension processing in the infra low frequency (20-35 Hz bandwidth). Active in "SUB" mode (NB: results in lower SPL Max)
 - CSC™** : (Cinema Screen Compensation): progressive correction of the frequency response (>1Khz) to compensate the screen sound absorption for Left, Center,& Right speakers (CSC™ only on "Speaker" mode)
- XLR/RCA analog inputs
- Possible digital link between RS700 depending on the application (DIGITAL SPDIF IN/OUT)
- XLR outputs driven by DSP for specific applications
- Trigger control IN/OUT (12V)
- Controlled and silent ventilation integrating accessible and renewable anti dust filters
- Settings protection by a front plate with mechanical locking system

AUDIO APPLICATIONS

- Luxury residential private Cinema Room
- Professional applications (Studio MONITOR) with WATERFALL PRO CUSTOM SERIES range of speakers (High SPL with no distortion)

TECHNICAL DATA

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| NOMINAL POWER/4 OHMS/SINUS 12 SECONDS 2 CHANNELS DRIVEN | 2 x 700 W RMS |
| NOMINAL LOAD IMPEDANCE | 4 - 16 Ohms |
| MINIMAL LOAD (ON IMPEDANCE CURVE) | 3 Ohms |
| MAXIMUM PEAK CURRENT (POWER STAGE THRESHOLD) | 2 x 30 A |
| FREQUENCY RESPONSE IN « SPEAKER » MODE | 2 Hz - 45 kHz (-3dB) |
| PHASE ROTATION IN « SPEAKER » MODE | 2° @ 30 kHz |
| FREQUENCY RESPONSE IN « SUB » MODE | 2 Hz to 35-150 Hz (12 ou 24 dB/oct) or 2 - 350 Hz (LFE) / (-3dB) |
| DISTORTION THD+N AT NOMINAL POWER | < 0.06% |
| DAMPING FACTOR (1 KHZ / 4 OHMS) | > 1000 |
| CONVERSION AD/DA « PREMIUM » | 2 inputs / 4 differential outputs - 32 bits |
| DSP INTELLIGENCE | 32 bits - 295 MHz Sigma DSP |
| SAMPLING FREQUENCY | 96 kHz - 24 bits audio resolution |
| DIGITAL LATENCY (NUMERICAL LOOP INCLUDED) | 1.95 ms |
| SIGNAL TO NOISE RATIO | 110 dB |
| CROSSTALK (1 KHZ @ NOMINAL POWER) | < - 95 dB |
| MAXIMUM INPUT LEVEL (RCA - XLR) | +22 dBu (XLR input - INA audio differential line receiver) |
| MAXIMUM OUPUT LEVEL (XLR) | +16 dBu (5Vrms-diff.) max / U-GUARD™ |
| INPUT IMPEDANCE | XLR : 18 kOhms/2 (com) - 36 kOhms (diff) - RCA ; 21 kOhms |
| OUTPUT IMPEDANCE (XLR) | 480 Ohms/2 (com) - 960 Ohms (diff) |
| MAXIMUM GAIN (DEPENDING ON INTERNAL SWITCH : 0 OR +15DB) | 29.8 dB / 44.8 dB |
| ACTIVE DRIVER EXCURSION CONTROL (« SUB » MODE ONLY) | X-GUARD™ Processing |
| CLIPPING MANAGEMENT/ "SOFT CLIPPING" ("SUB" & "SPEAKER" MODE) | U-GUARD™ Processing |
| AMPLIFIER THERMAL PROTECTION (POWER STAGE PROTECTION, "SUB" & "SPEAKER" MODE) | T- GUARD™ Processing Decrease of level (-15dB) with auto reset after 20 sec |
| SPEAKER THERMAL PROTECTION (VOICE-COIL PROTECTION, SUB MODE & SPEAKER MODE) | T- GUARD™ Processing - Power and duration according to settings Decrease of level (-15dB) with auto reset after 20 sec |
| BASS EXTENSION PROCESSING ("SUB" MODE ONLY) | X-TEND™ Processing Frequency response extension down to 20 Hz (SUB600S only) |
| CINEMA SCREEN COMPENSATION ("SPEAKER" MODE ONLY) | Processing CSC™ Progressive level correction from 1 to 20 KHz |
| ACTIVATABLE BASS MANAGEMENT IN "SPEAKER" MODE (DEPENDING ON SETUP) | High pass 80/100/120 Hz - 12 or 24 dB/oct on speakers outputs Adjustable low pass 35 to 150 Hz - 12 or 24 dB/oct on XLR outputs |
| ACTIVATABLE BASS MANAGEMENT IN "SUB" MODE (DEPENDING ON SETUP) | Adjustable low pass 35 to 150 Hz - 12 or 24 dB/oct on speakers outputs High pass 100 Hz - 12 or 24 dB /oct on XLR outputs |
| SPECIFIC DIGITAL CHAINING (S/PDIF WITH ASRC) | S/PDIF IN & OUT via RCA 75 Ohms / 96 kHz - résolution 24 Bits |
| LED INDICATORS | 2 blue leds : device powered on 2 red leds : U-GUARD™ and T-GUARD™ 2 green leds : X-GUARD™ |
| COOLING SYSTEM (SEPARATE REGULATION) | 2 low noise fans - 2500 RPM Set in motion from 2 x 40 W RMS @ 22°C (Ambient temperature) |
| OPERATING TEMPERATURE | 5° - 40°C |
| SHORT CIRCUIT PROTECTION | Yes |
| TRIGGER INPUT VOLTAGE (JACK MONO, 3,5MM) | 12V DC |
| POWER SUPPLY | (auto) 100 - 240V / 50 - 60 Hz |
| POWER CONSUMPTION | Switched off by trigger (standby) : 400mW Mute (speaker disable) : 14W / Idle : 36W/ Max peak : 2300W |
| SUPPLIED ACCESSORIES | 2 rack mounting brackets / 4 half-spherical feet 1 power cord / 3 x 15² - 16 A Lenght : 1.5 m |
| DIMENSIONS (L*H*P) (H= 2U) | 482 x 88 x 348 mm (rack) - 450 x 88 x 348 mm (standard) |
| WEIGHT | 8.7 Kg / 17.64 Lbs |



WATERFALL AUDIO

ZA les praderies - 83 570 Carcès - France
waterfallaudio.com

Made in France. 5 years warranty on speakers, 2 years warranty on amplifiers (parts & service).
 We operate a policy of continuous improvement and reserve the right to amend designs and specifications without prior notice.



All drivers and amplifiers are developed and manufactured by ATOHM (France).