



x•tant

x•tant (ikst`ænt, e`kstent) 1. *adj.* still in existence, especially. of **enduring excellence**. ||e.g. *of xtant quality that stands the test of time and the passing of fads.* 2. *adj.* Standing out or above, as in **out-standing**, the quality or state of being **original**. [from. L. xstans (xstantis) n present participle of xstare, to stand forth. || Second origin; Prescott AZ. U.S.A. Ntl. Frst. Cmp. 1994 v. to xtantify = to stand up and be heard] 3. *noun* /XTANT **applied creativity** esp. a *company of people united to apply original thinking to continually advance the spectrum of extraordinarily **vivid sound reproduction**, to apply innovative thought and action to questions previously considered resolved.* ||

Xtant Technologies

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SAFEGUARDS

**Please take the time to read this Owners Manual.
The following guidelines are designed to assure a safe and properly installed Xtant Mobile Audio System.**

All Xtant amplifiers and accessories are intended to be installed by a certified professional mobile audio installation specialist. It is the recommendation of Xtant Technologies that your new Xtant product(s) and all of your mobile audio products be installed by your Authorized Xtant Select Dealer.

INSTALLER'S REFERENCE (INSERT)

The Installer's Reference is an insert included in this manual. It is designed to assist your Authorized Xtant Select Dealer's professional installer. Installation techniques critical to the creation of a high-performance mobile audio sound system, (procedures for running wires, basic safety rules, and system layout concepts) are not presented in this owners manual. All Authorized Xtant Select Dealers have been chosen for their expertise in system design and advanced installation capabilities and Xtant highly recommends that you have all of your mobile audio products professionally installed. If, however, you choose to install your Xtant amplifier yourself, please refer to the Installer's Reference prior to installation.

WIRING REQUIREMENTS

All Xtant amplifiers have minimum wire gauge requirements for Power, Ground, Remote Turn-On, and Speaker cables. Please refer to the Installer's Reference for recommended wire gauges.

FUSING REQUIREMENTS

All Xtant amplifiers have on-board power fuses. However, it is recommended that a fuse of like value be installed at the positive terminal of the battery. In the case of a multi-amp system, use a fuse value equal to the combined value of all (system amplifier's) on-board power fuses.

WATER AND MOISTURE



Install all Xtant amplifiers and accessories in a location free of moisture or exposure to water.

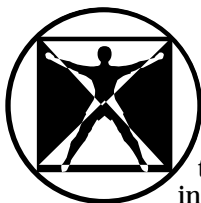




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 **xtant::1001dx**

The 1001dx is a one channel (mono) bass amplifier designed to provide high power, exceptional flexibility and outstanding performance in an all-in-one package. It can be utilized to operate a complex woofer system or, with its on-board crossover, be easily integrated into a multi-amp mobile audio system.

The internal crossover's RCA line outputs can be utilized to feed High Pass frequencies to additional amplifiers, thus, eliminating the need for external, active crossover components. As with all Xtant amplifiers, the 1001dx incorporates a forced convection thermal management system and a *Pulse Width Modulated* power supply for high efficiency and unsurpassed reliability and on-board accessory ports which allow performance upgrades via Xtant's plug-in modules. All these features are encased in Xtant's exclusive finish of stainless steel and copper!

STANDARD FEATURES



FORCED CONVECTION COOLING: All Xtant amplifiers employ forced convection cooling for thermal management. An on-board thermal sensing circuit regulates fan speed to maintain optimum operating temperature.

PWM POWER SUPPLY: All Xtant amplifiers feature a fully regulated, Pulse Width Modulated power supply. This supply technology provides high efficiency and consistent output performance even when battery voltage is less than optimum.

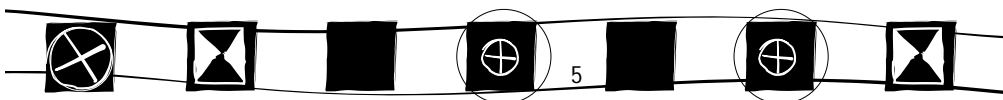
CROSSOVER: A 12/24 dB per octave "Butterworth" filter network is standard on the 1001dx amplifier. Both Low Pass and High Pass frequency selection is via a 12 pin Frequency Module (SIP). The amplifier is shipped with 90 Hz SIPs installed, 12 other frequencies are available from your Xtant Dealer. The crossover's Low Pass function is dedicated to the 1001dx while the High Pass or Bypass functions are available at the RCA line outputs.

BALANCED / FLOATING INPUT: All "c", "x" and "d" Series amplifiers offer docking ports which accept the optional Balanced Line Module (BLM-1). When added to the input stage, this circuitry helps to eliminate "system noise" associated with "ground-loops" and increases input sensitivity.

MODULAR EXPANSION PORT: All Xtant amplifiers are supplied with a modular port(s) used for docking any of Xtant's signal processing modules.

PROTECTION CIRCUITRY: Both Thermal, Overcurrent and Low Voltage protection are incorporated into the 1001dx. In the event of a problem, the amplifier will reduce its power to maintain operation. In the case of Low Voltage, the amplifier will shut off when the battery voltage falls to 10 Volts or less.

STATUS LEDS: Four LEDs, visible through the cover, indicate operational status of all Xtant amplifiers. The red LED illuminates when the amplifier is "ON", the blue LED indicates when the low voltage protection has engaged, the yellow LED indicates that overcurrent protection is employed and the orange LED indicates that the thermal protection circuit is operational.





XTANT 1001DX SPECIFICATIONS

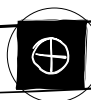
Frequency Response	5 Hz to 500 Hz +/- 3 dB
Number of Channels	1
Watts per Channel @ 4 Ω	1 x 250
Watts per Channel @ 2 Ω	1 x 500
Watts per Channel @ 1 Ω	1 x 1000
Distortion (THD)	< .08%
Signal to Noise Ratio	> 88 dB
Damping Factor	> 200 @ 100 Hz with 4 Ω Load
Input Sensitivity	100 mV to 8.5 V RMS Unbalanced Source 100 mV to 17 V RMS Balanced Source
Input to Line Output Gain	0 dB +/- 20 dB, Selectable in 10 dB Steps
On-Board Crossover	12 or 24 dB per Octave "Butterworth"
Line Outputs:	Yes, High Pass or Bypass Mode
Module Port(s)	1 - Accessory and 1 - Balanced Line
Power Supply	Fully Regulated, Pulse Width Modulated
Operational Voltage	11 to 15 Volts
Size (L x W x H)	20.5 x 9.9 x 2.5"
Warranty	Limited 4 Year Parts and Labor

SEE PAGE ELEVEN OF THIS MANUAL FOR COMPLETE DETAILS



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ON-BOARD ELECTRONIC CROSSOVER

The 1001dx bass amplifier features a dedicated two-way electronic crossover. The Low Pass function of the crossover feeds the 1001dx while the High Pass function supplies signal to the on-board RCA line outputs. A Bypass function is also available for the line outputs.

The 1001dx's crossover features independent selection of both crossover frequency and slope (12/24 dB per octave) for the Low and High Pass sections of the crossover. In addition, the Low Pass section offers a (selectable) 180° phase inversion for the 1001dx's output.

Crossover frequency selection is made via a frequency module (SIP)*. The following Frequency Modules (SIPs) are available from your Xtant Dealer: 50 Hz, 70 Hz, 80 Hz, 90 Hz, 120 Hz, 150 Hz, 300 Hz, 500 Hz, 700 Hz, 1 kHz, 3 kHz, 4 kHz, and 5 kHz.



* **SIP**: an acronym referring to multiple resistors in a **Single In-Line Package**



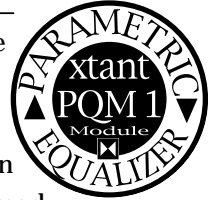


OPTIONAL ACCESSORY MODULES

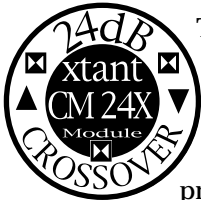
Xtant optional accessory modules are easily and quickly installed by your Authorized Xtant Dealer. The upgrade modules snap into place on the amplifiers PC board when the top of the unit is removed. These accessories enhance your entire system, expanding and customizing performance for your unique application.

PARAMETRIC EQUALIZATION MODULE – PQM 1

The PQM-1 is a precision tuning instrument, designed to be adjusted with the use of a *Real-Time-Analyzer*. This true, fully adjustable, one band parametric equalizer provides individual frequency, Q/bandwidth, and +/- 18 dB gain adjustment controls. By utilizing one of three (3) frequency modules included, any frequency from 20 Hz to 20kHz can be chosen. The “Q” ranges from 1 to 10 in value, allowing a wide variety of bandwidth adjustment to address the subtle tuning requirements common to mobile audio systems. All 1 & 2-channel Xtant amplifiers will accept one PQM-1. All 3/4-channel amplifiers will accept two PQM-1 modules if desired (one PQM-1 per 2 channels of input).



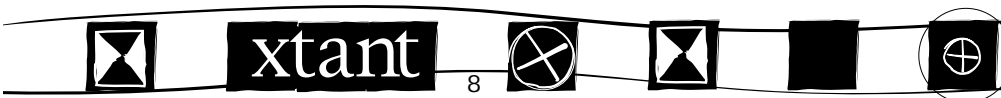
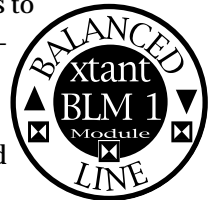
24 DB / OCTAVE CROSSOVER MODULE – CM 24X



The CM 24X upgrades the standard on-board crossovers provided on all Xtant “ix” and “x” Series amplifiers with a 24 dB per octave “Linkwitz - Riley” filter. The CM 24x module improves loudspeaker polar response while its steeper slope provides enhanced system design flexibility.

BALANCED LINE MODULE – BLM 1

The BLM 1 upgrades all Xtant “x” and “d” Series amplifiers to include Balanced / Floating Line Inputs, which are standard on the 2200ix amplifier. The BLM 1 does not create balanced line outputs. However, in most cases, the noise elimination benefits of balanced lines will be passed through to amplifier(s) connected to these outputs.





MAINTENANCE

RECOMMENDED CLEANING PROCEDURES

CLEANING THE FAN / CIRCUIT BOARD - EVERY 90 DAYS

- A. The internal fan in all Xtant amplifiers need periodic cleaning. If you are in a high dust environment, every 30 days is recommended. We recommend that your dealer remove the cover and clean the fan blades with a soft brush. Loose dust can be removed with a vacuum hose.

CAUTION: Have your dealer check the fan for obstructions if your amplifier over heats. When the Thermal Protection Circuit is engaged, the orange LED will be illuminated and power may be reduced.

- B. Have your dealer check the circuit board for dust. If present, use a low pressure air source to blow-off the dust particles. **DO NOT** use a high-pressure source, brush or any similar device to clean the circuit board!

CLEANING THE AMPLIFIER - EVERY 30 DAYS



Clean the stainless steel cover with a light dust cloth. For a more thorough cleaning, use WD 40™. Apply the cleaner the cloth (not the amplifier) and wipe the surface. Take care not to catch the cloth on the copper mesh.

CAUTION: Do not allow liquids to touch the circuit board.

- B. To polish the stainless steel cover use a commercially available stainless steel cleaner/polish. It is important to note that stainless steel has a (directional) grain. Please read the directions supplied with the polish before beginning. As a rule of thumb, always polish with the grain. Apply the cleaner/polish to the cloth (not the amplifier) and wipe the surface. Take care not to catch the cloth on the copper mesh.





CUSTOMER RELATIONS TECHNICAL SERVICES

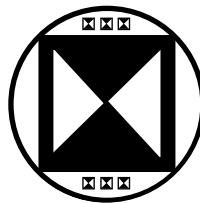
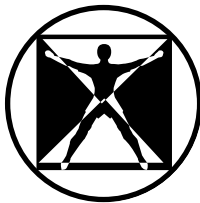
STATEMENT OF PURPOSE

Our customer's satisfaction is our purpose. You represent our present and our future. It is our goal to create and nurture relationships based upon trust and respect. This commitment is not taken lightly or just for today; it is our way of doing business. We believe there is no other way.

Xtant's policies and procedures are designed, in the event of a problem, to minimize the amount of your "down-time" and inconvenience. It is our commitment to service and return such product in no more than two (2) working days from the time Xtant receives the equipment. Please consider weekends or holidays (which may fall within the time period) when estimating the return date of serviced product.

For technical assistance and information regarding products and/or installation, please contact Xtant's Customer Relations Department from 8:00 am to 5:00 pm MST- Monday thru Friday at:

PHONE: (602) 431 8686
FAX: (602) 431 8600





FOUR - YEAR LIMITED U.S.A. WARRANTY

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Xtant Technologies Incorporated (Xtant) warrants its amplifiers and accessories to be free from defects in materials and workmanship under normal use and service for a period of four (4) years from the date of original purchase when the unit is installed by an Authorized Xtant Select Dealer. Non-Authorized Dealer installed products carry a one (1) year parts and labor limited warranty. The extent and conditions of Xtant's Limited Warranty are as follows:

1. Authorized Xtant Select Dealer Installed Products: Xtant will either repair or replace at no charge, to the original purchaser, any unit which Xtant's examination discloses to be defective and under warranty, provided the defect occurs within four (4) years from the date of purchase when the unit is installed by an Authorized Xtant Select Dealer and the product is returned immediately to Xtant. This warranty is not transferable.
2. Non-Authorized Xtant Dealer Installed Products: Xtant will either repair or replace at no charge, to the original purchaser, any unit which Xtant's examination discloses to be defective and under warranty, provided the defect occurs within one (1) year from the date of purchase and the product is returned immediately to Xtant. This warranty is not transferable.
3. The date of purchase and proof of Authorized Dealer Installation of an Xtant amplifier and/or accessory must be established by an original (or copy of the original) sales receipt which must accompany the article being returned for warranty work.
4. This warranty shall NOT apply to any Xtant unit found to have the original factory serial number removed or defaced. All products received (by Xtant) for in warranty or out of warranty repair, with their original serial numbers removed or defaced, will NOT be repaired and will be returned to sender, freight collect.
5. The provisions of this warranty shall not apply to any Xtant unit used for a purpose for which it is not designed, which has been repaired or altered in any way, or which has been connected, installed, or adjusted other than in accordance with the instructions furnished in Xtant's owner's manual. Nor shall this warranty apply to any part which has been subject to misuse, neglect, or accident.
6. Xtant does not authorize any other persons to assume any other liability in connection with its products. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY XTANT APPLICABLE TO ITS PRODUCTS. ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO XTANT'S AMPLIFIERS AND OR ACCESSORIES IS LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY. XTANT SHALL NOT BE LIABLE FOR THE INCIDENTAL, CONSEQUENTIAL, OR COMMERCIAL DAMAGES RESULTING FROM THE BREACH OF THIS WRITTEN WARRANTY. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts; so the above limitations or exclusions may not apply to you.
7. Your unit will be serviced on an in-warranty basis within the warranty period for the correction of warranted defects. If improper operation of your Xtant product should occur, contact your Authorized Xtant Select Dealer for assistance with the return and factory repair of your Xtant product. If an Authorized Xtant Select Dealer is not available, please contact **Xtant's Customer Relations Department at (602) 431 8686 from 8:00 am to 5:00 pm (MST) for assistance.**



Xtant Technologies
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Phoenix, Arizona 85040

TO RETURN XTANT PRODUCTS OUT OF WARRANTY: Contact Xtant's Customer Relations Department at (602) 431 8686 from 8:00 am to 5:00 pm (MST) for a Return Authorization Number. Return the unit, postage prepaid, in the original protective carton. Please include a description of the problem and, if desired, a request for an estimate of repair costs. Unless a request for an estimate is included, the unit will be repaired as necessary. Repaired unit will be returned with an itemized statement, C.O.D.



OWNER'S INSTALLATION LOG

Upon installation of your mobile audio sound system, your Authorized Xtant Select Dealer will complete this log. Keep this owners manual with your vehicle as a reference for all amplifier settings.

OWNERS NAME: _____

VEHICLE: MAKE/MODEL: _____ YEAR: _____

XTANT AMPLIFIER SERIAL NO.# _____

CROSSOVER SETTINGS:

LOWPASS FREQ: _____

VALUE CODE: _____

HIPASS FREQ: _____

VALUE CODE: _____

JUMPER SETTINGS:

SLOPE: 12 dB 24 dB

PHASE: NORMAL INVERT

RCA OUTPUTS (CIRCLE SETTING)

BYPASS HIPASS

SLOPE: 12 dB 24 dB

INPUT SENSITIVITY JUMPER (CIRCLE SETTING)

-20 dB (x .1) -10 dB (x .3) 0 dB (x 1) +10 dB (x 3) +20 dB (x 10)

OUTPUT GAIN ADJUSTMENT

(DRAW ARROW POSITION)



PQM-1 YES NO

LFQ45 YES NO

BLM-1 YES NO

XTANT SELECT DEALER _____

PHONE: _____

INSTALLATION SPECIALIST: _____

DATE INSTALLED: _____



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