

ICE-X 2000  
ICE-X 2500  
ICE-X 3000

A U D I O P A R T S  
**BANDA**



## USER MANUAL

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### TECHNICAL SPECIFICATION

- Operation topology: Class D
- Variable LINKWITZ-RILEY active crossover: 17Hz - 21kHz (12dB/octave)
- Input impedance: 47kohms
- Frequency response (cross key ON): 17hz - 21kHz (-3dB)
- Frequency response (cross key OFF): 5hz - 42kHz (-3dB)
- Variable subsonic filter: 17Hz - 120Hz (12dB/octave)
- Clipping indicator (5% distortion)
- THD: <0,08%
- SNR: >81,5dB (100Hz)
- Damping factor: >103
- Input sensitivity: 22mV ~ 10V (100Hz)
- Gain control (Input sensitivity ajust)
- Bass boost: 45Hz @ 0dB to +18dB
- Differential input circuit
- Active fans per temperature
- Termical protection

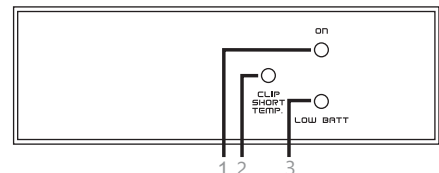
•Dimensions  
12.12"L x 2.36"H x 10.39"W  
Weight: ICE X 2500/3000: 10.36 lb

\*These values are typical and may present some minor variation.

### TECHNICAL SPECIFICATION

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• ICE-X 2001<br/>1 channel 2000Wrms @ 1ohm / 12,6Vdc<br/>Current draw at full power :<br/>108A (average music program)</li> <li>• ICE-X 2501<br/>1 channel 2500Wrms @ 1ohm / 12,6Vdc<br/>Current draw at full power :<br/>131A (average music program)</li> <li>• ICE-X 3001:<br/>1 channel 3000Wrms @ 1ohm / 12,6Vdc<br/>Current draw at full power :<br/>155A (average music program)</li> </ul> | <ul style="list-style-type: none"> <li>• ICE-X 2002<br/>1 channel 2000Wrms @ 2ohms / 12,6Vdc<br/>Current draw at full power :<br/>108A (average music program)</li> <li>• ICE-X 2502<br/>1 channel 2500Wrms @ 2ohms / 12,6Vdc<br/>Current draw at full power :<br/>131A (average music program)</li> <li>• ICE-X 3002:<br/>1 channel 3000Wrms @ 2ohms / 12,6Vdc<br/>Current draw at full power :<br/>155A (average music program)</li> </ul> |
|---|--|

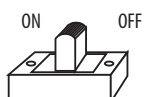
### FRONT PANEL



- 1. Blue LED: • On
- 2. Red LED: • Output distorted (Clip) - Output short circuit - Termical protection (check page 07 for more informations)
- 3. Yellow LED: • Low voltage battery

### Crossover Key

- Crossover key:  
CROSS KEY ON: Enable filters (Subsonic, Variable crossover and Bass boost).  
Frequency response in this option: 17Hz - 21kHz (-3dB)  
CROSS KEY OFF: Disable filters (Subsonic, Variable crossover and Bass boost).  
Frequency response in this option: 5Hz - 42kHz (-3dB)  
When the filter is DISABLED only the GAIN CONTROL is active.



\* To access this option: remove the cover and choose the key position ( the key is near the LEDs ).

COSTUMER SERVICE:  
55 (19) 3844-7173 - (19) 3844-7465 - (19) 3844-4923 •  
BANDA@BANDAAUDIOPARTS.COM

Name: \_\_\_\_\_  
Invoice: \_\_\_\_\_ Date: \_\_\_\_\_ Phone: \_\_\_\_\_  
Address: \_\_\_\_\_  
Shop: \_\_\_\_\_

### REGISTRATION DATA

Warning: Continuous expose to sound pressure levels over 85dB may cause permanent hearing loss.

After the warranty expires, Banda Audioparts will continue to provide extensive technical assistance directly or through its network of authorized service, charging, however, the repair services and replacement of components

### Note: Permanent Technical Support

Banda Audioparts reserves the right to change the product and its specifications at any time without prior notice.

Street: Manoel Joaquim Filho, number 353 - Jardim Santa Terezinha II - Paulínia - SP - Brazil  
- Zipcode: 13148-115

The defective equipment must be shipped to the factory or to an authorized service center

### This warranty does not cover shipping costs.

- 1. Damage resulting from misuse, abuse, accident, alterations or improper installation;
- 2. Damage resulting from installation in surces subjected to high levels of vibration;
- 3. Any source of repairs made by anyone other than a Banda Audioparts authorized service technician;

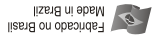
### Warranty Exclusions:

Within the period of this warranty, Banda Audioparts will repair or replace, free of charge, any part proving defective in material or workmanship.

Banda Audioparts warrants this equipment to be free of all defects in material and workmanship for a period of 12 months from the date of purchase

### WARRANTY

www.bandaaudioparts.com



Power supply section ICE-X

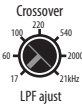
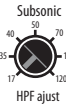
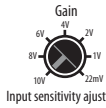
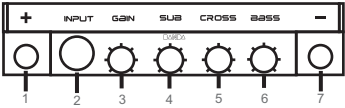


1. Negative power input (ground): connect to car chassis.
2. Positive power input (+12Vdc): connect to battery positive terminal.
3. Remote input: connect to radio/cd player remote output.

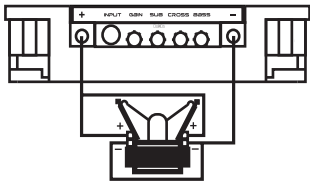
1. Negative power input: cable diameter 4AWG
2. Positive power input (+12Vdc): cable diameter 4AWG
3. Remote input: cable diameter 14AWG

1. Output speaker positive
2. Signal input (RCA)
3. Input sensitivity adjust
4. HPF adjust
5. LPF adjust
6. Bass boost adjust
7. Output speaker negative

Power output section - Input section - Frequency adjusters

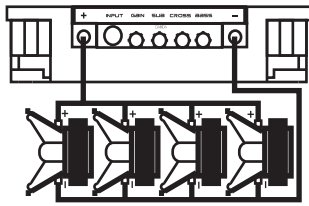


ICE-X 2001



2+2ohms 2000Wrms subwoofer coils wired in parallel resulting in 2000Wrms @ 1 ohm.

ICE-X 2002

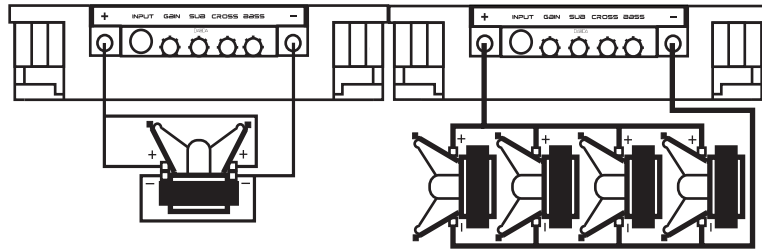


8ohms 500Wrms woofer x 4 wired in parallel resulting in 500Wrms @ 2 ohms.

CLIPPING INDICATOR

Clipping (LED RED Blinking - LED BLUE constant): The red LED lights up when the amplifier output is detected 5% of distorting. As long as the speakers used are capable of handle the total output power this LED can eventually blink but if it holds still it means too much distortion in the output and this can damage the speakers and the amplifier. In this case, turn down the head unit volume or the gain control of amp.

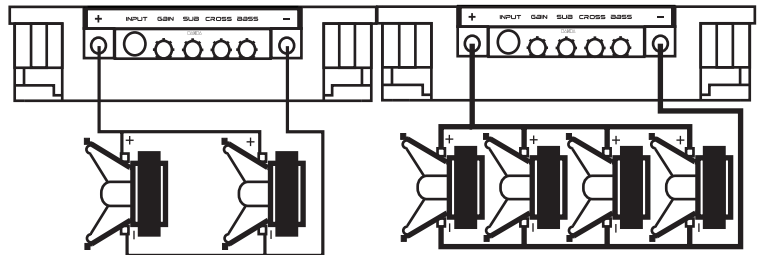
ICE-X 2501



2+2ohms 2500Wrms subwoofer coils wired in parallel resulting in 2500Wrms@1 ohm.

4ohms 625Wrms woofer x 4 wired in parallel resulting in 2500Wrms@1 ohm.

ICE-X 2502

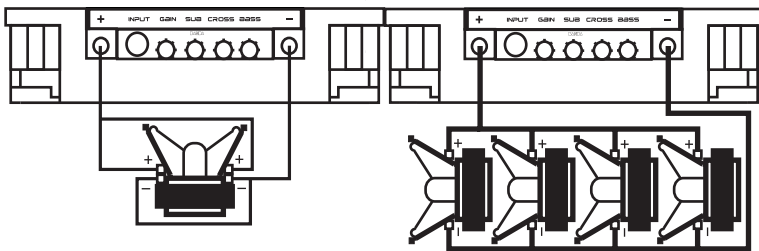


4ohms 1250Wrms (woofer or subwoofer) x 2 wired in parallel resulting in 2500Wrms@2 ohms.

8ohms 625Wrms woofer x 4 wired in parallel resulting in 2500Wrms@2 ohms.

NOTE: These designs are basic, just for example, this device works on several types of system as long as the minimum impedance is respected.

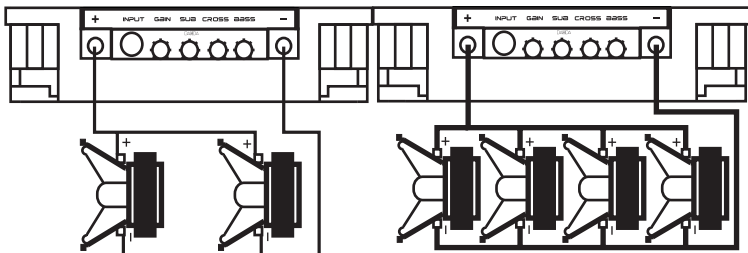
ICE-X 3001



2+2ohms 3000Wrms subwoofer coils wired in parallel resulting in 3000Wrms @ 1 ohm.

4ohms 750Wrms woofer x 4 wired in parallel resulting in 3000Wrms @ 1 ohm.

ICE-X 3002



4ohms 1500Wrms (woofer or subwoofer) x 2 wired in parallel resulting in 3000Wrms @ 2 ohms.

8ohms 750Wrms woofer x 4 wired in parallel resulting in 3000Wrms @ 2 ohms.

NOTE: These designs are basic, just for example, this device works on several types of system as long as the minimum impedance is respected.

EXTERNAL FUSE IS REQUIRED ON ICE X LINE AMPLIFIERS.

Short Circuit protection and low impedance:

If short circuit is detected in output terminals, the amplifier shuts down and the red LED lights blinking. The equipment must be turned off, solve the short circuit problem and turn the equipment on again. If the problem is solved, the blue LED must light up. If the load impedance is lower than the amplifier specification, the equipment may trigger the short circuit protection.

Low Voltage Protection:

When battery voltage is lower than 9Vdc, the amplifier will shut down and the yellow LED will blink until the equipment is restarted.

Thermal protection ICE-X (BLUE LED and RED LED constants):

When the temperature in the heatsink reaches around 45°C (113°F), the fans are driven in full rotation to cool the amplifier. If in extreme cases the heatsink temperature reaches around 85°C (185°F) the amplifier will enter protection mode (BLUE LED and RED LED lit simultaneously), at which point the circuit cuts the audio outputs for 15 seconds and maintains the fans turned on at maximum speed, then after 15 seconds the audio returns the outputs automatically.

Protection triggered

1. Check if the external fuse is blown (Yellow LED constant).
2. Check if there is short circuit in the output terminals. To do it, turn off the amplifier, disconnect all speakers and the input RCA cable and wait about 20 seconds. Turn on the amplifier again and if the blue LED lights up, the amplifier is operating normally.
3. Check if any speaker is presenting short circuit or the total impedance load is lower than the amplifier specification.
4. Check if there is enough current in battery to supply the amplifier and if the cables are capable of conduct that current. (Yellow LED blinking)

Output Noise

1. Check if there is loose connection in signal input or in the RCA cable.
2. Check if there is ground connection in the radio/cd RCA output.
3. Check if RCA cables are wired separated from the power cables.
4. Check if the +12Vdc that powers the amplifier is coming directly from the battery.
5. Check if ground cable is connected in car chassis as near as possible of the amplifier.
6. Both radio/cd and amplifier must be firmly connected to car chassis ground to avoid noises and voltage fluctuations at amplifier output.