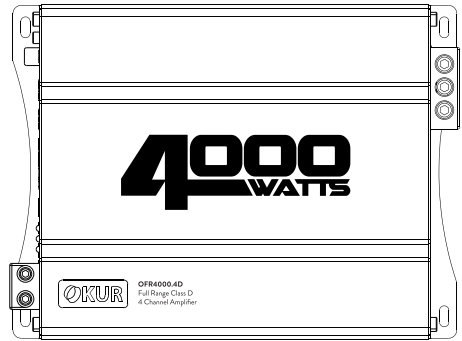


- **OFR2000.1D**
- **OFR3000.1D**

FULL RANGE CLASS D
MONOBLOCK AMPLIFIER



- **OFR4000.4D**
- FULL RANGE CLASS D
4 CHANNEL AMPLIFIER

USER MANUAL

Installation Instructions | Owner's Manual

www.okurelectronics.com

Due to continuous improvement of the product, specifications are subject to change without notice.

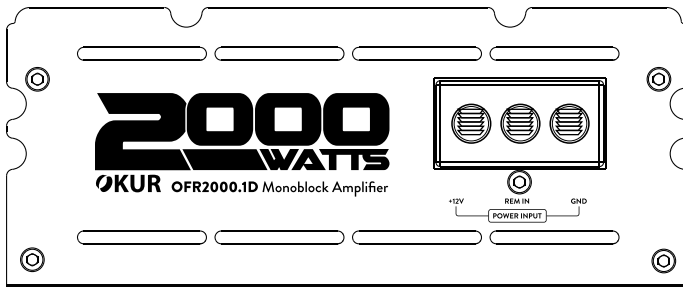
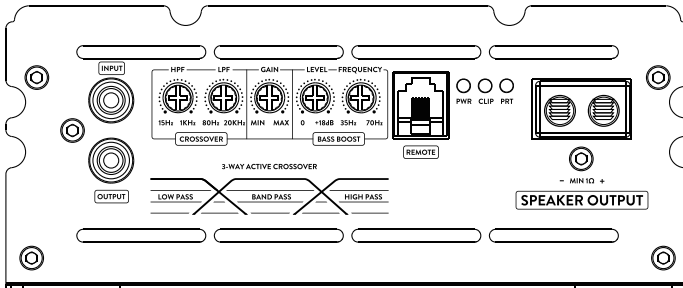
1. OKUR AMPLIFIERS SPECIFICATION

1-1. OKUR - FULL RANGE CLASS D MONOBLOCK AMPLIFIERS

Load	Voltage & THD	OFR2000.1D	OFR3000.1D
4Ω Mono	14.4 Volts & 1%	1 X 500	1 X 750
2Ω Mono	14.4 Volts & 1%	1 X 1000	1 X 1500
1Ω Mono	14.4 Volts & 1%	1 X 2000	1 X 3000

THD at Rated Power : <0.5%
 Bandwidth: (-3 dB) - 18Hz- 20KHz
 Damping Factor: (1kHz @ 4Ω) - 126
 Signal to Noise Ratio: >90dB
 Input Sensitivity: 285Mv - 6V
 Minimum Load Impedance: 1Ω mono
 Mono Low Pass Filter Slope: 12dB
 LPF Range: 80Hz-20KHz
 HPF Range: 15Hz-1KHz
 Variable Bass Boost: 35Hz-70Hz

2. OKUR AMPLIFIERS CONTROL & CONNECTION.



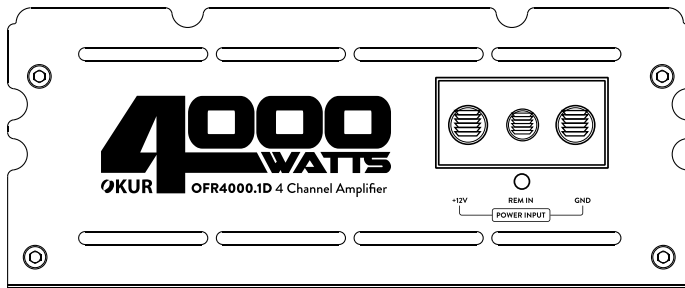
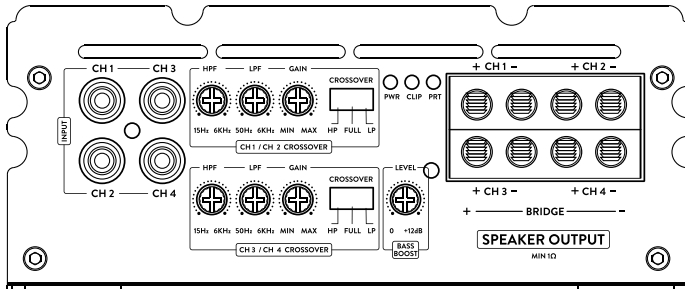
1. OKUR AMPLIFIERS SPECIFICATION

1.1. OKUR - FULL RANGE CLASS D 4 CHANNEL AMPLIFIERS

Load	Voltage & THD	OFR4000.4D
4Ω Stereo	14.4 Volts & 1%	4 X 500
1Ω Stereo	14.4 Volts & 1%	4 X 1000
2Ω Bridged	14.4 Volts & 1%	2 X 2000

Compatibility:	1Ω Stereo
THD at Rated Power:	<0.5%
Bandwidth:	(-3 dB) - 18Hz- 22KHz
Damping Factor:	(1kHz @ 4Ω) - 100
Signal to Noise Ratio:	>90dB
Input Sensitivity:	285Mv - 6V
Minimum Load Impedance:	2Ω Stereo
Input:	Pre in RCA
Crossover Filter Slope in Stereo:	12dB
Channel 1-2 HPF Range:	15Hz -6KHz
Channel 1-2 LPF Range:	50Hz - 6KHz
Channel 3-4 HPF Range:	15Hz -6KHz
Channel 3-4 LPF Range:	50Hz - 6KHz
Selectable Bass Boost @	45Hz - 0-12dB

2. OKUR AMPLIFIERS CONTROL & CONNECTION.



INPUT

Connect RCA output cables from the head unit to OKUR amplifiers' RCA Input.

OUTPUT

Is used when connection multiple amplifiers.

GAIN (6V – 0.2V)

Matching the output voltage of the head unit's RCA line-outs to OKUR amplifiers' input section.

HIGH PASS FILTER

Controls the High Pass Crossover point for the speaker outputs.

LOW PASS FILTER

Controls the Low Pass Crossover point for the speaker outputs.

+12V (POWER CONNECTION)

This must be connected to the fuse positive terminal (+12V) of the battery. Recommended wire is 4 gauge or thicker. Check the battery voltage.

GND (GROUND CONNECTION)

It is connected to the negative or ground cables of the vehicle. Recommended wire is 4 gauge or thicker.

REM (REMOTE)

It is connected to switched +12V with a trigger cable coming from the head unit.

SPEAKER OUTPUTS

It connects amplifier's terminal to subwoofer, speakers or full range speakers. Minimum speaker wire is 12 gauge.

POWER & PROTECTION INDICATOR

Power LED - Green-lit shows normal operation.
Protect LED - RED-lit shows general malfunction, faulty connection or thermal protection.

3. INSTALLATION

In case you install the OKUR amplifiers by yourself, please read owner's manual very carefully before your installation. Please take all steps into consideration or you can have OKUR or DB Research's authorized dealer to check installation and set your car audio systems.

3-1. MOUNTING PREPARATION

Disconnect the negative (-) battery cable before mounting your OKUR amplifiers or making any connections. Check the battery and alternator ground (-) connections. Make sure they are properly connected and free of corrosion before selecting a mounting location. Please take some concerns into consideration with cooling efficiency and safety.

3-2. MOUNTING PREPARATION

The OKUR amplifiers use a specially designed heat radiation heat sink to avoid excessive heat from OKUR circuitry. But for better heat dissipation, it is good to find the mounting location where you can install OKUR amplifiers vertically with the heat sink fins and better air flow around heat sink. For the safety, You have to find a dry and well ventilated location and make sure any cables and drilling car equipment are not interfere with mounting location. Be sure the mounting location and drilling of pilot cables will not present a hazard to any cables, control cables, fuel lines, fuel tanks, hydraulic lines or other vehicle systems or components.

3-3. +12V, GND, REM CONNECTION.

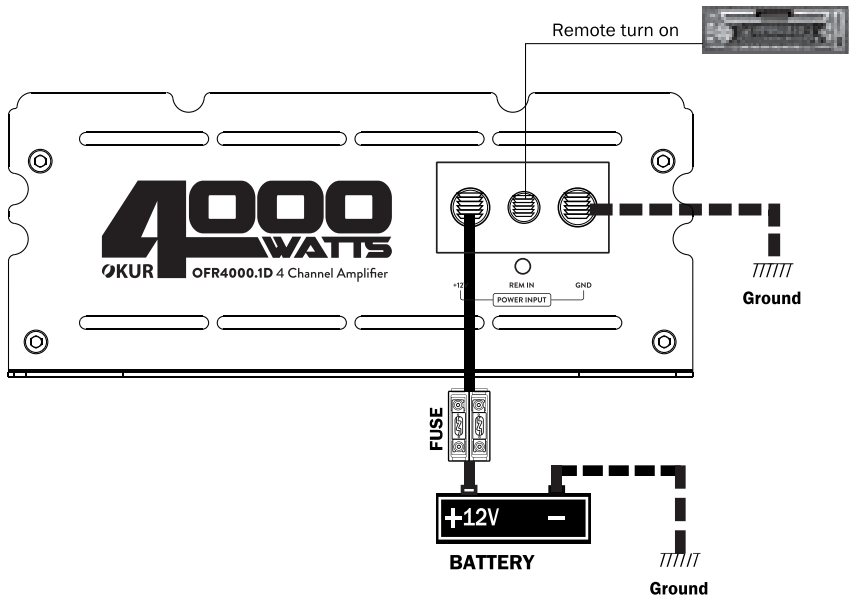
GND (GROUND CONNECTION)

Locate a secure grounding connection as close to OKUR series as possible. Make sure the location is clean and provides a direct electrical connection to the frame of the vehicle. Connect one end of a short piece of the same gauge cable as the power cable to the grounding point. Run the one end of the cable to the grounding point. Run the other end of the cable to the mounting location. Connect the ground cable to the screw terminal labeled as GND.

REM (REMOTE CONNECTION)

Run a remote turn on cable from the head unit's remote switched +12V output.

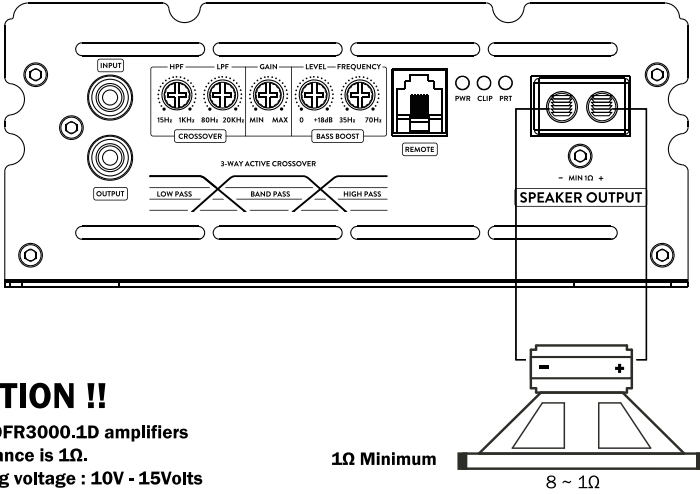
OKUR AMPLIFIER +12V, GROUND, REMOTE CONNECTION DIAGRAM



3-4. SPEAKER CONNECTION

OKUR recommends to use minimum 12 gauge speaker connecting cables. Run 12 gauge speaker connecting cables from your speakers to OKUR amplifier's mounting location. Keep speaker cables away from the power cables and OKUR amplifier's input cables. Use grommets anywhere the cables have to pass through the holes in the metal frame or sheet metal. Connect to the speakers according to the type of terminals on each speaker. Strip 3/8" of insulation from the end of each cable and twist the cables strands together tightly. Make sure there are no stray strands that might touch other cables or terminals and cause a short circuit. Crimp spade lugs over the cable ends or tin the ends with solder to provide a secure termination. Connect the cable ends to OKUR amplifiers as speaker system diagram.

OKUR FULL RANGE CLASS D MONOBLOCK AMPLIFIERS' SPEAKER CONNECTION DIAGRAM 1.

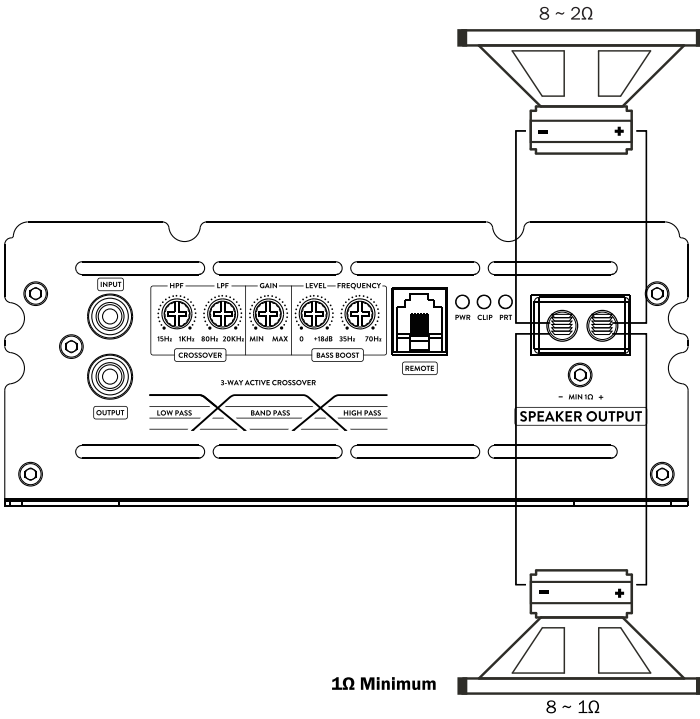


⚠ CAUTION !!
OFR20001.D & OFR3000.1D amplifiers
Minimum impedance is 1Ω.
Minimum working voltage : 10V - 15Volts

1Ω Minimum

8 ~ 10

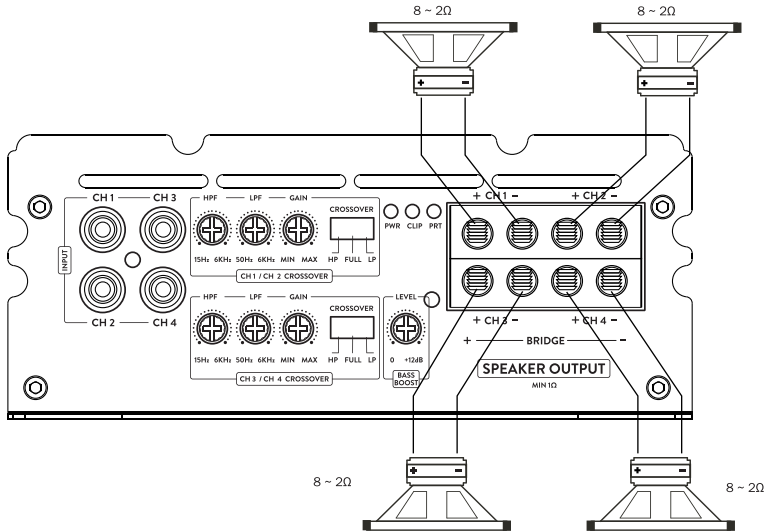
OKUR FULL RANGE CLASS D MONOBLOCK AMPLIFIERS' SPEAKER CONNECTION DIAGRAM 2.



1Ω Minimum

8 ~ 20

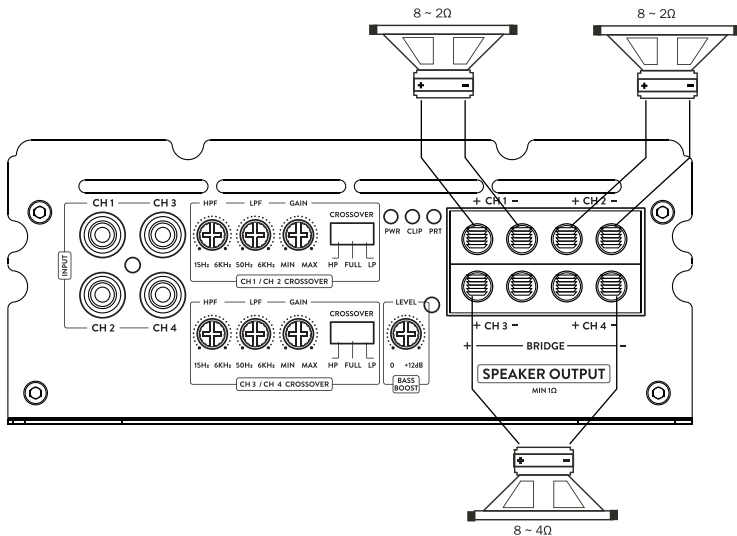
OFR4000.4D FULL RANGE CLASS D 4 CHANNEL AMPLIFIER SPEAKER CONNECTION DIAGRAM 1



⚠ CAUTION !!

OFR4000.4D working voltage is 10 ~ 15 volts
Minimum working impedance is
1Ω in stereo or 2Ω bridged.

OFR4000.4D FULL RANGE CLASS D 4 CHANNEL AMPLIFIER SPEAKER CONNECTION DIAGRAM 2



4. TROUBLE SHOOTING

NO SOUND (NO OUTPUT)

- 1) Please check all connections, cables' routing, short and voltage at **OKUR** amplifiers and head unit.
- 2) Please check built-in or external fuses, If it is blown, please replace with new one.
- 3) Please check whether speakers work well, you can test speakers by connecting to another amplifiers.

PROTECTION

- 1) Please check overload, overheat (thermal) , short, voltage and DC offset.
- 2) Minimum working impedance for OFR2000.1D and OFR3000.1D is 1Ω, Lower than 1Ω can damage the amplifiers.
- 3) If the OKUR amplifiers are shut down due to overheat, Reset by turning off the remote input and allowing time to cool down. Please make sure there are no airflow obstructions around OKUR amplifier to prevent thermal protection.
- 4) OFR2000.1D and OFR3000.1D have voltage protection as 10 ~ 15 volts. If Voltage is out of range as above, OKUR amplifiers will be protected.

POOR BASS RESPONSE

- 1) Please check speaker's polarity.

WHINING NOISE

- 1) Engine noise is caused by poor grounding of OKUR amplifiers, head unit, other components, battery or alternator, so please check all grounding connections.

LIMITED WARRANTY

OKUR warrants any products purchased in the U.S.A. from an authorized OKUR dealer. All products are warranted to be free from defects in material and workmanship under normal use and service for a period of (1) year when the unit is installed by an authorized OKUR dealer. Non-authorized dealer installed products carry a one (1) year parts and labor limited warranty. This warranty applies to the original purchase only.

OKUR will either repair or replace (as its option) any unit that had been found to be defective and under warranty provided the defect occurs within:

One (1) year, if purchased through an authorized OKUR dealer with original proof of purchase.

This limited warranty periods do not extend to units having been subjected to misuse, abuse, neglect, or accident. Products that in OKUR's judgment shows evidence of having been altered, modified, or serviced without OKUR's authorization, will be ineligible under this warranty.

To obtain warranty services please contact your retailer or visit our website at www.okurelectronics.com for more details.



DB Research L.L.P.

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