Owner's Manual

SK-M5001D
SK-M4004D
SK-M9005D

SOUND QUALITY MINI AMPLIFIER

1. INTRODUCTION

Congratulations and thank you for purchasing Skar Audio amplifiers, the logical choice in mobile audio amplification. Your amplifiers have been designed and engineered with the highest quality components and top of the line workmanship to help you reach the superior sound you are after. To achieve optimal performance of your system, please take a few moments to read over this Owner's manual or visit authorized dealer.

2. DESIGN FEATURES

Mini Digital monoblock and full range multi-channel amplifiers

- @ Stable into 1ohm load for SK-M5001D
- @ Stable into 2ohm stereo for SK-M4004D
- @ Stable into 2ohm stereo for CH1-CH4 & into 2ohm mono for CH5 for SK-M9005D
- @ Full range digital circuit for SK-M4004D
- @ High speed mosfet power supply
- @ 24dB/Oct, Variable Crossover for SK-M5001D
- @ Variable subsonic filter
- @ High level input
- @ 4 way protection circuit (Thermal, High & Low voltage, Speaker short & DC)
- @ High Purity copper printed boards
- @ 4 gauge power & ground terminals
- @ Hand-made high grade power supply

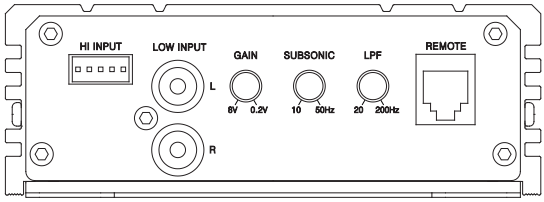
3. SPECIFICATIONS

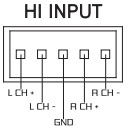
FEATURES	SK-M5001D	SK-M4004D	SK-M9005D
Power @ 4ohm	238W x 1	80W x 4	55W x 4 + 300W x 1
Power @ 2ohm	380W x 1	134W x 4	85W x 4 + 450W x 1
Power @ 1ohm	500W x 1	na	na
Power @ 4ohm bridged	na	270W x 2	170W x 2
Frequency Response	15~270Hz	10~40KHz	10~20KHz for CH1 ~ CH4 10Hz~500Hz for CH5
Signal to Noise Ratio	85dB	85dB	85dB
Damping Factor	100 <	100 <	100 <
Input Sensitivity	8V~0.2V	8V~0.2V	8V~0.2V
Low Pass Filter	20~200Hz	na	50~500Hz for CH5
Subsonic Filter	10~50Hz	na	na
Crossover		50~500Hz	20~500Hz
Crossover selector	na	HPF/FULL/LPF	HPF/FULL/LPF
Bass Boost	na	na	0~18dB for CH5
Remote Gain Control	Included	na	Optional
Power & Ground terminals.	8 Ga	8 Ga	8 Ga
Working Voltage	8.5V~16V	8.5V~16V	8.5V~16V
External Fuse	50A	40A	80A
Dimensions (Length) (118 W x 42 H mm)	200 mm	200 mm	280 mm

All features are subject to change in the continuing effort to improve the products without notice.

4. CONTROLS & CONNECTIONS

4-1. SK-M5001D control





HI INPUT cable color code
L CH + : White color
L CH - : Red color
GND : Black color
R CH - : Purple color
R CH + : Grey color

RCA JACK INPUT
Low Level Rca Input will accept the signal from the output of head units. Plug in Rca jack cables from the head unit.

HI INPUT
Connect factory system's headunit.

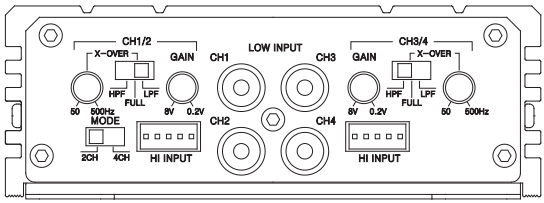
GAIN CONTROL [6V ~ 0.2V]
The gain control adjusts the gain level. so that this is used to match the signal level of different headunits.

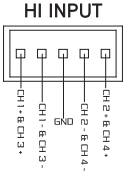
SUBSONIC FILTER [10Hz ~ 50Hz @ 24dB / Oct slope]
Control the high Pass point for the speaker outputs to eliminate extreme low frequencies.

LOW PASS FILTER [20Hz ~ 200Hz @ 24dB / Oct slope]
The crossover features a steep 24dB oct slope Linkwitz-Riley low pass crossover ensuring that only the lowest frequencies are reproduced by the amplifier.

REMOTE CONTROL PORT
This port is for connecting the remote gain control.
Remote control can be mounted around driver's seat for easy access.

4-2. SK-M4004D control





HI INPUT cable color code
CH 1 + & CH 3 + : White color
CH 1 - & CH 3 - : Red color
GND : Black color
CH 2 - & CH 4 - : Purple color
CH 2 + & CH 4 + : Grey color

RCA JACK INPUT
Low Level Rca Input will accept the signal from the output of head units. Plug in Rca jack cables from the head unit.

HI INPUT
Connect factory system's headunit.

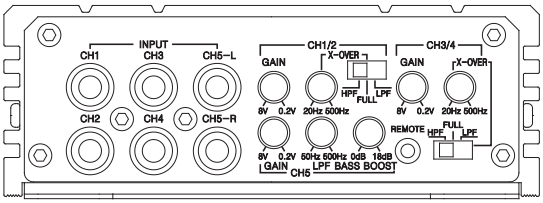
GAIN CONTROL [6V ~ 0.2V]
The gain control adjusts the gain level. so that this is used to match the signal level of different headunits.

X-OVER [50Hz ~ 500Hz @ 12dB / Oct slope]
The crossover features a steep 12dB oct slope Linkwitz-Riley crossover ensuring that only the highest or lowest frequencies are reproduced by the amplifier.

X-OVER SLECTOR SWITCH [HPF/FULL/LPF]
Selected x-over is in effect.

MODE [2CH/4CH]
Selecting 2ch or 4ch input

4-3. SK-M9005D control



RCA JACK INPUT
Low Level Rca Input will accept the signal from the output of head units. Plug in Rca jack cables from the head unit.

GAIN CONTROL [6V ~ 0.2V]
The gain control adjusts the gain level. so that this is used to match the signal level of different headunits.

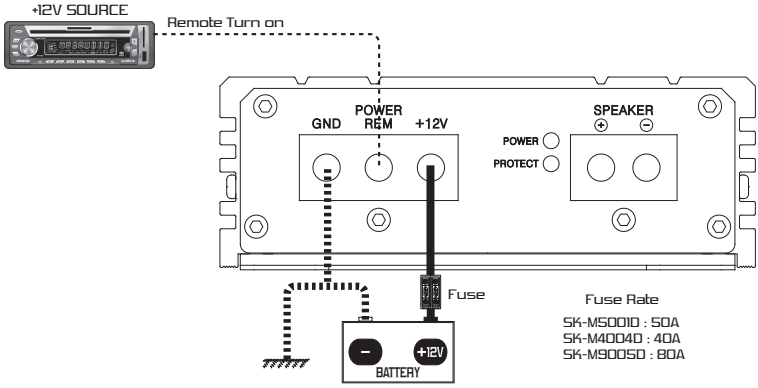
X-OVER [20Hz ~ 500Hz @ 12dB / Oct slope]
The crossover features a steep 12dB oct slope Linkwitz-Riley crossover ensuring that only the highest or lowest frequencies are reproduced by the amplifier.

X-OVER SLECTOR SWITCH [HPF/FULL/LPF]
Selected x-over is in effective.

LPF [50Hz ~ 500Hz @ 12dB / Oct slope]
The crossover features a steep 12dB oct slope Linkwitz-Riley crossover ensuring that only the lowest frequencies are reproduced by the amplifier.

BASS BOOST [0 ~ 18dB @ 45Hz]
It boosts bass from 0 ~ 18dB @45Hz.

4-4. Power, remote & ground connection



Working Voltage & Impedance

SK-M5001D : 8.5V - 16Volts & 1 ohm mono.
SK-M4004D : 8.5V - 16Volts & 2 ohm stereo or 4 ohm bridged
SK-M9005D : 8.5V - 16Volts & 2 ohm stereo or 4 ohm bridged for CH1-CH5 and 2 ohm mono for CH5.

GND (GROUND)

Locate a secure grounding connection as close to amplifier as possible.
Make sure the location is clean and provides a direct electrical connection to the frame of the vehicle.
The ground needs to have as low of a resistance as possible.
Connect one end of a short piece of the same size cable as the power cable to the grounding point or to one of your batteries or battery bank.
Run the other end of 8 gauge cable to the mounting location of the amplifiers for connection to the amplifiers ground terminals and connect the ground cable to the GND (ground terminal).

REM (REMOTE)

Run a remote turn on cable from the switched + 12V source . This may be a toggle switch, a relay, your source unit's remote trigger cables, or power antenna trigger cable. Connect the remote turn on cable to the REM (remote) terminal.

12V (POWER CONNECTION)

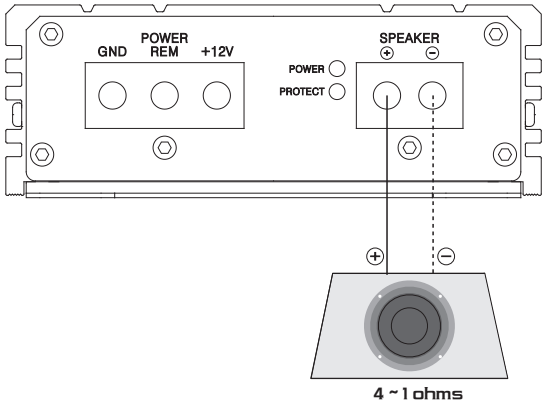
Before mounting amplifiers, disconnect the negative (**–**) cable from the battery to protect any accidential damage to your awesome amplifiers and audio system.
All amplifiers are designed to use 8 gauge power and ground connection.
Connect the power cables to power terminal + 12V.
SK-M5001D, SK-M4004D and SK-M9005D do not have built-in fuses so they need external fuse connection.
Connect one end of fuse holder to the power cable going into the amplifiers and the other end of fuse holder to positive battery.
This fuse location will protect the system and the vehicle against the possibility of a short circuit in the power cable.
Be sure to use fuses and fuse holder adequate for the application.

SPEAKER OUTPUT

This terminal connects the amplifiers to the speaker systems. Minimum speaker cable should be larger than 12 gauge.
Connect carefully the subwoofer speakers by checking the impedance
SK-M5001D : 1 ohm mono
SK-4004D : 2 ohm stereo or 4 ohm bridged
SK-M9005D : 2 ohm stereo or 4 ohm bridged for CH1 - CH4 and 2 ohm mono for CH5.

4-5. SK-M5001D speaker connection

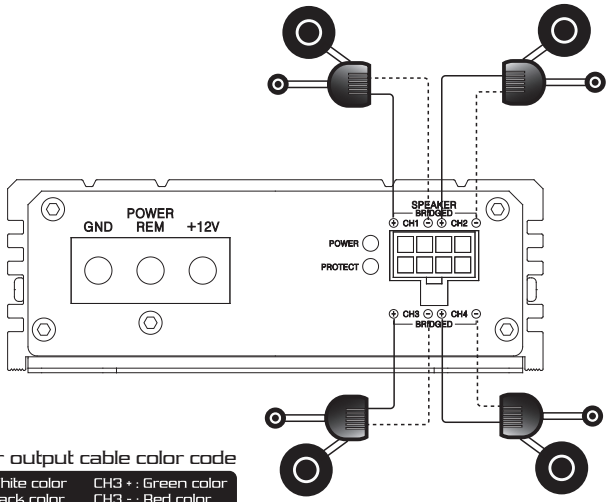
SK-M5001D speaker connection

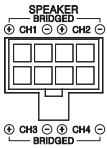


Caution !!

SK-M5001D Minimum working impedance is 1ohm.
Impedance lower than 1 ohm can damage the amplifier

SK-M4004D speaker connection 1.





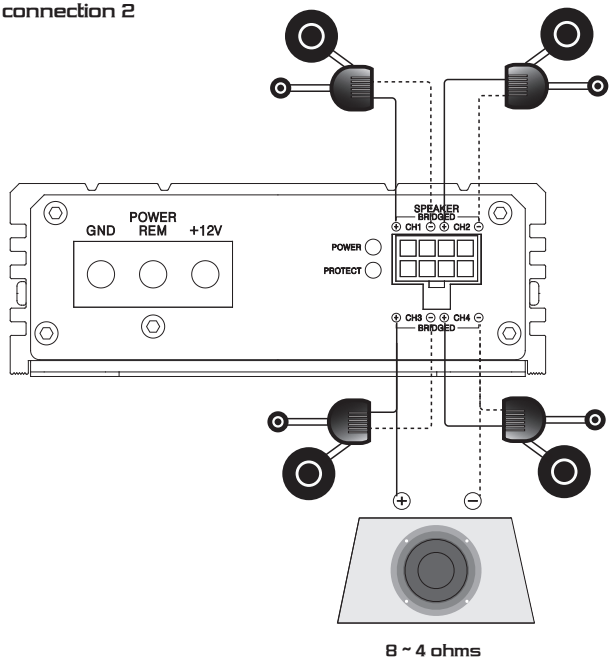
Speker output cable color code

CH1 + : White color	CH3 + : Green color
CH1 - : Black color	CH3 - : Red color
CH2 + : Grey color	CH4 + : Purple color
CH2 - : Brown color	CH4 - : Blue color

Caution !!

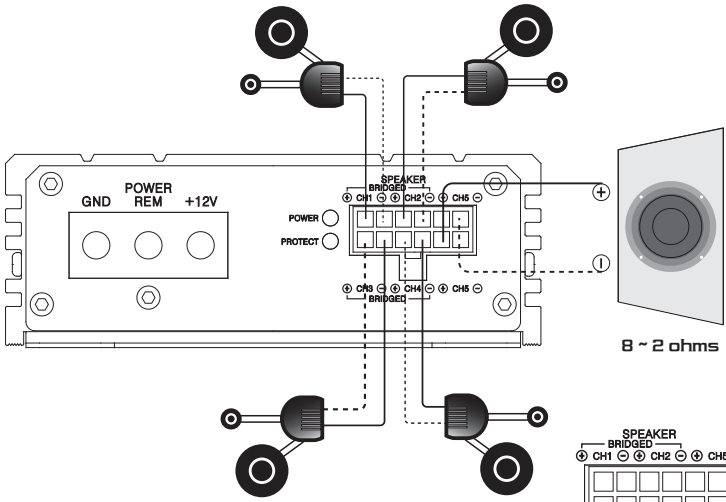
SK-M4004D Minimum working impedance is 2ohm stereo or 4ohm mono.
Impedance lower than 2ohm stereo or 4ohm mono can damage the amplifier

SK-M4004D speaker connection 2

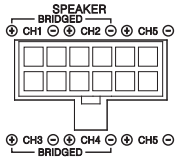


8 ~ 4 ohms

SK-M9005D speaker connection



8 ~ 2 ohms



Speker output cable color code

CH1 + : White
CH1 - : White with Black

CH2 + : Gray
CH2 - : Gray with Black

CH3 + : Green
CH3 - : Green with Black

CH4 + : Violet
CH4 - : Violet with Black

CH5 + : Orange
CH5 - : Blue

Caution !!

SK-M9005D Minimum working impedance is 2ohm stereo or 4ohm bridged for CH1 - CH4 and 2ohm mono for CH5.
Impedance lower than 2ohm stereo or 4ohm bridged for CH1-CH4 and 2ohm mono for CH5 can damage the amplifier.

5. TROUBLE SHOOTING

NO SOUND (NO OUTPUT)

- Please check all connections, cables' rounting, short & voltage
- Please check the fuses , If they are blown, please replace with new one.
- Please check whether speakers work well, you can test speakers by connecting to another amplifier

PROTECTION

- Please check overload, overheat (thermal), short and voltage, DC offset.
- Minimum working impedance is 1 ohm for SK-M5001D.
  SK-M4004D is 2ohm stereo or 4ohm bridged.
  SK-9005D is 2ohm stereo or 4ohm bridged for CH1 - CH4 and 2ohm mono for CH5.
- If amplifiers are shut down due to heat, they will be on some minutes later after cooling down.
  Please make better airflow and no obstruction around amplifiers for thermal protection.
- SK-M5001D, SK-M4004D and SK-M9005D working voltage is 8.5 ~ 16Volts.
- When over 4V DC comes into amplifiers, then, they will be DC protected.
  Check whether amplifiers work after removing RCA-Input.
  If amplifiers work, then check DC by checking RCA-input .
  When DC is over 4V at input, try by replacing +12V source unit .

DISTORTION & NOISE

- Readjust input level and check the speaker quality at another amplifier.
  Replace poor quality speakers with good quality ones.
- Check amplifiers and headunit's ground contact. all grounds should be common.
- Check Rca Jack, then repalce with new one or reroute Rca Jack.
- Engine noise is caused by poor grounding of amplifiers, headunit, other components, battery or alternator, so please check all grounding connection.

POOR BASS RESPONSE

- Please check speaker cables and reverse polarity.