SANSUI

INSTRUCTION MANUAL

SA-D650.1

1 CHANNEL CLASS D POWER AMPLIFIER

SANSUI

MADE IN CHINA

www.sansui-caraudio.com

INTRODUCTION

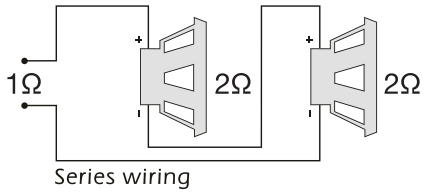
SYSTEM PLANNING

Proper system planning is the best way to maximize your amplifier performance. By planning your installation carefully you can avoid situations where the performance of the reliability of your system is compromised. Your authorized dealer has been trained to maximize your system's sonic potential. Your dealer is a valuable resource in helping you with your system design and installation.

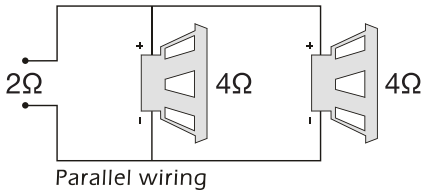
SPEAKER REQUIREMENTS

Each channel of your amplifier can easily drive 2Ω speaker loads when used in the stereo mode. When a channel-pair is bridged, the recommended minimum load impedance is 1Ω for subwoofer use, and 2Ω for full range operation. Although operation with lower impedances is not likely to cause immediate damage to the internal circuitry, the unit will most likely overheat, causing the thermal protection circuitry to shut down the amplifier. When the chassis cools down, normal operation will resume. Continuing to operate the amplifier under these conditions is not recommended and will reduce its life expectancy.

Most speakers designed for car audio operation are 2Ω impedance. Connection two such speakers in parallel will result in a 2Ω impedance load as seen by the amplifier. Some subwoofer models feature a dual 4Ω voice coil design. Connecting these voice coils in parallel will result in a 2Ω nominal impedance, which is not recommended for use with bridged channels of your amplfier.



Series wiring



Parallel wiring

INTRODUCTION

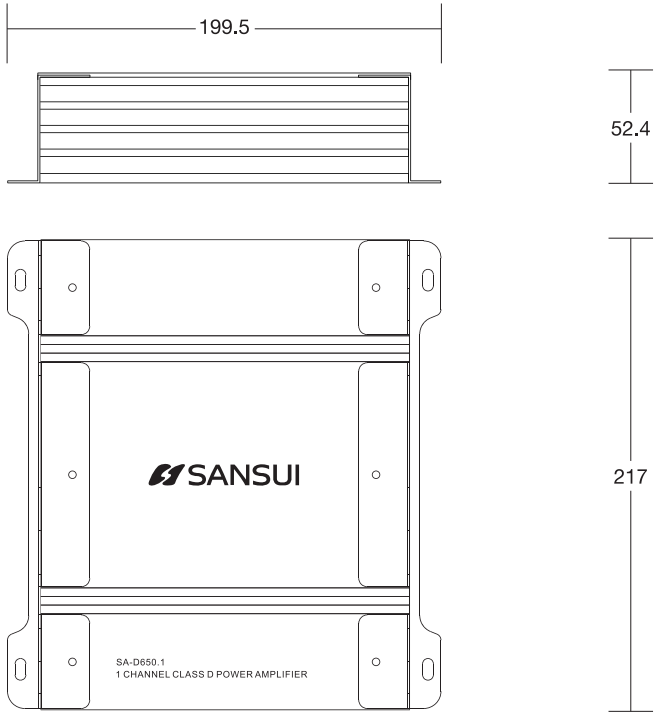
ACCESSORY LIST

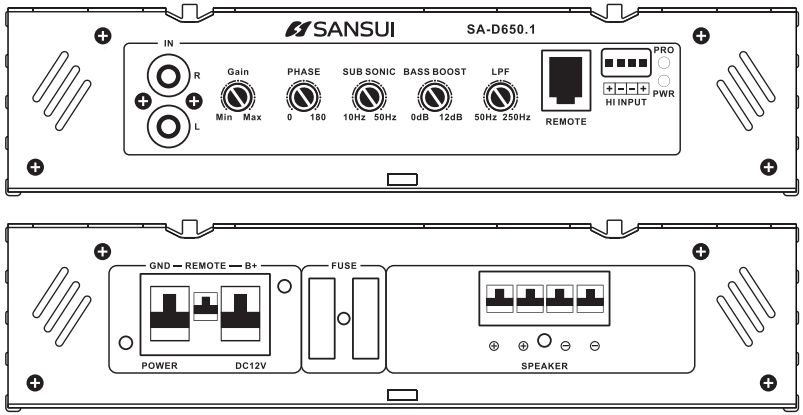
1. User Manual	1 pc
2. Amplifier	1 pc
3. Mounting Screw	4 pcs
4. Fuse(30A)	2 pcs
5. Remote Control	1 set
6. Connection line	1 pc

SPECIFICATIONS

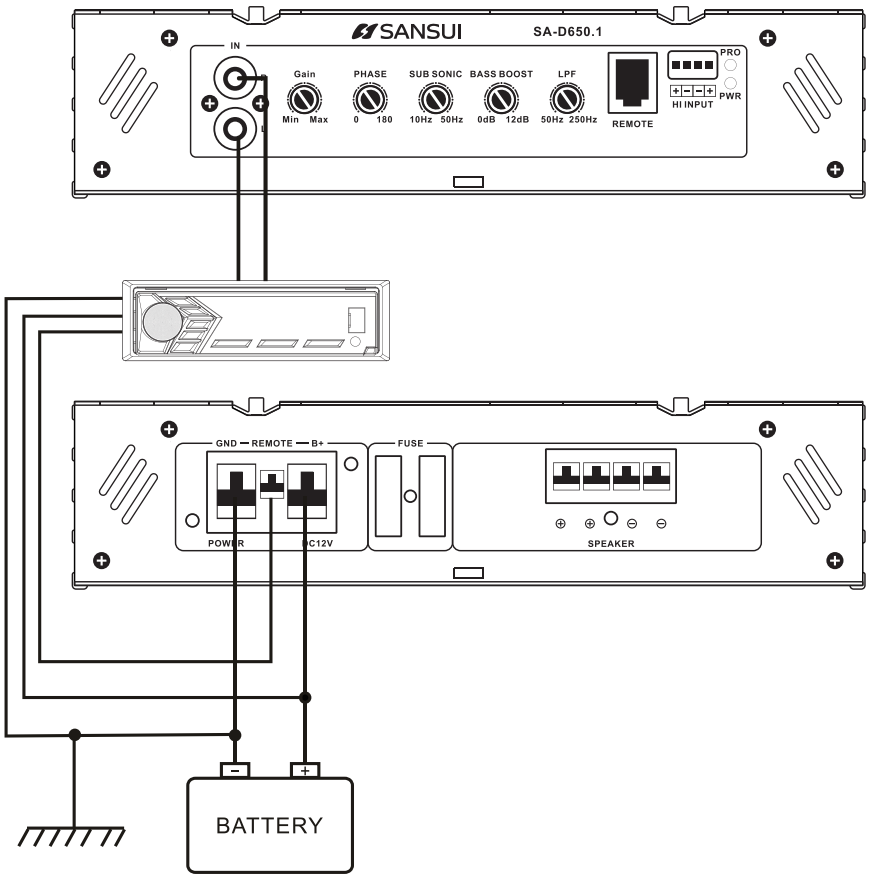
N-power Output @ 2 Ohm	350W x1
N-power Output @ 1 Ohm	650W x1
T.H.D.	<0.1%
Freqyency Response	50Hz - 250Hz
Signal To Noise Ratio	>90dB
Sensitivity	0.15V - 8V
Fuse Size	30A x 2
Unit Dimensions (L x H x W)	199.5 x 217 x 52.4 mm
Net Weight	Approx. 1.6kg
Box Dimensions (L x H x W)	225 x 225 x 63 mm
Gross Weignt	Approx. 1.9kg

DIMENSIONS (UNIT:MM)





POWER CONNECTION LEADS



POWER CONNECTION LEADS

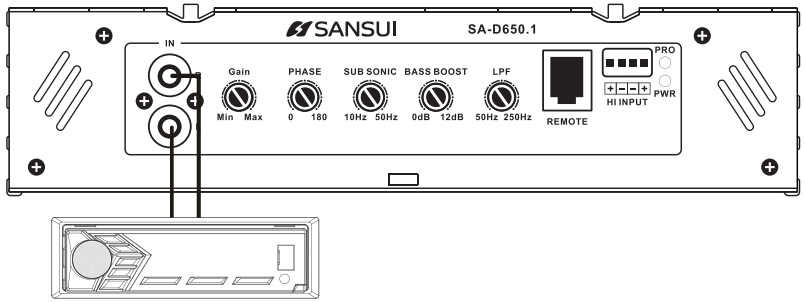
NOTES ON THE POWER SUPPLY

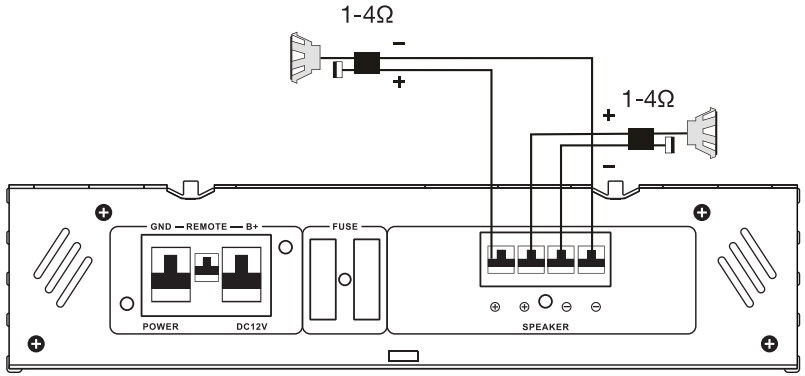
Connect the +12V power input lead only after all other leads have been connected. Be sure to connect the ground wire of the unit securely to a metal part of the car. A lose connection may cause a malfunction of the amplifier.

REMOTE: The unit is turned on by applying +12Volts to this terminal. This terminal dose not draw heavy current like the two power terminal so a thinner connecting wire is acceptable. Standard 18 GAUGE is fine and the standard colour is yellow. If the radio is equipped with a power antenna control wire, it can drive this terminal. If the power antrnna wire is already in use, you can still splice into it. With this method, the unit will turn on automatically with the radio. Use the power supply lead with a fuse attached whose value is the same as original fuse.
Place the fuse in the power supply lead as close as possible to the car battery. During a full power operation. Maximum current will run through the system. Therefore, Make sure that the leads to be connected to the +12V and GND terminals of the unit respectively must be larger than 8-Gauge (AWG.8).

POWER CONNECTION LEADS

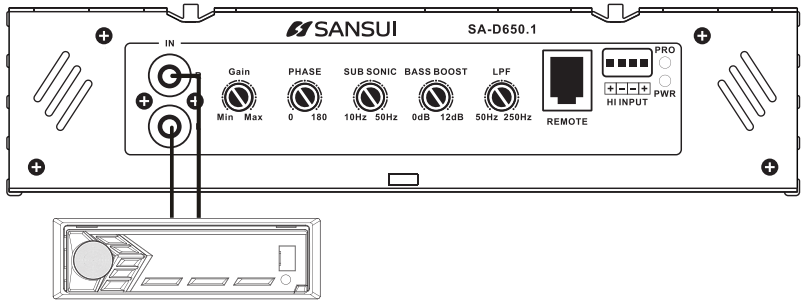
SYSTEM 1:

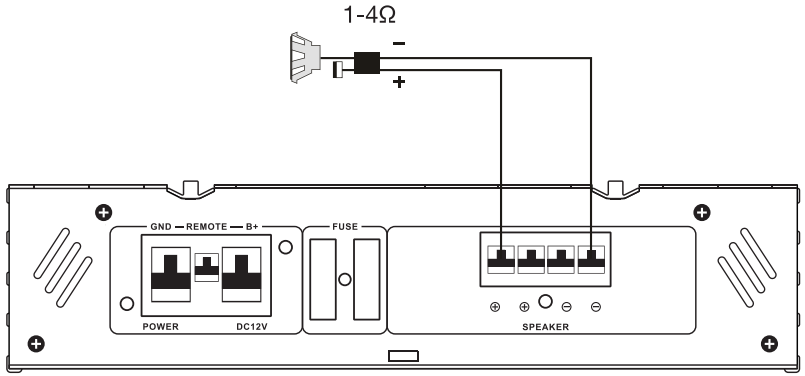




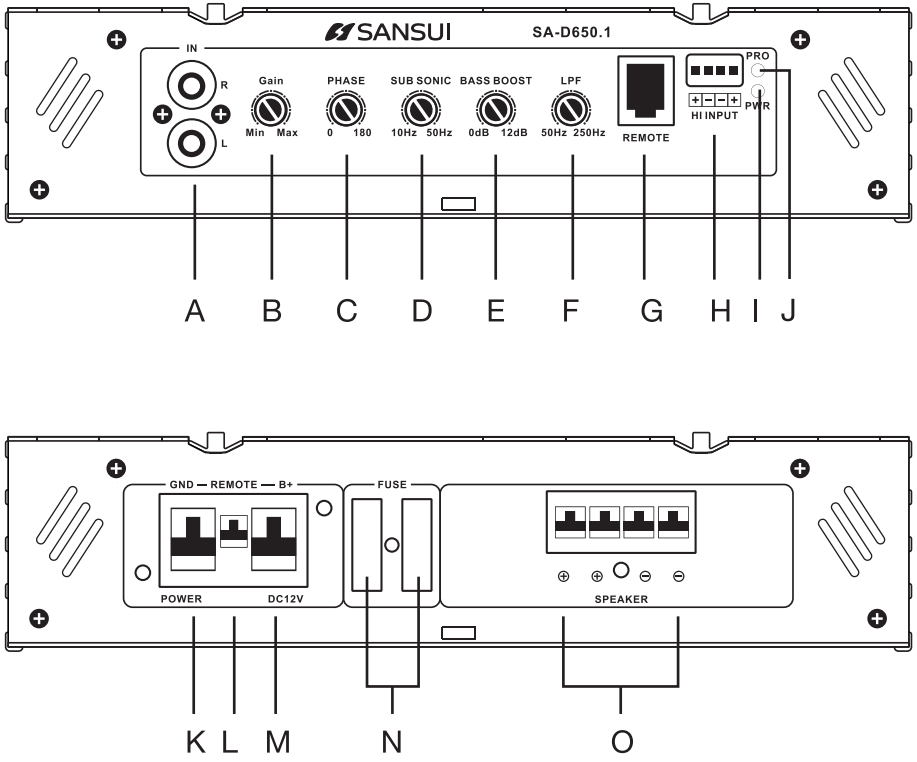
POWER CONNECTION LEADS

SYSTEM 2:





PANEL CONTROLS AND FEATURES



A. LOW LEVEL RCA INPUT
These RCA input jacks connect with your source unit RCA low level outputs or via optional adapter with your source unit speaker high level outputs. The use of high quality twisted pair car audio cables is recommended to reduce the possibility of audio signal degradation.

B. SPEAKER GAIN CONTROL
The gain control will match the amplifiers sensitivity to the source signal voltage.

PANEL CONTROLS AND FEATURES

C. PHASE KNOB
Phase adjustment 0-180°. The knob allows you to change the phase of the audio signal in the range from 0° to 180°. Adjusting the phase of the signal will improve the sound of low frequencies and change their spatial perception.

D. SUBSONIC FILTER CONTROL
This control allows you to filter out unwanted low frequencies from 10Hz to 50Hz, this allows you to increase the power handing of your installed woofers.

E. BASS BOOST
The BASS BOOST feature will increase the sound level in the bass frequencies.

F. SPEAKER LOW PASS CROSSOVER FREQUENCY
Controls low frequency of the amplifier between 50Hz to 250Hz.

G. ROMOTE LEVEL CONTROL INPUT
Attached the included remote level control here to cantrol the volume level to the subwoofer independently.

H. HIGH LEVEL INPUT
Designed to connect to signal sources without line output, such as car host.

I. POWER INDICATOR
The power indicator green LED will light up when the amplifier is working correcly.

J. PROTECTION INDICATOR
The protection red LED will light up and flash if there is a fault present in the amplifier. Please disconnect the amplifier and resolve the fault before reconnecting the amplifier.

K . GND(-) = GROUND CONNECTION
Connect this cable directly to the metal frame of the vehicle, ensuring that the metal frame has been stopped of all paint down to the bare metal. Use the shortest distance possible. It is always a good idea to replace the vehicle battery groudon terminal or any other factory ground points.

PANEL CONTROLS AND FEATURES

L. REM(ON/OFF) REMOTE CONTROL
When using HI-INPUT, the amplifier can detect the DC offset from the high level input signal to automatically turn the amplifier on or off. When the amplifier turns on, the REM terminal will output +12V DC to control the other devices to turn on or off. When using low level inputs, the amplifier REM-IN should be connected to the REM-OUT of the source unit. The source unit will control the amplifier to automatically turn on or off.

M. +12V = POWER SUPPLY
Connect this terminal through a fuse or circuit breaker to the positive terminal of the vehicle battery or the positive terminal of an isolated audio system battery.

N. FUSE
Do not use a fuse with a different value and never replace the fuse with a wire or coin.

O. SPEAKER CONNECTIONS
Connect your speakers and woofers to there terminals, ensuring proper polarity during connection. Never connect the speaker cables to the chassis ground.

TROUBLE CLEARING

SYMPTOM	POSSIBLE CAUSE	ACTION TO TAKE
NO OUTPUT	Low or no remote turn-on input	Check remote turn-on voltage output at amplifier and correct as needed
	Fuse blown	Check power wire integrity and reversed polarity, repair as needed and replace fuse
	Power wires not connected	Check power wire and ground connections and repair or replace as needed
	Audio input not connected or no output from source	Check input connections and signal integrity, repair or replace as needed check speaker wires and repair or replace as needed
AUDIO CYCLES ON AND OFF	Speakers are blown	Check system with known working speaker and repair or replace speakers as needed
	The normal protection engages when amplifier heatsink temperature exceeds 90°C	Make sure there is proper ventilation for amplifier and improve ventilation as needed
	Loose or poor audio input	Check input connections and repair or replace as needed
DISTORTED OUTPUT	Amplifier level sensitivity set too high; exceeding maximum output capability of amplifier	Reset gain referring to the tuning section of the manual for detailed instructions
	Impedance load to amplifier too low	Check speaker impedance load if below 2Ω stereo or 4Ω mono rewire speakers to achieve a higher impedance
	Shorted speaker wires	Check speaker wire connections and repair or replace as needed
	Speaker not connected to amplifier properly	Check speaker wiring and repair of replace as needed refer to the installation section of this manual for detailed instructions

TROUBLE CLEARING

SYMPTOM	POSSIBLE CAUSE	ACTION TO TAKE
	Internal crossover not set properly for speaker	Reset crossovers referring to configuration section of this manual
DISTORTED OUTPUT (CONT'D)	Speakers are blown	Check system with known working speakers and repair or replace as needed
POOR BASS RESPONSE	Speakers wired wrong polarity causing cancellation as low frequencies	Check speaker polarity and repair as needed
	Crossover set incorrectly	Reset crossovers referring to the multi-cross crossover configuration section of this manual for detailed instructions
BATTERY FUSE BLOWING	Impedance load to amplifier too low	Check speaker impedance load, if below 2Ω stereo or 4Ω mono rewire speakers to achieve a higher impedance
	Short in power wire or incorrect power connections	Check power and ground connections and repair as needed
	Fuse used is smaller than recommended	Replace with proper fuse size
	Too much current being drawn	Check speaker impedance load, if below 2Ω stereo or 4Ω mono rewire speakers to achieve a higher impedance
	Short in power wire or incorrect	Check power and ground connections and repair as needed
AMPLIFIER FUSE BLOWING	Too much current being drawn	Check speaker impedance load, if below 2Ω stereo or 4Ω mono rewire speakers to achieve a higher impedance and replace with recommended fuse size Check power and ground connections and repair as needed
	Fuse used is smaller than recommended	Replace with proper fuse size