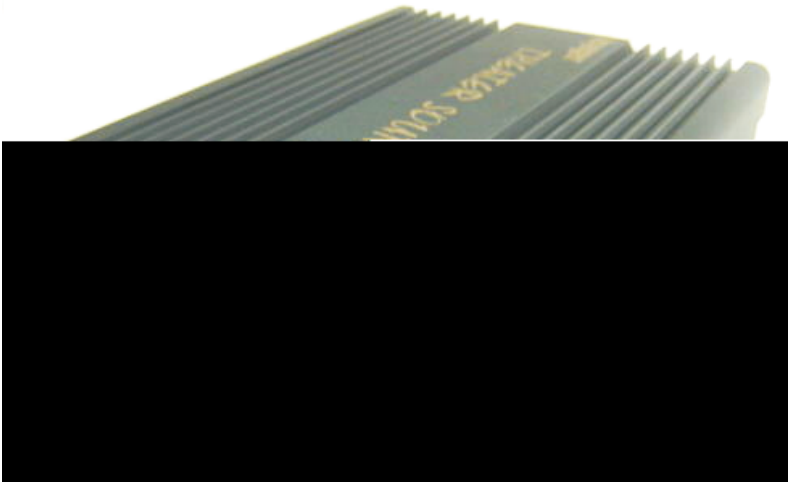
Voyager

THEATER SOUND

SRS 1000



Owner's Manual

Congratulations!!!
You have purchased one of the best, integrated Radio/TV amplification systems available for in-vehicle use today.

* Integrates TV and Radio sound into a single system for simplicity, enhanced performance and ease of use.
* On-board EQ and SRS functions greatly enhance sound quality from TV system.
* System can be added to an existing Radio system, or installed as a new system with optional cube speakers (model SP250) and subwoofers (model SP690).
* Sound quality parameters can be adjusted for optimum matching to vehicle interior.

Features:
* 4 x 15W main speaker outputs; 2 x 25W subwoofer outputs.
* SRS processor by SRS Labs, Inc. Unlike simple stereo systems, which produce a flat, 2 dimensional sound field, the SRS processor recovers lost spatial (directional) cues to reproduce a 3 dimensional sound field. This 3 dimensional sound field is more true to listening to a live performance than a traditional playback of a stereo recording. This feature is active for TV mode only.
* TV/Radio mode is activated via a simple 12VDC trigger line, which can be controlled by your own switch (integrated into your dash design, for example).
* 3 band EQ (100Hz, 1KHz, 10KHz centers), +/_ 10dB boost/cut for each band.
* TV and Radio gain controls to match the system to your devices for optimum performance.
* 3D field adjustment, to match size of sound field to vehicle.
* Low level and high level inputs for radio and TV for convenience.
* Mode indicator LED's on front panel.
* Sleep mode (ultra-low current draw mode) after 2 minutes with no signal detected.
* All controls factory preset with recessed knobs. This allows for easy adjustment, yet controls cannot be accidentally adjusted while being handled during installation.
* Extruded Aluminum heat sink housing.
* All connections made on rear panel, all adjustments made on front panel.

Front Panel Controls:

* Radio Gain adjustment
* TV Gain adjustment
* 3D Field adjustment
* Radio Mode LED indicator
* TV Mode LED indicator
* 100Hz adjustment
* 1KHz adjustment
* 10KHz adjustment

Rear Panel Connections:

* Main connector (Molex 16 pin, locking type). Handles power, speakers, subwoofers, and TV mode trigger I/O's.
* Radio low level input (RCA L/R)
* TV low level input (RCA L/R)
* TV high level input (3.5mm mono jack)
* Radio high level input (8 pin Molex, locking type) for Radio speaker feed direct

SRS Provides a Three-Dimensional Image from a Standard Stereo Source!

Benefits:

Natural 3D sound image from any two speaker stereo system

Based on characteristics of the human hearing system for natural, non fatiguing sound

Supports mono, stereo, and surround sound for enjoyment with any input material.

Fully immersive sound without a discernible sweet spot, allowing superb sound from any listening position.

60 U. S. And foreign patents issued.

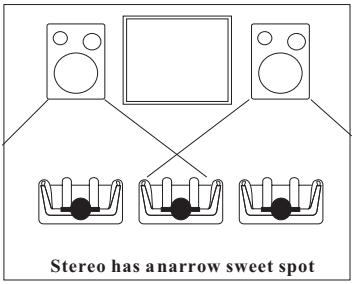
About the Technology:

SRS®, the Sound Retrieval System , came about after many years of research on the psychoacoustic of sound and the dynamics of the human hearing system. SRS retrieves the spatial information from recordings and restores the original three-dimensional sound field. As a result, the reproduced sound is much closer to a live performance. Like live performances, SRS has no critical listening position (sweet spot). Listeners can move around the room and continue to be immersed in full three-dimensional sound.

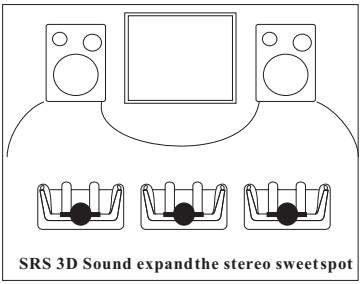
How the Technology Works:

A microphone does not possess the ability to inter pret the direction a sound is coming from in the same way that the human ear does. However, when the audio source is recorded, directional audio cues are still present in the recording. Without the proper processing of the ambient information, traditional stereo reproduces a flat, two-dimensional sound field.

By breaking down the stereo signal into its various signal components, it is possible to isolate and restore these spatial cues and place them in the proper space relative to the direct sounds, such as a soloist or dialogue. These spatial cues are restored by the use of Head Related Transfer Functions (HRTFs) , which process ambient sounds via patented frequency response correction curves.



Stereo has a narrow sweet spot



SRS 3D Sound expand the stereo sweet spot

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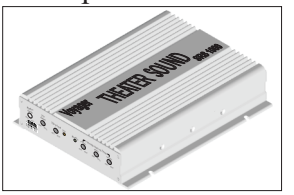
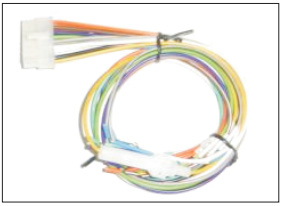
Package Contents

1. SRS1000 Amplifier.....1pc

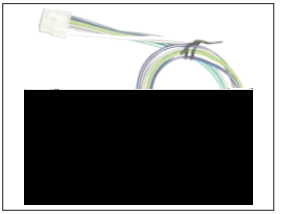


2. Wire Harness - 16 pin - Main Connection ...1pc

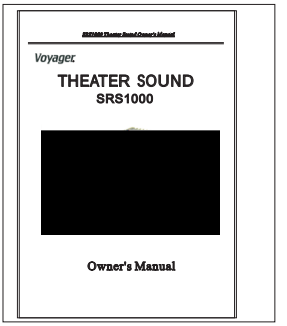


3. Wire Harness - 8 pin - Radio High Level

(Speaker Input) 1pc

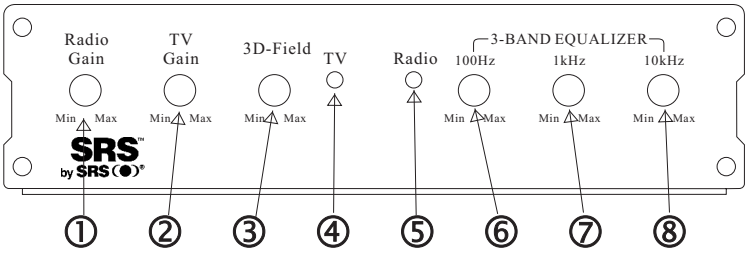


4. Owner's manual.....1pc



Front/Rear Panel Description (1)

Front panel view

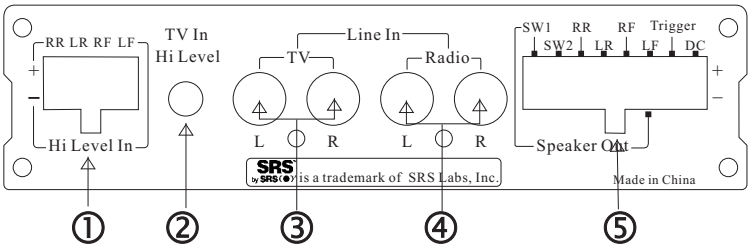


Front panel description:

1. Radio gain control---Adjust gain to match Radio signal level.
2. TV gain control---Adjust gain to match TV signal level
3. 3D field---Adjust depth of 3D effect
4. TV indicator ---Illuminated Orange LED when unit is in TV mode.
5. Radio indicator---Illuminated Green LED will unit is in Radio mode.
6. 100 Hz Band Adjustment---Adjust low frequency response (Bass) of the amplifier when in TV mode .This control has no effect on radio mode.
7. 1 kHz Band Adjustment---Adjust middle frequency response (Midrange) of the amplifier when in TV mode .This control has no effect on radio mode.
8. 10 kHz Band Adjustment---Adjust high frequency response (Treble) of the amplifier when in TV mode .This control has no effect on radio mode.

Front/Rear Panel Description (2)

Rear panel view



Rear panel description:

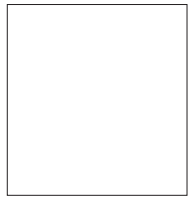
1. Radio, high level speaker input. Using the included 8 pin wire harness, connect the speaker output of the radio to SRS1000. Follow connection diagram on page 4. Do not use this input simultaneously with Radio Line In.

2. TV In, High Level -- This input is to be used only with monaural TV's (non-stereo) that do not have variable, stereo, line level out put. If this input is used, no connection should be made to Line In, TV. Doing so would cancel the SRS 3D effect.

3.Line in, TV--Connect to Stereo TV variable line level out put . Do not connect any cable to the TV In ,Hi Level Jack if this input is used .

4.Line in ,Radio--Connect to variable line output from radio (if available). Do not connect the 8 pin harness to the SRS1000 if this input is used.

5.Main Connection Input. Use included 16 pin wire harness to apply power, TV mode trigger, and all speaker outputs though this connection. Refer to page 4 for details.



Operation

Connecting the speakers

1. Speaker impedance
   a) Front & rear speakers : 4Ω minimum
   b) Subwoofer1 & Subwoofer 2 speaker: 4Ω minimum
2. Be sure to connect the cords between the speaker terminal and speaker systems with the same polarities("+" to "+","-" to "-"), if not, the central sound will be weak and the effect of the different instruments will not be clear. It will diminish the stereo effect.
3. When connecting the speakers, be sure that the wires do not stick out from the terminals and touch other terminal or the rear panel!
4. Checking connections.
   a) Be sure all connections are made correctly before applying power to the main unit. Damage to the unit may result if not connected properly. Refer to page 4 for connection details.
   b) Check the polarity (positive and negative) of connections and the directivity of stereo separation (right cord to right channel terminal)

First Time Operation

Important: Before Applying Power:

a) Set all controls on SRS1000 to mid position (slot in knob will be vertical).

b) Be sure TV mode trigger is not active (ie: 0 VDC)

c) Be sure that TV and Radio are off

System Set-Up (Gain Matching, EQ setting, 3D Effect setting)

1) Apply power to SRS1000. Verify Radio mode by checking Radio/TV indicators on Front Panel.

2) Turn on Radio and select a program source (a strong radio station, CD-play, etc). Adjust radio volume to approximately 1/4 volume.

3) Adjust Radio gain control up and down until suitable level is reached. Check level setting by exercising radio volume control from min to max and verifying overall volume levels at the speakers.

Note: EQ and 3D effect controls are only for TV mode operation. When in Radio mode, these controls are bypassed.

4) Now apply power to the TV mode trigger, and verify TV mode is active by checking indicator on the Front panel.

5) Turn on the TV , and select a program source (Strong station, VCP/DVD playing , etc).

6) Adjust TV volume to approximately 1/4 volume , and adjust TV gain control on SRS1000 until suitable level is obtained.

7) Adjust EQ until desired sound quality is reached. This is done by turning each of the 3 knobs under "3 Band Equalizer" on the front panel. 100Hz is for Bass, 1 Khz is for midrange, and 10 Khz is for Treble.

8) Adjust 3D Effect knob to match size of vehicle. This control is to compensate for the acoustic properties of small and large vehicles, which are very different. As a gengeral rule of thumb, the smaller

Specifications:

1. *Power Output (max. rating) :*
   Front channel : 15w+15w (4Ω)
   Rear channel : 15w+15w (4Ω)
   Subwoofer channel : 25w+25w (4Ω)
2. *THD:*
   Front channel : 0.3%
   Rear channel : 0.3%
   Subwoofer channel : 0.5%
3. *S/N ration* : 75dB
4. *TV Equalizer:*
   at 100Hz : ± 10 dB
   at 1kHz : ± 10 dB
   at 10k Hz : ± 10 dB
5. *Auto mute at no signal* : 2 minutes
6. *Dimensions:* 160(w) x 42(h) x 200(d) mm
7. *Voltage range:* 10.5V~16V
8. *TV mode trigger voltage range:* 10.5V~16V
9. *Stereo separation:* 50dB
10. *SRS 3D field effect specifications:* at 100Hz : +7 dB
    at 10kHz : +5 dB
11. *Current Draw:*
    Max : 6.5 A
    Normal (1W output): 1.5 A
    Min (no output-standby mode < 2 minutes no signal) : 0.6A
    Sleep (> 2 minutes no signal): 90mA (TV) /45mA (Radio)
12. *Frequency Response:*
    Front/Rear channels: 20Hz ~ 25kHz
    Subwoofer channels: 20Hz ~ 500Hz
13. *Signal Input Voltage Range:*
    Radio:
    High: 2 V
    Low : 200mV
    TV :
    High: 2 V
    Low : 200mA
14. *Gain Adjustment Range:* 0 ~ 32 dB