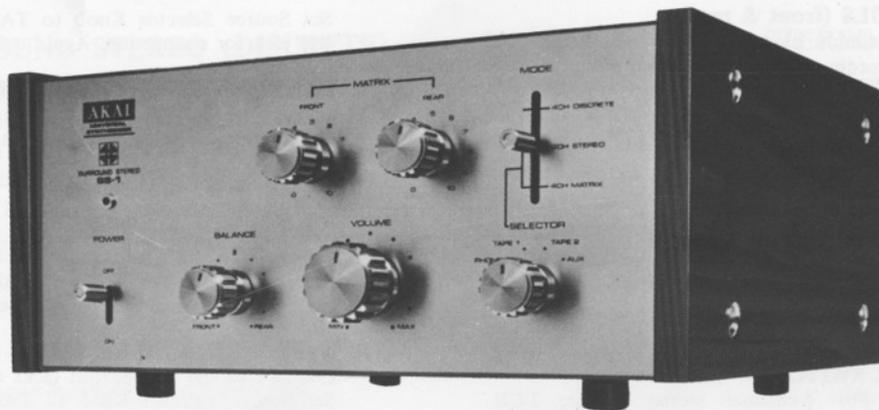


SS-1

UNIVERSAL SYNTHESIZER

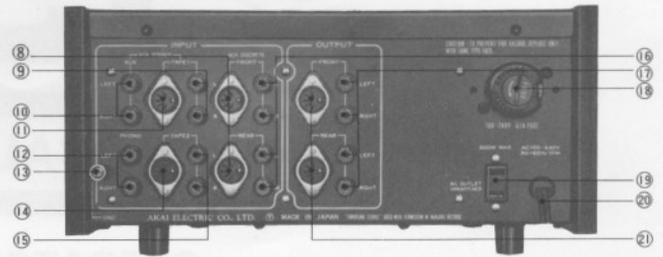
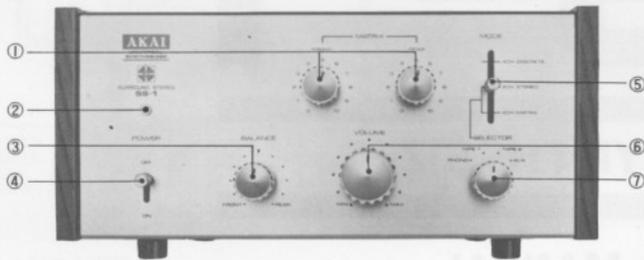
OPERATOR'S MANUAL



AKAI[®]

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CONTROLS



1. **MATRIX CONTROLS (front & rear)**
0 position: For maximum stereo effect; 10 position: For monaural. Adjust according to music and room circumstances or personal taste.
2. **POWER INDICATOR LAMP**
Lights when Power Switch is turned on.
3. **BALANCE CONTROL KNOB**
For front and rear channel speaker balance. Turning knob clockwise, increases the volume of the rear channel while reducing the front channel output and vice-versa.
4. **POWER SWITCH**
5. **MODE SELECTOR SWITCH**
4-CH DISCRETE: For 4-channel stereo source; 2-CH STEREO: For 2-channel stereo performance; MATRIX: 2-channel stereo source is converted for 4-channel stereo performance.
6. **VOLUME CONTROL KNOB**
For overall volume adjustment. Turning clockwise increases volume.
7. **SOURCE SELECTOR KNOB**
Select source according to input connections.
8. **FRONT/REAR CHANNEL DIN INPUT JACKS**
Connects to the front/rear Din output jacks of a 4-channel stereo tape deck or recorder. Set Mode Selector Switch to 4CH DISCRETE position when using these jacks for connection.
9. **TAPE 1 LINE INPUT JACKS (left & right)**
Connect to the line output jacks of a tape deck or recorder. Set Source Selector Knob to TAPE 1 position when using this jack for connection.
10. **AUX INPUT JACKS (left & right)**
Connect to the left and right output jacks of a 2-channel stereo turntable. Set Source Selector Knob to PHONO position.
11. **TAPE 1 DIN INPUT JACK**
Connects to the Din output jack of a tape deck or recorder.
Set Source Selector Knob to TAPE 1 position when using this jack for connection. Avoid connecting with amplifiers.
12. **PHONO INPUT JACKS (left & right)**
Connect to the left and right output jacks of a 2-channel stereo source. Set Source Selector Knob to AUX position.
13. **GROUND TERMINAL**
14. **TAPE 2 DIN INPUT JACK**
Connects to the Din output jack of a tape deck or recorder. Set Source Selector Knob to TAPE 2 position when using this jack for connection. Avoid connecting with amplifiers.
15. **TAPE 2 LINE INPUT JACKS (left & right)**
Connect to the line output jacks of a tape deck or recorder. Set Source Selector Knob to TAPE 2 position when using this jack for connection.
16. **FRONT/REAR CHANNEL LINE INPUT JACKS (left & right)**
Connects to the front/rear channel line output jacks of a 4-channel stereo tape deck or recorder. Set Mode Selector Switch to 4CH DISCRETE position when using these jacks for connection.
17. **FRONT/REAR CHANNEL LINE OUTPUT JACKS (left & right)**
Connects to the front/rear channel line input jacks of a 4-channel stereo tape deck or recorder or amplifier. Set Mode Selector Switch to 4CH DISCRETE position when using these jacks for connection.
18. **UNIVERSAL VOLTAGE SELECTOR & FUSE POST**
See Voltage Adjustment procedure.
19. **AC OUTLET**
20. **AC CORD**
21. **FRONT/REAR CHANNEL DIN OUTPUT JACKS**
Connect to the front/rear channel Din input jacks of a 4-channel stereo tape deck or recorder. Set Mode Selector Switch to 4CH DISCRETE position when using these jacks for connection. Avoid connecting with amplifiers.

INTRODUCTION

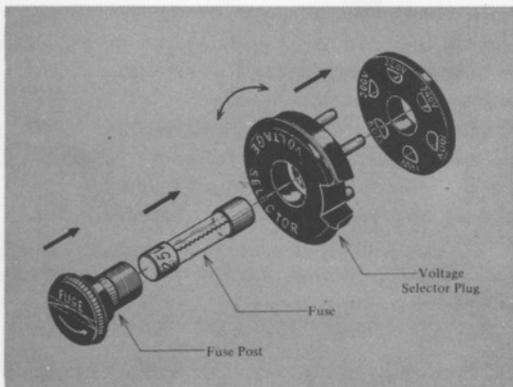
In Akai's never ceasing quest for excelling performance, we created 4-channel surround stereo tape decks and recorders. And to compliment the quality of these 4-channel performers, we produced top quality 4-channel surround stereo amplifiers. Nevertheless, with the intention of enabling you to utilize your present 2-channel units for 4-channel enjoyment, Akai now introduces the SS-1 Synthesizer featuring both 4-channel surround (discrete) stereo and matrix 4-channel stereo as well as conventional 2-channel stereo circuits.

MAIN FEATURES

- * With this new Synthesizer Unit, any 2-channel or 4-channel stereo source can be readily converted and played back in 4-channel stereo.
- * Continuous variable Matrix Controls are provided for front and rear channels for precise adjustment according to room circumstances and musical taste.
- * Multiple connection system facilitates simultaneous connections with many different machines. Simple front panel selector controls allow operation with any of the connected sources without disconnecting the other units.
- * Each of these connection systems are also equipped with a Din Jack. These Din Jacks can be used instead of the respective input or output Pin Jacks if your external unit is equipped with a corresponding connection jack.
- * By employing the Din and Pin Jacks, two units can be connected to each of the input systems. In this case, however, if both units are operated simultaneously, the signals will be mixed. Usually, these jacks are used alternatively.

4-CHANNEL SURROUND STEREO (DISCRETE)

For 4-channel surround stereo playback, the respective input jacks are connected to your 4-channel source (material which has been recorded on four separate tracks simultaneously). Then four speakers are connected and positioned to surround the listener. With the four speakers each delivering separate sound, left and right in front and left and right in rear, you are surrounded with live 4-channel stereo sound.



CEE, CSA and UL Standard models are not equipped with Voltage Selector. Therefore, voltage readjustment is not necessary. If your machine corresponds to any of these standards, please disregard all references to voltage adjustment throughout this manual.

CEE Models: 220V, 50 Hz
CSA Models: 120V, 60 Hz
UL Models : 120V, 60 Hz

Matrix 4-CHANNEL STEREO

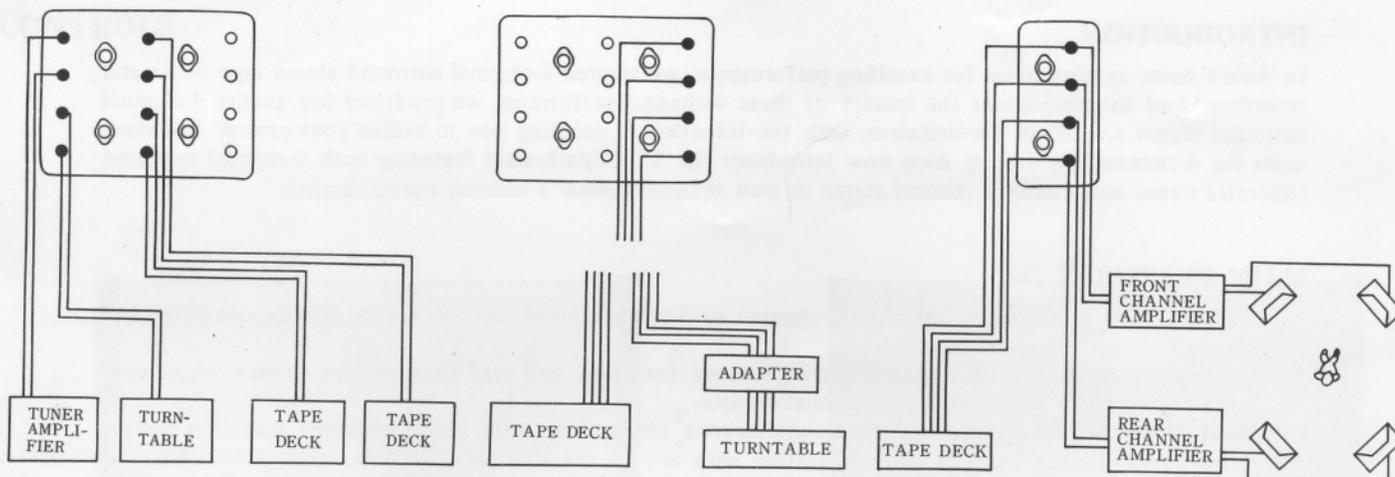
For matrix 4-channel stereo, the respective input jacks are connected to your 2-channel stereo source. When the SS-1 is set to matrix 4-channel, your 2-channel stereo source signals are fed through the matrix circuitry and divided into four separate signals. The left and right rear signals are then phase shifted for more effective rear channel sound reproduction. Speakers are connected and positioned in the same way as in surround stereo, and desired matrix effect is selected with the front panel Matrix Control Knobs.

POWER VOLTAGE ADJUSTMENT

Voltage Selector offers six selections of voltage from 100 V to 240 V for worldwide operability. Although this unit is preset at the factory according to destination, the operator is requested to check the previously set voltage and if readjustment is necessary, proceed as follows: (1) Remove Fuse Post by turning in direction of arrow. (2) Remove Selector Plug and reset so that proper area voltage shows through Plug cut-out. (3) Change fuse according to voltage: 100 V to 120 V: 0.2 A fuse, 125 V; 200 V to 240 V: 0.2 A, 250 V fuse. (4) Tighten Fuse Post.

AC OUTLET

Your unit is equipped with an extra AC outlet for added convenience. Note that the outlet is not inter-connected with the power switch, so that power is applied even with the unit turned off.



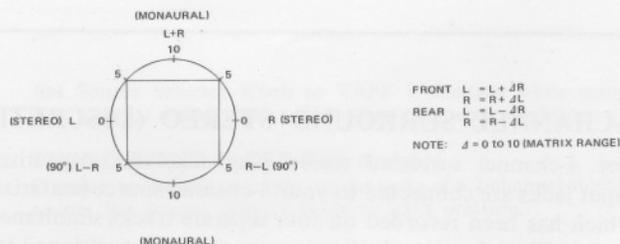
PLAYBACK

- A. Connect desired source as indicated in the figure and connect front panel Source Selector Knob accordingly.
 - B. Connect an external amplifier to the output jacks (for 2-channel stereo playback connect a 2-channel stereo amplifier, and for 4-channel stereo playback, a 4-channel stereo amplifier or two 2-channel stereo amplifiers), and connect the speakers as shown in the figure.
 - C. Turn on Power Switch. Note that the Power Indicator Lamp will light.
 - D. Set Mode Selector Switch to desired mode. (4-channel discrete stereo mode can be accomplished only if your source is 4-channel stereo).
 - E. Adjust Volume Control. Clockwise increases volume.
 - F. Adjust Balance Control for front and rear speaker balance. Turning knob clockwise increases the volume of the rear channel while reducing the front channel output, and vice-versa.
- * If you are operating at matrix 4-channel mode, desired effects can be selected with front and rear channel Matrix Controls.

"0" position for stereo mode.
 "10" position for monaural mode.

- a. When both controls are set to about <4> to <5> position, standard matrix 4-channel stereo is effected.
- b. When both controls are set to <0> position, small auditorium effect is obtained.
- c. When the front channel control is set to <0> position, and the rear to <10> position, reverberation is obtained for large concert hall effects.

... And so on. Thus, various effects can be obtained according to music and room circumstances.



RECORDING (Dubbing)

Dubbing from any 2-channel or 4-channel stereo source can be accomplished as follows:

1. Connect source and set front panel Source Selector Knob accordingly.
 2. Connect left and right input jacks of the recording machine to corresponding Output Jacks.
 3. Turn on Power Switch.
 4. Set Mode Selector Switch to desired mode. Note that discrete 4-channel stereo mode can be accomplished only if your source is 4-channel stereo.
 5. Make necessary adjustments at recorder.
- * Simultaneous dubbing can also be accomplished during playback by utilizing both the Din Jack and Pin Jack connections.

TECHNICAL DATA

Input Sensitivity: Aux/Tape 1/Tape 2/Discrete 4-Ch : 250mV, Phono: 5mV **Frequency Response:** Discrete 4-Channel Stereo (front): 10Hz(-0.5dB) to 100kHz(-2dB); Discrete 4-Channel Stereo (rear): 10Hz(-0.5dB) to 10kHz(-6dB); Matrix 4-Channel Stereo (front): 10Hz(-6dB) to 100kHz(-2dB); Matrix 4-Channel Stereo (rear): 10Hz(-6dB) to 10kHz(-6dB); Phono (RIAA): 30Hz to 15kHz (± 1dB) **Signal-To-Noise Ratio:** Better than 65dB **Distortion:** Less than 0.05% **Output Jacks:** Pin: 0.775V(standard), 7V(maximum); Din: -16dB in relation to Pin Jack **Matrix Range:** 0 to 1 continuous variability (L-R stereo, L+R monaural) **Shifter:** Rear 90° (in relation to 1.2kHz front channel) **Dimensions:** 290(W)x142(H)x315(D)mm, (11.4x5.5x12.6") **Weight:** 4.2kg (9.2 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

* "Surround Stereo", used with permission of Vanguard Records.

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