

aurora

SUNO

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## INTRODUCTION

Welcome to the world of SUMO. AURORA is genuinely an heir to a legacy; its predecessor CHARLIE was regarded by many as one of the finest tuners ever introduced, and was placed in a select group that included the Marantz Model 10b, the McIntosh MR 71, and the Sequerra tuner. CHARLIE was indeed exemplary in terms of its ability to reproduce music.

AURORA meets or exceeds CHARLIE in every important sonic respect, while performing exceedingly better under adverse conditions. AURORA strikes a careful balance between musicality and specsmanship. Presented with a strong, high quality signal, it rivals the signal source. Yet it performs admirably with weak, over modulated, and compressed signals--in the mud, as we say.

In order to achieve the maximum performance from AURORA, please read this manual thoroughly before attempting to operate the unit. If you have any questions concerning the use or maintenance of AURORA, please contact your dealer, or SUMO Customer Service, at 21300 Superior St., Chatsworth, CA. 91311; tel. 818 407-2438.

## PRECAUTIONS

Please be certain to turn your system's preamplifier level down from loud settings when tuning AURORA. Very intense levels of interstation noise may damage your speaker's high frequency drivers.

It is important that you do not change any rear panel connections on AURORA while your system is turned on.

**CAUTION:** To prevent fire or shock hazard, do not expose this unit to rain or moisture.

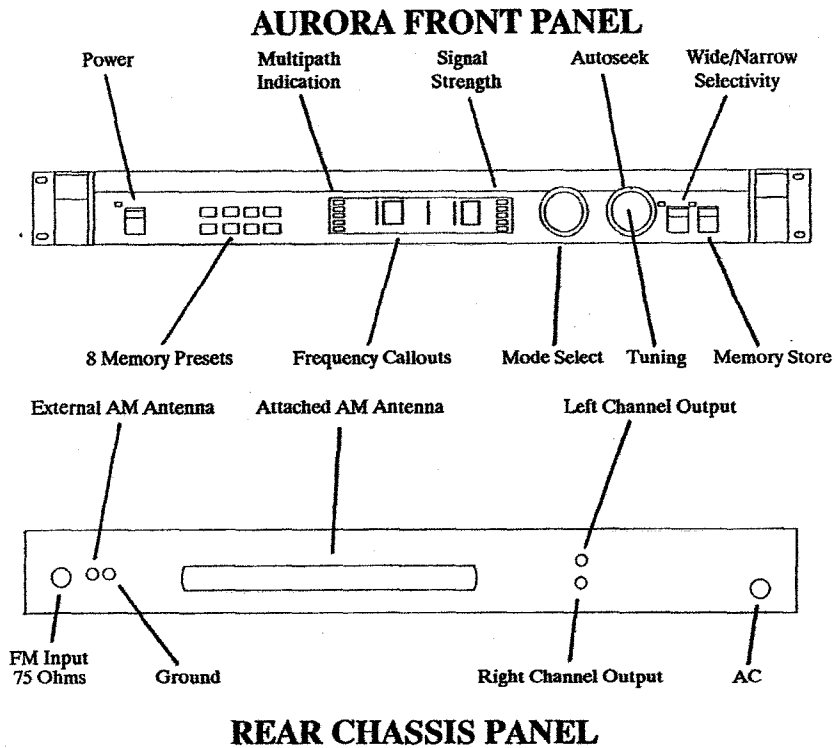
## UNPACKING

Immediately upon receiving AURORA, carefully unpack and inspect it for any sign of damage. If any damage is evident, please contact your dealer immediately. Please save the shipping carton and all associated packing materials for future use. They have been carefully designed to transport AURORA with a minimum of disturbance.

Shipment to the factory of this unit for any purpose must be made in the original carton and packing. If the original is lost or damaged, please contact SUMO or your dealer for a replacement.

## INSTALLATION

AURORA has been designed primarily for shelf or surface mounting. It does have the



structural integrity, however, to be flush mounted into a panel; simply measure the chassis panel or contact us for cut-out dimensions.

#### CONNECTIONS

Connect AURORA's rear-panel output jacks to the Tuner input jacks on your preamplifier or receiver. You may also use other high level input jacks, such as those labeled Tape, Aux, Video, etc. (all of which are usually interchangeable) using a pair of high quality interconnect cables.

All connections should be made with the AC power cord unplugged and the power switch in the off position. Under no circumstances should you attempt to make any connections while the power is on. Similarly, the power to your preamplifier should also be off when making connections—these steps are to eliminate pops, clicks, and other spurious noises that when amplified could damage your speaker elements.

**ANTENNA CONNECTION:** AURORA's FM antenna jack accepts a 75 ohm F connector, the typical termination for cable FM, Terk and/or Parsec antennas, as well as most high quality external antennas. Should you choose instead to use a 300 ohm dipole antenna, a 300

to 75 ohm transformer will be required. These adaptors are commonly available and inexpensive.

The AM ferrite-bar antenna attached to AURORA's rear panel, when moved up and slightly away from the chassis, should provide more than adequate AM reception. In most instances you will not require an auxiliary AM antenna. AURORA will, however, accept an external AM antenna; and screw connections are provided for both the antenna as well as a wire to ground.

## DISPLAY

AURORA has a five-function LED display. Signal strength and multipath are indicated by the amber ladder displays on either side of the frequency read out. Other indications are MHz (for FM), KHz (for AM), and STEREO.

**SIGNAL:** This indicates relative signal strength from the station tuned in. If it shows a weak signal condition (two or fewer LED's illuminated) try reorienting the antenna for improved reception.

**MULTIPATH:** This indicates, in the same fashion as the SIGNAL function, the amount of multipath distortion being received with the signal. If it indicates too much distortion (three or more LED's illuminated), try reorienting the antenna for the least amount.

Optimum tuning is achieved when signal strength (the SIGNAL indicator) is at maximum deflection while MULTIPATH is at its minimum.

**STEREO:** This indicator will be illuminated when AURORA receives an FM stereo broadcast. Please note: The STEREO function will light up only if MONO has not been selected (check the position of the rotary MODE SELECT knob). AURORA has not been programmed to receive AM stereo.

**MHz:** This digital display indicates the frequency in megahertz of the FM station AURORA is receiving. The tuning circuitry of AURORA is fully digitally synthesized, so that once a station is tuned in, its precise frequency is locked in.

**KHz:** This display similarly indicates the frequency in kilohertz of the AM station being received.

## MODE SELECT FUNCTIONS

**FM STEREO:** This is the normal day-to-day setting for receiving FM stereo broadcasts. Mute is automatically on when this setting is selected, which provides quiet interstation tuning.

**HIGH BLEND:** Since the majority of FM stereo noise is out-of-phase, this switch reduces noise, without sacrificing fidelity, by partially blending high frequencies between the left and right channels. Mute is on in this setting.

**FM MUTE OFF:** MUTE OFF is useful in receiving weak stations that might otherwise be below the mute threshold. When this function is selected, there is no interstation noise muting during tuning.

**FM MONO:** When this position is chosen, all stations are blended into monaural, irrespective of how the broadcasts originate. As with the other MODE SELECT functions, an amber LED indicates selection.

**AM:** As above, this is the normal day-to-day setting for receiving AM broadcasts. Mute is automatically on in this setting, which provides for quiet station to station tuning.

**AM MUTE OFF:** This function duplicates in AM what FM MUTE OFF does in FM; e.g., it allows the reception of weak stations that might otherwise be below the mute threshold. There is no interstation muting when this setting is selected.

#### WIDE/NARROW IF SELECTION

This switch, located on the right portion of the front panel, allows the selection of either a wide or narrow IF mode. The wide position (which is selected when the switch and indicator LED are on) is recommended for normal listening, and provides optimum separation and lowest distortion. When a strong alternate channel signal interferes with the station you are receiving, you will need the narrow IF position. Simply depress the switch and defeat the wide selectivity function.

#### TUNING

AURORA's unique rotary tuning mechanism (which is a genuine tuning knob) has the look and feel of analog, yet the precision of digitally synthesized tuning. In FM, it is stepped in 50 kHz European increments (one fourth the normal US steps) allowing fine tuning of FM signals--91.10 MHz, 91.15 MHz, 91.20 MHz, 91.25 MHz, 91.30 MHz, etc. In AM, these steps are the normal 10 kHz increments for the US version of AURORA, and 9 kHz for the European.

You may find the fine tuning feature particularly useful in receiving re-modulated cable FM, where signals are often not at the advertised center frequencies.

AURORA also has a unique rapid tuning feature, AUTO SEEK, that can be directed either up or down the dial. AUTO SEEK is activated by simply rotating the larger rear portion of the tuning knob: moving it to the right triggers seek UP the dial, while moving it left sends it DOWN the dial. The seek knob has a spring return, so the motion that activates it can be quite quick. You may also hold it in position to sustain rapid movement either up or down

the dial.

## STORING SIGNALS

AURORA can store up to as many as eight AM and eight FM stations in memory, any of which can be recalled by depressing the appropriate PRESET switch. To store a station frequency, first select either AM or FM. Then tune in the desired station using AUTO SEEK and/or the rotary fine tuning knob. When the display indicates the proper frequency, simply depress the MEMORY STORE button on the extreme right of AURORA's front panel (the red light above it will glow), then press the PRESET button you wish to represent that station. Repeat this procedure for the eight stations you most often listen to. Remember, you have a full eight selections for both AM and FM.

If the MEMORY STORE switch is accidentally depressed, do not attempt to defeat it by depressing any of the preset switches. It will automatically disengage within ten seconds.

## GENERAL MAINTENANCE AND SERVICE

Great care has been taken by SUMO to ensure that AURORA is as flawless in appearance as it is in performance. The front panel is finished with a high grade anodizing process for durability as well as beauty. It can best be cleaned with Windex or a similar solution. Under no circumstances should a lye solution, or any abrasive cleanser, be used on any part of the unit.

In the event that the unit must be returned to the factory for service, an authorization must be requested from SUMO before the unit is returned. Under no circumstances should AURORA be shipped to SUMO without prior authorization.

## PERFORMANCE SPECIFICATIONS

IHF Usable Sensitivity	Mono	11dBf
Signal Strength for 50dB Quieting	Mono	16dBf
	Stereo	34dBf
Capture Ratio		1.0dB
Alternate Ch Selectivity		75dB
Total Number of Station Presets	AM	8
	FM	8
Separation @ 1kHz		50dB
THD 1 kHz 100% Modulation	Mono	0.04%
	Stereo	0.05%
Maximum S/N	Mono	85dB
	Stereo	82dB
AM Capable	Yes	
Dimensions	19"W x 8.75"D x 1.75"H (48 cm x 22 cm x 4 cm)	

# LIMITED WARRANTY

THIS PRODUCT IS WARRANTED UNDER THE FOLLOWING CONDITIONS:

1. PRODUCT IS PURCHASED THROUGH AN AUTHORIZED SUMO DEALER.
2. WARRANTY COVERS NORMAL OPERATING CONDITIONS OF HOME USE.
3. WARRANTY PERIOD BEGINS AS OF DATE OF SALE PROVIDED IT IS REGISTERED BY THE AUTHORIZED SUMO DEALER WHERE THE PRODUCT WAS PURCHASED. REGISTRY PERIOD IS 20 DAYS.
4. DELIBERATE MISUSE, MISHANDLING, FAILURE TO REPORT RECEIVING DAMAGED MERCHANDISE, OR UNAUTHORIZED TAMPERING WITH OR MODIFYING OF THIS MERCHANDISE AUTOMATICALLY VOIDS ALL WARRANTIES.
5. WARRANTY PERIOD FOR ALL SUMO FACTORY WIRED PRODUCTS (EXCLUDING FUSES) IS 3 YEARS COVERING BOTH PARTS AND LABOR. TRANSPORTATION CHARGES TO THE DEALER OR FACTORY ARE EXCLUDED.
6. WARRANTY ON ALL SUMO PRODUCTS USED IN ANY OTHER FASHION THAN STATED ABOVE SHALL REDUCE THE WARRANTY TIME PERIOD AND OTHER CONDITIONS TO NEGOTIATIONS BETWEEN SUMO AND PROSPECTIVE USER.
7. THIS WARRANTY SHALL EXTEND TO EACH SUCCESSIVE OWNER, PROVIDED SUMO IS NOTIFIED BY REGISTERED MAIL WITHIN 20 DAYS OF RESALE BY INITIAL OR PRESENT OWNER. THIS NOTIFICATION SHALL CONSIST OF DATE OF SALE, NAME AND ADDRESS OF NEW OWNER.
8. SUMO GUARANTEES THAT ITS PRODUCTS ARE FREE FROM DEFECTS IN MATERIALS AND/OR WORKMANSHIP FOR THE REQUIRED WARRANTY PERIOD.
9. THIS WARRANTY IS NOT VALID UNLESS ACCOMPANIED BY SALES SLIP VALIDATION OR PROPERLY STATED INVOICE (COPY).
10. THIS WARRANTY IS VALID ONLY IN THE UNITED STATES OF AMERICA. SERVICE IN OTHER COUNTRIES WILL BE PROVIDED BY THE EXCLUSIVE SUMO REPRESENTATIVE OR HIS AGENTS. BECAUSE OF VARYING GOVERNMENTAL REGULATIONS AND CONDITIONS, THE SERVICE PERIOD MAY DIFFER FROM COUNTRY TO COUNTRY. HOWEVER, IN EVERY INSTANCE, THE SERVICE AGREEMENT CAN BE HONORED ONLY IN THE COUNTRIES WHERE THE UNITS WERE PURCHASED.

If your unit requires service, contact your nearest authorized SUMO dealer or factory service department. DO NOT send the unit for warranty service without obtaining factory RETURN AUTHORIZATION.

21300 SUPERIOR ST., CHATSWORTH, CA 91311, 818-407-2426, TLX65823SUMOCORPWKVG

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