

FM DIGITAL TUNER

SAE
Scientific Audio Electronics, Inc.

3200
Owner's Manual

CONGRATULATIONS

... You are now the proud owner of the finest FM tuner in the industry. Your tuner is the result of many years of painstaking research and development by SAE. Because of these efforts, SAE products are known around the world as "state-of-the-art" components.

In order to achieve maximum performance from your tuner, please read this manual thoroughly before connection. Your tuner will give you many years of outstanding performance. If you have any questions concerning operation or maintenance, please contact your dealer or SAE's Customer Service Department, P.O. Box 60271 Terminal Annex, Los Angeles, California 90060.

UNPACKING

Before leaving the factory every tuner is carefully inspected for physical imperfections as a routine part of our systematic quality control to insure a flawless appearance.

After the tuner has been unpacked, inspect it for physical damage.

Save the shipping carton and all packing materials, as they were carefully designed to reduce to a minimum the possibility of transportation damage.

In the unlikely event that damage has occurred, immediately notify your dealer and request the name of the carrier so that a written claim to cover damages can be initiated.

THE RIGHT TO ANY CLAIM AGAINST A PUBLIC CARRIER CAN BE FORFEITED IF THE CARRIER IS NOT NOTIFIED PROMPTLY, AND IF THE SHIPPING CARTON AND PACKING MATERIALS ARE NOT AVAILABLE FOR INSPECTION BY THE CARRIER. SAVE ALL PACKING MATERIALS UNTIL THE CLAIM HAS BEEN SETTLED.

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

INSTALLATION

ADEQUATE VENTILATION WILL EXTEND THE TROUBLE—FREE LIFE OF YOUR TUNER.

The tuner should not be completely enclosed with other heat producing components. The tuner may be mounted either horizontally or vertically. Allow enough space around the opening to clear adjacent panel-mounted components. If your cabinet has doors or a lid, the mounting panel should be a minimum of 13/16" behind the doors or lid when closed in order to clear the knobs and switches. The mounting holes on the bottom of the tuner are #6-32. **THE LENGTH OF SCREWS MUST NOT PROJECT MORE THAN 1/4" INTO THE TUNER.** If the tuner is to be mounted in a closed cabinet, it is recommended that a fan be utilized in order to keep the air in constant circulation around the tuner.

PROVIDE ADEQUATE VENTILATION!!

GENERAL CONNECTIONS

All connection facilities are located on the rear panel of the tuner. **ALL CONNECTIONS MUST BE MADE WITH A.C. POWER OFF.**

DETAILED CONNECTIONS

All output audio signal connections are to be made with shielded audio cables such as those provided with the tuner. Left channel output is labeled LEFT, right channel output is labeled RIGHT. Antenna connections are to be made with 75-Ohm coaxial cable or 300-Ohm twin lead. The line cord should be plugged into an AC outlet providing 110-130 Volts AC, 50 to 60Hz.

OUTPUTS

Connect the outputs to a conventional preamplifier which has its own volume control. Output level is switchable at the front panel.

The output impedance of the Output jacks and the front-panel Tape Output jack is 500 Ohms, however, they should not be connected with load impedances lower than 5000 Ohms.

CONNECTION FOR STEREO OPERATION

Connect a shielded cable from the tuner's Left Channel Output jack to the preamplifier's Channel A (or Left Channel) tuner or auxiliary input jack. Connect a second shielded cable from the tuner's Right Channel Output jack to the preamplifier's Channel B (or Right Channel) tuner or auxiliary input jack.

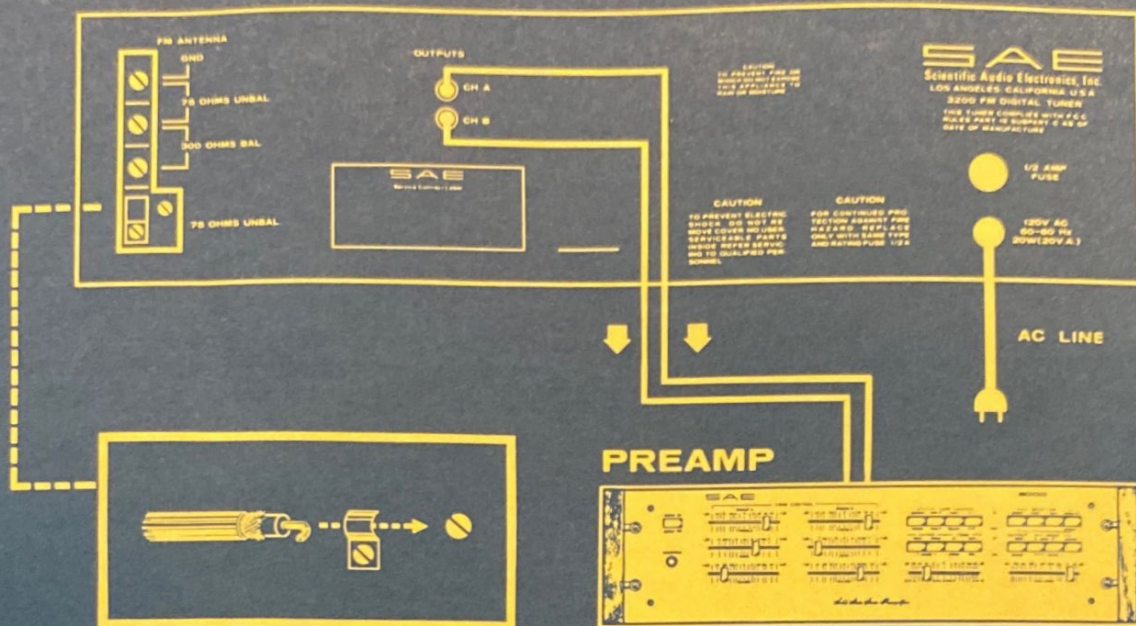
CONNECTION FOR TAPE RECORDING

Tape recorders or tape decks with record/playback preamplifiers are normally connected to the Tape Output jacks on the preamplifier. Any FM program from the tuner into the preamplifier can be recorded on tape. You may also connect the front-panel tape jack directly to the recorder inputs if desired. The front-panel stereo tape jack uses the industry standard plug (referred to as a 3-conductor phone plug). Connect the Left Channel to the tip, the Right Channel to the ring, and the shield to the sleeve.

FM ANTENNA

A flexible indoor FM dipole (300 Ohm) antenna is supplied with the tuner. This antenna is easy to install and is suitable for good FM reception in urban or high-intensity signal areas. Connect the two leads of the dipole antenna to the two terminals marked 300 Ohms. The flexibility of the thin flat wire allows the dipole to be easily located behind the equipment enclosure or in any position near the tuner. Unfold the dipole to a "T" shape and extend the arms as straight as possible. The dipole antenna is somewhat directional and may have to be positioned in a particular location for best reception of

3200 TUNER



TYPICAL HOOKUP

desired stations. Experimenting with the dipole position may also be necessary to reduce multipath distortion on certain stations. Since it is not convenient to continually change the position of the dipole it may have to be set for minimum multipath on your favorite station. For an initial setting, orient the arms of the dipole perpendicular to the direction of your favorite station.

An outdoor FM antenna is always recommended for best FM reception under all conditions. In fringe or outlying areas, and especially in hilly areas, a highly directional FM antenna used in conjunction with a rotor will give the finest possible FM reception. Rotate the antenna until it points in the direction of the station, or until it receives the best possible signal. Maximum indication of the signal strength display generally shows when the optimum signal is obtained.

An FM antenna with an unbalanced 75-Ohm coaxial cable may also be used with the tuner. Connect the center lead of the coaxial cable to the

75-Ohm terminal screw. Connect the outer shield of the coaxial to the GND screw next to the 75-Ohm terminal screw. Note that use of 75-Ohm coaxial cable with a conventional 300-Ohm antenna **without** an associated matching transformer might result in inferior signal reception.

OPERATION OF CONTROLS

POWER ON/OFF

This switch turns the tuner on and off.

MUTE

The Mute Switch, while in the out or Mute position, is used to reduce or delete noise when tuning from station to station. Since very weak stations may also be muted with the noise, the muting may be defeated by moving the switch to the In or Mute Defeat position. In this manner, you will be able to hear weak stations.

LEVEL

This control adjusts the level of sound simultaneously on left and right channels. It is a two

position switch providing either maximum output or 10dB attenuation.

TAPE

This stereo phone jack may be used as an output for making tape recordings directly from the tuner. Headphones with an impedance greater than 2K Ohms may also be used.

HF (HIGH FREQUENCY) BLEND —

This switch is used to reduce noise heard on weak stereo signals.

This switch will not have any effect when listening to monophonic broadcasts nor does it attenuate high frequencies. Its use reduces or blends stereo separation at high frequencies only. It is necessary that the high frequency sound be heard with **both** the user's ears to appreciate the effect of this switch.

STEREO/MONO

This switch selects the mode in which the tuner will operate. When depressing the MONO switch all broadcasts including stereo are heard monophonically.

When you release the MONO switch the tuner will automatically switch between mono and stereo stations. The signal level at which automatic stereo switching occurs has been preset by the factory. This setting discriminates between noise and signal and will switch to stereo only if the signal is sensed as being adequately noise-free.

TUNING

Rotation of this control will select the desired FM broadcasts.

DISPLAYS

FREQUENCY MHz

Four LED (light emitting diode) solid-state readouts identify the precise station frequency assignment for any of the 100 channels available across the FM band. The Digital Readout is crystal referenced and corrects itself 60 times per second, thus allowing rapid tuning across the FM band.

STEREO

This LED indicates reception of stereo broadcasts when lit.

CENTER TUNE

This display will indicate precise tuning of FM stations when the center LED illuminates. This display is controlled by the ratio detector which is used to convert the frequency modulation to audio signals.

SIGNAL STRENGTH

The maximum number of LEDs illuminated will indicate optimum tuning and relative signal strength of the FM station in a logarithmic presentation. The display is also scaled in microvolts for actual readout of reception signal strength.

GENERAL MAINTENANCE

FRONT PANEL

Great care has been taken by the staff at SAE to assure that your tuner is as flawless in appear-

ance as it is electronically. The panel is finished with a high-grade black anodizing process (MIL Specification 8625-A-Type 2) for durability as well as beauty. If it should become finger-printed, it can best be cleaned by using a soft cloth dampened with a solution of LIQUID detergent and water. The display window may be cleaned with Windex and a soft cloth.

UNDER NO CIRCUMSTANCES SHOULD A LYE SOLUTION OR AN ABRASIVE CLEANER SUCH AS SCOURING POWDER BE USED ON ANY PART OF THE TUNER.

FUSE REPLACEMENT

The tuner is protected by a ½ amp line fuse on the rear panel. When power is applied to the tuner and the LED displays do not illuminate, check the line fuse.

If the fuse is faulty, replace it **ONLY** with a fuse of equal value.

Replacement with a fuse of a high current rating will not protect the tuner and will void the warranty.

If after replacing the fuse, it blows immediately, an electronic component failure might be suspected. No further attempts to replace the fuse should be made.

SERVICE

SAE has a Customer Service Department to answer all questions pertinent to the installation and operation of your unit. Please feel free to write us at any time and we shall endeavor to offer prompt and complete advice regarding your installation.

If a problem arises which cannot be resolved through our combined efforts, we may wish to refer you to a local authorized repair agency or we may prefer to authorize the return of your unit to the factory. To aid us in selecting a service station convenient to you, it would be helpful if you would indicate which major city is closest to your home.

Please address inquiry to:

SAE, INC.

Customer Service Department

P.O. BOX 60271 TERMINAL ANNEX

LOS ANGELES, CA 90060

Be sure to include the model number and the serial number of your unit.

In the event your unit must be returned, an authorization form and proper packing instructions will be forwarded to you. This authorization form **MUST BE RETURNED** with your unit.

UNDER NO CIRCUMSTANCES SHOULD YOUR UNIT BE SHIPPED TO THE FACTORY WITHOUT PRIOR AUTHORIZATION.

If the original shipping carton has been lost or discarded, or if the carton is not in good condition, a duplicate carton may be obtained from our Service Department for a minimal charge.

Always ship via recognized freight carriers. Suggested carriers will be listed in the Return Authorization papers. Do not ship via Parcel Post. **ALL PARCEL POST SHIPMENTS WILL BE REFUSED.**

SERVICE COVERAGE

U.S. (ONLY)

SAE is proud to offer you an unprecedented free Five-Year Service Contract on your component. In order to receive this valuable protection, the enclosed Service Contract Registration Card must be completed and mailed to SAE within one hundred-twenty (120) days of purchase. If you do not receive your Service Contract Label within thirty (30) days after the Registration Card has been mailed, please contact SAE immediately.

While waiting for the Service Contract Label, your sales receipt will serve as proof of purchase and must be presented to the Service Station in the event servicing is required within one hundred-twenty (120) days of purchase.

INTERNATIONAL

As stated above, the SAE 5 year service contract is valid only in the United States. Service in other countries will be provided by the exclusive SAE 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 only be honored in the country where the unit was purchased. In the event that there is no SAE representative in your country please contact SAE or in

CANADA: The Pringle Group
30 Scarsdale Road
Don Mills, Ontario
Canada M3B 2R7

FIRST CLASS
PERMIT NO. 53505
LOS ANGELES, CALIF.

BUSINESS REPLY MAIL
No Postage Stamp Necessary If Mailed In The United States

Postage Will Be Paid By

SAE

P.O. BOX 60271 TERMINAL ANNEX
LOS ANGELES, CALIFORNIA 90060

ATTN.: ORDER DEPT.

SAVE
50%

**SPECIAL OFFER
TO SAE EQUIPMENT BUYERS**

SAVE
50%

SAVE 50%

on a one year subscription to **HIGH FIDELITY** magazine

High Fidelity's world renowned critics review 1000 new releases and historic re-releases each year, including jazz, rock, pop, classical, theatre and film scores. High Fidelity not only tells you how it is played, how it sounds, how it compares with other recorded versions. In addition, you get High Fidelity's objective news and coverage of equipment—including CBS Technology Center test reports on receivers, amplifiers, tuners, tape decks, turntables, speakers and more. Send no money, we'll bill you later.

Enter my one year subscription to High Fidelity at 50% off, only \$4.98 (regular rate, 1 year \$9.95)
Notice: Allow 5-6 weeks for first copy to be mailed. Outside U.S. — \$4.00 additional for postage.

Name _____
Address _____ Apt. _____
City _____ State _____ Zip _____

Subscribe to High Fidelity at 50% OFF

E9SA3

SAVE
50%

Place
Stamp
Here

SAE
SCIENTIFIC AUDIO ELECTRONICS, INC.

P.O. BOX 60271 TERMINAL ANNEX
LOS ANGELES, CALIFORNIA 90060

32-0015