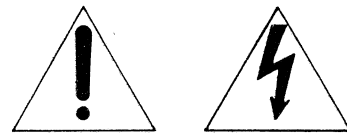




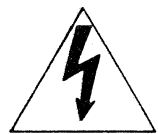
## Safety Instructions

**WARNING :** to reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.



**CAUTION**  
**RISK OF ELECTRIC SHOCK**  
**DO NOT OPEN**

**CAUTION :** to reduce the risk of electric shock, do not remove cover (or back); no user-serviceable parts inside. Refer servicing to qualified service personnel.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING :** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

① **Read Instructions** - All the safety and operating instructions should be read before the appliance is operated.

② **Retain Instructions** - The safety and operating instructions should be retained for future use.

③ **Heed Warnings** - All warnings on the appliance and in the operating instructions should be adhered to.

④ **Follow Instructions** - All operating and use instructions should be followed.

⑤ **Water and Moisture** - The appliance should not be used near water. For example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

⑥ **Ventilation** - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in situation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

⑦ **Heat** - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

⑧ **Power Sources** - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

⑨ **Grounding or Polarization** - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

⑩ **Power-Cord Protection** - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

⑪ **Cleaning** - The appliance should be cleaned only as recommended by the manufacturer.

⑫ **Power Lines** - An outdoor antenna should be located away from power lines.

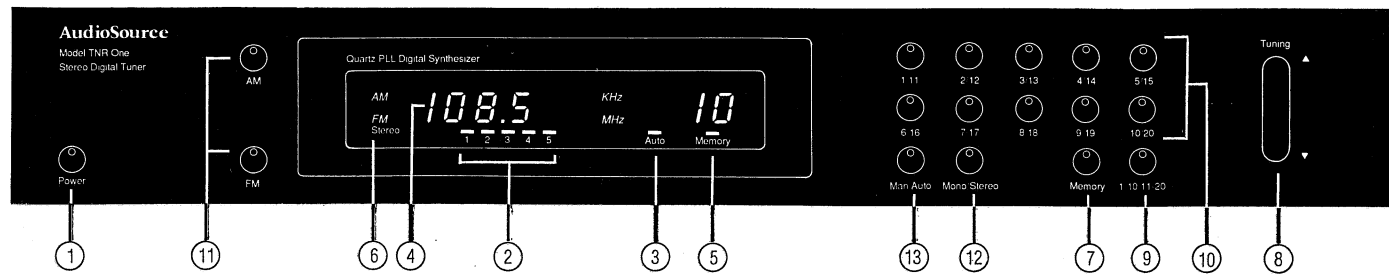
⑬ **Non-use Periods** - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

⑭ **Object and Liquid Entry** - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

⑮ **Damage Requiring Service** - The appliance should be serviced by qualified service personnel when:

- A) The power supply cord or the plug has been damaged; or
- B) Objects have fallen, or liquid has been spilled into the appliance; or
- C) The appliance has been exposed to rain; or
- D) The appliance does not appear to operate normally or exhibits a marked change in performance; or
- E) The appliance has been dropped, or the enclosure damaged.

⑯ **Servicing** - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.



## INTRODUCTION

Thank you for purchasing the AudioSource **TNR ONE** Tuner. The **TNR ONE** Digital AM/FM Tuner is the perfect source material complement for your system.

Quartz Digital Phase Lock Loop tuning assures pinpoint accuracy and absolute signal clarity. Its high sensitivity, and Capture Ratio of only 1dB will enable you to put the 20 Station Preset Memories to full use. The Auto Scanning function is at your command, along with

manual electronic tuning. The Digital Display will keep you informed of Station Frequency, Signal Strength, Station Preset, Memory Mode, Band Selection, and Stereo and Auto Tuning Modes.

By spending a few minutes to read the operating instructions carefully, you will have years of thrilling listening pleasure.

## CONNECTIONS

At the rear of your **TNR ONE**, you will find a set of output jacks, labeled "OUTPUT LEFT" and "OUTPUT RIGHT".

You should link these outputs to the corresponding LEFT and RIGHT TUNER Inputs of your preamplifier or integrated amplifier.

The **TNR ONE** may also be connected to any other high-level inputs, such as the "AUX" inputs.

## ELECTRONIC CONTROLS

### ① Power Switch

Press ON to apply AC power to the tuner. Press again to release and switch power OFF.

### ② Signal Strength Indicator

This light indicates the relative signal strength received from the AM/FM station.

### ③ Auto Tuning Indicator

The indicator lights when AUTO tuning switch is pressed.

### ④ Frequency Display

Digitally indicates the AM/FM station's frequency. AM frequencies are indicated in KHz and FM in MHz.  
FM: For reception of FM broadcasts.  
AM: For reception of AM broadcasts.

### ⑤ Memory Indicator

The indicator lights when the MEMORY switch is pressed. Store the frequencies for broadcast stations in the memory when this indicator is on. This indicates that it is ready to store a selected frequency in any of the memory's 1-20.

### ⑥ Stereo Indicator

When the tuner receives an FM stereo broadcast with the MONO/ST switch set to the ST (stereo) position, the STEREO indicator will be displayed.

### ⑦ Memory Switch

Press this switch to store the frequency of a broadcast station in memory. Press the desired AM or FM function selector. When tuning to FM broadcasts, set the MONO/ST switch (refer to instruction #12) as required. Press the desired MAN/AUTO button (refer to instruction #13) and tune to the desired AM or FM station by pressing the TUNING (UP or DOWN) button while monitoring the frequency display and the TUNED indicators, so the frequency of the desired station is displayed and the maximum number of TUNED indicators light. Press the MEMORY button. The MEMORY indicator and button will light to indicate that you should enter the preset number. Choose either 1-10 or 11-20 using the 1-10/11-20 (shift) button. While the MEMORY indicator is displayed, press any of the AM/FM RANDOM 20 STATION MEMORY buttons as desired and the MEMORY indicator will go off. Set all the stations you wish to preset in the same way. The AM/FM RANDOM 20 STATION MEMORY selectors can be used to preset a total of 20 stations. Once preset, these stations can be recalled at a later time. You can override a previously preset station with a new entry by following the above procedure. When this is done, the memory setting of the previously preset station will be cleared and replaced by the new entry.

### ⑧ Tuning Up/Down Button

This button is used to select the desired frequency in the band selected. Press the top portion to tune upscale and the lower portion to tune downscale.

### ⑨ 1-10/11-20 Shift Button

When selecting or storing 11-20 of the AM/FM RANDOM 20 STATION MEMORY, press this button while pressing any of the AM/FM 20 RANDOM STATION MEMORY buttons.

### ⑩ AM/FM RANDOM 20 STATION MEMORY

Press these buttons to preset or call up stations. Select either 1-10 or 11-20 with the 1-10/11-20 (shift) button. Press the AM/FM RANDOM 20 STATION MEMORY selector button corresponding to the preset station you wish to recall. If an FM station has been chosen, set the MONO/ST switch as required.

### NOTE:

The contents of the preset station memories, and the channel which was received last, are maintained as long as power is supplied to the tuner. If the power plug of the tuner is disconnected, they will be cleared about 24 hours after disconnection.

### ⑪ FM/AM Function Selector Buttons

Selects the frequency band as follows:  
FM: For reception of FM broadcasts.  
AM: For reception of AM broadcasts.

### ⑫ MONO/ST Button

MONO: For reception of monaural or weak FM stations.  
STEREO: For reception of FM stereo. When tuned to a stereo signal, the tuner will automatically select and modulate FM stereophonic broadcasts. The STEREO indicator will light when tuned to a stereo broadcast.

### ⑬ MAN/AUTO Button

Pressing this button alternates the tuning mode between automatic and manual. When the automatic tuning mode is selected, the AUTO indicator will light. When the AUTO indicator is lit (Automatic Tuning): By pressing the TUNING UP or DOWN button, the tuning frequency scans the frequency band up or down continuously; scanning will stop when tuned precisely to a broadcast. When the UP or DOWN button is pressed once, the tuning frequency changes to a higher or lower frequency.

### FM "T" Type Antenna

If the **TNR ONE** is to be used in a strong FM signal area, a "T" type antenna (dipole) may provide adequate reception. To connect this antenna, attach its leads to the 300 ohm terminals, fully extend the upper sections of the "T" and position them for greatest sensitivity (maximum indication of the Tuned indicators when tuned to a broadcast station).

In weak signal areas, a roof-top FM antenna will be required. A 3-element antenna is generally sufficient for medium distances and an antenna with 5 or more elements may be required for long distances and fringe areas. Two types of outdoor antenna cables are available: 300-ohm balanced antennas and 75-ohm unbalanced antennas. 300-ohm antennas use the same flat twin lead used by most TV antennas. 75-ohm antennas use a coaxial cable; these antennas are recommended for use in high interference areas such as adjacent to a road where ignition noise may be present. When installing a roof-top antenna, check that it is pointing in the direction from which most stations are received. **Do not connect antenna leads to both the 75- and 300-ohm inputs at the same time.** Use only the terminals corresponding to the antenna cable being used.

### AM Loop Antenna

In an area where signals are strong, near to the broadcast stations, the AM Loop antenna provided on the rear panel may be adequate. This antenna is effective in all areas except those where the signal strength is very low, or in buildings made from reinforced concrete. Position this antenna so that as many Tuned indicators as possible light when tuned to an AM broadcast.

### Outdoor Antenna

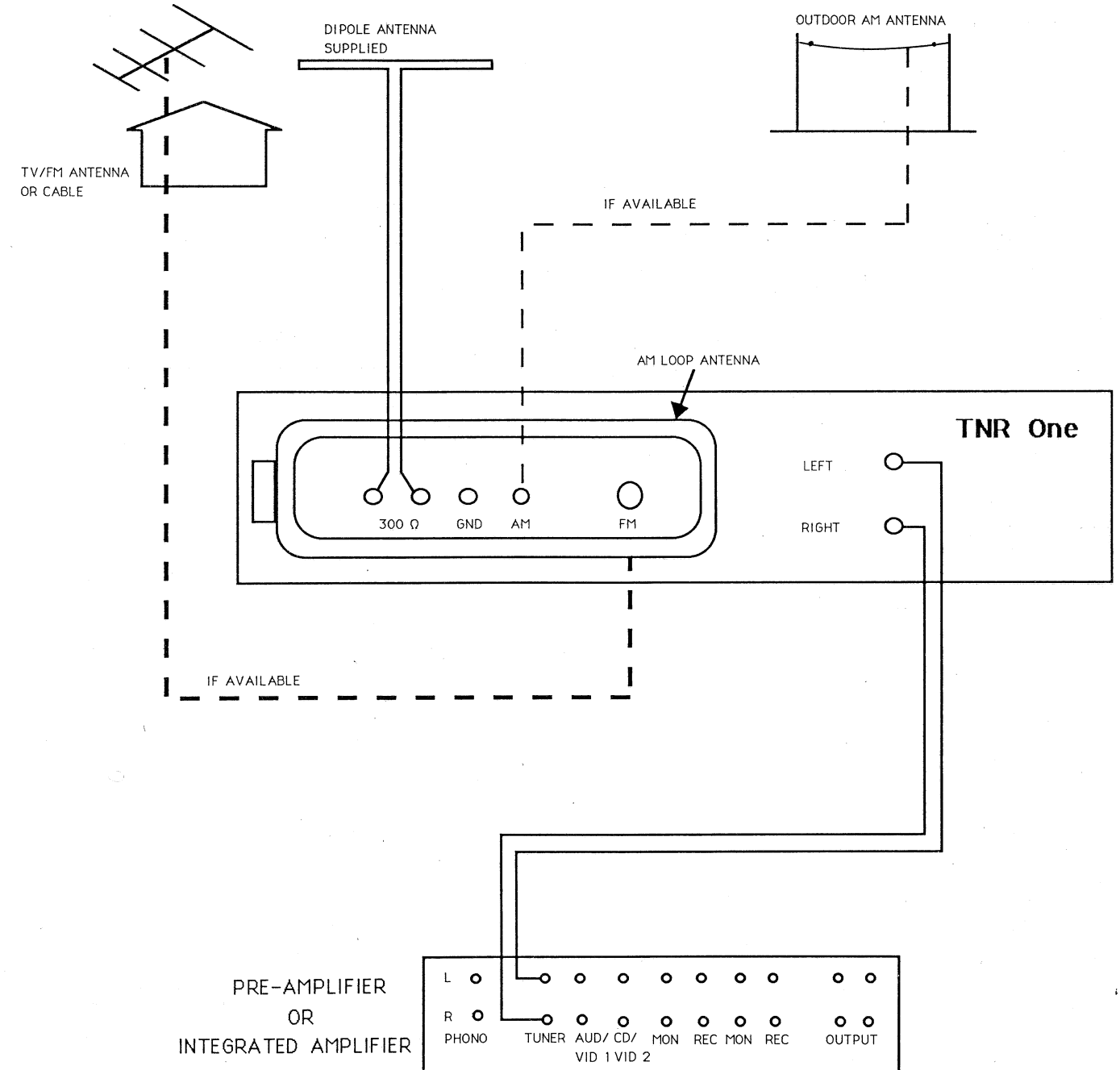
If you have difficulty in receiving clear AM broadcasts using the Loop antenna, connect an external antenna to the AM terminals. Set this antenna near a window or outdoors, as high as possible; do not disconnect the provided AM Loop antenna.

## Specifications

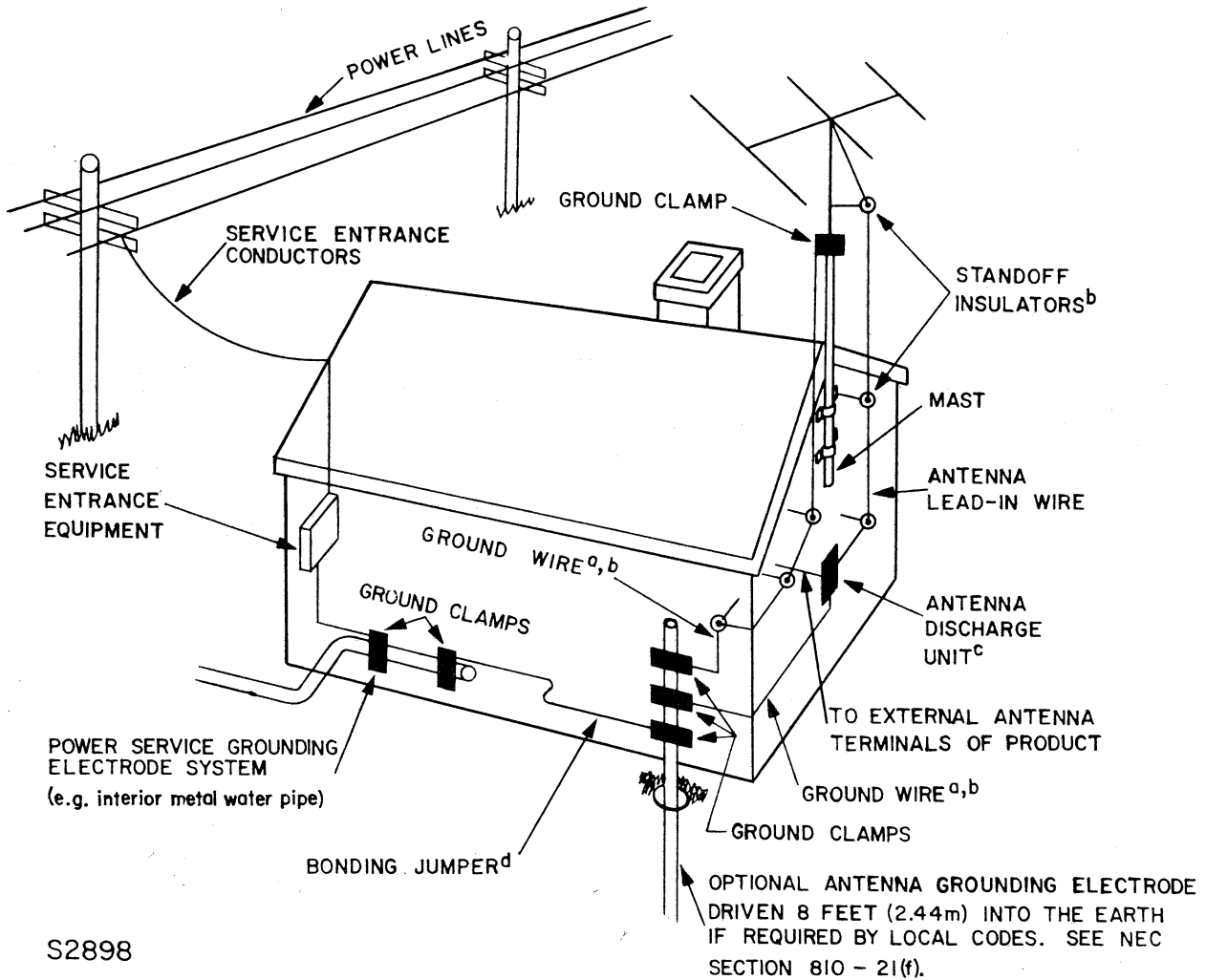
### TNR ONE

FM Section	
Sensitivity:	2 $\mu$ V
50 db quieting sensitivity:	Mono: 5.6 $\mu$ V Stereo: 56 $\mu$ V
Total Harmonic Distortion:	Mono: 0.2% Stereo: 0.4%
Signal-to-Noise Ratio:	Mono: 76db Stereo: 70 db
Alternate Channel Selectivity:	65db
Capture Ratio:	1.0 db
Image Rejection:	70 db
Antenna Terminals:	300 ohms/75 ohms
AM Section	
Sensitivity:	20 $\mu$ V
Image Rejection (at 1000 kHz)	40 db
IF Rejection (at 1000 kHz)	60 db
General	
Power Requirements:	120 VAC, 60 Hz
Power Consumption:	12W
Dimensions:	16 1/2 W x 2 3/8 H x 11 5/8 D
Weight (net):	8 lbs. 5 oz.

Designs and specifications subject to change without notice



EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE INSTRUCTIONS  
CONTAINED IN ARTICLE 810 — "RADIO AND TELEVISION EQUIPMENT"



S2898

<sup>a</sup>Use No. 10 AWG (5.3 mm<sup>2</sup>) copper, No. 8 AWG (8.4 mm<sup>2</sup>) aluminum, No. 17 AWG (1.0 mm<sup>2</sup>) copper-clad steel or bronze wire, or larger, as a ground wire.

<sup>b</sup>Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4—6 feet (1.22—1.83 m) apart.

<sup>c</sup>Mount antenna discharge unit as close as possible to where lead-in enters house.

<sup>d</sup>Use jumper wire not smaller than No. 6 AWG (13.3 mm<sup>2</sup>) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

# AudioSource®

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