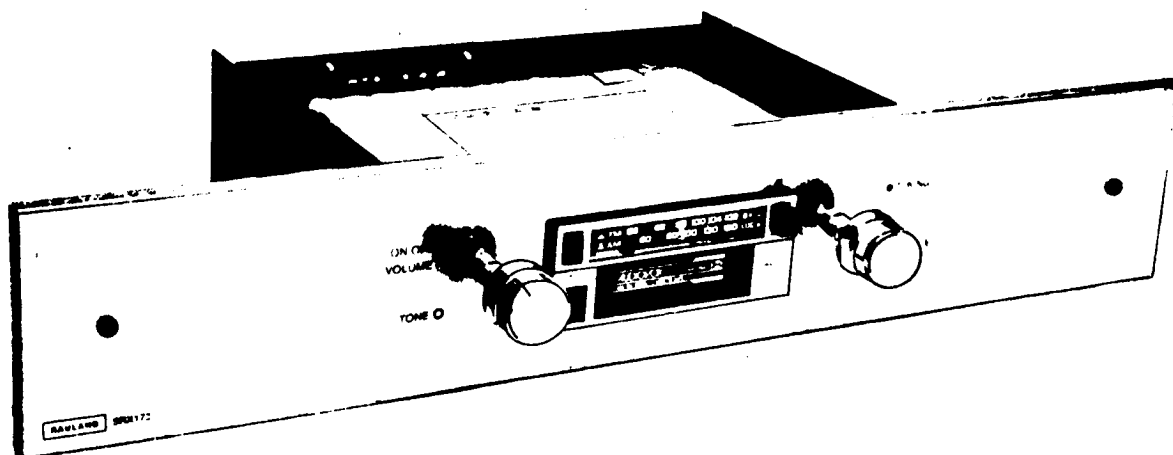**Rauland**

MODEL SRX173
AM-FM TUNER & CASSETTE TAPE PLAYER

RAULAND-BORG CORPORATION • 3535 West Addison Street, Chicago, Illinois 60618 (312) 267-1300

GENERAL DESCRIPTION

The Rauland Model SRX173 AM-FM Tuner and Cassette Tape Player comes ready to be rack-mounted. It includes a separate 12-VDC power supply that can be plugged into any convenient 120-VAC power outlet. There are screw terminals for connecting the external antenna required for the AM-FM tuner, and an RCA-type phono jack for connecting the unit's unbalanced monaural audio output to a sound or communications system.

The 2-volt RMS maximum audio output provides an ample signal for the auxiliary input of an amplifier or a communications system. See the attached diagram KM-0688 for details about connections to the tuner and cassette player.

UNPACKING

The SRX173 comes assembled with its knobs and dress panel in place. The only separate items besides the main chassis are the 12-VDC power supply and screws and "U" nuts for fastening the chassis to the rack. (A more extensive parts list is given on page 5.)

Equipment Damaged in Transit

Rack-Mounting

Step 1.   Carefully pull off the four control knobs.

Step 2.   Remove the two WA87 6-32 x 3/8 pan-head screws and WⷦO074 washers
from the front dress panel; then remove the panᵉˡ. ᵗe careful not
to mar the panel.

Step 3.   (a)   If the <u>rack's</u> holes are <u>tapped</u> or include a snap-on nut, insert
the SRX173 into the rack and fasten it there with four WA202
10-32 x 1/2 hex-head SEMS screws (supplied).

(b)   If the <u>rack's</u> holes are <u>untapped</u>:

(1)   Insert an AB1889 #10 "U" type nut (supplied) over each of
the four holes that you will use.   (On some extruded
holes, you may have to omit the "U" nuts.)

(2)   Insert the SRX173 and fasten it with four WA102 #10
thread-forming pan-head screws (supplied).

Step 4.   Carefully remount the dress panel and fasten it with the two WA87
6-32 x 3/8 pan-head screws and WJO074 washers.

Step 5.   Push the control knobs back on.   Do not push the inner knobs on so
far as to create a noticeable space between them and the outer
knobs.

Initial Antenna Connections

Step 1.   Prepare the lead-in wire from the antenna by cutting it to the
proper length and installing appropriate-sized terminal lugs to the
inner conductor and the shield.

Step 2.   Connect the inner conductor to the "DIST" antenna screw terminal and
the shield to the "GND" screw terminal.

Audio Output Connections

Step 1.   Use a single-conductor shielded cable of suitable length to connect
the "AUDIO" jack on the back of the chassis to the "Auxiliary" or
"Tuner" input of the sound or communications system.   One end of the
cable should terminate in a male RCA-type phono plug; the other end
should have a connector suitable for the input of the sound or
communications system.

Step 2.   Plug the RCA-type phono plug into the "AUDIO" jack of the SRX173,
and the other end of the cable into the "Auxiliary" or "Tuner" input
of the sound or communications system.

Power Connections

Insert the DC power plug of the power supply into the "PWR SPLY" jack on the back of the SRX173, then plug the power supply itself into a suitable 120-VAC outlet.

Setting the Controls

The following settings can be tried initially. Make adjustments as needed to obtain the best performance.

> Volume: Between the "11 o'clock" and "12 o'clock" positions.
>
> Tone: In the horizontal, or "3 o'clock," position.
>
> Balance: In the horizontal, or "9 o'clock," position. (The SRX173's monaural output is a blend of the two stereo channels; hence, turning the "Balance" control off-center will result in an incorrect "blend.")
>
> DX/LOC: In the "DX," or "Distance," position. (Since this does not affect AM signals, you will have to change the inner conductor of the antenna lead-in wire from the "Distance" to the "Local" terminal if you find that some AM signals are so strong that they are causing distorted sound or are received at several places on the dial.)

Antenna Adjustments

Step 1. Tune in a weak AM station around 1400 KHz. Then adjust the antenna trimmer for the loudest output. (The trimmer is in the rear of the tape compartment, on the right side. You will need a long, thin-bladed screwdriver. The trimmer's range of adjustment is one complete turn; continuing to turn the trimmer in either direction will merely take you through the same range again.)
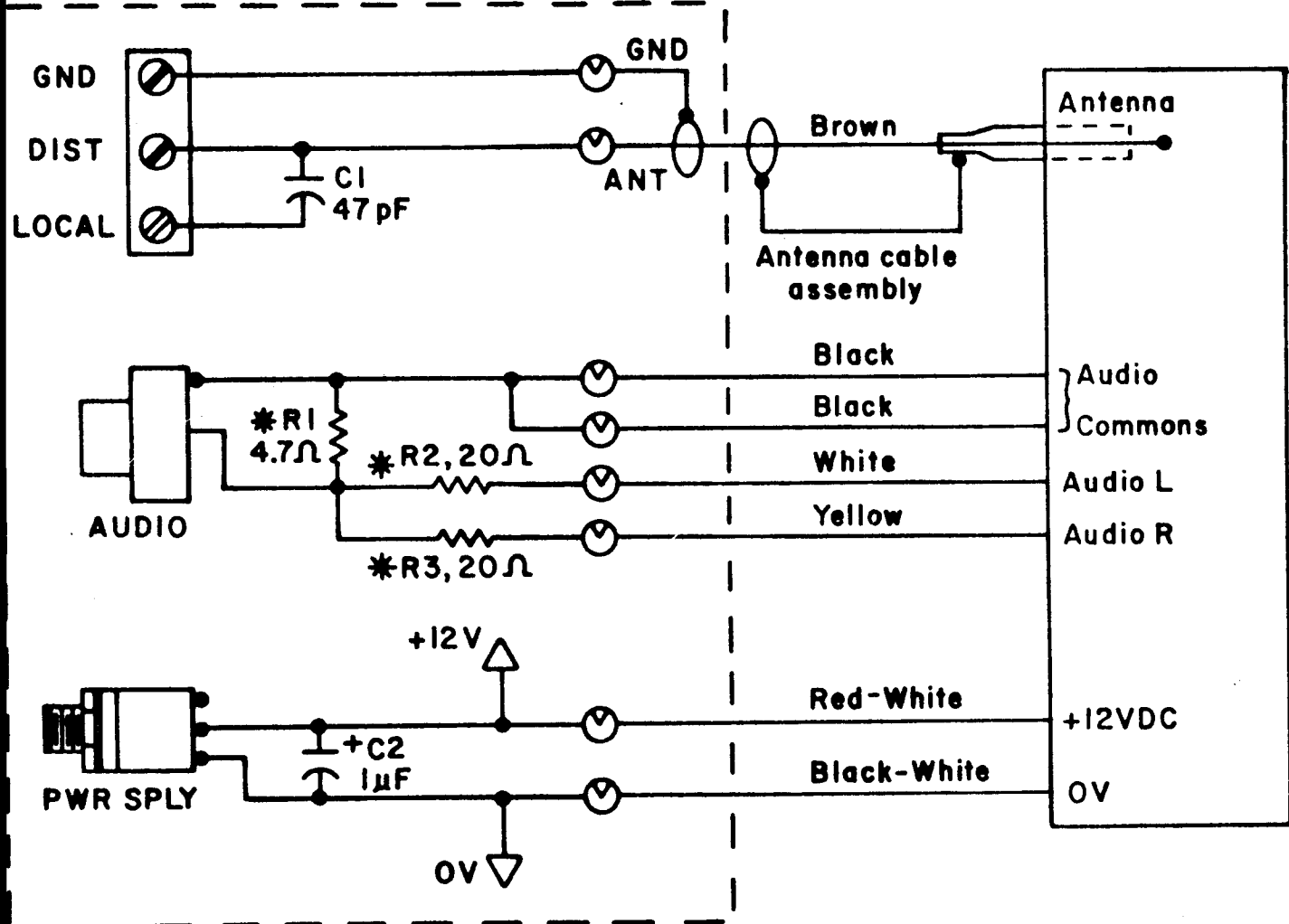
Step 2. If AM station overload is a problem, transfer the inner conductor lead from the "DIST" to the "LOCAL" antenna terminal on the back of the chassis (see "Setting the Controls").

OPERATING INSTRUCTIONS

Refer to the separately supplied vendor's instructions for the tuner and cassette-player's operation and care.

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GND

DIST

LOCAL

GND

ANT

C1
47 pF

Brown

Antenna

Antenna cable
assembly

Black

Black

White

Yellow

Audio

Commons

Audio L

Audio R

AUDIO

*R1
4.7 Ω

*R2, 20 Ω

*R3, 20 Ω

+12V

+C2
1μF

Red-White

Black-White

+12VDC

0V

0V

PWR SPLY

* All resistors are 1/2 W, 5 %.

Ⓥ = Amp- barrel terminals

SRX173
AM-FM TUNER & CASSETTE
TAPE PLAYER
KM0688 Ⓐ

AC, 60 Hz outlet)

GROUND
CLAMP

DOWNLEAD OR
LEAD-IN WIRE
(NOTES 1 & 2)

MAST
GROUND WIRE
(NOTES 1 & 2)

ANTENNA
DISCHARGE
UNIT
(NOTE 3)

TO
RECEIVER

GROUND
WIRE

GROUND
CLAMPS

GROUNDING ELECTRODE
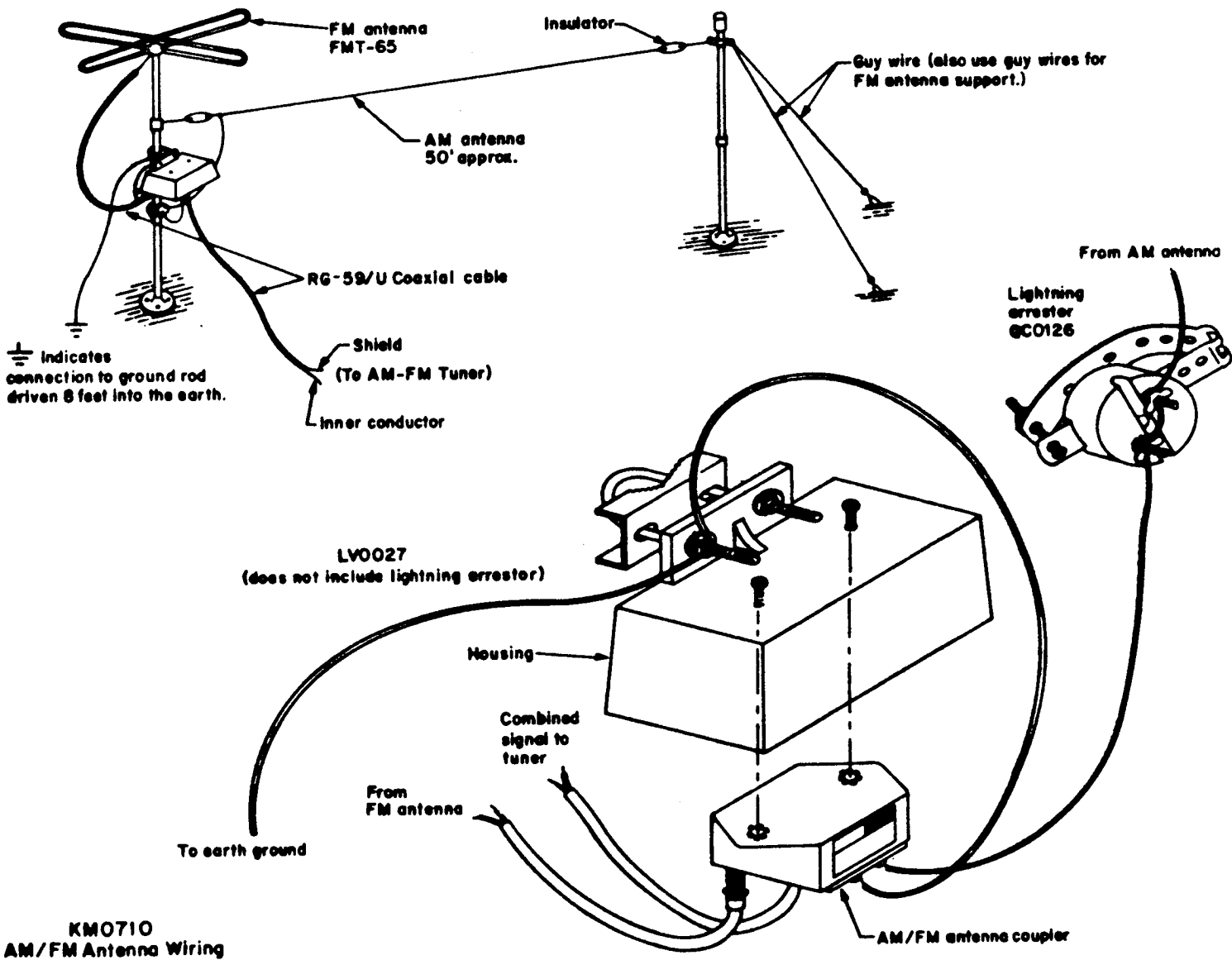DRIVEN 8' INTO THE EARTH
(2.44 METERS)
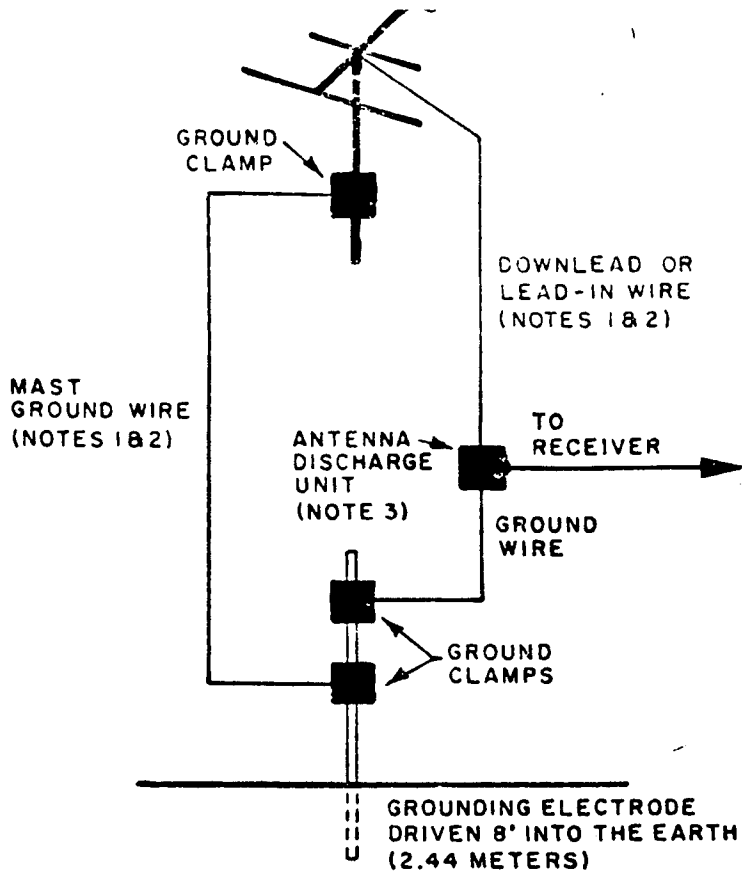
NOTES:

1. USE NO. 10 AWG COPPER, NO. 8 AWG ALUMINUM, OR NO. 17 AWG
   COPPER-CLAD STEEL OR BRONZE WIRE (OR LARGER) AS GROUND
   WIRE FOR BOTH MAST AND LEAD-IN.

2. SECURE THE LEAD-IN WIRE FROM THE ANTENNA TO THE AN-
   TENNA DISCHARGE UNIT AND SECURE THE MAST GROUND WIRE
   TO BUILDING STRUCTURE WITH STAND-OFF INSULATORS SPACED
   FROM 4 TO 6 FEET APART.

3. MOUNT THE ANTENNA DISCHARGE UNIT AS CLOSELY AS POSSIBLE
   TO WHERE THE LEAD-IN ENTERS THE BUILDING STRUCTURE.

FIGURE 1. EXAMPLE OF ANTENNA GROUNDING PER NATIONAL
          ELECTRICAL CODE INSTRUCTIONS.

IL 0153 - ☐

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FM antenna
FMT-65

Insulator

Guy wire (also use guy wires for
FM antenna support.)

AM antenna
50' approx.

RG-59/U Coaxial cable

From AM antenna

Lightning
arrester
@C0126

Shield
(To AM-FM Tuner)

⏚ Indicates
connection to ground rod
driven 8 feet into the earth.

Inner conductor

LV0027
(does not include lightning arrester)

Housing

Combined
signal to
tuner

From
FM antenna

To earth ground

KM0710
AM/FM Antenna Wiring

AM/FM antenna coupler

SRX173
AM/FM ANTENNA WIRING

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OUTDOOR ANTENNAS

IL-0153, on page 8, suggests a grounding system for an AM/FM antenna system; KM-0710, on page 9, illustrates a way of mounting the AM and FM antennas.

The following Rauland-Borg parts are used in the suggested system:

(1) FMT-65 FM Antenna

(2) LM0027 AM/FM Antenna Coupler. The package includes these parts:

- The coupler itself.
- An outdoor housing.
- Two screws for mounting the coupler inside the housing.
- A "U" bolt and related hardware for mounting the housing to the mast.
- Two "F" connectors for plugging the coaxial cables into the coupler.

(3) QC0126 Lightning Arrestor. This includes the hardware needed to