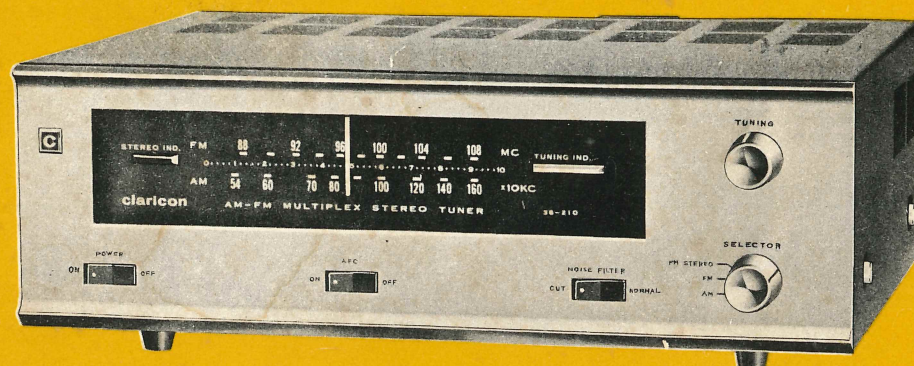


# claricon®

## AM-FM MULTIPLEX STEREO TUNER

### MODEL 36-210



## SPECIFICATIONS

### FM SECTION

TUNING RANGE :	88 — 108MC MULTIPLEX STEREO AND MONAURAL
SENSITIVITY :	4 $\mu$ V for 20db QUIETING
SELECTIVITY :	$\pm$ 100KC (— 6db down)
DISCRIMINATOR BANDWIDTH :	RATIO DETECTOR WITH AFC, 500KC (PEAK TO PEAK)
HARMONIC DISTORTION :	LESS THAN 1%
RF IMAGE REJECTION :	40db
IF IMAGE REJECTION :	55db
EXT. ANTENNA INPUT :	75 OHM UNBALANCED
MULTIPLEX CHANNEL SEPARATION :	BETTER THAN 33db at 1KC BETTER THAN 25db at 100 cps to 6KC BETTER THAN 15db at 50 cps to 12KC
19KC PILOT SUPPRESSION :	— 35db
38KC SUBCARRIER SUPPRESSION :	— 42db

### AM SECTION

TUNING RANGE :	535 — 1605 KC
SENSITIVITY :	100 $\mu$ V for 20db QUIETING
RF IMAGE REJECTION :	50db
IF IMAGE REJECTION :	45db
IF BAND WIDTH :	6KC (— 6db down)
ANTENNA :	BUILT-IN FERRITE LOOPSTICK WITH TERMINAL FOR EXTERNAL ANTENNA
POWER REQUIREMENTS :	117V, 60WATT, 60 cps.
TUBES :	6AQ8/ECC85 $\times$ 2, 6BA6 $\times$ 3, 6AU6 $\times$ 2, 6BE6 $\times$ 1, 12AT7 $\times$ 2, 6RE13 $\times$ 1 plus 2 silicon diodes and 8 germanium diodes.
SIZE :	15 (L) $\times$ 4 $\frac{1}{2}$ (H) $\times$ 11 $\frac{1}{2}$ (D)
FRONT PANEL :	EXTRUSION PANEL
KNOBS :	METAL KNOBS

## **1. ANTENNA AND GROUND CONNECTION**

### **A. FOR FM BROADCAST RECEPTION:**

In strong signal areas the "T" shaped FM antenna is used. Connect the leads to the terminals marked FM and GND. Spread the horizontal portion of the antenna and attach to the wall or suitable location in the correct position for maximum reception. Best position is determined by rotating the antenna prior to mounting. Mounting holes are provided in the ends of the horizontal portion of the antenna.

### **IN WEAK SIGNAL AREAS:**

When used in concrete steel building or in areas remote from the station, an outdoor antenna should be used. Antenna should be located as high as possible in order to be clear of the building or other obstructions which may block the signal. Attach antenna leads to the terminals marked FM and GND.

### **B. FOR AM BROADCAST RECEPTION:**

#### **IN STRONG SIGNAL AREAS:**

Where the ferrite antenna fails to provide satisfactory results, the attached wire antenna should be used. Attach one end of wire to the terminal marked AM. Attach remainder of wire along wall or ceiling or any convenient mounting location. In extremely weak signal areas, a longer wire antenna can be mounted outside the building. It should be as high as possible and insulated from the building.

### **IMPORTANT:**

Weak reception is caused by several factors, extreme distance from the station, obstructions, such as buildings, mountains, etc., steel re-inforcing within the building itself and many others. All factors should be considered in order to determine which antenna will provide optimum reception.

## **2. POWER SOURCE**

Tuner operates on 117 volt A.C. Plug into wall outlet or external outlet provided on most amplifiers.

## **3. TAPE RECORDER TERMINALS**

Provided for recording FM Stereo. Connect either "Line Input Terminal" or "Aux. Input Terminal" of your recorder to terminals marked "Tape Rec," "R" & "L". Be certain that terminal marked "R" on tape recorder is connected to "R" on tuner and terminal marked "L" on tape recorder is connected to "L" on tuner. For best tone quality, limit length of leads to 6'.

## **4. OUTPUT TERMINALS**

Provided for connecting Tuner Output to amplifier. Connect "R" & "L" Output Terminals of tuner to "R" & "L" terminals of amplifier marked "Aux. Input" or "Tuner Input". Be certain "R" is connected to "R" as stated in paragraph (4). Limit length of leads for best tone quality.

## **5. CONTROLS AND INDICATORS**

1. SELECTOR knob is provided for selecting AM, FM monaural or FM STEREO broadcasts.

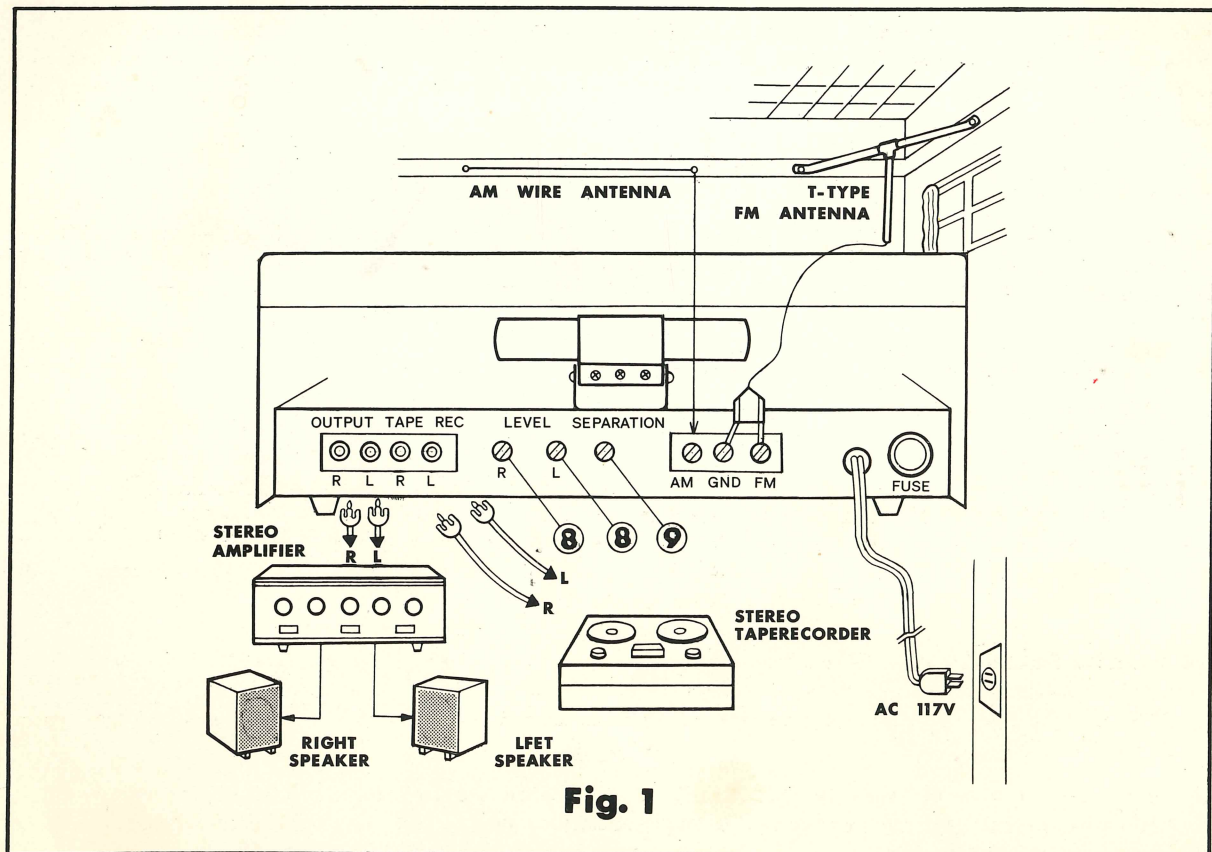
**AM RECEPTION:** Set the knob to AM position. AM broadcast signal is then present on both the Left and the Right channels of the Tuner Output Terminal.

**FM MONAURAL RECEPTION:** Set the knob to FM position. FM broadcasts signal is then present on both the Left and the Right channels of the Tuner Output Terminal.

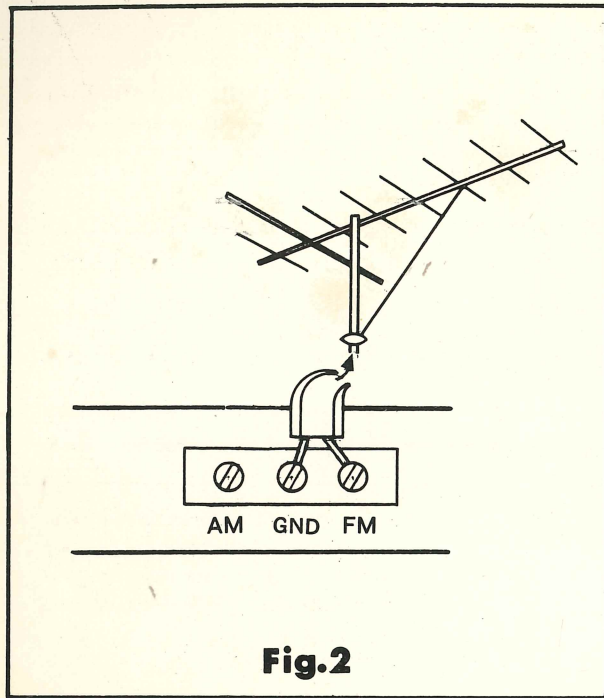
**FM STEREO RECEPTION:** Set the knob to FM position. Tune in an FM broadcast if the Stereo Indicator Lamp turns on, it indicates that the signal you are receiving is stereo. Set the selector to FM STEREO position. FM Stereo signals are now present on the Left and the Right channels of the Tuner Output Terminal.

- a. Do not set the Selector knob to FM STEREO position when the Indicator Lamp is off.
- b. FM monaural broadcast can be received when the Selector knob is set to FM STEREO position and the Indicator Lamp is on.

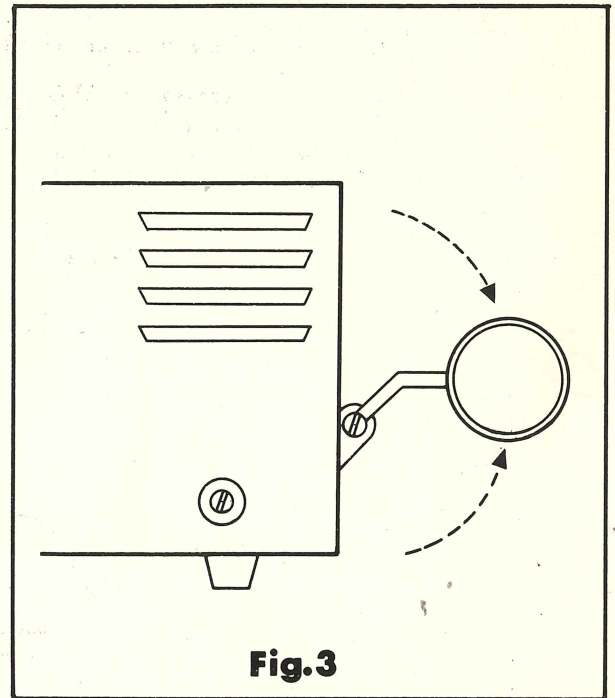
2. TUNING knob is provided to select either AM or FM stations. The dial pointer indicates frequency of the station. When the station is properly tuned in, the Tuning Indicator indicates in green and closes.
3. NOISE FILTER Switch is provided to reduce atmospheric noise which may be received when tuning in a weak or distant station. Lowering of the noise level will improve reception particularly when receiving FM STEREO broadcasts.
4. POWER Switch is for turning tuner on or off. Leave in off position when tuner is not in use.
5. AFC Switch..... The abbreviation "AFC" stands for Automatic Frequency Control. At the very High Frequencies used for FM broadcast, tuner drifting may take place. Set AFC switch in OFF position when selecting a station. Set AFC to ON position when station is tuned in AFC circuit will automatically correct tuning if drifting occurs and insure clear reception on weak or distant stations.
6. TUNING INDICATOR is provided to show the user whether the signal is tuned in properly. The indicator lights in green at each end. When the two green sections close, the tuning is set in the correct position for best reception.
7. STEREO INDICATION Lamp indicates in red when the tuner is receiving an FM STEREO broadcast. It does not indicate when receiving FM monaural broadcast. However, it may indicate when receiving a very strong noise signal.
8. LEVEL CONTROL is provided to adjust output voltage. The output increases when turned clockwise and decreases when turned counter-clockwise. Correct tuner output level is dependent on the gain of the amplifier used. Level Control adjusts each channel independently.
9. SPEARATION Control is provided to properly separate the two channels when receiving Stereo broadcasts. It is not necessary to adjust this control for normal use. If for any reason, good separation is not obtained in normal use of the tuner, carefully turn the Control knob clockwise or counter-clockwise and set it at a point where best separation is obtained. In adjusting the Separation Control, the following precautions must be taken.
  1. Be certain you are receiving FM STEREO.
  2. Set the Selector Knob of the Tuner on FM STEREO position.
  3. Set the Selector Knob of the amplifier on FM STEREO position.
  4. Be certain all other controls are properly set and all terminal connections are correct.



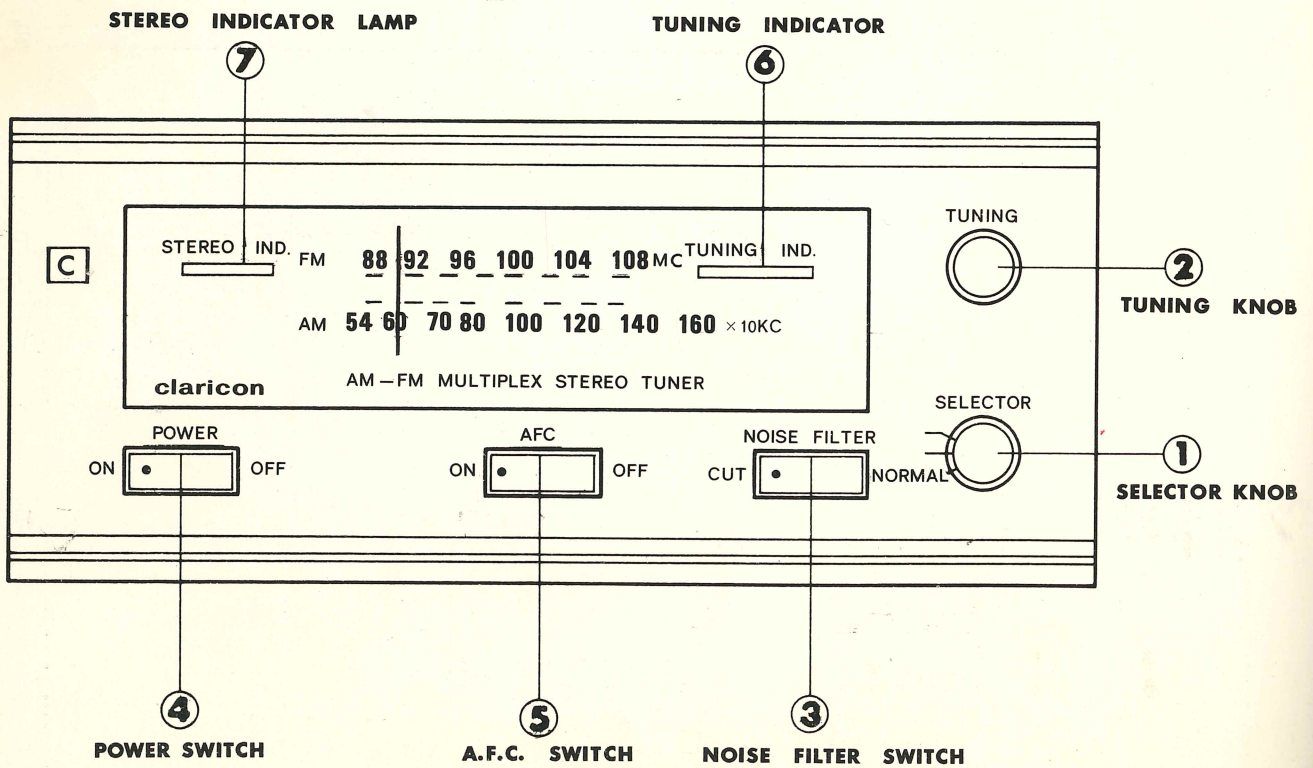
**Fig. 1**



**Fig.2**



**Fig.3**



**Fig.4**

