



**NOTES:**

To better understand the system operation, let us first establish an initial setup procedure. Before we do this, let us note some pre-conditions programmed in the microprocessor.

When power is first applied, or the unit has been without A.C. power for more than four (4) minutes, the following conditions will be observed:

- 1) The time will start at 1:00 A.M.
- 2) Auto on time is re-set to 1:00 A.M.
- 3) If the Radio is turned on, FM or AM may display any Frequency within the respective FM or AM band.

**TIME SETTING:**

To set the correct time:

**EXAMPLE 1:** Assume the correct time of day is 8:30 AM.

Press **MEM/TIME** and **HOLD**.

To set the hour, press **HRS/ADV** and hold until the correct hour "8" is displayed. Then press **MIN/ADV** switch until minutes displayed is "30". Now release **MEM/TIME** switch.

Display will read

A digital display showing the time 8:30. The digits are large and black on a white background. The colon is positioned between the hour and minute digits.

NO "AM" SELECTION IS INDICATED

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**NOTE:** Pressing and holding the **HRS/ADV** or **MIN/ADV** will cause the Digits to continually advance. Pressing either switch momentarily will advance the hours or minutes one digit at a time.

**NOTE:** The DOOR SWITCH must be held "ON" while talking and listening to the door speaker.

**DOOR CHIMES: (OPTIONAL EQUIPMENT)** The Model 350 Radio-Intercom system is designed to operate with Music and Sound's Electronic Door Chimes Models C3 and C8. The Model C3 is a 3 Note chime, while the Model C8 is a multiple 1, 2, 4, and 8 Note Westminster Chime. Activating the door chime will "mute" the radio program during the chime cycle and the chime will be heard through all speakers that are in the RADIO-INT position. The Chime will not disturb a room that has been placed in the MONITOR position.

**NOTE:** A minimum of one speaker must be left "ON" to receive chime tones.



**EXAMPLE 2:** Assume the correct time of day is 8:30 PM. Press **MEM/TIME** and **HOLD**.

To set hour, press **HRS/ADV** and hold until the correct hour "8" is displayed and the PM indicator is lit. Then press **MIN/ADV** switch until minutes displayed if "30".



Display will read

Now release the **MEM/TIME** switch.

The "AUTOMATIC" function of the clock and the SLEEP set will be explained later.

**PRELIMINARY OPERATIONS:** Before selecting radio function, set the following switches and controls as indicated:

**AUTO/OFF/POWER-ON:** Set to "OFF" position.

**AM/FM/PHONO:** Set to "FM" position

**RADIO/TAPE:** Set to "RADIO" position

**MONITOR/OFF/RADIO-INT:** Set to "RADIO-INT" position



**TONE CONTROL:** Turn control indicator to center (12 o'clock) position.



**RADIO VOLUME:** Turn control indicator to approximately the 9 o'clock position.



**INTERCOM LEVEL:** Turn control indicator to approximately the 12 o'clock position.



**SPEAKER VOLUME:** Turn control indicator to **maximum** clockwise position.

**STATION AND TUNING TECHNIQUES:** The range of the AM broadcast band is from 540 to 1600 KHz (Kilohertz) and all AM stations end with an "0" (540, 820, 1080, etc.). The range of the FM band is from 88.1 to 107.9 MHz (Megahertz) and all FM stations end with an odd number, .1, .3, .5, .7, .9 (92.5, 100.3, 102.9, etc.). The Model 350 has a tuning range beyond the standard AM and FM bands previously specified. This unit will tune from 530 to 1620 KHz in the AM band and from 87.9 to 107.9 MHz in the FM band.

**NOTE:** The microprocessor is programmed to display "TIME" except when Radio Tuning is actually in process. To display the frequency at any time the radio is on, press the **FREQ** switch and station frequency will be displayed for approximately ten (10) seconds then the display will automatically change back to time.

Your system is now set to activate the radio functions.

Now set the AUTO/OFF/POWER-ON switch to "POWER-ON". The unit should display a frequency in the FM band and the FM indicator should be lit.

**MANUAL SCAN:** CAUTION: CAUTION: CAUTION: Before any tuning can take place, display must show FREQUENCY. If the unit is displaying time, press the **FREQ** button momentarily and then press either the manual scan **UP** or **DOWN** to the desired station. Holding the button results in a rapid scan while a momentary press will result in a single step. Some practice will be required to achieve good tuning techniques. Remember, all AM stations end in "0" and all FM stations end in odd numbers so when you approach a station and tune for maximum clear sound, the last number should either be an "0" for AM or 1, 3, 5, 7, 9 for FM. You may want to refer to your local news media for a listing of these station frequencies. To switch from FM to AM, place the AM/FM/PHONO switch in the "AM" position and use the same procedure to scan the AM band.

**INTERCOM PROGRAM:** The Intercom is operational 24 hours a day. It is always on, even when the radio is off.

a) Loudness (volume) adjustments are a matter of adjustment by the user. Too much volume can cause feedback. If a howling noise is heard when using the intercom, reduce the intercom volume setting.

b) For best intercom functions, the room speaker volume control should be in the near "full on" position. If the volume setting of a speaker is low or off, the sensitivity of the speaker as a microphone will be substantially reduced or off.

**TO TALK FROM THE MASTER UNIT TO THE ROOM SPEAKERS:** Place any quantity of speaker switches in the "RADIO-INT" or monitor position. Press the LISTEN/TALK switch of the master unit to "TALK". Hold in the TALK position while speaking. The radio program will be muted and your voice communication will be heard at all stations in the RADIO-INT or MONITOR positions unless the room station volume control is turned off.

a) Release the switch from the talk position to receive a reply from any of the room speakers.

b) Or release the talk switch and re-position any room speaker from the RADIO-INT position to the MONITOR position, to receive a reply without the room speaker having to operate any of the controls. This technique is very useful to communicate with a person who is sick or unable to operate the controls of a room speaker.

**ROOM TO ROOM COMMUNICATION:** All room stations in the RADIO-INT position can communicate with one another by pressing the LISTEN/TALK switch to TALK, then release to listen.

**DOOR ANSWERING:** Never open the door to a stranger. From the master unit, with one finger, press and HOLD the door switch in the ON position. With another finger, press the LISTEN/TALK switch to the TALK position and talk, release the switch to listen. The visitor at the door has nothing to do but talk.

Door answering from a room speaker is accomplished in the same manner as from the Master Unit. Remember, the Room Selector Switches on the Master Unit must be in the RADIO-INT position to receive communication to the rooms.

The next step will complete the "auto on" function. Set the radio to the desired station you want to hear at the auto on time previously set, then place the AUTO/OFF/POWER ON switch to the "AUTO" position.

**NOTE:** After the radio turns on in the "AUTO" mode, it will continue to play for 64 minutes then automatically turn off. To continue the radio operation, the "AUTO/OFF/POWER ON" switch must be placed in the "POWER ON" position. To turn the unit off during the AUTO ON cycle, turn the AUTO/OFF/POWER ON switch to the "OFF" position.

**SLEEP SET:** The sleep set function will continue radio operation for 64 minutes and then will turn the radio off if the "AUTO/OFF/POWER" switch is in the AUTO or OFF position. To start the SLEEP SET mode, press the **SLEEP SET** button. The radio will play for 64 minutes and automatically turn off. If you want to cancel the sleep set function before the 64 minute cycle is complete, press the **AUTO-CANCEL** button.

**RADIO/TAPE:** This switch is normally in the RADIO position for AM, FM and PHONO operation. The tape position is used for TAPE play when the unit is connected to an external tape deck.

**ROOM SPEAKER SWITCHES:** There are ten (10) room speaker switches provided on the Master Unit. Two (2) additional speakers (maximum of 12) can be used with the system by connecting 2 speakers to a room switch on the master unit.

**TO MONITOR:** Place the speaker switch(s) in the MONITOR position. This lets you hear at the Master Unit what is taking place in the Monitored room. All rooms that have been placed in the RADIO-INT position will also receive the monitored room(s).

- a) A "MONITORED" room speaker will receive calls from the Master unit or other room speakers.
- b) A room with the speaker in the off position on the Master Unit WILL NOT receive Radio of Intercom functions.
- c) A speaker in the RADIO-INT position (normal) will receive both radio and intercom functions.

**AUTO SCAN:** To scan the AM or FM bands, first select the desired band using the AM/FM/PHONO switch. To scan "UP" the band, momentarily press the AUTO UP button and the unit will scan to the next higher radio station broadcasting with enough signal strength to stop the scan automatically. To scan down is the same except the **DOWN** button is pressed.

**NOTE:** If for some reason the unit does not stop scanning, momentarily press either the auto scan **UP** or **DOWN** button. This will stop the auto scan function.

The automatic scanning system requires adequate signal strength from the antenna for proper operation. If the system will not stop scanning, the antenna system should be checked thoroughly.

**MEMORY SELECTION:** The Model 350 Radio will store six (6) AM stations and six (6) FM stations in the memory.

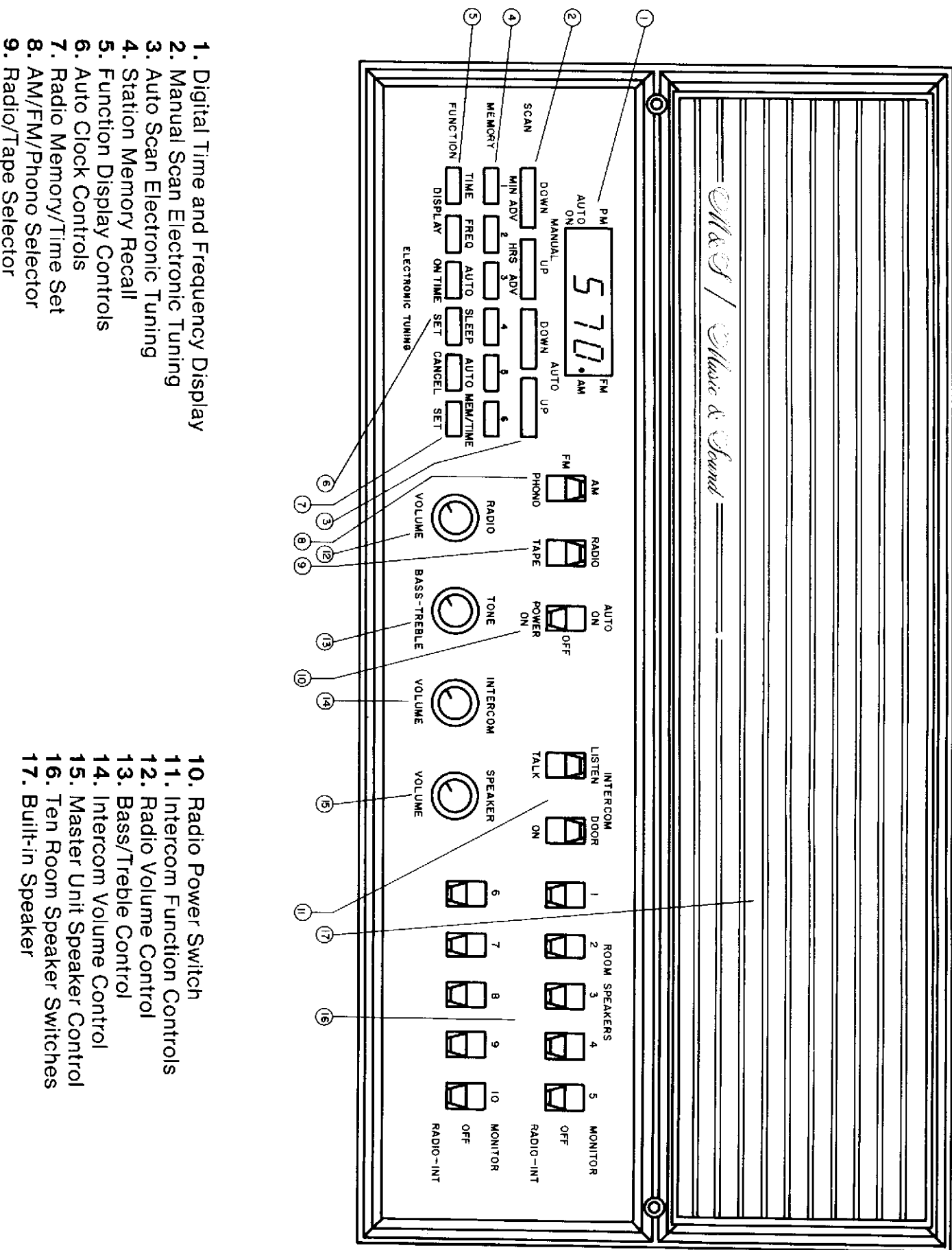
To store stations, select either AM or FM by using the AM/FM/PHONO switch. Use auto or manual scan to locate the desired station. To enter this station into the memory, press the **MEM/TIME** set button momentarily then press the desired memory location (1, 2, 3, 4, 5, or 6).

**NOTE:** The unit must be displaying the Frequency when you enter a station in the memory. If the unit has returned to time, first press the **FREQ** button, then the **MEM/TIME** followed by the memory location.

**MEMORY RECALL:** To recall stations in memory, set the AM/FM/PHONO switch to the desired AM or FM radio band then press the desired memory button. The station selected will now be playing and the display will show that station frequency for approximately 10 seconds then change back to time.

**AUTO ON TIME:** Setting auto on time is very similar to setting real time. The first step is to press the **AUTO-ON** button, then release. The display should show a valid time and the "AUTO-ON" indicator (lower left hand corner of the display) should be lit. Now press the **HRS/ADV** and (or) **MIN/ADV** to the time you wish the unit to automatically turn on. Be sure to observe the "PM" indicator when making the time setting. The unit will automatically return to real time after setting activity has stopped. If for some reason the unit returns to real time during the setting procedure, press the "AUTO ON TIME" button again and continue.

(6)



(7)

1. Digital Time and Frequency Display
2. Manual Scan Electronic Tuning
3. Auto Scan Electronic Tuning
4. Station Memory Recall
5. Function Display Controls
6. Auto Clock Controls
7. Radio Memory/Time Set
8. AM/FM/Phono Selector
9. Radio/Tape Selector

10. Radio Power Switch
11. Intercom Function Controls
12. Radio Volume Control
13. Bass/Treble Control
14. Intercom Volume Control
15. Master Unit Speaker Control
16. Ten Room Speaker Switches
17. Built-in Speaker