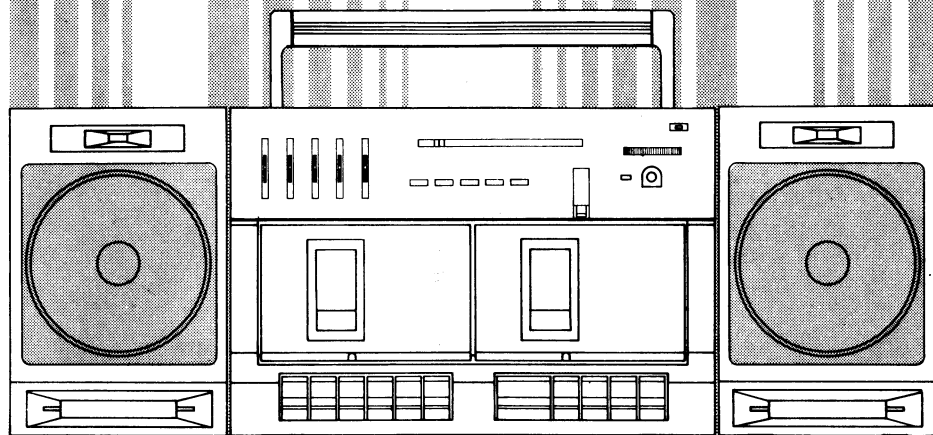


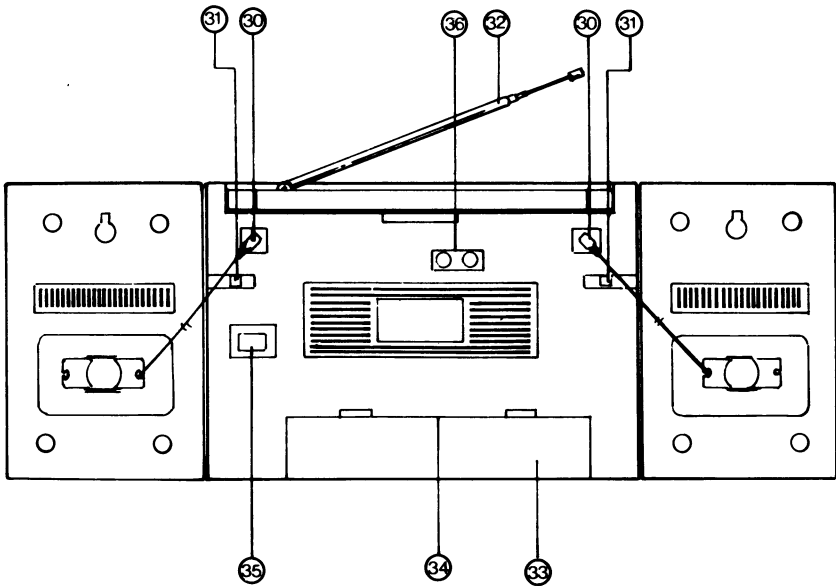
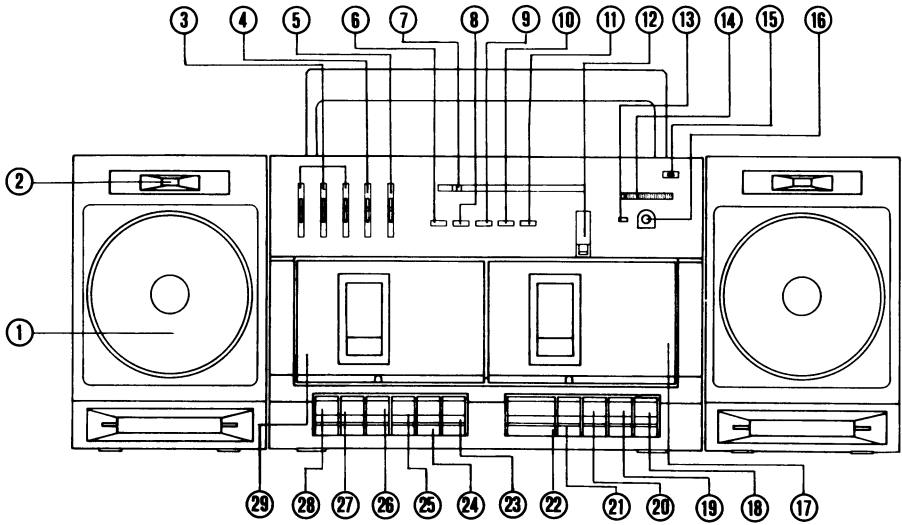
# Instruction Manual



**DE LUXE PORTABLE INTEGRATED  
COMPONENT SYSTEM**

**Double Cassette Recorder**

**ACR 113**



## FEATURES

1. WOOFER
2. TWEETER
3. 3 GRAPHIC EQUALIZER CONTROL
4. L. VOLUME
5. R. VOLUME
6. POWER SWITCH (ON/OFF)
7. DIAL POINTER
8. NORMAL/FAST SPEED SELECTOR
9. TAPE SWITCH
10. PHONO SWITCH
11. RADIO SWITCH
12. BAND – SELECTOR
13. FM STEREO INDICATOR
14. TUNING KNOB
15. BUILT IN CONDENSER MICROPHONE
16. EXT. PHONE JACK
17. CASSETTE TAPE A
18. PAUSE BUTTON A
19. STOP/EJECT BUTTON A
20. FAST FORWARD BUTTON A
21. REWIND BUTTON A
22. PLAY BUTTON A
23. PAUSE BUTTON B
24. STOP/EJECT BUTTON B
25. FAST FORWARD BUTTON B
26. REWIND BUTTON B
27. PLAY BUTTON B
28. REC. BUTTON B
29. CASSETTE TAPE B
30. EXT. SPEAKER JACK
31. SPEAKER RELEASE BUTTON
32. TELESCOPIC ANTENNA
33. BATTERY & POWER CORD COMPARTMENT
34. AC VOLTAGE SELECTOR (OPT.)
35. AC SOCKET
36. EXT. PHONO JACK

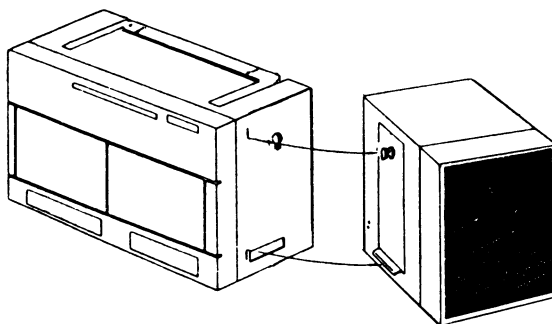
- NOTE:**
1. when operating your unit on batteries, please ensure the AC cord is unplugged from AC outlet.
  2. The batteries will last longer if you keep the volume down. Remember the higher the volume, the shorter the life of the batteries.
  3. Old batteries can leak and cause corrosion, so never leave run-down batteries in your unit which may cause corrosion and damage to the set.

## **SPEAKER CONNECTION**

The speaker boxes supplied with this unit are unique in concept. They may be used as extension speakers for greater stereo effect or attached to the main unit for true portability.

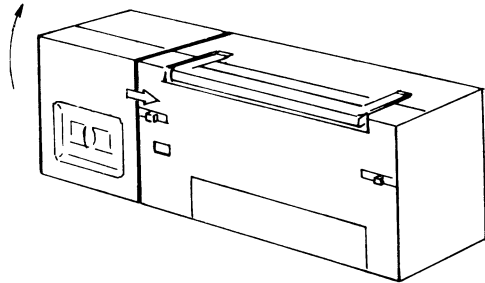
### **A. To attach the speaker boxes to the main unit, proceed as follows:**

1. Place the left channel speaker box next to the main unit so that the speaker grille is facing forward.
2. Join the speaker box to the main unit by positioning the bottom hook of the speaker box into the bottom slot of the main unit and locking the speaker box onto the main unit.
3. Repeat steps 1 and 2 above to attach the right channel speaker box.
4. Insert the plug at the end of each **SPEAKER LEAD** into the appropriate Ext. SPEAKER jack (30).



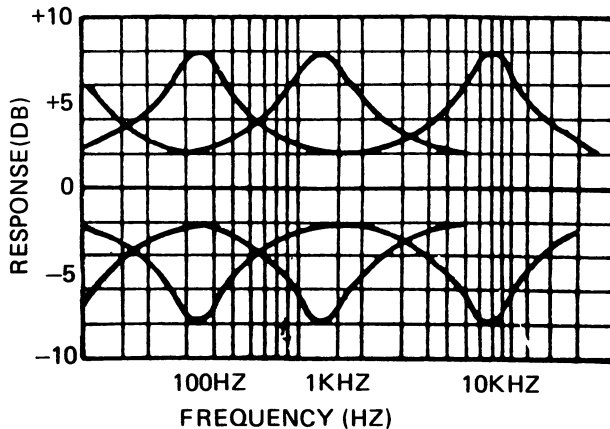
**B. To use the speaker boxes as extension speakers, proceed as follows:**

1. Detach the speaker boxes from the main unit by depressing the locking latches on top of main unit and unlocking the speaker boxes.
2. Withdraw the both SPEAKER LEADS from their stowaway areas and insert the plug at the end of each SPEAKER LEAD into the appropriate Ext. SPEAKER jack (30).



**GRAPHIC EQUALIZER CONTROLS (OPTIONAL)**

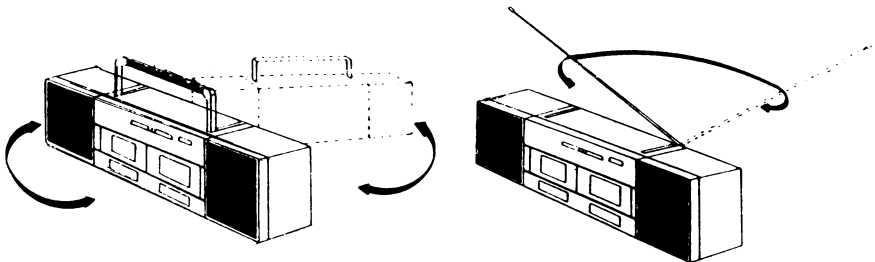
By means of three independent frequency (100/1K/10K) controls with up to  $\pm 10$ dB adjustment, you can get your favorite sound shape flexibly. Typical frequency responses adjusted with the frequency controls are shown in fig below. "Flat" response is obtained by setting the controls to the "O" positions.



## RADIO OPERATION

1. Select power supply using either AC or DC source as described earlier.
2. Connect the speaker boxes to the main unit as described earlier.
3. Depress the POWER switch (6) in the 'ON' position.
4. Place the VOLUME, and GRAPHIC EQUALIZER controls (4, 5, 3) in mid-range position.
5. Select your desired waveband by radio switch (11) and BAND selector (12).
6. Select the desired station on the dial display by rotating the TUNING knob (14).
7. Re-adjust the VOLUME, and GRAPHIC EQUALIZER controls (4,5,3.) to suit personal preference.
8. To switch the unit off, depress the POWER switch (6) in the 'OFF' Position.

**NOTE:** 1. For MW or LW reception, slight rotation of entire unit may improve reception. For FM, FM-STEREO and SW reception, be sure to fully extend the TELESCOPIC ANTENNA (32) and adjust its angle for optimum reception



2. Many FM stations broadcast their programmes in stereo. When tuning in on stereo broadcasts, the FM-STEREO indicator (13) will glow in Red color automatically.

## CASSETTE OPERATION

1. Follow steps 1-4 of 'Radio Operation' paragraph.
2. Depress the 'TAPE' Switch (9).
3. Please select either TAPE A or TAPE B for tape playback.
4. Depress the STOP/EJECT button (19 or 24) to open the cassette compartment lid.
5. Insert a pre-recorded cassette tape in the cassette compartment lid guides. Ensure open end of the cassette tape exposing the tape is facing downward and the tape is wound onto the left spool. Close the cassette compartment lid firmly.
6. Depress PLAY button (22 or 27).
7. Adjust the VOLUME and GRAPHIC EQUALIZER controls (4, 5, 3,) as desired.
8. To stop playing cassette tape, depress the STOP/EJECT Button (19 or 24). To remove cassette depress the STOP/EJECT button (19 or 24) once again to open cassette compartment lid.
9. If you wish to rewind tape, depress REWIND button (21 or 26)
10. If you wish to fast forward tape, depress FAST FORWARD button (20 or 25)
11. When unit is no longer being used, ensure to place the Power switch (6) in (off) Position.

- NOTE:**
1. When any button is in depressed position, before pressing any other button, always be sure to press STOP/EJECT button (19 or 24) first to release previous operation button. If this is not done, damage may result to both deck mechanism and cassette tape.
  2. This cassette mechanism is designed with a built in tape end sensor which will automatically cancel the play function when the tape reaches the end of its travel in either direction.

3. This unit's mechanism also includes PAUSE buttons (18 or 23) which, when pressed, instantly stops the tape's movement in the 'PLAY' and 'RECORD' modes of operation. When released, the tape movement resumes instantly. Please Note even though the tape will be stationary when the PAUSE buttons (18 or 23) is depressed, the mechanism's motor is still running and power is being consumed. Therefore, do not leave the unit with pause button depressed for long periods as this will drain the batteries (in DC operation) almost as fast as if in actual Play or Record - modes.

### **PHONO OPERATION**

1. Connect an optionally available turntable fitted with a stereo ceramic cartridge to the PHONO jacks (36).
2. Follow steps 1-4 of Radio Operation Paragraph.
3. Depress the PHONO SW (10).
4. Operate your turntable as per instruction included with the turntable unit.
5. Re-adjust the VOLUME, and GRAPHIC EQUALIZER controls (4,5,3,) to suit personal preference.
6. To switch the unit off. Depress the Power switch (6) in the off position.

### **RECORDING**

This unit can be used to make recordings on to cassette tape from

- a. Built-in radio broadcasts
- b. Built-in condenser microphone
- c. Optionally available pre-recorded tape

**NOTE:** 1. Only TAPE B (29) can proceed recording. When recording be sure the accidental record prevention tab has not been removed from rear of cassette tape, otherwise, recording cannot proceed (see the section on "Record prevent Device"). Do NOT use excessive force to press the RECORD button (28).



2. Since this unit features an Auto Level Control (A. L. C.) circuit, the VOLUME, and GRAPHIC EQUALIZER controls (4,5,3) will have no effect on recording

#### **Recording from built-in radio broadcast**

1. Select the desired broadcast as described earlier in "Radio Operation" paragraph.
2. Insert a blank tape in the cassette compartment lid guides. Ensure open end of the cassette tape exposing the tape is facing downward. Close the cassette compartment lid firmly.
3. Depress and lock the RECORD and PLAY buttons (27,28) simultaneously.
4. This unit is now recording the broadcast material.
5. Since you can monitor through the speakers regardless of recording level, adjust the VOLUME, and GRAPHIC EQUALIZER controls. (4,5,3) for your desired sound.

#### **Recording from built-in condenser microphone**

1. Depress the 'TAPE' switch (9).
2. Follow steps 2,3 and 4 from. Recording from built-in radio broadcast paragraph above.

**NOTE:** The built-in condenser microphone used in this unit have very high sensitivity. Therefore, it is not necessary to place the radio cassette recorder close to the source of sound.

#### **Recording from a pre-recorded tape (Dubbing Tape A to Tape B)**

This unit features a "DOUBLE CASSETTE DECK" tape mechanism, you can duplicate or dub without the use of another tape deck.

1. Follow steps 1-2 of "CASSETTE OPERATION" (Page 6)
2. Depress the STOP/EJECT Button of Tape A (19) to open the TAPE A cassette door and insert your prerecorded tape.
3. Depress the STOP/EJECT button of TAPE B (24) to open the TAPE B cassette door and insert your blank cassette tape.

4. Simultaneously depress the "PAUSE, RECORD and PLAY" buttons of TAPE B (23, 27, 28) Your tape is now ready for recording from TAPE A.
5. If you prefer to record at NORMAL speed (1-7/8 i.p.s. -4.75 cm/sec) leave the "SPEED" button (8) in the NORMAL position. Depress the "SPEED" button for high speed duplicating (2 times normal speed, 3-3/4 i.p.s. -9.5 cm/sec). Use the "FAST SPEED", for recording only, do NOT use in the playback position.
6. Depress the PLAY button of TAPE A (22), the prerecorded tape will start playing immediately.
7. Release the PAUSE button on TAPE B (23) and recording will begin simultaneously. Ensure the position of your blank tape, you must have the brown color cassette tape past the recording head, not the white leader tape.

**NOTE:** (a) When the "SPEED" selector (8) is in the "NORMAL" position, regardless of the recording level, you can monitor through the speakers and adjust the Volume and Graphic Equalizer (3,4,5) controls to your desired sound volume and tonal quality.

(b) The "FAST SPEED" function should only be used when you are duplicating from TAPE A (play back) to TAPE B (recording).

**'WARNING'** If you use "FAST SPEED" function for rewind and fast forward, the speed and torque could damage or break your tape.

### **Erasure of recordings**

When a new recording is made, all previous recordings on that part of tape are automatically erased and only the new recording remains.

## **PRIVATE LISTENING**

Insert an optionally available stereo headphones into the HEADPHONE jack (16). This will automatically disconnect the speakers.

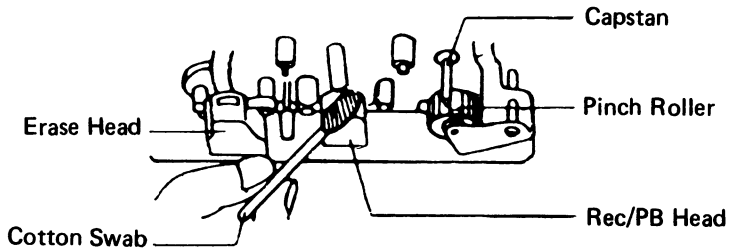
## **MAINTENANCE**

After a period of time, especially when inexpensive brands of tape are used, the sound on playback may become "muffled" or in extreme cases, almost inaudible.

This is **NOT A FAULT OF THE UNIT ITSELF** but merely due to a deposit of oxide and other contamination on the tape heads. The head assembly, the capstan and the pinch roller are in constant contact with the tape. If these parts are dirty or have dust adherence, abnormal phenomena such as sound decrease, distortion, fluctuation or tape chewing will result.

Use a small cotton swab with tape cleaning alcohol to clean the tape head, capstan and pinch roller carefully (rubbing or drinking alcohol should not be used).

Another easy way to overcome the problem is by using of a proprietary brand of head-cleaning cassette. Follow the instructions provided with the cleaner carefully and **DO NOT OVERUSE** as this may cause undue wear. The tape head is a delicate precision component and serious damage will result if you attempt to scrape the contamination away with a sharp implement.



- NOTE:**
1. Don't bring articles of metal or magnetic material, such as a screwdriver near the head assembly.
  2. After cleaning, be sure no particles of cotton are left.

**Other common causes of trouble are:**

- a. Tape jamming — leading to uneven speed on playback and record.
- b. Tape tangling — where the tape wraps/itself around vital parts of the mechanism.

To reduce the likelihood of these problems occurring, you must observe the following precautions:

1. Check that there are no loose layers of tape visible through the cassette centre window (see fig. 1) Take-up these loose layers using a pencil or ballpoint pen before inserting the cassette into the machine (see fig. 2).
2. If the cassette feels 'tight' whilst performing the operation shown in fig. 2, the tape may be jamming due to ridges in the winding of the tape (visible through the centre window). These may be removed in most cases, by fast winding of the cassette from one end to the other and back again.

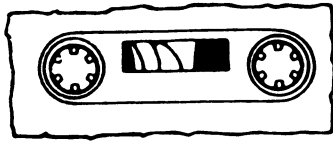


Fig. 1

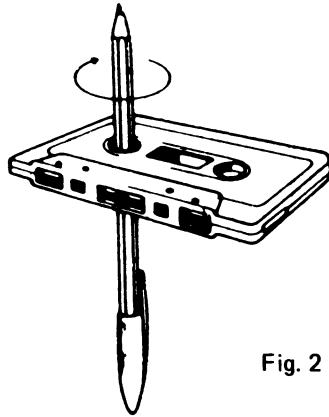
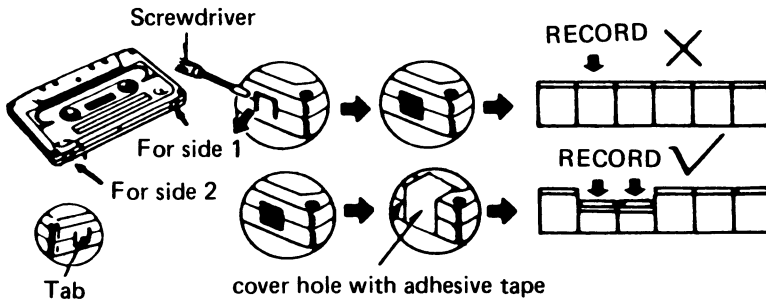


Fig. 2

## RECORD PREVENT DEVICE

The cassette tape contains 'Knock Outs' on its rear end to prevent accidental recording on, or erasure of a pre-recorded tape. Recording can only be made when these 'Knock Outs' are intact. There is one knock out for each side (track) of the tape. To protect a recorded tape, proceed as follows:

With the record side of the tape facing upwards and the rear end (opposite the open end) facing you, use a small screwdriver to prise out the tab on your right-hand side. If after the tabs have been removed, you wish to re-record on the protected side simply cover the hole with a piece of sticky tape, thereby activating the accidental record prevention lever built into this unit's mechanism.



## WARNING

We recommend exclusively the use of well known brands of cassette tape for use in this unit having a running time of no more than 45 minutes per side (C-90). The use of low quality tapes or lengths greater than C-90 may cause tape check wing which may result in damage to the cassette mechanism.

## TROUBLE SHOOTING

Please check the following items before seeing your local service station

- 1. When neither Radio nor Tape recorder operates:**
  - a. Check the batteries polarity.
  - b. Check that the batteries are not exhausted.
- 2. When there is no sound (noise) in Radio mode:**
  - a. See that the RADIO switch being depressed
  - b. See that the VOLUME control is not set at the minimum position.
- 3. When sound quality deteriorates:**
  - a. Re-rotate the TUNING knob to you desired station exactly.
  - b. Check that the batteries are not-exhausted.
- 4. When the cassette compartment lid does not close:**
  - a. Check if the cassette fits into the cassette holder
  - b. See that the PLAY button is not depressed already.
- 5. When the tape does not move:**
  - a. Check if the batteries are weak.
  - b. See that the PAUSE button is not depressed.
- 6. When there is no sound (noise) from depressing the PLAY button:**
  - a. See that the VOLUME control is not set at the minimum position.
  - b. See that the TAPE switch being depressed.
- 7. When recorder does not record from the built-in radio:**
  - a. See that the Switch button is placed in the "RADIO" position.
  - b. Check if the radio program is being received.
- 8. When recorder does not record from the EXT. phono jacks:**
  - a. Check the connection of the phono jacks.
  - b. See that the PHONO switch being depressed
- 9. When the sound quality is distorted or out of tune in a playback mode:**
  - a. Check if the batteries are weak.
  - b. If dirt or reddish-brown oxide has accumulated, clean the heads, pinch roller and capstan.
- 10. When the record mode does not work:**

Check that the tab of cassette is not removed.

## **SPECIFICATIONS**

### **GENERAL**

Power Source	: AC. 110/220 60/50Hz or 220/50Hz or 240/50Hz or 110/60Hz or 127/220 60/50Hz : DC. 9 Volt. (UM1x8) "D" Cell Batteries
Power Consumption	: 8W (AC)
Semiconductors	: 6 Integrated Circuits 5 Transistors 20 Diodes
Dimensions – System	: Width 21½ inches (55.2 cm) Height 7½ inches (19.5 cm) Depth 5 inches (12.6 cm)
Weight (without Batteries)	: 8.1 Lbs (3.7 Kg)

### **AMPLIFIER**

Peak Music Power	: 10 Watt Per Channel / 4 ohms
Continuous Power	: 3 Watt RMS Per Channel / 4 ohms
Frequency Response	: 35 - 14.000 Hz
Output Impedance	: Speaker 4 ohms Headphone - 8 ohms
Input Impedance	: Phono 47 K ohms

### **SPEAKER ENCLOSURE**

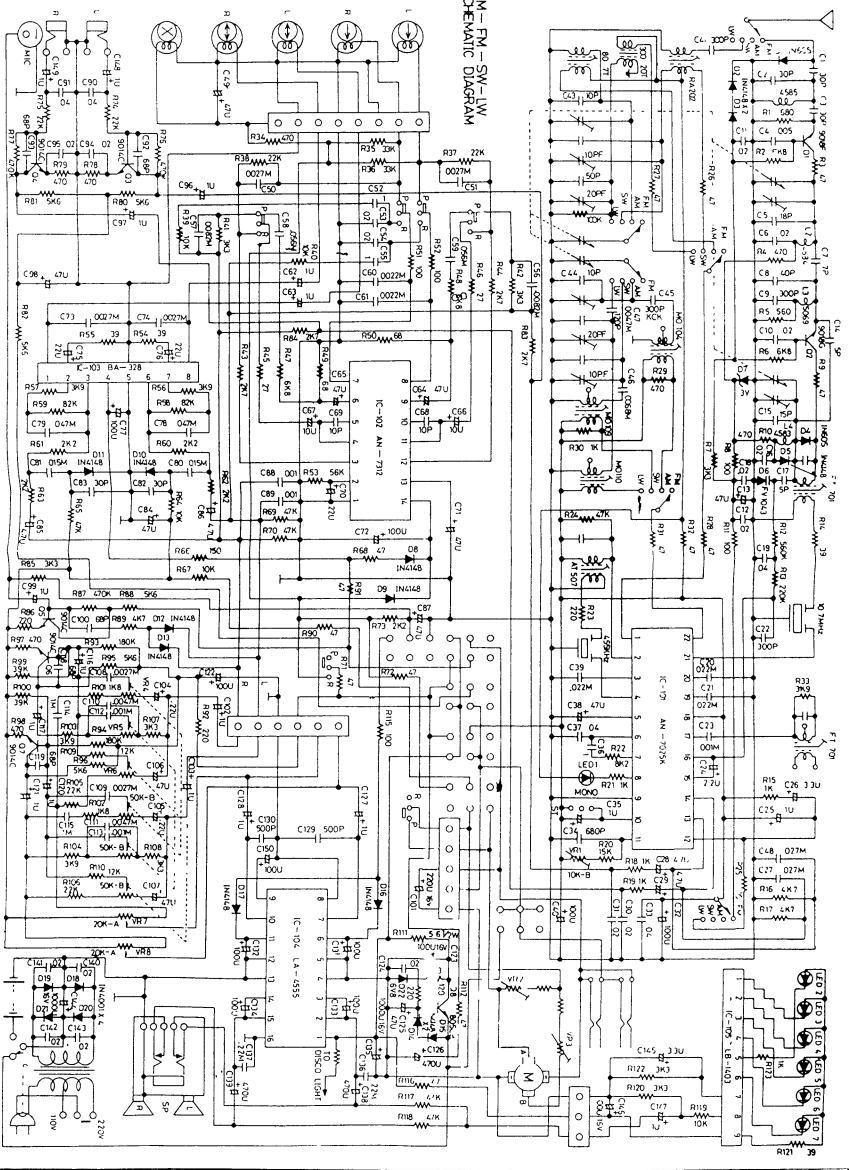
Specifications can be applied to either Right or Left speaker enclosure.

Type/Size	: Woofer, Bass-Reflex. 4 inch (10 cm) Piezo Buzzer (20 mm)
Dimensions	: 5W x 7½H x 5D inch 13W x 19.3H x 12.5D cm

The manufacturer reserves the right to vary specifications, design, or use alternative materials as may be deemed necessary or desirable at any time, any such change or variations being of a kind as not to reduce the quality, performance or appearance.

AM-FM-SW-LW  
SCHEMATIC DIAGRAM

CIRCUIT ARE SUBJECT TO CHANGE WITHOUT NOTICE



IC-101  
IC-102  
IC-103  
IC-104  
IC-105  
IC-106