CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: To reduce the risk of electric shock, do not remove the cover. No user-serviceable parts inside. Refer servicing to qualified personnel.

WARNING: To prevent fire or electric shock, do not expose this equipment to rain or moisture.

CAUTION: To reduce the risk of fire, replace only with same type fuse. (See specifications).

EXPLANATION OF GRAPHICAL SYMBOLS

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 humans.

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.

CONTENTS

Feedback

Feedback is a howling or shrill sound that is self-generated by the sound system. It is caused by microphone pickup of the sound emanating from the speaker and then being re-amplified. Once generated, this can be a self-sustaining phenomenon.

Feedback Causes

--- Microphone too close, pointing towards or in front of speaker.
--- Volume setting too loud for room.
--- Sound reflections from hard surfaces, walls, etc.

Avoiding & Eliminating Feedback

--- Point the microphone into a different direction.
--- Keep the microphone away from the speaker; position the speaker in FRONT of the microphone;
--- Reduce the volume of the sound system. Have all volume controls set to minimum prior to powering on the sound system.
--- Place sound dampening material over hard surfaces; curtains or sound dampening foam.

CAUTION: Feedback can be damaging to both your equipment and a person's hearing
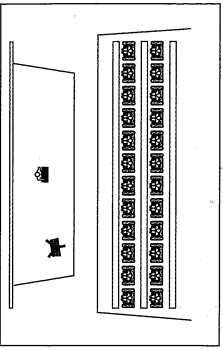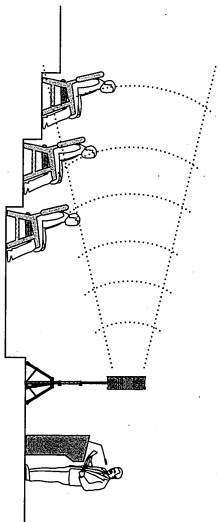
Acceptable
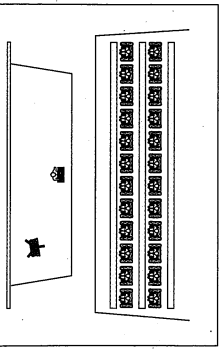
Unacceptable

Setting Up The Sound System

For best results, it is recommended that the PA system be placed above the heads of the audience and above the height of the tallest obstruction using a speaker stand or table. This will benefit the listeners in the rear while minimizing the risk of overpowering the listeners in front.

Stand Setup

1. Loosen the Lower Collar Knob.
2. Separate the stand legs until the leg support Cross Braces are parallel to the floor.
3. Tighten the Lower Collar Knob.
4. Extend the center pole by loosening the Upper Collar Knob.
5. Adjust the height and retighten the Upper Collar Knob.
6. Place the sound system on the stand.

Upper Collar Knob

Lower Collar Knob

Cross Braces
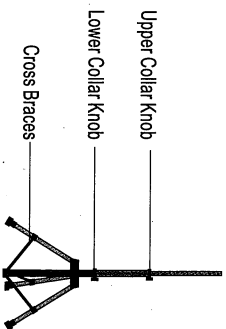
Sound System Placement

The ideal placement of the sound system is between the crowd and the presenter, facing the crowd. This will give the audience a direct signal path and keep the person with the microphone behind the sound system, helping to prevent feedback from occurring.
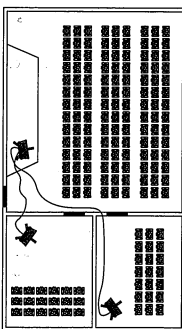
Single Unit Application

Place the unit along the aisle with the least amount of pedestrian traffic. Point the unit towards the center of the audience.

Two Unit Application

Place each unit along the aisles pointing just off the centerline of the audience. With the sound system placed properly over the head of the crowd, this should be sufficent coverage.
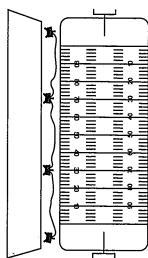
High School Football Stadium/Stands   Auditorium/Outdoor Assembly/City Hall

Sound System Connection

The second method would be to utilize the line-output feature. Simply connect an RCA cable from the line-out of the primary unit to the line-in on the secondary powered unit. Set the volume of the second unit to maximum so that full volume control will be at the primary sound system.

NOTE: Auditoriums or out side areas with large exposed walls or patios may create multiple reflections of the original sound. Altering the sound system position will minimize the sound reflections.

Primary Powered System

Secondary Powered System

Line Out - to - Line In Connection
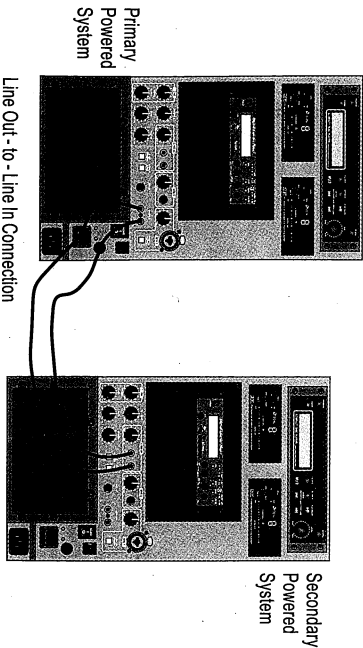
The line-out connection can also be used to send the signal to a sound system in a different room or a recording device.

Caring For Built-in Batteries

It is very important that you fully charge the batteries in your system before first use and as soon as possible after each and every use, even of operated only briefly to preserve battery life.

When The Battery LED Flashes or Won't Light

The POWER LED will begin to flash when the battery charge is low. To prevent damage, the automatic protection circuit turns the unit off when the batteries approach their critical discharge point; about 15-30 minutes.

POWER
Flashing = low battery

Charging Batteries

Your system has a built-in automatic charger designed to properly charge and maintain the batteries. The following steps outline the necessary procedure to charge the batteries:

1. With the power switch off, plug the cord into an AC outlet. The Charger LED will light, indicating the batteries are being charged.
2. When the batteries are fully charged (about 6-8 hours), the Charger LED will off.

CHARGER
Plug cord into AC outlet.
Light On = charging
Light Off= fully charged

Expected Battery Service Time

Battery service time will vary depending on the volume level, tone control settings, type of program usage and if a companion speaker is used with the system. You can expect about 6-8 hours of operation at medium volume, 2-4 hours at full volume of continuous music input (usually longer for speech applications.)

IMPORTANT:
Always store your system with the batteries in a fully charged condition. During extended periods of storage, leave the system plugged into an outlet. If this is not possible, charge the system at least once each month for a minimum of 24 hours.

Control Panel

1. Set all input level controls to minimum and tones controls to flat or middle position before turning on the power. Turn the Player Power switch to ON position.
2. Plug a microphone into Mic 1 or Mic 2, or plug an audio source into the Line-in input jack.
3. Press POWER on. The red LED near the switch will light.
4. Slowly increase the level control adjacent to the input jack used to desired volume.
5. For speech applications, Speech Mode should be "on" to overcome ambient noise. For standard applications (music and indoors), Speech Mode should be "off".
6. Adjust Bass and Treble controls for desired sound quality.

NOTE : Instructions for wireless operation can be found on page 11

CD Player

Wireless Receiver

Digital Recorder Player or Cassette Player

Mic Level Control

Line in

Line in Level Control

Tone Controls

Player Volume

Echo Volume

Master Volume

Voice Priority

Speech Mode

Rec Out

Mic Input Jacks

Line Out

Mic 1 Phantom Power

CD Power

DC Output

Fuse

Charger Indicator

Power Indicator

Power Switch

AC Inlet

Battery Compartment
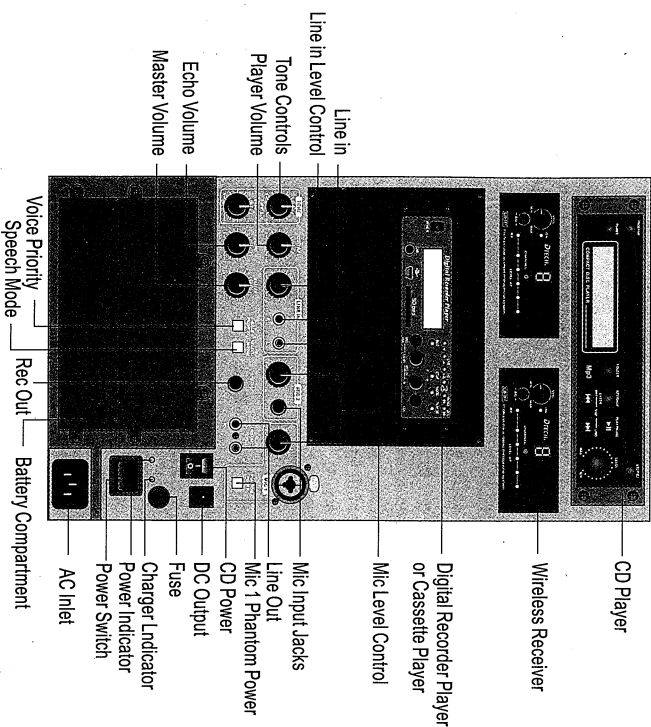
Mic 1

This balanced Combo, low impedance input is for use with balanced microphone to help prevent hum or interference when using a long cable. It features +48VDC condenser mic power for use with a condenser-type microphone.

Mic 2

This balanced 1/4" jack, low impedance input is for use with balanced microphone to help prevent hum or interference when using a long cable.

Line In

The unbalanced, high impedance RCA input is used for playback of a cassette or CD player, musical instrument, VCR, other sound system or similar line-level signal source. This input may be used in conjunction with other inputs for a composite output.

Line Out

The unbalanced Line-out provides a combined signal of all inputs being used. You can use this function to "daisy chain" another powered sound system to this unit for greater crowd coverage. Note: This output is post source level; any volume fluctuations for a specific input will affect the output signal level at this output.

Rec Out

The unbalanced Rec-out provides a combined signal of all inputs being used. You can use this function to record your presentation.

6 Volt DC Output

The DC output jack is used to power auxiliary equipment such as a Walkman or Discman. It is rated at 6 Volts DC, 250 milliamps maximum (output available at jack may be slightly lower depending on installed options).

Speech Mode

The Speech Mode button allows you to customize the sound output of this unit for a particular application:

OFF — ON
SPEECH MODE

Speech Mode off (button out):
This unit provides flat, full-range frequency response for music or indoor voice applications.

Speech Mode on (button in):
Frequencies in the vocal range (800Hz-12kHz) are boosted for added clarity and efficient sound projection. Use this setting for outdoor functions, large crowds and speech applications.

Voice Priority

The Voice Priority button allows you to customize the sound output of this unit for a particular application:

OFF — ON
VOICE PRIORITY

Voice Priority off (button out):
This unit provides a normal music or indoor voice applications.

Voice Priority on (button in):
The Voice for Microphone will overcome the music from the player. When the speech stops, the music will slowly pick up to normal sound.

CD PLAYER OPERATION

The CD player features direct-in play power loading, anti-shock/skip CD mechanism, repeat & random play, three beam laser tracking system and dual one bit D/A converters. The audio signal is fed directly into the mixing bus, mixing it directly with all other inputs of this unit for a composite output.

CAUTION: To avoid noise at shut off, turn CD player off before you turn off the unit.

Power On/Off   LCD Display
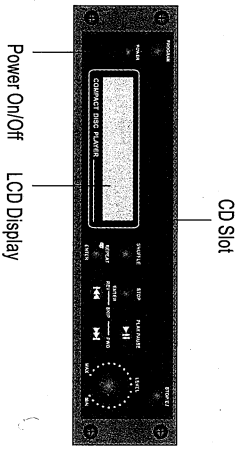
CD Slot

General Operation

INSERT CD -Push a disc into the CD slot label side up. The disc will automatically insert and begin to play.

POWER ON/OFF - Press POWER to turn the unit on and off.

EJECT CD - Press EJECT to eject the disc from the slot. If the disc has not been removed within 10 seconds, it will automatically be loaded into the slot again.

PROGRAM - Under Program Function. Press skip to select the track, then press Enter to store this track, repeat the above step to store more tracks, then press ▶Ⅱ to play all the track in program.

PLAY/PAUSE - Press to play a disc if one has been loaded. Press this button while disk is playing to pause play, press again to resume.

UP - Press UP once to advance disc to previous track. Press and hold UP to fast backward on the current track.

DOWN - Press DOWN once to go to next track. Press and hold DOWN to fast forward on current track.

STOP - Press STOP once to stop playing the disc.

SHUFFLE - Press SHUFFLE to play all the tracks continuously in random order. Press SHUFFLE again to stop continuous random play.

REPEAT - Press this button to repeat the same track of the disc continuously. RPT will appear on the display. Press again to stop it.

POWER

PROGRAM

EJECT CD

PLAY/PAUSE

UP

DOWN

STOP

SHUFFLE

REPEAT
ENTER

DIGITAL RECORDER PLAYER OPERATION

The Digital recorder records to MP3 compression format, high sample rate at 44.1KHz, 128Kbps. The audio signal is fed directly into the mixing bus, mixing it directly with all other inputs of this unit for a composite output.

CAUTION: To avoid noise at shut off, turn player off before you turn off the unit.

Digital Recorder Player

SD card
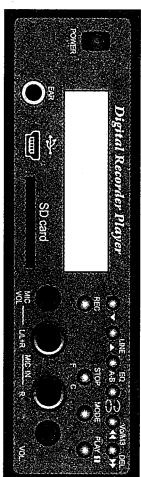
General Operation

POWER ON/OFF -Press POWER to turn the unit on and off.

PLAY/PAUSE - Press to play a track. Press this button while track is playing to pause play, press again to resume.

STOP- Press to stop all the motions, ex.: recording, playing, track selection....

Record- Select track no. in VOC mode in advance, push REC key to record, and then push STOP key to stop record. If the track you want to record is occupied, the LCD will show "≡≡" you must delete the content of the track before you record. When the memory is with 30 seconds left, the LCD will start to count30, 29,28,27...6,5,4,3,2,1,0. You can use microphones\LINE IN audio source or both mixed source for recording source.

FORWARD - Press to fast forward on the current track.

BACKWARD - Press to fast backward on the current track.

A-B repeat- During playing, push this key to indicate any point as start point (A point) and finish point(B point) on a track, the machine will repeat from A to B point until you push the key again to release the function and continue to play.

UP - Press UP once to advance to previous track.

DOWN - Press DOWN once to go to next track.

↺ & ↻ Repeat- In MP3 mode during playing, push REPEAT key once to "repeat the track" the LCD will show ↺, and push REPEAT key twice to "repeat all the track", the LCD will show↻. Push the key at the third time to release repeat function. The "Repeat all" function can not be used in VOC mode.

MODE - Push the MODE key with another key for special function selection. The LCD will show "MODE" when push MODE key, you should push another function key to perform the function. If you do not push another function key within 5 seconds, the machine will back to idle mode. Following is the detail of special function keys.

POWER

REC

STOP

PLAY/Ⅱ

A-B

MODE

DIGITAL RECORDER PLAYER OPERATION

LINE ▶ (/LINE IN):LCD will show " LINE IN ", and select line in audio source as recording source.

DEL. ▶▶ (/Del.) :When push these two keys, the LCD will show DEL,you must push ▶▶ (/Del.) key again to delete the track. The LCD will show " DEL " until the delete process is finished.

Vol/M3 ◀◀ (/VOC,/MP3):To select VOC mode (Record from microphone or LINE IN source) or MP3 mode (Download * .mp3 files from PC).

EQ A-B A-B(/EQ):For EQ select function. EQ sequence is Normal\ Classic\Pop\ Rock\Jazz. (Normal EQ will not be shown on LCD)

STOP STOP :Change the source from flash or SD card.

⤸ ⇄ USB CONNECTION: You can easily copy MP3 files from computer to the machine through USB connection.

A. Install Hardware: Connect the machine and your computer with a USB cable. Your computer will recognize a new removable storage device automatically. You can add, delete, copy, and preview files.(If the operation system of your computer is Window 98 or below, you must install USB driver for first use. The USB driver is included.)

B. Download files from computer
The machine may connect to computer and download music to play. When connecting to PC by USB port, the computer will take the device as two removable disks (the first disk is for build-in flash memory, the second disk is for SD card memory) when they connect successfully, then you can start to download music from the computer, or duplicate the recording files from the device to computer. As the recording files from the device has been compressed to MP3 format, it is easy to playback the files without any transference.

C. Interchange MP3 files to VOC mode
The device will playback the MP3 files you download from computer in MP3 mode; and playback the sound file you recorded from MIC-IN or LINE-IN in the VOC mode . However, the track no. of the music files in MP3 mode is decided by the sequence the music be put in, so the track no. is not fixed, it will change if any existing tracks were deleted. If you want the MP3 music is with fix track no, or playback in VOC mode, you need to change the file names of the MP3 music as the following format:

C-1 If you want to playback the MP3 file to flash memory in VOC mode, you must re-name it as M_INT_xx.MP3 (xx means the track no. you want to store to, ex. 03 is track no. 3)

C-2 If you want to playback the file to SD card in VOC mode, you must re-name it as M_EXT_xx.MP3 (xx means the track no. you want to store to, ex. 03 is track no. 3)

File format must be MP3 to work.

D. After completing all operations on computer, please detect the USB connection then to operate the machine.

CASSETTE PLAYER OPERATION
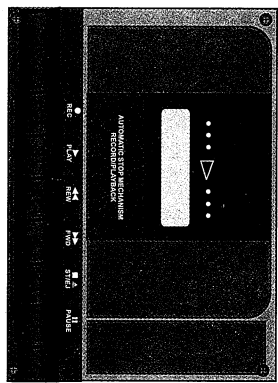
General Operation

● REC REC - Press to record the presentation.

▼ PLAY PLAY - Press to play a cassette .

▼▼ FWD FORWARD - Press to fast forward.

▲▲ REW BACKWARD - Press to fast backward.

▐▐ PAUSE PAUSE - Press this button while cassette is playing to pause play, press again to resume.

**■ ▲ ST/EJ** STOP/EJECT - Press to stop playing. Press again to eject the tape.

Wireless

The wireless is a 16 channel, diversity wireless system. The antennae are mounted internally so there are no obstructions or risk of damage.

Receiver Channel Selection

Before you use your UHF wireless system, you will need to select a wireless frequency channel. The wireless receiver is mounted inside the unit and can be set to any of 16 available channels.

1. Locate the Wireless Channel selector on the front panel.
2. Set the Channel (frequency) of the receiver to 1 thr 16.
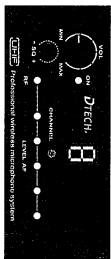
NOTE: If you experience ongoing interference with your wireless system, the selected frequency may be incompatible with other RF systems in your area. Try a different channel.

Handheld Transmitter:
1. Release battery cover on lower end of microphone.
2. Set the channel selection dial to match the channel setting on the receiver.
3. Replace the battery cover.
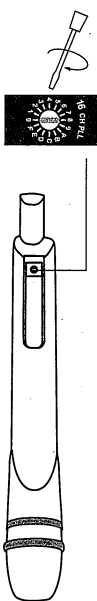
Body-pack Transmitter:
1. Push the SET button till the CHANNEL flashing, release the button, push the button again to select the channel to match the channel setting on the receiver.
2. Set the channel selection dial to match the channel setting on the receiver.
3. When you finish the selection, push the MANU and SET button together to confirm.

MANU — SET
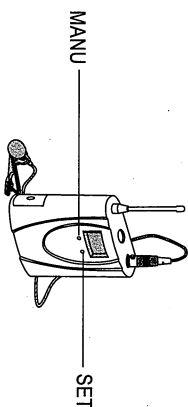
Wireless Microphone Operation

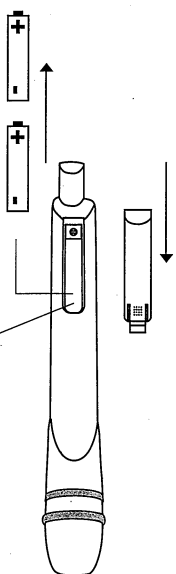Both the receiver and microphone must be set to the same channel.

1. If you are using a body-pack transmitter, insert the plug from the mic into the jack marked MIC on the transmitter.
2. Turn the transmitter power switch to ON. (The red LED will flash when the mic is turned on. If the red LED stays on, the battery is low.)
3. Turn the unit power switch to ON.
4. The RX indicators will light (one indicator at a time lights) when the wireless signal is being transmitted and received.

NOTE: When using a dual wireless unit, make sure each microphone is set to a different channel frequency.

Replacing Transmitter Battery

Handheld Transmitter:
1. Release battery compartment cover on lower end of mic.
2. Install 2 fresh 'AA' alkaline batteries.
3. Replace the battery cover.

Place batteries into slot and slide forward

Body-pack Transmitter:
1. Slide open battery cover on the side of transmitter box.
2. Install 2 fresh 'AAA' alkaline batteries.
3. Close the battery cover.

CAUTION: Harmful feedback may occur when walking in front of a sound system or speaker with a wireless microphone. Always point mic away from speakers.
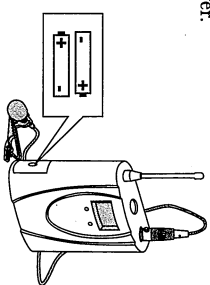
NOTE: Transmitter power switch must be in the OFF position when changing batteries.

SPECIFICATIONS

Rated power output: 60 watts @4Ω continuous
Max SPL @rated power: 112 dB speech mode on
107 dB speech mode off
Batteries (two): 12 Volt rechargeable, 5.0 AH

GENERAL

Frequency response: 60 Hz-15kHz +/-3dB speech mode off
+10dB from 1.5-12kHz speech mode on
Speaker type: 8" full range 2 way driver
Fuse: 1A250V

INPUTS

Microphone inputs (two): Lo-Z (1kΩ), balanced, Combe and 1/4" Jack
48 VDC/6.8k condenser mic power
Auxiliary (line) input: Hi-Z (10kΩ), unbalanced, RCA

SENSITIVITY FOR RATED OUTPUT

Microphone: -52 dBV (2.5 mVrms)
Auxiliary (line): -14 d BV (200 mVrms)

OUTPUTS

Line output (post fader): Lo-Z (<1kΩ), buffered, RCA
DC Output: 6 Volts DC, 250 m A max.
AC power requirements: 110-125 VAC, 50/60 Hz, 50 watts max
dimensions (HWD): 480X 225 X 310 MM
Weight: 16 kgs.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

TROUBLESHOOTING

Having trouble with the sound system?

Condition	Possible Cause
No sound (power LED not lit):	- power switch OFF - batteries fully discharged
Charge indicator doesn't light:	- blown fuse
No sound (power LED lights):	- no output from source - input cable unplugged - input volume control low or off
Excessive hum or noise:	- input cable not shielded - not using balanced microphone
Distorted sound:	- input signal too strong - poor connection on input cable
Shortened battery life:	- batteries not fully charged - batteries need replacement

Having trouble with the wireless system?

Condition	Possible Cause
No sound (TX ON indicator lights):	- wireless volume control low or off - no mic plugged into belt-pack transmitter - sound system not turned on
No sound (TX ON indicator off):	- transmitter power switch turned off - low battery or no battery in transmitter - not on same channel