

**WANTOK**  
**FM BROADCAST**  
**OPERATIONS MANUAL**

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**OPERATING**

**THE**

**STUDIO**

**CONSOLE**

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(ii)

## OPERATIONS

### Operating the Console

All units making up the studio console are powered from one common source. There are two levels of power functioning within the console, as all units do not operate on the same voltage. This will not matter to you as operators.

When you come in to start your shift as an announcer, follow these steps to check out your console before the transmitter is on the air:

- (1) Turn on the power supply, then turn on the console power switch - top left side of the console. A green light should come on;
- (2) Advance the monitor slider control to mid range and put on the headphones. Put the Cue switch to "Out", slide the appropriate microphone slider forward and speak into the microphone. You should hear your voice in the earphones and you should get a visual display on the mixer. Some difference will occur in volume by how close you are to the microphone when you speak into it. Adjust the flexible neck to a comfortable operating position.
- (3) Check out your tape players one at a time:
  - (a) Insert a tape, press play, turn the cue switch to that particular cassette unit, (each unit has a line number) and listen for the tape content. You should hear it at a prominent level. If it is too loud, **do not adjust the tape player volume control**, this is cue only - it is supposed to be at a prominent level. If you wish to adjust it downward, use the monitor slider control.
  - (b) With audio being received in the headphones, turn the cue switch to "Out" position, and advance the slider control for that particular unit. You should hear the tape content coming up in the headphones and see a visual light display on the mixer LED's as you advance the slider. The level in the headphones in the "Out" position will be significantly lower than in the cue position.
  - (c) Note the position of the slider at maximum light display. It should be near the top of it's slide. If it is not near the top of it's slide, put the slider in that position, lift the tape cassette player up and adjust the volume control so that the signal when at the top end of the slider control is hitting high peaks on the light display.
  - (d) The light display represents a visual indication of the direct feed to the transmitter. If you over-drive the light display, you will be transmitting a distorted and unusable signal.

Check out the second cassette player in the same manner.

(1)

- (4) Check out your CD players one at a time:
  - (a) Insert a CD into the player, set your cue switch to that particular CD and listen for the disc content. You should hear it at a prominent level in the cue position. Remember, if it is too loud or too weak in the cue position, use the monitor slider control to adjust level at this point, not the volume control on the CD.
  - (b) With the audio being received in the headphones, switch cue to “Out” position. Advance the associated line slider forward and as you hear the audio coming up in your headphones you should see the LED light display move across as you bring the lever forward.
  - (c) Note the position of the lever at maximum light display. It should be near the top of it’s slide. If it is not near the top of it’s slide, lift the front of the CD up and adjust the volume on the CD till the display is near maximum with the slide nearly at the end of it’s upward slide. The same applies if the signal is too low. Adjust it so that slide and display coincide with full scale.
  - (d) Remember, this is your signal to the transmitter. What you feed the transmitter it will radiate, so you want a nice clean clear signal.  
Adjust the second CD player in the same manner
- (5) Cue up your first two pieces of material.

You now have your studio checked out and ready to go. It is necessary to do these checks on the tape recorders in particular as they may have been out in the field and have had their volumes adjusted for field work or for editing. It should be less of a problem with the CD players as they leave the console only to have audio recorded in the solid state storage capacity. They should need very little, if any, volume adjustment.

### **Operating the Transmitter**

- (1) Check your antenna output for proper cable connection.
- (2) Check that the audio output cable from the console is connected to the transmitter.
- (3) Ensure the transmitter is connected to the power supply.
- (4) Turn on the transmitter by turning on the power supply.

The DC power light will come on. The PLL Unlock light will come on, flicker, and after three seconds it will go out. The PLL Locked light will come on and lock in. The Power light will come on and the power output light will come on.

If the transmitter does not lock on, contact the technician or follow the steps as outlined in the Technical Manual that accompanied the transmitter. The tuning capacitor needs adjustment.

Assuming your transmitter comes on and locks in properly, return to your console, introduce your programming and start your first piece of material. Do an “Off-Air” monitor with a radio receiver to make sure your signal is clean and clear.

## **Operating the Mixer**

The mixer is the heart of your studio operation. It is designed to take in all the inputs from your programming sources and feed them out to your single transmitter.

As the signals are fed to the transmitter, you need a visual indication of what level they are going out at. To meet this requirement, LED visual displays are provided. They are the equivalent of a visual meter output display, but without the moving parts which are so frequently damaged when meters are shipped from place to place.

As in any radio studio, a cue and control feature ensures that you can listen to the material ahead of time and cue it up exactly as you want it before it goes to the transmitter.

You will note that the Cue knob, on the upper right side of the mixer, has five positions. They are labelled 1 through 4 to correspond to the channel sliders, or line sliders on the mixer. The fifth position on the Cue knob is labelled “Out” for Output to the transmitter. You also monitor your microphone output via this position. (If you continue to rotate the knob there is one more sixth position but it is not connected. It is blank. The only precaution is not to leave the Cue in that position or you will hear nothing).

This means that if you choose to cue something up on Line 1, you will be able to listen to it without broadcasting it if your cue switch is in the # 1 position. It will not go to the transmitter until you move the corresponding channel 1 slider forward. It is only when that slider switch goes forward and your digital light display starts flashing that you will begin to transmit the signal.

For that reason, you will normally only have one slider in the forward position at any given time. If you put two or more forward, you will get the modulation mixing and becoming just a garble of sound. It is only if you wish to blend one with the other, say for example, voice over top of a soft music background, that you would adjust more than one slider in the forward position.

You must never forget to bring your microphone slider back down as you bring up your music. Otherwise, you will also be broadcasting every noise in your location out over the transmitter. For that reason, both microphone slider knobs are marked with a red line so you will know that unless you are talking into the microphone, they should be in the downward position.

Let us now try a sample Cue, Control and Broadcast:

- (1) Put the headphones on. They are light and comfortable, get used to them. An external speaker could be connected into the earphone jack, but it is not recommended. Operators have a tendency to forget and sometimes broadcast their cue signals through the microphone over top of the current track or voice announcement being played.
- (2) With the Cue control positioned on the sound source you want, select a piece of music from a CD or Tape. Get the music set up to the point you want using the cue position, then put the music on pause. Switch the Cue control to “Out”.
- (3) Slide the microphone slider forward, and announce the piece you are about to play. As you finish speaking, bring down your microphone slider and release the pause feature on the playing device, slide the associated channel slider forward and watch your display till you are getting a good scale reading. (That is, one where only the occasional peaks reach full scale). As you brought the music slider up you were backing the microphone down. You should have only one slider in the forward position now. If you do not bring your microphone slider down, studio noises will be broadcast out over top of the music being played.
- (4) While the first piece of music, or first program is playing, you set up your next piece of material. Get it ready in the same way and put it on pause. While waiting for the music being played to end, sort out the next three or four items you wish to broadcast and have them ready at hand.

You have a variety of ways to monitor your programmed material. You have the visual display, which will cease with the end of modulation and you have the “Out” position on the cue/control switch which gives you an audio indication in the headphones. After cueing up a selection, switch to the “Out “ position so you will know when your current selection is ending. On some CD players you can program a “by the second” count down display of play time remaining. It is still best to monitor it with headphones.

- (5) As the piece ends, bring down it’s associated slider, slide up your microphone slider and make your comments and/or introduce the next item. Release the pause on the new item and bring it’s associated slider up as you bring your microphone slider back down.
- (6) Start cueing the next piece.
- (7) You should come on to your shift as an operator with a plan, a schedule and a firm idea of what you want to play or what you want to accomplish. If you think that you can come on shift, unprepared, with no plan or idea of what your will be doing, that is exactly what you will sound like to the audience. Someone with no plan and no idea of what he/she is doing.  
There is no substitute for good planning and preparation. It takes work, lots of it to be a good announcer.

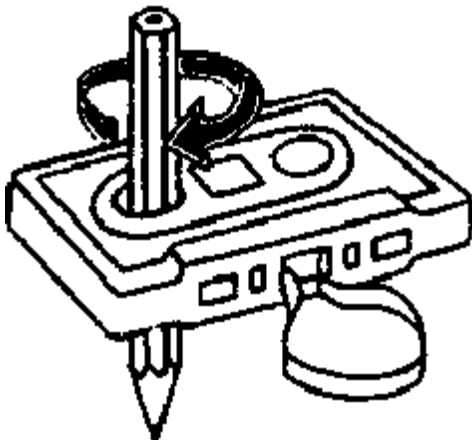
- (8) Planning need not be extensive, but you should at least map out the time slot you will be working in into 15 minute segments as a minimum. For that 15 minutes, know what you plan to say, what you plan to play and what sequence it will happen in. You can get a wealth of information off CD and Tape jacket covers, use that as commentary when you introduce or close out musical pieces.

If you are introducing locally prepared material, fill in some background ahead of it, give the listener an idea of Where, When and Why the interview, or other recorded event took place. Try to add some significance to what you are broadcasting.

### **Operating the Tape Cassette Player/Recorders**

**Note: Cassette Player and CD/MP3 models change frequently. While most conform to the following procedures, always check the Appendix sheets for details on operating your particular model.**

Operating the tape cassettes is a fairly straight forward operation. Many people have their own such units for entertainment purposes. The following operational procedures are offered as a guide to assist you in becoming comfortable working with the units and to help in avoiding the little “glitches” that might occur when you are “on-air”.



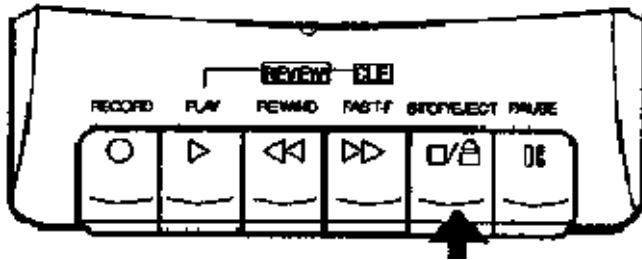
#### **Preparing a Cassette**

Take up any slack in the tape by turning one of the cassettes hubs with a pencil.

Caution: If you do not remove excess slack, the tape may become tangled in the record/playback mechanism resulting in a messy clean out operation, a ruined tape, and dead air time. Nothing is infallible, so try and have at least two pieces of material cued up besides the one playing so you can quickly switch over should a disc or tape fail.

Also, if you do not take out the slack in a tape, when you release the pause button, it will not come on as expected as the machine will need time to pick up the slack you left in the tape. Thus you will not have a proper cue.





### Loading a Cassette

Press the **Stop/Eject** button to open the cassette compartment door.

Load the cassette with its open edge toward the controls, the desired side facing up, and its full reel to the left. Then close the door.

The cassette box will normally indicate the order of the music or other content that is on the tape. Run forward or backward till you have the piece positioned correctly. Press **Play** then **Pause**. The tape will sit on pause till you are ready to introduce it. Once introduced, press **Pause** again to commence playing.

If the next piece of material you are going to play is in sequence, then at the end of the first piece, simply press **Pause** while you make the announcement or introduction, press **Pause** again and the next portion of the tape will play.

**Note:** It is not recommended that the pause be left on for lengthy periods of time. This has a tendency to cause stretching of the tape. Particularly the thinner C60 and C120 tapes. One to five minutes is not a problem but if it is going to be longer than that, the machine should be shut off.

If the piece you need to locate is not in sequence, use the **Fast Forward (Fast-F)** button to move forward on the tape and the **Rewind** button to bring it back. Pressing **Stop/Eject** gently will stop the player. Pressing it again will flip open the compartment and spring the tape out for easy reversal or for removal and insertion of a new tape.

Like everything else, practice makes perfect. It may seem a bit complicated at first but with a little practice you will soon become quite skilled.

### Recording With the Cassette

As noted earlier, the cassette units can be removed and used in the field to gather broadcasting material. Having followed the previous instructions on removal and preparation of the unit, you might want to consider the following points.

The Cassettes have a built in Automatic Level Control (ALC) for recording. This circuit automatically adjusts the recording level. Adjusting the **volume** has no effect on recording.

There is a built-in condenser microphone of high sensitivity that is built into the cassette player itself. This is convenient for recording conferences or a guest lecturer.

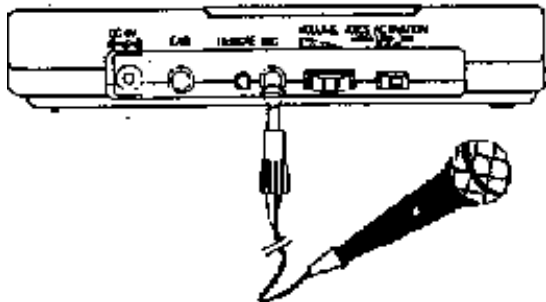
We suggest the following steps.

- (1) Load a blank cassette tape, or one you want to record over, into the cassette compartment.
- (2) Place the recorder 60 to 90 cm (2 or 3 feet) from the recording source. Press **Record** to begin recording. Both **Play** and **Record** will lock down. To temporarily stop recording, press **Pause**. To resume recording, press **Pause** again. Press **Stop/Eject** to stop recording.

### Using an External Microphone

Your studio has been provided with a switch controlled external microphone. This is handy for when you want to record only an individual's voice and exclude most other sounds in the surrounding area. Such as when you are attempting to interview someone for local news, etc.

Examining the microphone you will note it has a double plug on the end. They are of different size, so no plug in error can occur. The larger plug goes into the jack marked **Mic** and the smaller plug goes into the adjacent jack marked **Rem** for Remote. As soon as the external microphone is plugged in it does two things. First it disconnects the built in internal microphone. Secondly, it



controls the motor for recording through the switch on the handle of the microphone. By switching the button on the microphone, you will stop and start the recording process.

Put a blank cassette in the recorder;

Plug in the microphone with the switch in the "Off" position;

Press the **Record/Play** buttons down

Now note- When you turn the switch on the microphone to “On” you begin recording. When you turn the microphone switch to “Off”, the recording stops. (The **Pause** feature still works as well but if you have the external microphone plugged in it is usually easier to use the switch on the microphone).

### Recording from an External Source

You may record directly from an external audio source, such as a radio, tape deck, or CD player. All you require is a suitable patch cord. Note; before you connect an external audio source to the recorder, be sure the source’s and the recorder’s volume controls are set to their minimum setting. Load a blank cassette into the cassette recorder compartment, If you have an external microphone connected, be sure to disconnect it as it over-rides the other circuitry.

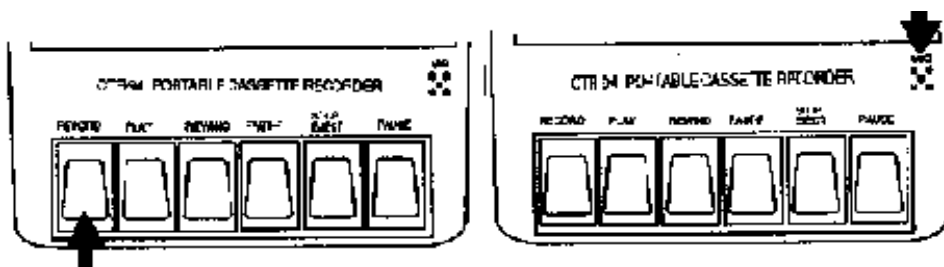
Connect your external audio source to the input labelled **Aux** (for Auxiliary) using a 1/8th inch plug on the cassette end and whatever is the appropriate connection on the source end. Start your sound source and set it’s volume to a normal listening level. Press **Record** to begin recording, both the **Record** and **Play** buttons will lock down and the recording will begin.

Make full use of the pause button to temporarily stop recording at parts that you have no interest in recording. This will save you significant time in your editing process later on. Press **Pause** to stop the recording and **Pause** to resume recording. When you are finished, press **Stop/Eject** to stop recording and remove your tape.

### Copyright Note:

Most material on pre-recorded tapes/CD’s is copyrighted. Unauthorized duplication of copyrighted material is a violation of the copyright laws of some countries and may carry a penalty. Also, some countries have legislation requiring a fee be paid as a form of royalty to the entertainer who’s music you may be playing. You are obliged to check the legislative requirements of your particular situation.

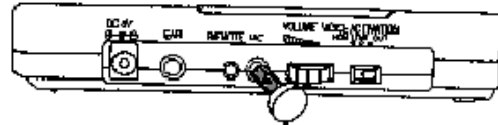
In Canada for example, the organization that collects the royalty and pays it out to performers is SOCAN. To determine if you are required to pay a fee, contact SOCAN’s Broadcast Licensing Department at 1-800-557-6226 Extension 785.



## Editing

Your studio has been provided with two cassette players to permit easy editing of field material. For edit purposes, it is recommended that both units be removed from the console and taken to a clean table before you begin the edit process. An appropriate edit cord has also been provided to go from the output of the field unit into the **Aux** input of the edit unit. The following procedures are recommended:

- (1) If possible, the first thing you do is make a complete duplicate of the field recording and set the original aside. If you inadvertently press the wrong button on the wrong machine, then you have not destroyed your interview or other subject matter.
- (2) Work with your duplicate copy. Play and monitor it with the speaker built into the unit. Have the edit unit on **Record** and the field unit on **Play**.
- (3) With your fingers controlling the pause buttons, play the tapes, recording only those parts you wish to keep.
- (4) Use the **Fast-F** and **Rewind** buttons to manipulate the field machine to the areas you wish to use.



## Tape Condition

As might be expected, the quality of the tape greatly affects the quality of the recording. Use extended range or low noise tapes if available. C30's or C60's if possible.

C90's and C120's may be used but they are thinner and are more prone to stretching or tangling.

## Erasing a Cassette Tape

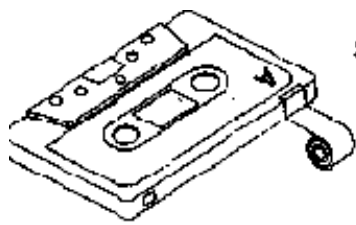
To record over a cassette tape, simply record as usual. The cassette deck records over the previous recording.

To erase a cassette tape, insert the supplied Sony edit cord into the **Mic** jack and press **Record**. By inserting the cord you cut off the built in microphone and as long as nothing is connected to the other end of the Sony edit cord you will record silence.

**Note:** Be sure you have not connected anything to the **Aux** jack.

## Preventing Accidental Erasure

Cassette tapes have two erase-protection tabs. One for each side of the tape.



Side A



Side A Tab

Side B Tab

When a tab is in place you can record on that side. To protect a recording from being accidentally recorded over or erased, use a screwdriver or other small instrument to break off one or both of the cassette tape's erase tabs. This prevents the **Record** button from being pressed.

If you later decide to record on a tape side after you have removed the erase protection tab for that side, simply place a piece of sturdy tape over that particular side's erase protection hole. This will act as a tab and allow you to record on the tape again.

### **Bulk Erasing**

Bulk erasing will occur if a tape is placed in a magnetic field. Magnetic tape erasers are available but are only practical if large quantities of erasing are required.

**Note:** removing the erase protection tabs from a cassette will not protect it from bulk erasing by a magnetic field.

### **Restoring Tape Tension and Sound Quality**

After several playing's of a cassette tape, the tape may become tightly wound on the reels. This may cause the sound quality to deteriorate when the tape is played. To restore the sound quality, fast-forward the tape from the beginning to the end of one side, then completely rewind it. Do this a couple of times. Having completed this process, loosen the tape reels by gently tapping each side of the cassette case on a flat hard surface. Do not tap hard enough to damage the cassette, just enough to loosen the reels. Be careful not to touch the tape surface with your fingers.

### **New Recording Technology**

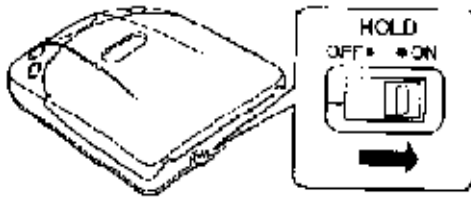
New digital recording machines are now coming onto the market that may eventually do away with tapes. They consist of a three inch compact disc in a sealed cartridge. You can record on them the same as you can on an ordinary tape cassette. You can also re-record over top erasing the original just as you can with tape. The problem at present is cost. However, cost is dropping and they may become a viable alternative to tape in the future.

Also coming on the market are various models of "solid state" recording devices.

These units digitally store information on a single electronic chip. They have no moving parts. Recordings can be done in separate “pages” so more than one recording can be made and kept separate from another. Some of these devices will record up to 30 or 60 minutes of voice data.

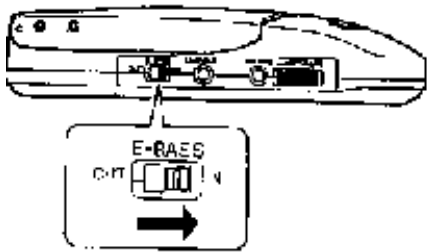
Like tape or the digital discs, unwanted material can be erased and the space used for new information. These devices look very promising for use in community broadcasting.

### OPERATING THE COMPACT DISC PLAYERS

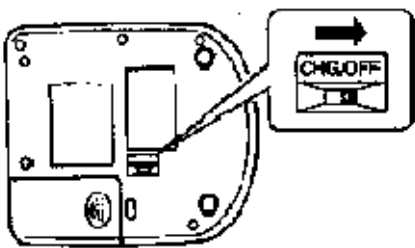


**Switch Positions (See Appendix for your particular model)**

If you substitute a CD player for the ones provided originally, there are three switches on some CD players that you normally will not use.



The first is the **Hold** switch. This switch locks up the controls at their last position. It will normally be left off.



The second switch is the **EBass** for “Enhance Bass” This is normally only used to enhance the bass sound on particular selections.

The third switch is the **Battery Charger**.As the CD players get their power from the console supply this switch should always be left “Off”.

### CD/MP3 Player Provided

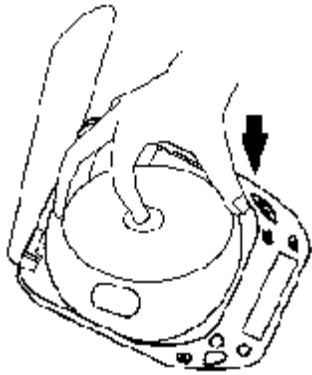
The CD/MP3 player provided has a built in charger. If you use the CD player outside the console with rechargeable batteries, the batteries will be recharged within about 3 hours of being returned to the console if the console is turned on. It is only recommended that you use this method of charging if you do not have any other method of charging that is external to the console. We recommend an external method of charging if you have one because otherwise power to all units in the console must be left on and also it is a minor drain on your charging batteries.

Ensure you remove the batteries after 3 to 4 hours of charging. We recommend that you do not use non-rechargeable batteries in the CD/MP3 player at all. These units have a fairly high power consumption.

**Never leave non-rechargeable batteries in the CD/MP3 player when you put it back in the console. An explosion could occur that may damage the player and console.**

### Playing a CD

Your CD player is designed to play normal 5 inch and 3 inch music industry compact discs. The newer models will also play digital MP3 recorded format and may also have some digital storage capability.



Putting objects, other than 5 and 3 inch compact discs on the turntable will damage the mechanism and destroy both the disc player and the warranty.

Press **Open** - the disc cover will release and open. Load the disc, (label side facing up) over the disc compartments centre hub. Press lightly till it clicks in place and lies flat within the compartment. Close the compartment cover.

Switch the **RES/NOR/HOLD** button to **NOR**.  
Switch **PLAYER/RECORD** to **PLAYER**

Press **▶▶ PLAY** button. --:-- flashes and the disc starts to play and begins counting the elapsed time of the track and current track number.



Some other commercial units require that you press a **Memory/Time** button to begin elapsed time counting. As total elapsed time for each musical score is usually shown on the cover of the accompanying album, you may use this to assist you in cueing up your next item.



## **Selecting a Track**

To select a previous track press ◀ twice. To select next track press ▶ once.

## **Skipping Tracks**

If you wish to skip several tracks, either forward or backward, press ▶ or ◀ and hold it down till the track that you desire is displayed in the LCD window.

## **Fast Forward/Reverse**

Simply hold ▶ or ◀ till you get where you want to be.

## **STOP**

To stop the CD press ⏻ STOP button and hold it down till S T O P is displayed on the screen. On the CD/MP3 players provided, there is a slight delay of approximately 1.25 seconds on the stop button. Rather than hitting it several times, just hold it down till S T O P is displayed.

## **One Track Playback**

To activate one track playback (have the player play one track only and then stop), press the PLAY MODE button until the number 1 is displayed on the screen. After the track has finished playing, the word STOP will appear on the screen and the player will stop and turn off automatically.

## **Intro Play**

If you are searching for a particular song and you know how it starts, Intro Play is very useful in helping you find the song in order to cue it up. On Intro Play, the player plays the first ten seconds of each song, pauses for 3 seconds and goes to the next until all songs have been checked.

To activate Intro Play, press the PLAY MODE button until INTRO appears on the screen. The player will then play the first ten seconds of each track in turn with a three second pause in between each track. When it completes all tracks, STOP will display in the screen and the player will automatically shut off.

## **Random Playback**

It is sometimes desirable to have a player play a number of tracks in random order to permit the operator to perform other tasks. To activate RANDOM playback mode, press the PLAY MODE button until RAND appears on the screen. The player will then play all of the tracks in a random order. After playing all tracks once, STOP will appear on the screen and the player will turn off automatically.

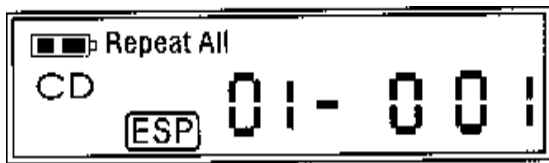


## Program Playback

Rather than having the player select a random form of playback, you may wish to have the various tracks play in a specific order other than the sequence in which they were recorded on the disc. For that reason, a programmed playback sequence is provided.

To activate PROGRAM playback mode, press the PLAY MODE button repeatedly until PROG appears on the screen. You can now program each track using the following procedures:

1. Press ► or ◀ to select the track number you wish to program



2. Press REP/ENT button once, the sequence number will increase by one. Then repeat step one and two until you have your desired programmed sequences in place.

3. If you want to delete the last track you programmed, you can press ◀ until the sequence number decreases by one. For example, if you have programmed 8 tracks, you press ◀ until the sequence number changes to 7.

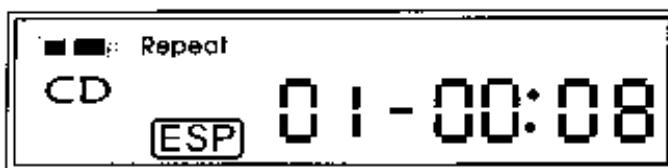
4. After programming, press ► || PLAY button to start playing.

5. Press PLAY MODE button to exit from the PROG mode.

## Repeat Playback

### 1. To Repeat a Track

a) Press PLAY MODE while playing until 1 displays in the screen.



b) Press REP/ENT once and the LCD screen displays the following;

c) Press REP/ENT once again to cancel repeating. After playing the track, STOP will appear on the LCD display screen and

the player will turn off automatically.

### 2. To Repeat a Disc

a) Press REP/ENT once while playing and the LCD screen displays the following,

b) The repeat box beside the word ALL indicates that the entire disc will repeat.

### 3. Programmed Repeat

Programmed sequences that you have set up yourself may also be repeated.

- a) Begin playing your programmed sequence.
- b) Press REP/ENT to enter into Program Repeat mode during the Program Playback.



The player will play the programmed sequence repeatedly .

#### MP3 PLAYBACK

The ESP time of MP3 recorded discs is 45 seconds.

The player provided by Wantok Ent. Ltd. supports MP3 discs with sampling frequencies of 32KHz, 44.1KHz, 48KHz and a baud rate less than 224 Kbit/Second.

The provided player can support a maximum 256 directory MP3 disc or a maximum 512 track (file) MP3 disc.

All of the play modes that apply to playing CD's can also be used when playing MP3 recorded discs.

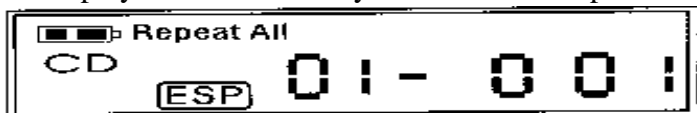
While playing MP3 discs, please note that the sequence of the tracks are not always from the centre to the edge. In order to reduce the movement of the lens, the player may rearrange tracks.

The following procedures apply only to MP3 recorded discs.

#### Dir Playback

If you wish to select one specific directory out of a number of directories on an MP3 disc, we suggest the following procedures.

1. During normal playback, press DIR/REC once to enter DIR PLAYBACK mode. DIR number one will begin flashing on the display screen as indicated in the following diagram.
2. Assuming you want to enter and listen to directory number 6, press ► 5 times and then press ► II to play the next directory.
3. To repeat all the tracks of this directory, press REP/ENT once while in play mode.



## IN DIR STATUS

### a) How to enter the next level directory

Press ► || PLAY to enter into the next level directory. If there are tracks in the next directory, it will begin playing from the first track of the directory.

### b) How to return to the last level directory

Simply press the ⏹ STOP button to return to the last level directory.

### c) How to select a directory

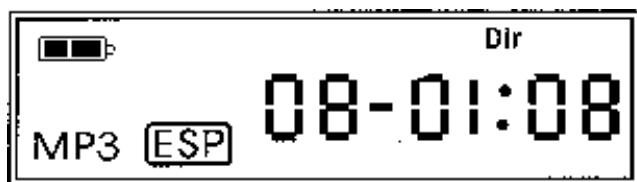
When a DIR number is flashing, Press ►► or ◀◀ to select the directory you wish and then press ► || to enter into the next directory.

Press ►► or ◀◀ and hold it down for fast selection of the desired directory.

Note: if after selecting the directory, if there are no MP3 files (tracks) in that directory, the operation will be cancelled in 3 seconds and the player will return to the last operating status.

### How to select a track (file) in DIR playback status

Press ►► or ◀◀ once. A file number will begin flashing. Then press ►► or ◀◀ to select the desired file.



If you want to fast select a track press ►► or ◀◀ and hold it down until the track you wish to select is displayed on the LCD screen.

Note: it will only apply to the files in the specific directory that you are in.

## DIR PROGRAM

To activate DIR PROGRAM playback mode, press the PLAY/MODE button until DIR PROG is displayed on the screen in the upper right side. The directory number will begin flashing.

Now press ►► or ◀◀ to select the desired directory. Then press REP/ENT to program all the tracks in that directory.

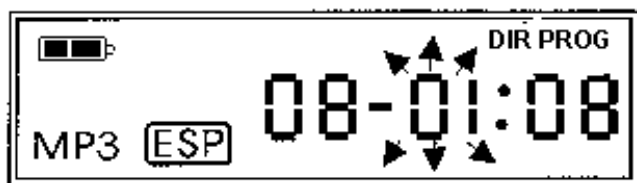
Repeat these steps to program up to 128 files (128 tracks) and ignore the other tracks (files).

After you have completed programming, press ► || to play.

Note: If you notice during playback that the time display on the LCD screen is irregular or erratic, it is an indication that the baud rate of the disc is not regular.

## DIGITAL STORAGE AND RECORD FUNCTION

The CD/MP3 player provided has the capability of storing up to 8+ minutes of digital information on an internal hard drive. This capability is very useful for such items as your regular station sign-



on and sign-off or other items that are the same announcement repeated every day. It can even be used for recording commercials or other repeated community service announcements.

**Dir No , is flashing** The quality of the recorded data is a product of the sampling rate used while recording the data. If you do not need the full 8 minutes on each machine, you may wish to double the sampling rate. While this improves the quality significantly, it cuts your storage time in half. This is a decision you will have to make for yourself. In the case of straight voice storage, the 8 minutes of storage at the slower sample rate is probably adequate. For music or higher fidelity, use a faster rate.

The maximum recording time of the player is 500 seconds. If you hold down the SOUND button for 2 seconds while in the RECORD mode, the maximum recording time will be shortened to 250 seconds, but the fidelity will be greatly improved because the sampling rate has doubled.

### Preparation

- 1) Open the cover of the player and take out the disc.
- 2) If you are recording outside the console, connect your power source or insert batteries.
- 3) Plug in your microphone or pre-recorded tape from a tape player.
- 4) Switch the PLAYER/RECORDER switch to RECORDER.

## **Recording**

- 1) Press ► || PLAY button to turn on the power.
- 2) Press DIR/REC button to begin recording.
- 3) Press DIR/REC button again at any time if you wish to pause the recording process.
- 4) Press ● STOP button after completing the recording and to exit record mode.
- 5) Press ► || PLAY button to play back the recorded content after recording.

Note: You should always play back and monitor the recording to assure quality and accuracy of the recorded material.

You should also be aware that some dynamic microphones overload the MP3 hard drive causing poor quality recording. It is generally easier to make your recording on tape or another MP3 device first, then using the Sony-to-Sony edit cord that we provide with each unit, upload it from the tape player to the MP3 hard drive.

By utilizing this method, you are able to edit out any unwanted sounds and produce a high quality message and better able to control the levels when you load it into the MP3 hard drive.

## **HANDLING OF COMPACT DISCS**

The following information applies to the general care and cleaning of compact discs.

Your CD/MP3 players are designed to play compact discs that bear the logo on the right. Discs that do not carry this logo may not conform to international CD standards and may not play properly. MP3 discs are frequently recorded on a computer and have no logo but must conform to the sampling frequencies and baud rates listed under the section on MP3 playback.

Dirty, scratched or warped discs may cause skipping or noise. Take the following precautions.

- 1) Handle the disc only by the edges. To keep the disc clean, do not touch the surface of the disc. Body oils are quite damaging to the surface.
- 2) Return the discs to their cases after use to avoid serious scratches that could cause the laser pickup to skip.

- 3) Do not expose the discs to direct sunlight, high humidity or high temperatures for extended periods. Prolonged exposure to high temperatures can warp the disc.
- 4) Do not apply paper or write anything on either side of the compact disc. Sharp writing instruments, or the inks used in some felt-tip pens may damage the disc surface.
- 5) If finger prints get on the disc, they should be carefully wiped from the surface of the disc with a soft, lint free cloth. Unlike conventional records, compact discs have no grooves to collect dust and microscopic debris. Gently wiping them with a cloth should remove most particles and oils. When cleaning, wipe in a straight motion, from the inside to the outside of the disc. Small dust particles and light stains should have no effect on reproduction quality.
- 6) Never use chemicals, record sprays, gasoline, anti-static sprays, thinners or household chemicals to clean compact discs. These chemicals can damage the plastic surface of the disc.

**Note:** The disc player will not play a disc that has been inserted upside down.  
It may not play discs that do not conform to the Compact Disc Standard.  
It may not play discs that do not conform to the MP3 specifications listed..  
It may not play discs that are excessively soiled, scratched or fingerprinted.  
8 cm (3") discs may be played without an adaptor.

## CONCLUSION

Congratulations on concluding a very compressed and intensive course on both the equipment and the operating techniques required to have it perform at maximum efficiency. Some of the procedures may appear a bit confusing at first, but with practice will come perfection.

Please retain this workbook as a reference tool along with all the notes you made in the process. It will help you over the frustrating parts and serve as a backup training tool for new replacement workers.

Please refer to the following chart for equipment care.



**Keep the equipment dry at all times;**



**Do not handle the equipment roughly. Use care;**



**Avoid temperature extremes on the equipment;**



**Keep the equipment clear of dust and dirt;**



**Clean with a damp cloth. Do not use chemical cleaners.**