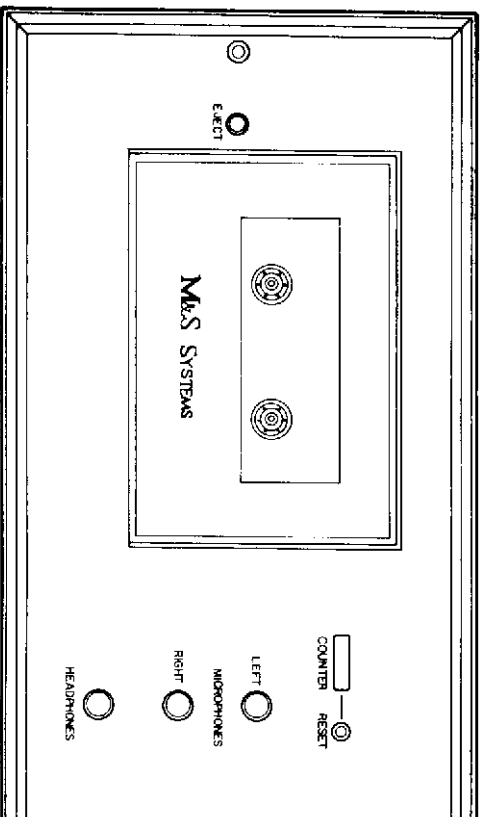


M&S Systems
Model MCT
Stereo Cassette Tape Player

Owner's Guide



Printed in U.S.A.

Lit. No. MCTG

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This booklet contains the information you need to get the most from your cassette tape player unit, and it includes applicable statements of warranty. Retain this booklet for future reference.

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Note: Product specifications are subject to change without notice.

About Your M&S Systems Model MCT Stereo Cassette Tape Player

Thank you for purchasing this cassette tape player from M&S Systems. With the various features offered, you will have many hours of pleasurable service. Now, let us introduce you to a new concept in cassette decks. The Model MCT has many features, so it is important that you read this Owner's Guide thoroughly before operating the unit. After you have finished reading the instructions, put them in a handy place for future reference.

It is the user's responsibility to read and operate this cassette tape deck as outlined in this Owner's Guide. Our local distributor is not allowed to make calls at your home to demonstrate or explain the operating features of this product as a condition of the product warranty. A charge can be made for service of this type.

This cassette unit has a microprocessor controlled mechanism which provides a smooth operating system. Tape selection is also accomplished automatically, therefore, you do not have to have additional switches for normal, chrome or metal tapes. Other features of the unit are discussed in the following instructions.

Unit Controls, Indicators, and Features

- 1** Eject button
Opens a spring loaded door for tape insertion and removal.
- 2** Power button
Turns the MCT on and off. The MCT has an AUTO OFF feature which automatically turns the deck off when it remains stopped and no buttons have been depressed for 20 minutes.
- 3** Stop button
Disables the current function and stops the MCT. The STOP button will stop any function.
- 4** Pause button
Stops the MCT when it is in the PLAY

Statements of Warranty

The following warranty applies to the Model MCT.

LIFETIME LIMITED WARRANTY PRODUCTS

Central Vacuum Power Units, Musical Intercom Master Units, Compact Disc Player, Cassette Tape Player, and Built-in 2-way 8-ohm Flush Mount Speakers

M&S Systems, Inc., warrants to the original homeowner for as long as he owns his home, its products to be free from factory-cause defects of material and workmanship. M&S Systems, Inc., will repair or replace, at its option, parts and/or materials at no charge should they, upon examination, be determined to be defective.

M&S Systems, Inc., reserves unto itself the sole right to make the final decision whether there is a defect in materials or workmanship and whether or not the product qualifies for the warranty.

M&S Systems, Inc., will not be responsible for any service call charges arising from the installation or repair company to the homeowner.

Defective product must be returned to the installing dealer or distributor by the homeowner. Transportation/freight charges on products submitted for replacement or repair are the customer's responsibility.

ONE YEAR LIMITED WARRANTY PRODUCTS

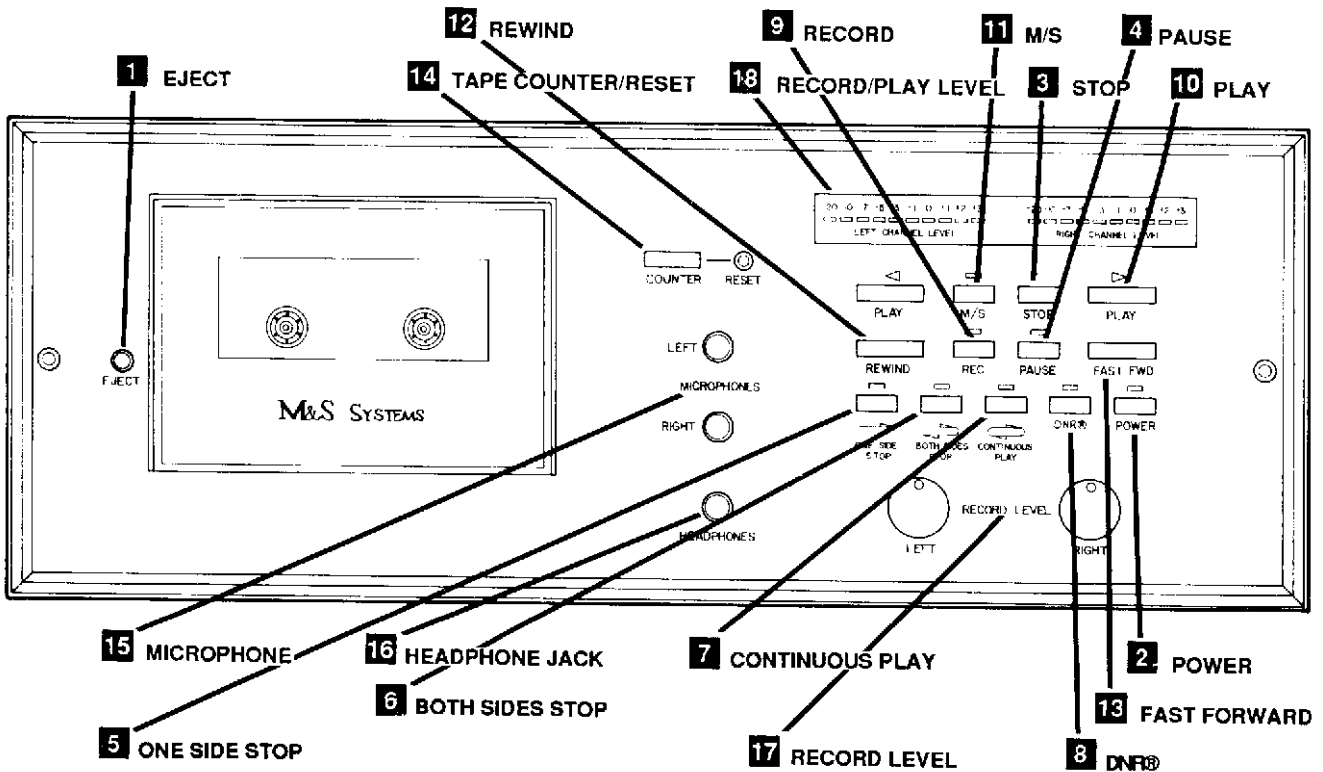
Vacuum accessories, Video Door Intercoms, Musical Intercom Accessories, Speakers, Ironing Centers, Wall Sates, System 2000 Intercoms.

WARRANTY EXCLUSIONS

M&S Systems, Inc.'s Limited Warranty does not apply to product damage or failure caused by acts of God, misuse, abnormal usage, normal wear, faulty installation, improper maintenance, or any repairs other than repairs made by an authorized M&S repair center. This Limited Warranty will not apply to any M&S Systems, Inc. product which has been used in violation of any electrical code or NON-M&S Power Units, Musical Intercom Master Units, or Speakers installed with NON-M&S Systems' brand wire or wall housings.

These warranties are for the sole and exclusive use of products in a residential installation. The Limited Warranty covers only the liability described above, and does not include liability for incidental or consequential damages.

IMPORTANT: All M&S Wire and Cable Products are U.L. Approved



or RECORD operation. During the recording operation, PAUSE keeps the RECORD/PLAY Level Indicators active (so the record level can be set), and also keeps the record head activated to avoid recording switching noises.

The mode of operation is selected by depressing one of the following three mode keys when the power is on and a tape is in the MCT:

- 5** One Side Stop button
This option sets the MCT to automatically stop after the current side of the tape has finished playing or recording.
- 6** Both Sides Stop button
This option sets the MCT to automatically stop after the current and the opposite sides of the tape have finished playing or recording. Changing the play direction will reset BOTH SIDES STOP.
- 7** Continuous Play button
This option sets the MCT to continuously play both sides of the tape, one side at a time. Recording is not allowed in this mode. If RECORD is selected while in the CONTINUOUS PLAY mode, the mode will automatically be changed to ONE SIDE STOP.
- 8** DNR* button
DYNAMIC NOISE REDUCTION*. This option is activated by depressing the DNR* button when the MCT is on and a tape is in the drive. This button engages a noncomplementary dynamic noise reduction system and reduces tape noise during the play operation.
- 9** Rec button
RECORD. Initiates the two step

Reset Button

Should the cassette tape player ever lock-up, or operate in a way other than designated in these operating instructions, an MCT RESET button has been provided. This RESET button is activated by pushing a paper clip, or similar device, into the MCT RESET hole one the front panel of the unit (located just above and to the right of the FORWARD PLAY [>] button). This will stop, reinitialize, and "power off" the MCT. When it is turned back on, the problem should be cleared.

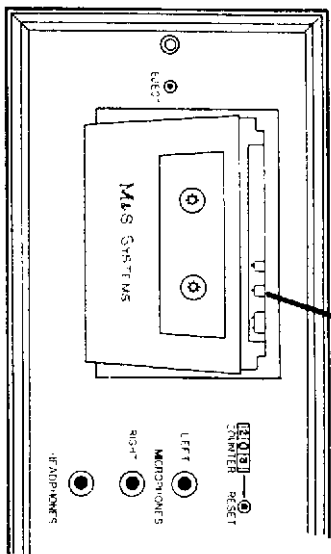
Cassette Tape Handling

The selection and handling of the cassette tape itself is very important. Please check the following before use:

Slack or Protruding Tape - If the tape protrudes from the cassette, or is slack, the tape may run without passing between the capstan and pinch roller, and tape damage or a jammed mechanism may result. Take up the slack by inserting a pencil through the reel hub and turn in the appropriate direction. Some tapes provide a tape reel locking device to prevent tape slack. Make sure that you remove the locking device before inserting the tape into the deck.

Erasurage Prevention Tabs - Cassette tapes are provided with erasure prevention tabs, which act as protection devices to prevent the accidental erasure of a recording that you want to keep. If you remove the tabs with a screwdriver, you will be able to prevent erasure if the unit is accidentally set in the RECORD mode. To record on a cassette where the tabs have been removed, cover the tab openings with adhesive tape. *Note: Cassette tapes are provided with two tabs, so that you can protect the recordings on both sides.*

Gently Push Up With Your Finger



Note: The Tape Inserted Sensor must be bypassed while performing Step 3 below. This is done by gently holding the Tape Inserted Sensor up with your finger (see illustration above).

Step 3 While holding up the Tape Inserted Sensor, turn the power on and depress the FORWARD PLAY [>] button. This will engage the capstan and pinch roller on the right. Clean the roller and capstan with the moistened swab as the capstan and roller rotate. To clean the capstan and roller on the left side of the head assembly, depress the REVERSE PLAY [<:] button. In this mode, the NCT will stay engaged 2 to 3 seconds, and then stop automatically (this is normal operation). The REVERSE PLAY [<:] button may be depressed several times while cleaning the capstan and pinch roller as they rotate.

After the cleaning is completed, replace the door cover by carefully snapping it back into place. *Do not place a tape in the unit for at least 3 minutes.*

Demagnetizing the Heads

The recording head becomes magnetized when you use the tape deck for prolonged periods of time. This results in noise generation and loss of high frequencies during recording and playback. The record head should be demagnetized on a regular basis. A demagnetizer can be purchased through most stores selling high fidelity component equipment. Follow the instructions supplied with the demagnetizer, but make sure the power to cassette unit is *off* during the demagnetizing procedure.

sequence required to record audio onto a tape using the MCT (see page 8 for further instructions.)

- 10** Play buttons
- Since the MCT will play in either direction, two PLAY buttons are provided. Each PLAY button has an indicator showing the unstired tape direction - [>] for FORWARD PLAY, and [<:] for REVERSE PLAY (see page 7 for further instructions).

- 11** M/S button
- MUSIC SEARCH. Sets the function on or off as indicated by the MUSIC SEARCH LED (see page 9 for further instructions.)

- 12** Rewind button
- Causes the tape to be rewound at a high rate of speed relative to the direction that the tape was last playing. The unit will indicate which direction the tape is moving by rapidly blinking the PLAY LED in that direction.

- 13** Fast Fwd button
- FAST FORWARD. Causes the tape to be forwarded at a high rate of speed relative to the direction that the tape was last playing. The unit will indicate which direction the tape is moving by rapidly blinking the PLAY LED in that direction.

- 14** Tape Counter/Reset button
- Shows the relative position of the tape using a three digit display. A RESET button is provided which resets the TAPE COUNTER display to 000 when it is depressed.

- 15** Microphone jacks
- Two 1/4-inch phone jacks are provided

for left and right channel microphones. Any good quality dynamic or electric element microphone with an impedance range from 200 to 1000 ohms may be used with the MCT.

16 Headphone jack

A 1/4-inch stereo phone jack is provided for headphone monitoring during PLAY or RECORD. Stereo headphones are required.

17 Record Level knobs

The LEFT and RIGHT RECORD LEVEL knobs adjust the input levels for proper recording. The individual controls allow the user to adjust the left and right channels separately to compensate for balance problems in the source program. The proper setting for each RECORD LEVEL knob is obtained when it produces an average level of "-3", but does not exceed "0" on the RECORD/PLAY LEVEL Indicator.

18 Record/Play Level Indicators

These indicators show the level of the signal that is on the tape (in PLAY mode), or that is being recorded on the tape (in RECORD mode).

Operating The Model MCT Cassette Tape Player Unit

Tape Insertion

- Step 1 Depress the EJECT button allowing the door to fall open.
- Step 2 Insert the cassette tape into the pocket of the door allowing it to slide to the bottom. (see illustration on next page).
- Step 3 Push the door closed until it locks into place. Depress PLAY.

- Tapes where a high level of hum has been recorded between programs.

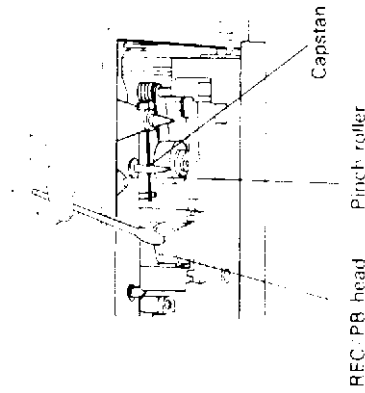
Maintenance

The following maintenance instructions will keep your tape deck in top working order. Maintenance is the user's responsibility, and is not included in the warranty.

The heads, capstans, and pinch rollers are parts which get dirty quite easily. If the heads are dirty, the high frequencies are not reproduced properly and the stereo balance is impaired. It is therefore recommended that the heads, capstans, and pinch rollers be cleaned regularly. Cleaning kits are available through most stores selling high fidelity equipment.

Cleaning Procedure

- Step 1 Press the EJECT button to open the door, exposing the head assembly.
- Step 2 Dip a swab from the cleaning kit into the cleaning fluid and wipe the head assembly with it.



Step 1 Depress the FORWARD PLAY [>] or REVERSE PLAY [<] button.

Step 2 Depress the MUSIC SEARCH button.

Step 3 Depress the FAST FORWARD or REWIND button. This initiates the search in the selected direction. Note: Please remember that FAST FORWARD or REWIND depends on the play direction selected.

The MCT will automatically start playing the tape after the search has found the beginning (REVERSE) or end (FAST FORWARD) of the song or blank that was being played when the search was initiated.

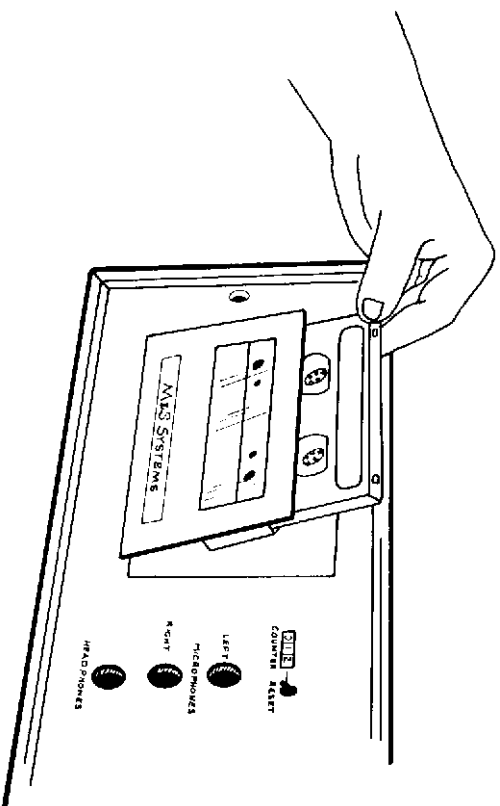
When the cassette is playing with MUSIC SEARCH on, FAST FORWARD/REWIND silently advances/reverses the tape to the first encountered blank position (the next song), and automatically resumes normal play. If a blank is not found before the end of the tape, the unit will automatically stop. Depressing the STOP or POWER button will manually terminate the MUSIC SEARCH function.

When the cassette is playing with MUSIC SEARCH off, FAST FORWARD/REWIND enables an audible search of the tape. The function continues as long as the FAST FORWARD/REWIND button is depressed.

Note: Since the MUSIC SEARCH function detects the unrecorded blanks between programs, it may not work properly in the following circumstances (this is normal and therefore does not indicate a malfunction):

- Tapes which do not have unrecorded blanks between the programs lasting 4 to 6 seconds.
- Tapes which have very soft sections of music that continue for many seconds, or tapes in which the sound is broken for many seconds.
- Tapes whose programs have all been recorded at a low level.
- Tapes of conversation, where the recording of the voice is intermittent.

To remove the tape, depress the STOP button and follow the above steps in reverse order.



Note: The EJECT button cannot be depressed while the unit is operating.

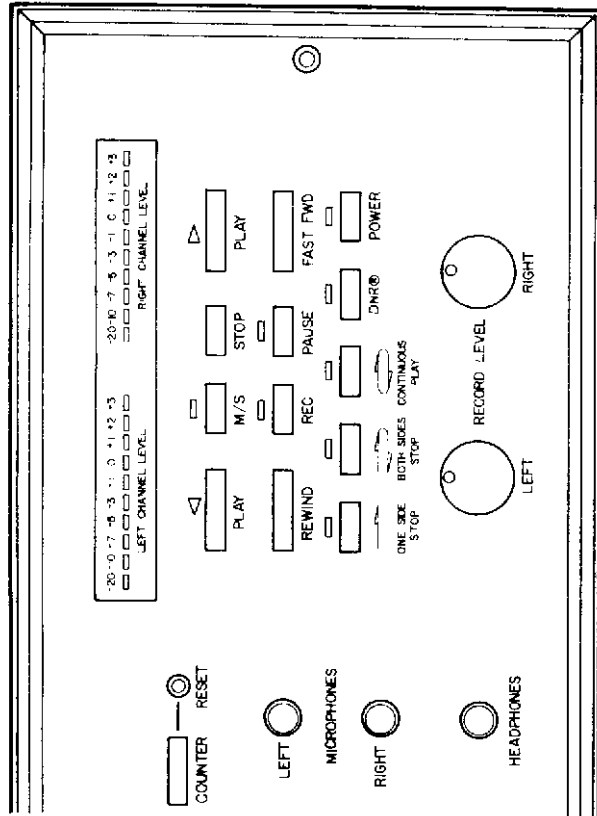
Playback

Step 1 Depress the POWER button to on.

Step 2 Insert the cassette tape (see previous Tape Insertion section for further instructions).

Step 3 Select the desired cycle (ONE SIDE STOP, BOTH SIDES STOP, or CONTINUOUS PLAY).

Step 4 Depress the FORWARD PLAY [>] button to cause the tape to operate in the forward direction (from left to right). Depressing the REVERSE PLAY [<] button will cause the tape to operate in the reverse direction (from right to left). Note: When the MCT is in the BOTH SIDES STOP or CONTINUOUS PLAY mode, the tape will automatically reverse to the other side.



Step 3 Select the desired cycle (**ONE SIDE STOP** or **BOTH SIDES STOP**). **Note:** **CONTINUOUS PLAY** will not work during the **RECORD** mode of operation.

Step 4 Press the **RECORD** button. The unit will now be in the **RECORD "PAUSE"** mode, and both **FORWARD** and **REVERSE PLAY** lights will be blinking. Press **PLAY** in the direction you wish to record. The **RECORD** and **PLAY** direction lights should both be illuminated, and the tape should be moving. If the unit will not go into the **RECORD** mode, check the erasure prevention tabs on the cassette (see page 13 for further instructions).

Step 5 Adjust the **LEFT** and **RIGHT RECORD LEVEL** knobs for a reading on the **LEVEL** indicator of "-3" to "0" for the loudest music passages. Adjusting the level too high will cause distorted sound during playback, and recording too low will result in more background noise during playback. **Note:** **LEFT** and **RIGHT RECORD LEVEL** should be adjusted while in **RECORD PAUSE** mode.

Step 6 The **PAUSE** function allows you to stop the tape, but the unit will stay in the **RECORD** mode. In the **PAUSE** mode, the tape travel direction indicator will flash, indicating the direction of the tape before the unit was put in the **PAUSE** mode. To continue recording, press the **PLAY** button under the flashing direction indicator.

Step 7 Press the **STOP** button to cancel the **RECORD** function. **Note:** The unit will automatically stop at the end of tape in one direction, or both directions, depending upon the mode you have selected.

Music Search

The **MUSIC SEARCH** function allows the operator to search, with **REWIND** to the beginning, or **FAST FORWARD** to the end, of the current song. It also allows the user to **FAST FORWARD** through blank tape to find the beginning of the next song. This function requires three steps to operate properly. The first two steps are "order independent":

Step 5 To stop or interrupt tape movement, use the **STOP** button to cancel the play function, or use the **PAUSE** button to interrupt tape movement. **Note:** This unit has an automatic end of tape stop function that prevents tape and mechanism damage.

Step 6 To **FAST FORWARD** or **REWIND** the tape, press the appropriate button. **Note:** When in the **PLAY** mode, you must press the **STOP** or **PAUSE** buttons before either button is pushed. If you do not press **PAUSE** or **STOP** first, the unit will go into the audible manual **MUSIC SEARCH** mode of operation.

Record

Step 1 Depress the **POWER** button to on.

Step 2 Insert the cassette tape (see previous Tape Insertion section for further instructions).