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# Important Information for Cassette Users

**Note:** Model III BASIC on the TRS-80 Model III is essentially the same as Level II BASIC on the TRS-80 Model I. All of the following references to Level II BASIC also refer to Model III BASIC. The only difference is that a higher baud rate for saving onto tape can be set if you have a Model III with Model III BASIC (high = 1500 and low = 500). Both low and high baud rate use the same volume setting on the Model III.

## Using Your Cassette Deck

Many factors affect the performance of a cassette system. The most significant one is volume. Too low a volume may cause some of the information to be missed. Too high a volume may cause distortion and result in the transfer of background noise as valid information.

Four different cassette models have been supplied with the TRS-80 system—the CTR-40, CTR-41, CTR-80, and CTR-80A. Each model has its own loading characteristics. The table below gives the suggested volume ranges for each of the CTR models.

Notice that the volume ranges for Level I and Level II are different. This is because the Level II data transfer rate is faster (500 baud vs. 250 baud). Also, notice that for the TRS-80 Model I, pre-recorded Radio Shack programs need a slightly higher volume setting than that required by your own `CSAVE`d tapes. This is because the pre-recorded tapes are produced with high-speed audio equipment at a slightly lower volume level than the `CSAVE` process provides. The Model III records at a lower volume than the pre-recorded tapes are recorded at, so the volume setting for user-generated tapes is higher than for pre-programmed tapes. You will need to take this into account when `CLOAD`ing Level II programs into a Model III.

Recorder Model	User-Generated Tapes		Pre-Recorded Radio Shack Tapes	
	LEVEL I	LEVEL II	LEVEL I	LEVEL II
CTR-40	YELLOW LINE	RED LINE	YELLOW LINE	RED LINE
CTR-41	6-8	4-6	6.5-8.5	5-7
CTR-80 & CRT-80A	4.5-6.5	3-5	5.5-7.5	2.5-5

**Recommended Volume Settings for Radio Shack Cassette Decks  
When Used with the TRS-80 Model I**

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Recorder Model	User-Generated Tapes	Pre-Recorded Radio Shack Tapes
CTR-80, CTR-80A	5-7	4-6

**Recommended Volume Settings for Radio Shack Cassette Decks  
When Used with TRS-80 Model III**

(With the CTR-40, CTR-80, and CTR-80A, turn the control to the left to increase volume. With the CTR-41, turn the control to the right.)

When information is being loaded from the cassette tape, two asterisks will appear on the screen. The one on the right will flash on or off as the program is read in. If the asterisks do not appear, or the one on the right does not flash, then the volume setting is probably too low. Increase the volume and try again. If you have a Model III this may be an indication that the tape's baud rate is different than the Computer's baud rate. (All Radio Shack Model I Level II pre-recorded cassettes are recorded at 500 baud rate, so Low baud rate must be selected when they are loaded on the Model III.) Try resetting the baud rate from high to low or vice versa (See your Operation Manual).

Use the reset button to stop the cassette and return control to you if loading problems occur.

Radio Shack programs are recorded at least twice on each tape. Following this practice when you record programs on tape will give you a back-up if one does not load properly or if it becomes damaged.

**Important Note:** The CTR-41 requires that you keep the supplied "dummy plug" in the MIC jack at all times. However, the other models should never be used with the "dummy plug."

## Level I

Sometimes you will get an error message during an attempted CLOAD. This means that some information was lost or garbled. Adjust the volume level slightly and try again.

## Level II (Also Model III BASIC)

In case of an error message, proceed as above. In Level II, there is also a rare case in which the program is not loaded correctly even though no error message is generated. So, after CLOADING a program, be sure to LIST it. If some data was garbled, then at some point in the listing the display will be filled with meaningless words and characters. Adjust the volume and try again.

## Hints and Tips

Computer tapes should be stored in a relatively dust-free area (a cassette case is recommended) and protected from high temperatures. Magnetic and electrical fields may alter recorded information, so avoid placing the tape near them

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(i.e. household appliances, power sources such as transformers and television sets, etc.).

The cassette deck supplied with the TRS-80 is very compatible with the system and will perform its duties with great success. To keep the cassette deck in top condition and thus minimize your problems, you should periodically perform some routine maintenance on it. Dirty heads can cause as much as a 50% loss of volume. Also, heads become magnetized with use and may cause distortion. We recommend that you clean the head, capstan, and pinch roller after every four hours of operation. Heads on new recorders should always be cleaned before use.

**Note:** Cassette cleaning and demagnetizing accessories are available from your local Radio Shack store.

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NOTE: Good data processing procedure dictates that the user test the program, run and test sample sets of data, and run the system in parallel with the system previously in use for a period of time adequate to insure that results of operation of the computer or program are satisfactory.

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**U.S.A.: FORT WORTH, TEXAS 76102  
CANADA: BARRIE, ONTARIO L4M 4W5**

**TANDY CORPORATION**

**AUSTRALIA**

**280-316 VICTORIA ROAD  
RYDALMERE, N.S.W. 2116**

**BELGIUM**

**PARC INDUSTRIEL DE NANINNE  
5140 NANINNE**

**U.K.**

**BILSTON ROAD WEDNESBURY  
WEST, MIDLANDS WS10 7JN**