

There are four ways to record using your VCR -- immediate recording, quick timer recording, automatic timer recording, and dubbing.

Your VCR automatically adjusts the sound level while it records.

The video cassette you use for recording must have the erase-protection tab in place. If the tab is removed, the cassette automatically ejects if you try to record on it.

Power-Failure Auto-Rewind

To protect the tape if a power failure occurs when a video cassette is loaded, the VCR is in the stop mode, and the fast-response system is activated, the VCR rewinds for about 10 seconds after power is restored.

Before you make a recording, check the memory counter. If it shows a negative reading, press MEMORY. Then fast-forward the tape until 0:00:00 appears on the display. This positions the tape as it was before the power failure.

TAPE SELECTION

The quality of tape you use greatly affects record/playback quality and the life of the VCR. Use only video cassettes that display the official VHS logo. High-grade tape has a better oxide coating that helps prevent dirty video heads and gives the best results.

Although T-160 video cassettes offer the longest recording time, they contain thinner tape that is more likely to jam. We suggest you use T-120 or shorter length tape.

The following chart shows the maximum recording times for different-length tapes at the three recording speeds.

Cassette Recording Speed	T-60	T-120	T-160
SP	1 hour (60 minutes)	2 hour (120 minutes)	2 2/3 hours (160 minutes)
LP	2 hours (120 minutes)	4 hours (240 minutes)	5 1/3 hours (320 minutes)
EP	3 hours (180 minutes)	6 hours (360 minutes)	8 hours (480 minutes)

ERASE PROTECTION

Video cassettes have an erase-protection tab to prevent accidental erasure of a tape. To prevent recording, break off the tab using a screwdriver. The cassette automatically ejects if you try to record on the tape.

If you want to record on a video cassette that does not have a tab, put a piece of heavy plastic over the erase-protection tab hole.

IMMEDIATE RECORDING

You can record the same program you watch or record one program while you watch another depending on which connection you choose in "If You are Using an Antenna" or "If You Have Cable."

NOTE: If you want to record from another VCR, a laser disc player, or other source with A/V outputs, see "Dubbing."

Recording a Program As You Watch It

1. Turn on the VCR and the TV. If you have connected your Model A/V inputs, set your TV to the video mode.
2. Set the TV tuner to the same channel as the VCR's CHANNEL 3/4 switch.
3. Press TV/VCR on the remote control so VCR appears on the display.
4. Press INPUT on the remote control to select the tuner mode.
5. Insert the tape you want to record on into the VCR.
6. Press TAPE SPEED on the remote control to display the desired recording speed (SP, LP, or EP).
7. Press CH/TRACK (CHANNEL on the VCR) \ / or / \, or use the remote control's number buttons to select the desired channel.
8. Press RECORD.

You can press PAUSE/STILL during recording to temporarily pause recording (during commercials, for example). To resume recording, press PAUSE/STILL again or record.

NOTE: If you leave the VCR in the record pause mode for 5 minutes, the VCR automatically stops.

9. Press STOP to stop recording.

Recording One Program While You Watch Another

1. Follow Steps 1-8 in the previous section "Recording a Program As You Watch It."
2. Press TV/VCR so VCR does not appear on the VCR's display. If you have connected your Model 98 to A/V inputs, set your TV to the video mode.
3. Set the TV tuner to the channel you want to watch.
4. Press STOP to stop recording.

QUICK TIMER RECORDING

Quick Timer Recording (QTR) starts recording immediately and then

automatically stops after the length of time you select (from 1 minute to 24 hours within the next 24 hours). You need not supervise the VCR while it is recording.

You can set the QTR program on the TV screen or on the VCR's display. The instructions refer to the TV's on-screen display indicators. Some of the indicators on the VCR's display vary slightly.

1. Follow Steps 1-8 in "Recording a Program as You Watch It."
2. Press RECORD again to enter the QTR mode. The QTR menu appears on the TV screen.
3. Press RECORD or CH/TRACK (CHANNEL on the VCR) \ / or / \ repeatedly until the VCR displays the desired recording end time within the next 24 hours.

Press RECORD to advance the time in 30-minute increments up to 24 hours, and press CH/TRACK (CHANNEL on the VCR) \ / or / \ to advance or reverse the time in one-minute increments.

NOTE: The recording time is limited by the length of the inserted tape.

QTR Hints

To ensure that you record all of the desired program, set the time a little later than the end of the program.

QTR cannot function if a cassette is not inserted, if the erase-protection tab is removed, or if an automatic timer recording is in progress.

The VCR's power turns off at the end of QTR.

To cancel QTR in progress, press STOP.

To temporarily stop the tape during QTR, press PAUSE/STILL. Press PAUSE/STILL again or press RECORD to resume recording. If you leave the VCR in the pause mode for 5 minutes, the VCR automatically stops.

You can change the QTR end time by pressing RECORD and CH/TRACK (CHANNEL on the VCR) \ / or / \.

TAPE SPEED is active during QTR but should not be changed while the VCR records.

You cannot check automatic program timer settings during QTR.

AUTOMATIC TIMER RECORDING

Automatic timer recording lets you set the VCR to start and end recording while you are away. You can set six program timers to record a combination of weekly, daily, or one time TV programs. This allows you to record on a specific day within a 1-year period (ONCE), the same time Monday through Friday (DAILY) and the same day every week (WEEKLY).

You can set each program timer to record on a different channel at a different speed.

Automatic timer recording consists of two steps: setting the program timer and making the automatic timer recording.

Setting the Program Timer

You must use the remote control to set the program timer.

Be sure you correctly set the clock before you use automatic timer recording.

In the following example, the VCR is set to record channel 10 from 9:00 PM to 10:30 PM on March 9, 1993, at the EP speed.

1. Insert the cassette you want to record on into the VCR. The VCR turns on.
2. Turn on the TV and set it to the same channel as the VCR's CHANNEL 3/4 switch.

If your TV has A/V inputs, set the TV to the video mode.

3. Press TV/VCR on the remote control until VCR appears on the display.
4. Press PROGRAM on the remote control. The program timer menu appears on the TV screen.

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MENU
1. LANGUAGE/CLOCK
2. TIMER SETTING
PROGRAM CHECK/CLEAR
```

5. Press 2 to select the timer setting.

NOTE: If all six program timers have been set, you cannot select 2.

```
TIMER SETTING
STATE DATE --/--
MONTH/DAY
[ CLEAR ] —> TO CORRECT
[ PROGRAM ] —> END
```

6. When the date indicators flash, use the number buttons to set the desired date. (Press 0 3 0 9 to set March 9, for example.)

NOTE: If you accidentally set the timer to record on a date that is before the VCR's clock date, the VCR considers the set time, date, and day of the week to be fore next year. If you set the timer to record on the same day as on the VCR's clock, but an earlier time, the VCR does not keep the entry.

```

      TIMER SETTING
START DATE 03/09 (TUE)
TIME --:--
[CLEAR] —> TO CORRECT
[PROGRAM] —> END

```

7. When the time indicators flash, use the number buttons to set the start time. (Press 0 9 0 0 to set 9:00, for example.) Press 1 to set an AM hour or 2 to set a PM hour.

```

      TIMER SETTING
START DATE 03/09 (TUE)
TIME 09:00 PM—
END TIME --:--

```

8. Press the number buttons to set the end time. (Press 1 0 3 0 to set 10:30, for example.) Press 1 to set an AM or 2 to set a PM hour.

```

      TIMER SETTING
START DATE 03/09 (TUE)
TIME 09:00 PM
END TIME 10:30 PM
CHANNEL -- REC SPEED SP

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9. Press the number buttons to select the channel number.

NOTE: For an A/V recording, press 0 twice.

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      TIMER SETTING
START DATE 03/09 (TUE)
TIME 09:00 PM
END TIME 10:30 PM
CHANNEL A/V REC SPEED SP

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10. Press TAPE SPEED to change the tape speed (SP, LP, or EP).

```

      TIMER SETTING
START DATE 03/09 (TUE)
TIME 09:00 PM
END TIME 10:30 PM
CHANNEL 10 REC SPEED EP
ONCE=1 DAILY=2 WEEKLY=3
[CLEAR] —> TO CORRECT
[PROGRAM] —> END

```

11. Use number buttons 1-3 to set the desired timer mode -- ONCE, DAILY, or WEEKLY. (Press 1 to set ONCE, for example.)

```

      TIMER SETTING
START DATE 03/09 (TUE)
TIME 09:00 PM
END TIME 10:30 PM

```

```
CHANNEL 10 REC SPEED EP  
TIMER MODE ONCE
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12. Double-check all the set information.

If something is not correct, press CLEAR as needed to erase the wrong number and enter the correct information.

When the information is correct, press PROGRAM. The menu display reappears.

```
MENU  
1. LANGUAGE/CLOCK  
2. TIMER SETTING  
3. PROGRAM CHECK/CLEAR  
4. VCR SETUP  
[NUMBER] —> TO SELECT  
[PROGRAM] —> END
```

To store other program(s), press 2 and repeat Steps 6-12.

13. Press PROGRAM again to exit the menu display.

Making an Automatic Timer Recording

1. Be sure the tape you want to record on is in the cassette compartment.
2. Press POWER to turn off the VCR. The timer indicator appears on the display. This shows that the VCR is in the timer standby mode. When a timer recording begins, the record indicator appears.

NOTE: You can turn on and operate the VCR manually prior to the set times, but the VCR makes the automatic timer recording(s) only if the power is off at the set start time(s).

Automatic Timer Recording Hints

The VCR's power turns off at the end of an automatic timer recording.

If two program times overlap, the one that starts first has priority. When the first program ends, the VCR records the remainder of the second program.

If you set the timer and turn off the VCR without loading a cassette, the timer indicator flashes.

If the end of a tape is reached during an automatic timer recording, the VCR turns off.

Monitoring an Automatic Timer Recording

To monitor an automatic timer recording, turn on the TV and set it to the same channel as the VCR's CHANNEL 3/4 switch. Press TV/VCR until VCR appears on the display. If you have connected your Model 98 to A/V inputs, set your TV to the video mode.

Checking Program Timers

1. Turn on the TV and set it to the same channel as the VCR's CHANNEL 3/4 switch. If you have connected your Model 98 to A/V inputs, set your TV to the video mode.
2. Turn on the VCR and press TV/VCR on the remote control until VCR appears on the display.
3. Press PROGRAM. The menu display appears on the TV screen.
4. Press 3 to select PROGRAM CHECK/CLEAR.
5. Press CH/TRACK \ / or / \ until the program that you want to check appears on the screen.
6. Press PROGRAM to exit the PROGRAM CHECK/CLEAR mode. The menu display reappears.
7. Press PROGRAM again to exit the menu display.

Clearing a Program Timer

1. Follow Steps 1-4 under "Checking Program Timers" to select the PROGRAM CHECK/CLEAR mode.
2. Press CH/TRACK \ / or / \ to select the program that you want to clear.
3. Press CLEAR.

To select another program to clear, press CH/TRACK \ / or / \ and press CLEAR. If there is no program, the display will automatically return to the TV program.

4. Press PROGRAM to exit the PROGRAM CHECK/CLEAR mode. The menu display reappears.
5. Press PROGRAM again to exit the menu display.

DUBBING

The process of recording from one VCR to another is called dubbing.

You can use a camcorder, satellite receiver, or other device with A/V outputs in place of the playback VCR. Always use video-quality shielded cables with RCA-type connectors. Do not use standard audio patch cords.

Connections for Dubbing

Connect the video and audio outputs of the playback VCR to the corresponding VIDEO and AUDIO IN jacks on the Model 98.

Dubbing a Video Cassette Tape

1. Insert a pre-recorded video cassette into the playback VCR.

2. Insert a tape you want to record on into the Model 98's cassette compartment.
3. Press INPUT on the Model 98 so AV appears on the display.
4. Press TAPE SPEED on the remote control to display the desired recording speed (SP, LP, or EP).
5. Press RECORD on the Model 98.
6. Begin playback of the tape in the playback VCR.

NOTE: For best results during dubbing, hold the Model 98's remote control close to the Model 98's remote control receiver window (to the left of the VCR display) when you press TAPE SPEED. Otherwise, the remote control might affect the playback VCR's operation.

Monitoring Dubbing

1. Turn on the TV connected to the Model 98, and set it to the same channel as the Model 98's CHANNEL 3/4 switch. If your TV has A/V inputs, set it to the video mode.
2. Press TV/VCR on the remote control until VCR appears on the display.

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