

CHANGING THE MENU LANGUAGE

English, Spanish or French can be selected by the user.

Before starting

- Turn on the power (TV and VCR).
- Set the TV to channel 3 or 4.
- Press the **VCR** button on the remote control to select the VCR operation mode.
- If the VCR indicator is off, press the **TV/VCR** button on the remote control.

The VCR indicator lights.

- 1 Press the **MENU** button.

The main MENU appears.

- 2 Press the **CH/TRACK** ▼ (or ▲) button to select the Language select option, then press the **SET** button.
- 3 Press the **CH/TRACK** ▼ (or ▲) button to select the language of your choice, then press the **SET** button.

The Language select menu disappears, and the on-screen menu language has been selected.

PROGRAMMING CHANNELS

Once the initial setup is completed, the channels can be programmed again. This may be necessary if you are switching from cable service to antenna reception.

NOTES:

- Make sure the antenna or cable connections are correct. (See pages 10 and 11.)
- If the input source is set to L1, press the **INPUT** button on the remote control until the indicator panel shows a channel number.

- 4 Press the **CH/TRACK** ▼ (or ▲) button to select the CATV/TV option, then press the **SET** button to select "CATV" (if you subscribe to a cable TV service) or "TV" (for normal broadcast reception through an antenna).

- 5 Press the **MENU** button twice.

The main MENU appears.

- 6 Press the **CH/TRACK** ▼ (or ▲) button to select the Auto tuning memory option, then press the **SET** button.

The VCR programs all unscrambled channels that are available in your area into the tuner memory.

The "Auto tuning memory" message is displayed while the channels are automatically set.

NOTE: If automatic channel programming is started before the antenna or cable TV connection is made, the "No Signal" message appears.

Channel Programming

- 1 Follow the steps in **Before starting** above.
 - 2 Press the **MENU** button.
- The main MENU appears.*
- 3 Press the **CH/TRACK** ▼ (or ▲) button to select the VCR setup option, then press the **SET** button.

The VCR setup menu appears.

CATV/TV	●CATV TV
Cable box	●No Ch02
MTS	●ST SAP Mono
Audio out	●ST L R Mono
Child Lock	On ●Off
Off timer	●Off 2Hr 6Hr

[CH▼▲] + Option

[SET] + Select [MENU] + TV

VIEWING TV ONLY

You do not need to disconnect the VCR from the TV in order to watch a TV program without recording it.

- 1 Turn off the VCR.
- 2 Turn on the TV and set it to the channel you want to watch.

PLAYING A RENTAL TAPE

When you load a cassette with the safety tab removed, the VCR starts playing it automatically.

Before starting

- Turn on the TV.
- Set the TV to channel 3 or 4.

This VCR features full automatic playback and rewind. Load a cassette (with the safety tab removed).

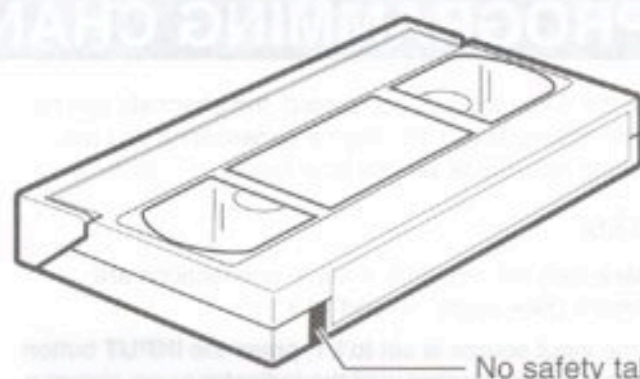
- The power turns on automatically and playback begins.
- At the end of the tape, the VCR stops, then rewinds.
- The cassette is ejected after rewinding.

Playback of Copyguarded Tapes

Some prerecorded tapes employ a copyguard system that may cause intermittent distortion in the upper portion of the picture during playback. (This distortion is more likely to be visible on an older TV.) If you experience this problem, do the following:

- 1 Select a TV station with a strong, clear signal.
- 2 Record a brief segment of that station's programming.
- 3 Play back the recording.

If the playback picture is clear, the VCR is operating properly. The distortion on the prerecorded tape is due to the copyguard system.



NORMAL PLAYBACK

Before starting

- Turn on the power (TV and VCR).
- Set the TV to channel 3 or 4.
- Load a cassette.
- Select the desired audio output mode. (See "AUDIO OUTPUT MODE" on page 28.)

1 Press the **PLAY** button.

Normal playback begins.

The tape stops and rewinds when the end of the tape is reached.

2 Press the **STOP** button (or **STOP/EJECT** on the front panel) to stop playback.

- To rewind the tape, press the **REW** button.
- To fast forward the tape, press the **FF** button.

NOTES:

- When the tape comes to a blank segment during playback, the "No Signal" message appears and the sound is muted.
- If the playback picture shows noise or no video at all while audio is properly heard, first try the manual tracking adjustment. If this does not correct the problem, it may indicate that the video heads need maintenance. Contact an authorized service center.

Digitally-Adjusted Clean Playback

Advanced technology developed by Sanyo enables your VCR to detect imperfections in the condition of a recording (an old recording that has been played back many times, for example) then automatically adjust the playback signal to deliver the best possible image.

TRACKING CONTROL

Tracking Control Adjustments

When you play a tape that was not recorded on this VCR, some noise may appear in the picture due to incorrect head-to-tape tracking.

The VCR will automatically adjust the tracking for the optimum results.

If noise still appears:

MANUAL TRACKING CONTROL

- 1 Press the **VCR** button on the remote control to select the VCR operation mode.
- 2 Press and hold the **CH/TRACK** ▼ or ▲ button (or **CHANNEL** on the front panel) during playback to eliminate the noise streaks from the picture.

The automatic tracking control mode is canceled.

To return to automatic tracking, eject the cassette, then reinsert it.

TAPES WITH HI-FI SOUND

- 1 Press the **DISPLAY** button to select the status display.

When a tape with Hi-Fi sound is played, the L and R indicators must be on for Hi-Fi sound to be heard.

Watch the L and R indicators while pressing the **CH/TRACK** ▼ or ▲ button (or **CHANNEL** on the front panel). Make sure that the L and R indicators remain on.

RECORDING

Before starting

- Turn on the power (TV and VCR).
- Set the TV to channel 3 or 4.
- Press the **VCR** button on the remote control to select the VCR operation mode.
- If the VCR indicator is off, press the **TV/VCR** button on the remote control.

The VCR indicator lights.

- Press the **INPUT** button on the remote control to select the tuner mode. (See "Recording Input Options".)

A channel number appears.

- Load a cassette.

- 1 Select a channel to record (on the VCR).
- 2 Set the MTS mode as desired. (See page 27.)
- 3 Press the **SP/EP** button on the remote control to select the tape record speed.

The tape speed appears on the screen.

- 4 Press the **REC** button.

The REC indicator lights.

Recording begins.

RECORD AUTO CANCEL: Recording will not start if the safety tab has been removed from the cassette. The cassette will automatically be ejected.

- 5 Press the **PAUSE/STILL** button to temporarily stop recording (record pause mode).

The REC indicator blinks.

*During the pause, if you want to change the channel, press the **CH/TRACK** ▼ or ▲ button on the remote control (or **CHANNEL** on the front panel).*

If the record pause mode continues for approximately 5 minutes, the VCR automatically stops recording.

- 6 Press the **REC** button, or press the **PAUSE/STILL** button again.

The REC indicator lights.

Recording continues.

- 7 Press the **STOP** button (or **STOP/EJECT** on the front panel) when you want to stop recording.

The REC indicator goes off.

Rec. List Super Feature

The Rec. List Super feature lets you keep track of all recordings you make on this VCR. The information automatically includes the channel number, date and start time. In addition you have an option to add the program type to the information list. See next page for more detailed instructions on the Rec. List Super feature.

Recording One Program While Viewing Another

- 1 Follow the steps 1 – 4 in "RECORDING".

- 2 Press the **TV/VCR** button.

The VCR indicator goes off.

- 3 Tune the TV to the channel you want to watch.

NOTES:

- If you have connected your cable converter/decoder to the input of the VCR, recording one program while watching another is not possible.
- If audio/video connections are made between the VCR and the TV, set the source selector on the television to TV.

Recording Input Options

You can record not only from the VCR tuner (TV programs), but also from the external equipment (i.e., another VCR, camcorder or digital camera) connected to the rear-panel A/V inputs.

Before starting to record, make sure the correct input source is shown in the top right corner of the screen. If not, press the **INPUT** button on the remote control until the correct input source is selected.

Recording input source	On-screen display
VCR Tuner (TV programs)	Selected channel number
External unit connected to the rear-panel A/V jack	L1

Rec. List SUPER

Rec. List (Recording Contents List) Super

Every time a recording is made with this VCR, the channel number, date and start time information is automatically recorded on the tape. When you call up the Rec. List super menu, the VCR scans the information on the tape and displays it on screen. You can then use the menu to easily find a desired recording and play it back at the touch of a button.

The Rec. List super feature also gives you the option of adding the type (or title) of program you record to the list. To use this option, you must select the type name using the Type input menu before setting up the recording. See next page for more detailed instructions.

① Load a cassette that has been recorded on this unit.

② Press the **MENU** button.

The main MENU appears.

③ Press the **CH/TRACK** ▼ (or ▲) button to select the Rec. List super option, then press the **SET** button.

The Rec. List super menu appears.

Rec. List super			
Ch	Date	Start	Type
1.			
2.			
3.			
4.			
5.			
6.			
7.			
[SET] → Start			

NOTE: If no cassette tape is loaded, the Rec. List super menu will not be displayed.

④ Press the **SET** button.

The tape rewinds to the beginning. Then the VCR begins scanning the tape for the Rec. List super information and when detected, displays it on screen. Wait for the desired recording to be listed.

Rec. List super			
Ch	Date	Start	Type
1.01	5/06	9:00h	Movie
2.22	5/15	6:30h	-----
3.04	5/21	7:30h	Sport
4.L1	5/27	7:30h	Game
5.05	6/01	SPORTS	DIGEST
6.L1	6/02	6:30h	Child
7.--	-/-	-:-	-----
[1-7] → Select			

⑤ Press the number of the desired recording (1 - 7).

"Searching" will flash on screen while the tape rewinds to the beginning of the selected recording. Playback will start automatically.

NOTES:

- To cancel the operation, press the **STOP** button. The scanned section of the list will be kept in the VCR memory until the tape is removed from the VCR.
- When 8 or more recordings are found on the tape, the list scrolls up, and the last 7 recordings are listed. In order to see the top of the list again, you will have to repeat steps ② - ⑤.
- The list shows " - - " for the sections where there is no data or the data is unreadable (recorded by another VCR, for example).
- A recording shorter than 5 minutes may not be listed.
- The scanned Rec. List super information will be kept in the VCR memory until the tape is removed from the VCR.
- When a second selection for playback is made (after having played the first selection), the tape first rewinds to the beginning before searching for the selected recording.
- If a new recording is made over an old one, the Rec. List super information from the old recording will be deleted.

Rec. List SUPER

Entering the Program Type

To have the program type included in the Rec. List super menu, you must enter the program type before proceeding to step ① of "RECORDING" on page 24.

- The clock must be set before the program type can be selected.

- ① Press the **TYPE** button on the remote control.

The Type input menu will be displayed on screen.

Type+Auto

- ② Press the **TYPE** button repeatedly until the desired program type is displayed.

Each time the TYPE button is pressed, a different type, "-----"-Movie-Talk-Sport (Sports)-Game-Soap-News-Child-Auto is displayed.

Auto: If the recorded program transmission carries title information, it will automatically be entered. Then, when using the Rec. List super function, the title will be displayed (up to 15 characters).

"-----": The program type is not set.

Other settings: When using the Rec. List super function, the setting entered here will be displayed as the program type.

NOTE: To cancel, press the **CLEAR** button.

- ③ Press the **SET** button to enter the settings.

NOTES:

- To enter the selected program type, press the **SET** button within 10 seconds after selecting a program type.
- Program types set manually have priority over automatic settings.
- After pressing the **POWER** button (to switch off the power), or ejecting the cassette, the selected type will be cancelled if no recording have been made.

VHS Hi-Fi AUDIO AND MTS BROADCASTS

VHS Hi-Fi VCRs record and play back two kinds of audio tracks: Hi-Fi stereo tracks (left and right) and a normal (linear) audio track.

- The Hi-Fi tracks contain two separate signals (for example, the left and right channels of a stereo program or the main and second SAP* signals).
- The normal (linear) track is recorded and played back monaurally.

This VCR has a built-in MTS (Multichannel TV Sound) decoder that allows programs with multichannel sound (stereo and SAP* programs) to be received and recorded, as well as regular, non-stereo TV programs.

* MTS broadcasts may contain an optional SAP (Second Audio Program) soundtrack. The SAP soundtrack may carry the same information as the main soundtrack in another language or information that is not related to the video portion of the program.

Stereo/SAP Recording

MTS INDICATORS

On-screen display



When a stereo or SAP broadcast is received, one or both indicators (ST and SAP) are displayed on-screen.

ST: Displayed on-screen when a stereo broadcast is received.

SAP: Displayed on-screen when an SAP broadcast is received.

- No indicator is displayed on-screen when a monaural program is received.
- Both indicators are displayed on-screen when an MTS broadcast contains stereo and SAP signals.

MTS MODE SELECTION

To watch and/or record a stereo or SAP broadcast, set the MTS mode as follows.

- 1 Follow the "Before starting" steps on page 18.

Make sure the input source is set to Tuner. (A channel number is shown on-screen.).

- 1 Press the **MENU** button.

The main MENU appears.

- 2 Press the **CH/TRACK** ▼ (or ▲) button to select the VCR setup option, then press the **SET** button.

The VCR setup menu appears.

- 3 Press the **CH/TRACK** ▼ (or ▲) button to select the MTS option, then press the **SET** button to select the desired mode, as indicated by the "0".

ST (STEREO): To view and/or record a stereo TV program.

The left and right channels are recorded separately on the Hi-Fi audio tracks, and both signals are recorded mixed on the linear track.

SAP: To record or monitor an SAP program.

The main audio signal is recorded on the left Hi-Fi audio track and the second audio signal is recorded on the right Hi-Fi audio track.

The second audio signal is also recorded on the linear audio track.

When the selected MTS mode is SAP, stereo programs will be heard in monaural.

Mono: Use this setting to get better results when watching or recording a program with a weak or noisy stereo signal.

The left and right signals are mixed and recorded on both Hi-Fi tracks and the linear track.

- 4 When finished, press the **MENU** button to exit the menu.

NOTE: Do not change the MTS mode while recording.

AUDIO OUTPUT MODE

Use the VCR setup menu to select the desired audio output mode when playing a tape or viewing a television broadcast.

NOTE: Audio output mode selection is not required when playing back a tape recorded in mono or viewing a mono TV program.

- 1 Follow the "Before starting" steps on page 18.
- 2 Press the **MENU** button.
The main MENU appears.
- 3 Press the **CH/TRACK** ▼ (or ▲) button to select the VCR setup option, then press the **SET** button.
The VCR setup menu appears.

CATV/TV	●CATV TV
Cable box	●No Ch02
MTS	●ST SAP Mono
Audio out	●ST L R Mono
Child Lock	On ●Off
Off timer	●Off 2Hr 6Hr

[CH▼▲]+Option
[SET]+Select [MENU]+TV

- 4 Press the **CH/TRACK** ▼ (or ▲) button to select the Audio out option, then press the **SET** button to select the desired mode, as indicated by the "●".

ST (STEREO): The left channel sound is heard from the left speaker and the right channel sound is heard from the right speaker.

Use this setting to listen to a stereo program or tape in stereo.

L: Left channel sound is heard from both speakers. Use this setting to listen to the left channel of a stereo program or the main audio of a program that contains an SAP soundtrack.

R: Right channel sound is heard from both speakers. Use this setting to listen to the right channel of a stereo program or the SAP soundtrack (if available).

Mono: The sound from the normal audio track (mono or second audio) is heard from both speakers.

- 5 When finished, press the **MENU** button to exit the menu.

SPECIAL PLAYBACK

Picture Search (Forward and Reverse)

- 1 Press the **FF** or **REW** button during normal playback.
The picture plays forward or backward rapidly.
- 2 Press the **PLAY** button to resume normal playback.

Still Image

- 1 Press the **PAUSE/STILL** button during normal playback.
A still image appears on the screen.
- 2 Press the **PLAY** button to resume normal playback.

Slow Motion

- 1 Press the **SLOW** button on the remote control during normal playback.
Slow motion playback starts.
*The slow-motion playback speed switches between 1/5 and 1/30 of normal playback each time the **SLOW** button is pressed.*
- 2 Press the **PLAY** button to resume normal playback.

FR (Fast Response) Search

- 1 Press the **FF** button (in fast forward mode) or the **REW** button (in rewind mode).
The forward or reverse picture can be viewed.
- 2 Press the **FF** or **REW** button again to return to the fast forward or rewind mode.

Frame Advance

- 1 Press the **PAUSE/STILL** button repeatedly during still mode.
The picture advances one frame at a time.
- 2 Press the **PLAY** button to resume normal playback.

Double Speed Playback

- 1 Press the **x2** button during normal playback.
The picture plays back at about 2 times the normal playback speed.
- 2 Press the **PLAY** button to resume normal playback.

Endless Playback

This function will play back a tape to the end, rewind it and then replay and rewind over and over until you stop it.

- 1 In the stop or playback mode, press and hold the **PLAY** button on the front panel, then while holding it down press the **REW** button on the front panel.
The tape rewinds to the beginning, then endless playback starts.
- 2 Press the **STOP** button (or **STOP/EJECT** on the front panel) to cancel endless playback.

NOTE: If an operation button is pressed during endless playback, the function is cancelled.

SPECIAL PLAYBACK

If noise appears on double-speed or slow motion play:

Press and hold the **CH/TRACK** ▼ (or ▲) button (or **CHANNEL** on the front panel) to reduce the noise.

If noise appears on a still picture:

Start slow motion play, and then repeat the operation above.

- This adjustment also corrects tracking errors for a still picture.

If the picture is unstable (vertical jitter) during double speed playback, still or slow motion modes

- 1 Press the **PLAY** button.
 - 2 Press the **PAUSE/STILL** button.
A still image appears on the screen.
 - 3 Press and hold the **CH/TRACK** ▼ or ▲ button (or **CHANNEL** on the front panel) to reduce the vertical jitter.
- This adjustment also corrects tracking errors during double speed playback and slow motion playback.

NOTES:

- During special effects playback, the sound is muted.
- Noise bands (narrow white lines in the picture) may appear during picture search. This is normal and cannot be eliminated by using the tracking control.
- After staying in still or slow motion playback for 5 minutes, the VCR automatically stops.

ZERO SEARCH

Use the zero search function to go back to the beginning of a program immediately after you have recorded it.

- 1 Press the **DISPLAY** button.

The status display appears.

- 2 Press the **RESET** button.

The tape counter resets to 0:00:00.

- 3 Begin playback or recording.

- 4 Press the **STOP** button (or **STOP/EJECT** on the front panel) to stop playback or recording.

- 5 Press the **→0←** button.

"▶▶ 0:00:00 ◀◀" is displayed on screen for about 3 seconds.

The tape rewinds and will stop at or near the counter zero ("0:00:00") position.

NOTES:

- The tape counter indicates tape elapsed time in hours, minutes and seconds.
- When you eject a cassette, the tape counter resets to 0:00:00.
- The tape counter does not operate when a blank tape or a blank portion of a tape is played.
- If the tape is rewound beyond the 0:00:00 counter reading, a negative indicator (-) appears.

INDEX SEARCH

You can easily return to the beginning of the current program or skip to the beginning of the next program and start playback.

- **EXAMPLE:** To skip to the next program.

- 1 Press the **INDEX** button in the play or stop mode.

"◀◀ Index Search ▶▶" will be displayed on-screen.

- 2 Press the **FF** button.

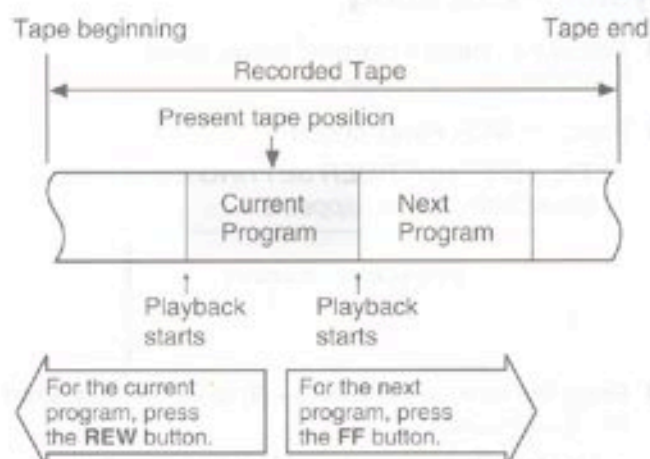
The tape quickly advances to the beginning of the next program.

Playback begins.

NOTES:

- There may be a slight discrepancy between the position shown on the tape counter and the actual tape position.
- Each time a recording is made, an index code is automatically placed on the tape at the beginning of the recording.
- When a recording is resumed after a record pause, no index code is marked.
- The index codes cannot be individually erased. However, when recording over an indexed tape, the old index codes will be erased along with the programs.

INDEX SEARCH Operation



VCR Plus+ PROGRAMMING SYSTEM

You can easily program a timer recording by entering the PlusCode number (3 to 8 digits) published in your TV Guide®, CATV guide or local newspaper.

On any occasion, you can preset a maximum of 8 programs to be recorded during the next 1-year period, including the ones programmed by normal timer recording. See "PROGRAM TIMER RECORDING" on page 34.

You can also set any of the 8 time slots to repeatedly record the same channel at the same time daily (Monday through Friday) or weekly. Daily and weekly settings are retained in the timer memory and will continue to cue the VCR to record as long as tape is available.

During timer programming, you may want to take advantage of convenient features that give you the option of saving the title/type of program being recorded (Rec. List Super, page 25) and having the VCR automatically set the proper tape speed (Smart Speed Record Function, page 35).

NOTE: The clock time must be set before a VCR Plus+ programming system recording can be programmed.

Setting a VCR Plus+ Programming System Recording

- 1 Follow the "Before starting" steps, under "RECORDING" on page 24.

- 2 Press the **VCR Plus+** button.

The VCR Plus+ TIMER SETTING menu (PlusCode number) appears.

PlusCode number

- 3 Press the number buttons (0 - 9) to enter the desired PlusCode number.

- **EXAMPLE:** To enter PlusCode number 4930 to program a recording, at the EP recording speed.
- Press 4 - 9 - 3 - 0

NOTE: If you enter the wrong number by mistake, press the **CLEAR** button to cancel, then enter the correct number.

- 4 Press the **SET** button.

The recording date, start time, end time, channel and recording tape speed appear.

PlusCode number
4930-----
Ch Date Start End
10 3/26Su 4:00PM 6:00PM 2

- 5 Check the channel number displayed on the screen.

For the channel numbers that appear highlighted (gray background instead of green), continue the programming until step 10, and the channel will be memorized. Once a channel has been memorized, its number will not be highlighted.

*If the channel number displayed is incorrect, press the **CLEAR** button to erase the wrong number. Press the number buttons to enter the correct channel number.*

NOTE: Enter the channel number you normally select when using your cable converter/decoder (if you subscribe to a cable TV service), or the channel number you select on the TV (if you do not subscribe to a cable TV service).

- 6 To change the recording tape speed, press the **SP/EP** button.

For automatic speed selection, select "A" for tape speed. (See Smart Speed Record Function on page 35.)

- 7 Press the **MENU** button to select the timer recording mode, if necessary.

Timer Recording Modes

Daily (M-F): Records a program at the same time, Monday through Friday.

Weekly (WK): Records a program on the same day and time each week.

- 8 Press the **CH/TRACK** ▼ or ▲ button to change the recording time, if necessary.

10 minutes are subtracted from or added to the end time.

- 9 Press the **TYPE** button repeatedly to select the desired program type for Rec. List super. (See "Entering the Program Type" on page 26.)

Type and the selected type name will be indicated instead of End and the end time.

Continued on the next page. →

VCR Plus+ PROGRAMMING SYSTEM

- ⑩ When finished, press the **SET** button to save the settings.

The VCR Plus+ TIMER SETTING menu (PlusCode number) appears.

- ⑪ Press the **VCR Plus+** button.

The VCR power turns off and the timer is set to the recording standby mode.

The Timer icon (⏏) appears.

VCR Plus+ PROGRAMMING SYSTEM NOTES:

- If the programmed recording falls on a Saturday or a Sunday, the Daily recording mode will not be possible.
- If you subscribe to cable television, and your cable company changes the channel assignments in your area, it may be necessary to correct some channel numbers as described in item ⑤ on page 32.
- To check, clear and change a timer recording programmed with a PlusCode number, follow the steps under "PROGRAM TIMER RECORDING" on page 36.
- If the displayed data does not correspond to the desired program to record, the wrong PlusCode number has been entered or the clock is set incorrectly.
- When recording cable TV programs using a cable converter/decoder, the channel to be recorded must be selected using the channel selector on the cable converter/decoder.

VCR Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation.

The VCR Plus+ system is manufactured under license from Gemstar Development Corporation.

PROGRAM TIMER RECORDING

The Program Timer switches your VCR on and off to record a TV program at a preset time. On any occasion, you can preset a maximum of 8 programs to be recorded during the next 1-year period, including the ones programmed with the VCR Plus+ system. See "VCR Plus+ PROGRAMMING SYSTEM" on page 32.

You can also set any of the 8 time slots to repeatedly record the same channel at the same time daily (Monday through Friday) or weekly. Daily and weekly settings are retained in the timer memory and will continue to cue the VCR to record as long as tape is available.

During timer programming, you may want to take advantage of convenient features that give you the option of saving the title/type of program being recorded (Rec. List Super, page 25) and having the VCR automatically set the proper tape speed (Smart Speed Record Function, page 35).

NOTE: The clock time must be set before a timer recording can be programmed.

Timer Programming

- 1 Follow the "Before starting" steps, under "RECORDING" on page 24.

- 2 Press the **MENU** button.

The main MENU appears.

- 3 Press the **SET** button.

The Timer program menu appears.

Ch	Date	Start	End	
--	M/DD	H:MM	H:MM	SP
--	-/-	-:-	-:-	-

- 4 Press the number buttons (0 - 9) to set the timer program.

- **EXAMPLE:** To record a program on channel 10 once (Once recording mode) on March 9, from 09:00 PM to 10:30 PM, using the EP recording speed (March 9 = 03/09).

- Channel 10: Press 1 - 0
- Date March 9: Press 0 - 3 - 0 - 9
- Daily/Weekly setting: Press **CH/TRACK** ▲

Timer Recording Modes

Daily (M-F): Records a program at the same time, Monday through Friday.

Weekly (WK): Records a program on the same day and time each week.

Each time the **CH/TRACK** ▲ button is pressed, a different recording mode (Daily - Weekly - Once) is selected.

Set the start and end time.

Start time 9:00 PM: Press 0 - 9 - 0 - 0 - 100/ENTER

End time 10:30: Press 1 - 0 - 3 - 0

The end time AM/PM setting will be entered automatically.

NOTE: If you press the wrong button, press the **CLEAR** button to erase the wrong number. Each time the **CLEAR** button is pressed, the previous number will be erased. Press the correct button to continue.

- 5 To change the recording tape speed, press the **SP/EP** button.

For automatic speed selection, select "A" for tape speed. (See Smart Speed Record Function on next page.)

Ch	Date	Start	End
10	3/09Th	9:00PM	10:30PM EP
--	-/-	-:-	-:-

- 6 Press the **SET** button.

- 7 Press the **TYPE** button repeatedly to select the desired program type for Rec. List super. (See "Entering the Program Type" on page 26.)

Type and the selected type name will be indicated instead of End and the end time.

- 8 Press the **SET** button.

The next timer recording slot can be programmed. When two or more program timer recordings are set, they will be listed in chronological order of the recording start times with the earliest time listed first.

- 9 When finished, press the **MENU** button to exit the menu.

- 10 Press the VCR **POWER** button.

The VCR power turns off and the timer is set to the recording standby mode.

The Timer indicator lights.

PROGRAM TIMER RECORDING

Smart Speed Record Function

When the Smart Speed Record function is set, the VCR automatically calculates the remaining time left on the tape during timer recording. If there is not enough time left for the program to be taped, the VCR switches the recording speed from SP (standard play) to EP (extended play) to enable the entire program to fit onto the remaining tape.

For example, when recording a 150-minute program onto a T-120 (120-minute) tape:

The recording will be done in SP mode for almost 105 minutes and in EP mode for the last 45 minutes.

NOTES:

- This feature is not available during Quick Timer Recording (QTR).
- This feature will not work properly on T-140 tapes or tapes longer than T-160. (The feature will work on T-160 tapes.)
- If two or more timer recordings are programmed, all the programs may not fit onto a single tape. In that case, make sure the Smart Speed Record mode is not set, and select the recording speed manually.
- There may be some interference in the image at the point where the speed has been switched.
- If a program to be taped cannot fit into the remaining time left on the tape, even in EP mode, the program will not be recorded till the end.

Setting a Program Timer Recording Using the Buttons on the VCR

If the remote control does not operate or is not available you can use the buttons on the VCR front panel to set a program timer recording.

NOTE: Eject the cassette tape, before proceeding with the steps below.

- 1 Press and hold the **REC** button on the front panel for about 5 seconds.

The Timer program menu appears.

If the clock has not yet been set, the Clock set menu appears.

*If necessary, the clock can also be set using the **CHANNEL** ∇ (or \blacktriangle) and **FF** buttons. (Refer to the next step for button functions.)*

- 2 Use the **CHANNEL** ∇ (or \blacktriangle) and **FF** buttons on the VCR front panel to program the timer.

CHANNEL button: To select numbers or switch settings

FF button: To select the next item

NOTE: If you enter the wrong number or setting, press the **REW** button to return to the wrong number or setting, then enter the correct one.

- 3 When finished, press the **REC** button on the front panel to save the settings.
- 4 Load a cassette.
- 5 Press the **POWER** button.

NOTES:

- Daily or weekly recording, or the program type cannot be set using this method.
- Once a program timer recording has been set, it cannot be erased using the buttons on the VCR front panel.
- When the recording tape speed is set, you can confirm it by pressing the **FF** button on the VCR front panel.

PROGRAM TIMER RECORDING

Checking the Program Timer

1 Turn on the power (TV and VCR).

2 Set the TV to channel 3 or 4.

3 Press the **MENU** button.

The main MENU appears.

4 Press the **SET** button.

The programmed recordings are listed.

NOTE: To display the program type, press the **TYPE** button after selecting the desired program using the **CH/TRACK** ▼ (or ▲) button.

5 When finished, press the **MENU** button to exit the menu.

6 Press the **POWER** button.

The VCR power turns off and the timer is set to the recording standby mode.

The Timer indicator lights.

Clearing the Program Timer

1 Follow steps 1 – 4 in "Checking the Program Timer".

2 Press the **CH/TRACK** ▼ (or ▲) button to select the program to be cleared.

3 Press the **CLEAR** button.

The erase confirmation screen appears.

4 Press the **CLEAR** button again. (To cancel the erase procedure, press the **SET** button.)

The selected timer program is erased from the program memory.

5 When finished, press the **MENU** button to exit the menu.

6 Press the **POWER** button.

Changing the Program Timer

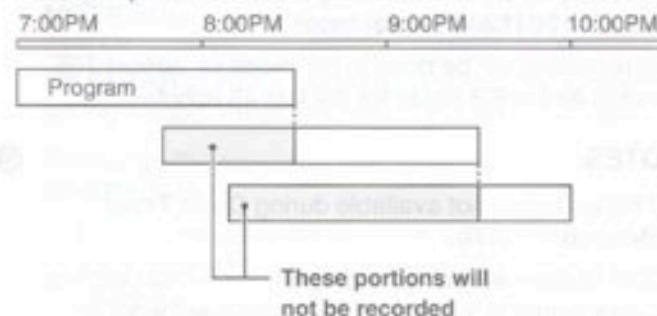
1 Follow the steps under "Clearing the Program Timer" to erase the program that you wish to change.

2 Follow the steps under "Setting a VCR Plus+ Programming System Recording" or "Timer Programming" to add a new timer program.

Using Timer Recording for Several Programs

If two or more programmed recording times overlap on the same day, the VCR will not begin recording a new program until the previous program has ended (as shown below).

Program Recording Order



TIMER SETTING NOTES:

- If the programmed recording falls on a Saturday or a Sunday, the Daily recording mode will not be possible.
- To select the A/V recording mode, press the **INPUT** button instead of selecting a channel number.
- 12:00 PM = noon; 12:00 AM = midnight.
- If the end of the tape is reached during timer recording, the VCR stops and the power turns off automatically.
- If the power fails or the VCR is unplugged from the AC outlet, the correct clock time and timer settings are kept in memory for approximately 1 hour. After 1 hour, the clock and program timer must be reset when power is restored. Refer to INITIAL SETUP to set the VCR.
- If a program timer is set and a tape is not loaded into the VCR, the **TIMER** indicator will flash.

QUICK TIMER RECORDING (QTR)

As the name suggests, the QTR feature provides a quick and simple way to set the timer to record. A QTR setting overrides Program Timer settings.

- The clock must be set before Quick Timer Recording can be performed.
- To set the type of the recording, first follow the steps under Entering the Program Type on page 26.
- Start a recording following the instructions for "RECORDING", steps ① - ④ on page 24.

- ① Press the **REC** button during recording.

QTR -- : -- will be displayed on-screen.



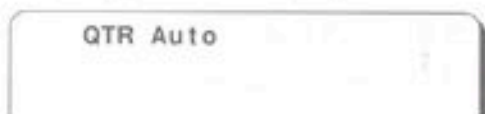
- ② Set the recording end time using the **REC** button (to advance the time in 30-minute increments to the nearest hour or half hour) or the **CH/TRACK** ▼ (or ▲) button (or **CHANNEL** on the front panel) (to increase or decrease the time in 1-minute increments).

NOTES:

- The end time can be advanced for a total of up to 24 hours.
- Recording ends if the end of the tape is reached.
- To stop recording before the end time is reached, press the **STOP** button (or **STOP/EJECT** on the front panel).

Auto Setting

If an XDS-encoded broadcast is being recorded, "Auto" appears at step ① above and blinks for 10 seconds on-screen. The VCR timer received the end time information from the XDS signal and recording will be made automatically to end of the program.



Notes on using the AUTO setting

- To set the recording end time manually, press the **REC** button while "Auto" is blinking. The display will switch to "-- : 30" or "-- : 00". Then use the **REC** button and/or the **CH/TRACK** ▼ (or ▲) button to set the recording end time.
- Depending on the reception conditions of TV signal or remaining program duration, the AUTO QTR operation may not be accurate.

CHILD LOCK

With the Child Lock function on, the picture is blanked and the sound muted, virtually blocking the ability to view a videotape or TV program received through the VCR tuner.

- 1 Press the **MENU** button.

The main MENU appears.

- 2 Press the **CH/TRACK** ▼ (or ▲) button to select the VCR setup option, then press the **SET** button.

The VCR setup menu appears.

- 3 Press the **CH/TRACK** ▼ (or ▲) button to select the Child Lock option, then press the **SET** button to select the "On" position, as indicated by the "0".

NOTE: Select the "Off" position to cancel the child lock function.

- 4 When finished, press the **MENU** button to exit the menu.

While the child lock function is active, the message "Blocked" will appear on the TV screen.

NOTES:

- Even when the child lock function is activated, timer recording and other functions can still operate normally.
- Since the child lock function can be activated or deactivated by remote control, you may wish to store the remote control in a secure location while the child lock function is activated.

Ad JUMP™

The Ad JUMP™ feature allows you to skip through to the end of a commercial break at a faster speed and resume normal playback at the point when the program restarts.

- 1 During playback, press the **Ad JUMP** button when a commercial starts.

Forward picture search begins.

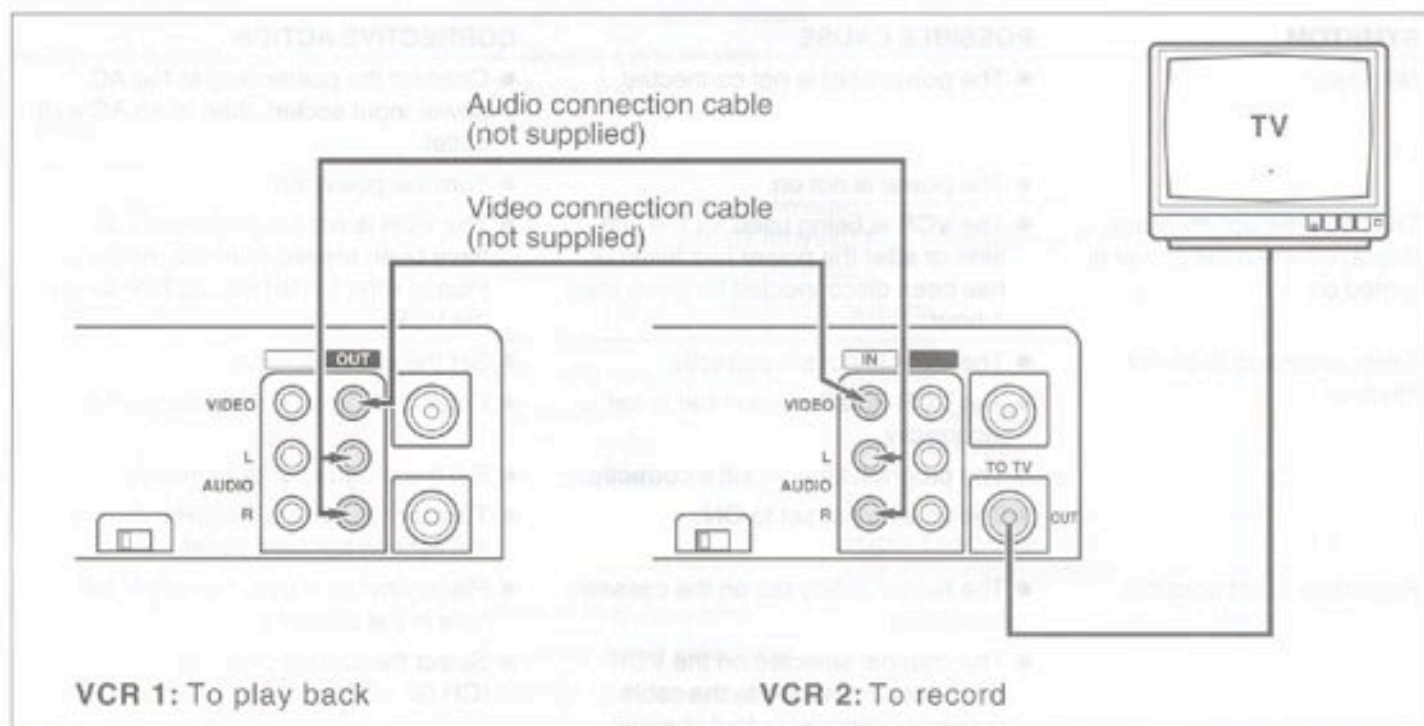
The sound is muted.

- 2 Press the **Ad JUMP** or the **PLAY** button when the commercial ends.

The tape will rewind for a few seconds, then playback will resume.

COPYING A TAPE

You can copy recordings (such as home videos) from one tape to another using two VCRs.



- ❶ Connect the VCRs as shown.
 - ❷ Insert the recorded cassette into VCR 1.
 - ❸ Insert a blank tape into VCR 2.
 - ❹ Set the desired recording speed on VCR 2.
 - ❺ Turn on the TV and set it to channel 3 or 4.
- If you use this model as VCR 2 to record:
- Press the **INPUT** button on VCR 2 to select the rear input jacks.
"L1" appears on the screen.
- ❻ Press the **TV/VCR** button on VCR 2 to select the VCR mode.
 - ❼ Place VCR 2 in the record/pause mode.
 - ❽ Press **PLAY** on VCR 1.
 - ❾ When the tape in VCR 1 has reached the desired point, press (release) **PAUSE/STILL** on VCR 2. Recording begins.
 - ❿ Press **STOP** (or **STOP/EJECT** on the front panel) on both VCRs when finished.

MAINTENANCE

Head Care and Cleaning

- Under normal conditions, the heads should not require cleaning. If you suspect a problem, contact a factory-authorized service center.

Cabinet Cleaning

- Clean the outside of the cabinet with a clean, soft cloth, moistened with lukewarm water and wrung dry.

DO NOT USE SOLVENTS OR OTHER TYPES OF CLEANSERS. THESE CHEMICALS CAN CRACK OR DISCOLOR THE CABINET.

TROUBLESHOOTING GUIDE

If you have followed the instructions in this manual and still have difficulty operating your VCR, check the steps below before getting help from a factory-authorized service center.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
No power.	<ul style="list-style-type: none"> • The power cord is not connected. • The power is not on. 	<ul style="list-style-type: none"> • Connect the power cord to the AC power input socket, then to an AC wall outlet. • Turn the power on.
The "Auto Setup" message is displayed when the power is turned on.	<ul style="list-style-type: none"> • The VCR is being used for the first time or after the power has failed or has been disconnected for more than 1 hour. 	<ul style="list-style-type: none"> • The VCR is not set or the settings have been erased from the memory. Please refer to INITIAL SETUP to set the VCR.
Timer recording does not function.	<ul style="list-style-type: none"> • The clock is not set correctly. • The VCR PlusCode number is set incorrectly. • The program timer is set incorrectly. • The timer is not set to ON. 	<ul style="list-style-type: none"> • Set the clock correctly. • Enter the correct PlusCode number. • Set the program timer correctly. • Turn the power off. TIMER indicator will light on the front panel.
Recording is not possible.	<ul style="list-style-type: none"> • The record safety tab on the cassette is missing. • The channel selected on the VCR does not correspond to the cable converter/decoder output channel. 	<ul style="list-style-type: none"> • Place vinyl tape over the safety tab hole in the cassette. • Select the correct channel (CH 02 - 07).
The picture is poor during playback.	<ul style="list-style-type: none"> • The TV channel selector is not set to the proper channel. • The TV fine tuning is not set correctly. 	<ul style="list-style-type: none"> • During playback, set the TV's channel selector to channel 3 or 4 to match the VCR's channel switch setting. • Fine-tune the TV. • If the playback picture is still poor, contact a factory-authorized service center.
White lines (noise bands) in the picture during playback.	<ul style="list-style-type: none"> • Poor quality recording or tape. 	<ul style="list-style-type: none"> • Try a different tape.
No picture during playback.	<ul style="list-style-type: none"> • The TV is not set to the proper channel. 	<ul style="list-style-type: none"> • Set the TV's channel selector to match the VCR's channel switch setting (channel 3 or 4).
Playback picture is partially noisy. (horizontal white lines)	<ul style="list-style-type: none"> • The tracking control is not set to the proper position. 	<ul style="list-style-type: none"> • Adjust the tracking control for a better picture.
TV programs cannot be seen.	<ul style="list-style-type: none"> • The cable connections are incorrect. 	<ul style="list-style-type: none"> • Recheck all cable connections.
The remote control does not operate.	<ul style="list-style-type: none"> • Temporary problem with the internal circuitry. 	<ul style="list-style-type: none"> • Remove the batteries from the remote control for 10 minutes or more, then reinstall the batteries and try again.
A mechanical noise is heard if the unit is left in the stop mode for 5 minutes or more with the power on.	<ul style="list-style-type: none"> • The tape-protection mechanism has been activated automatically. (This is not a malfunction.) 	

SPECIFICATIONS

General Specifications

Television system	NTSC standard system		
Recording system	Rotary helical scan system		
Number of heads	4, Double azimuth video 2, Audio FM		
Format	VHS standard		
Tape width	1/2 inch		
Tape speed	SP : 1.31"/sec. (33.35 mm/sec.) LP : 0.65"/sec. (16.67 mm/sec.) (playback only) EP : 0.43"/sec. (11.12 mm/sec.)		
Recording time	SP : 120 minutes with T-120 cassette EP : 360 minutes with T-120 cassette EP : 480 minutes with T-160 cassette		
Tuner receivable channels (181 total)	TV Position VHF channels 2-13 UHF channels 14-69	CATV Position VHF channels Mid band channels Super band channels Hyper band channels Mid low band channels	1-13 14-22 23-36 37-94, 100-125 95-99
RF converter	Built-in VHF converter		
Converter output	Channel 3 or 4 selectable		
Time indication	AM/PM 12-hour system		
Timer	1 year/8-event programmable		

Terminals

Antenna input	VHF/UHF: F type
Antenna output	VHF/UHF: F type
Video input/output	RCA jack
Audio input/output	RCA jack

Electrical Specifications

Video output level/impedance	1 V(p-p)/75 ohms
Audio output level/impedance	316 mV (-10 dBV)/less than 2.2 kohms
Video input level/impedance	500 mV(p-p) - 2.0 V(p-p)/75 ohms
Audio input level/impedance	316 mV (-10 dBV)/more than 47 kohms

Other Specifications

Power requirements	120 V AC, 60 Hz
Power consumption	14 watts
Dimensions (W x H x D)	14.17" x 3.82" x 10.75" (360 mm x 97 mm x 273 mm)
Weight (approximate)	3.0 kg (6.6 lbs.)

The manufacturer reserves the right to modify product designs and specifications without notice and without incurring any obligation.



For assistance in obtaining repairs and operational or technical information, please contact the following Toll Free Number:

DIAL TOLL FREE: 1-800-813-3435

Weekdays 7:30AM ~ 4:00PM Central Time

Also, you may write to SANYO Manufacturing Corporation, 3333 Sanyo Road Forrest City Arkansas 72335

LIMITED WARRANTY

LABOR 90 DAYS

PARTS 1 YEAR

CARRY-IN ONLY

THIS WARRANTY IS VALID ONLY ON SANYO PRODUCTS PURCHASED FROM A WAL-MART STORE AND USED IN THE UNITED STATES OF AMERICA, EXCLUDING HAWAII AND ALL U.S. TERRITORIES AND PROTECTORATES. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL RETAIL PURCHASER AND DOES NOT APPLY TO PRODUCTS USED FOR ANY INDUSTRIAL, PROFESSIONAL OR COMMERCIAL PURPOSE.

Subject to the OBLIGATIONS and EXCLUSIONS below, SANYO FISHER Service Corporation. ("SANYO") warrants this SANYO product against defects in materials and workmanship for the periods of LABOR and PARTS specified above. SANYO will repair or replace (at its option) the product and any of its parts which fail to conform to this warranty with new or refurbished products or parts. The warranty period commences on the date the product was first purchased at retail from a Wal-Mart Store.

OBLIGATIONS

In order to obtain warranty service, the product must be delivered to and picked up from a Wal-Mart Store at the original retail purchaser's expense. The original dated bill of sale, or sales slip from a Wal-Mart Store must be submitted to a Wal-Mart Store at the time warranty service is requested.

EXCLUSIONS

1. This warranty does not cover (A) the adjustment of customer-operated controls as explained in the appropriate model's instruction manual, or (B) the repair of any product whose serial number has been altered, defaced or removed.
2. This warranty shall not apply to the cabinet or cosmetic parts, broken or damaged video heads, batteries or routine maintenance.
3. This warranty does not apply to uncrating, setup, installation, removal of the product for repair or reinstallation of the product after repair.
4. This warranty does not apply to repairs or replacements necessitated by any cause beyond the control of SANYO including, but not limited to, any malfunction, defect or failure caused by or resulting from unauthorized service or parts, improper maintenance, operation contrary to furnished instructions, shipping or transit accidents, modification or repair by user or any third party, abuse, misuse, neglect, accident, incorrect line voltage, fire, flood or other Acts of God, or normal wear and tear.

The foregoing is in lieu of all other express warranties and SANYO does not assume or authorize any party to assume for it any other obligation or liability.

THE DURATION OF ANY WARRANTIES WHICH MAY BE IMPLIED BY LAW (INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS) IS LIMITED TO THE TERM OF THIS WARRANTY. IN NO EVENT SHALL SANYO OR THE MANUFACTURER OF THE PRODUCT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM OWNERSHIP OR USE OF THIS PRODUCT, OR FOR ANY DELAY IN THE PERFORMANCE OF ITS OBLIGATIONS UNDER THIS WARRANTY DUE TO CAUSES BEYOND ITS CONTROL.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS AND/OR DO NOT ALLOW THE EXCLUSION OR LIMITATION OF CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIAL LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

For your protection in the event of theft or loss of this product, please keep the following information with a sales receipt in a safe place.

Model No. _____

Serial No. _____

Date of Purchase _____

Purchase Price _____

Where Purchased _____

SANYO

SANYO FISHER Service Corporation

SANYO

SANYO Electric Co., Ltd.

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(1199KP-SJC)

Issue No. 1

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