

## Cassette-Corder

### Operating Instructions

## TCM-473V/455V/454VK/453V

Sony Corporation © 1998 Printed in Taiwan, R.O.C.

### For customers in the United States

#### Owner's Record

The model number is located at the bottom and the serial number is located inside the cassette holder. Record the model and serial numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

#### WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

## Welcome!

Thank you for purchasing the Sony Cassette-Corder. Some features are:

- VOR (Voice Operated Recording) system that starts and stops recording automatically in response to the sound, to save tapes and batteries.
- SPEED CONTROL function that lets you increase or decrease the tape playback speed.
- Stereo playback function that lets you enjoy pre-recorded stereo tapes with the supplied headphones (TCM-473V only).

## About This Manual

The instructions in this manual are for 4 models. The TCM-453V is the model used for illustration purposes. Their differences are shown in the table below:

	TCM-473V	454VK	455V/453V
EAR (earphone) jack	—	○	○
⌚ (Stereo headphones) jack	○	—	—
Battery charger adaptor	—	○	—
Rechargeable batteries	—	○	—
AC power adaptor	—	○	—

○: provided or supplied —: not provided or not supplied

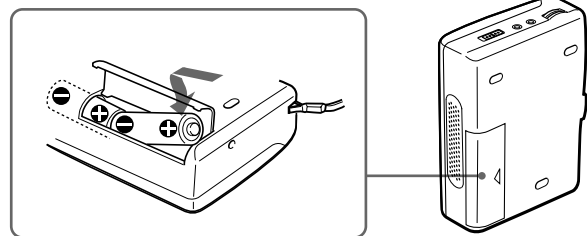
### ▶ Getting Started

## Preparing a Power Source

Choose one of the following power sources.

#### Dry Batteries

Make sure that nothing is connected to the DC IN 3V jack.

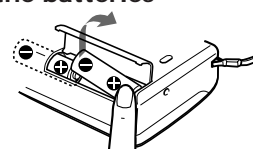


- 1 Open the battery compartment lid.
- 2 Insert two size R6 (AA) batteries (TCM-455V for U.S.A.: supplied/Other models: not supplied) with correct polarity and close the lid.

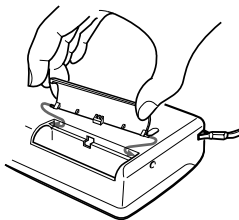
#### Notes

- Do not charge a dry battery.
- Do not use a new battery with an old one.
- Do not use different types of batteries.
- When you do not use the unit for a long time, remove the batteries to avoid any damage caused by battery leakage and subsequent corrosion.
- Dry batteries will not be expended when another power source is connected.

#### To take out the batteries

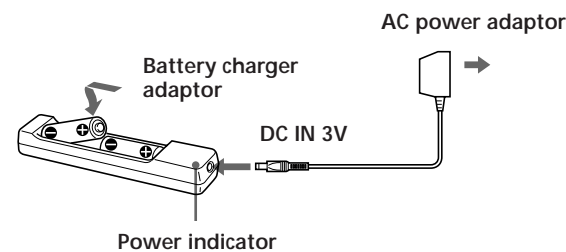


To attach the battery compartment lid if it is accidentally detached



#### Rechargeable Batteries (supplied to TCM-454VK only)

Before using the rechargeable batteries, charge them with the supplied battery charger adaptor and AC power adaptor.



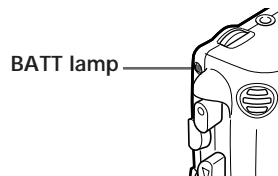
- 1 Insert the rechargeable batteries (NC-AA) into the battery charger adaptor with correct polarity.
- 2 Connect the AC power adaptor (supplied to TCM-454VK) to the DC IN 3V jack of the battery charger adaptor and to the wall outlet. The power indicator lights up.
- 3 Unplug the AC power adaptor from the wall outlet and from the battery charger adaptor after about eight hours.

#### Notes

- The power indicator lights in green as long as the AC power adaptor is plugged to the wall outlet and the DC IN 3V jack, even when the charging has not been done.
- Use only the supplied or recommended AC power adaptor, battery charger adaptor and rechargeable batteries.
- The rechargeable batteries can be charged approximately 500 times.
- Do not leave the battery charger adaptor plugged in for more than 20 hours. Overcharging may damage the rechargeable batteries.

#### When to replace the batteries

Replace the batteries with new ones or charge the batteries (TCM-454VK only) when the BATT lamp dims.



#### Notes

- After the batteries have been used for a while, the BATT lamp may flicker with the playback sound when you turn up the volume; however, this does not mean that you need to replace the batteries.

- The unit will play back normally for a while even after the BATT lamp dims. However, replace the batteries as soon as you can. If you do not, subsequent recording will not be done correctly.

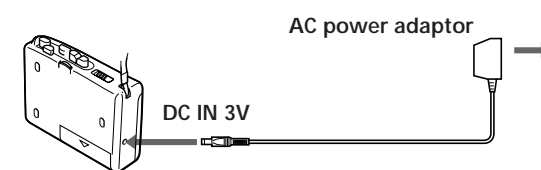
Battery life (Approximate hours)	(EIAJ*)	
	Playback	Recording
Sony alkaline LR6 (SG)	11	11
Sony R6P (SR)	3	3
Sony rechargeable battery (NC-AA) fully charged (TCM-454VK only)	(Models for U.S.A. and Canada)	
	3	3
	(Model for Europe)	
	3.5	4

\* Measured value by the standard of EIAJ (Electronic Industries Association of Japan). (Using a Sony HF series cassette tape)

#### Note

The battery life may shorten depending on the operation of the unit.

#### House Current



Connect the AC power adaptor to DC IN 3V and to the wall outlet. The AC power adaptor is supplied only with the TCM-454VK. For other models, use the AC-E30HG AC power adaptor (not supplied). Do not use any other AC power adaptor.

#### Polarity of the plug



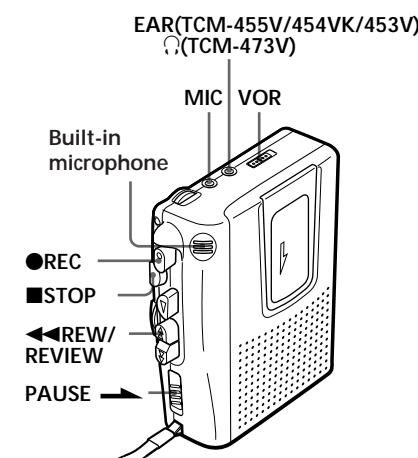
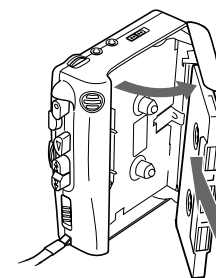
#### Note

Specifications for AC-E30HG varies for each area. Check your local voltage and the shape of plug before purchasing.

### ▶ Operating the Unit

## Recording

You can record right away with the built-in microphone. Make sure that nothing is connected to the MIC jack.



- 1 Insert a normal (TYPE I) tape with the side to start recording facing the cassette holder.
- 2 Set VOR to: H or L to start and pause recording automatically to the sound.  
H (high) to record at meetings or in a quiet and/or spacious place.  
L (low) to record for dictation or in a noisy place.  
OFF to start and stop recording manually.

#### Note

When the sound to be recorded is not loud enough, set the VOR switch to OFF, or the unit may not start recording.

- 3 Press ● REC. Recording starts.

At the end of the tape, recording stops and the unit turns off automatically.

To	Press or slide
Stop recording	■ STOP
Pause recording	PAUSE ➡ in the direction of the arrow To release pause recording, release PAUSE ➡*.

Review the portion just recorded	Press and hold ◀◀ REW/REVIEW during recording. Release the button at the point to start playback.
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\* PAUSE ➡ will be also automatically released when ■ STOP is pressed (stop-pause-release function).

#### To monitor the sound

For TCM-473V: Connect stereo headphones (supplied) firmly to the ⌚ (headphones) jack.

For TCM-455V/454VK/453V: Connect an earphone (not supplied) firmly to the EAR jack.

#### Notes

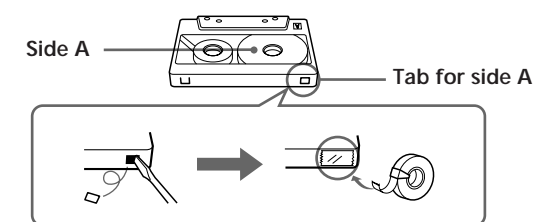
- Do not use a CrO<sub>2</sub> (TYPE II) or metal (TYPE IV) tape, otherwise the sound may be distorted when you play back the tape, or the previous recording may not be erased completely.
- The SPEED CONTROL switch works in the playback mode only. Recording will be made independent of this control.

#### Notes on VOR (Voice Operated Recording)

- When you use the VOR system in a noisy place, the unit will stay in the recording mode. If the sound is too soft, on the contrary, the unit will not start recording. Set VOR to H (high) or L (low) depending on the conditions to pick up necessary sound only.
- The VOR system depends on the environmental conditions. If you cannot get the desired results even though you adjust VOR to H or L, set VOR to OFF.

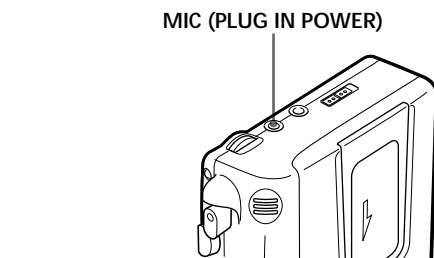
#### To prevent a tape from being accidentally recorded over

Break out and remove the cassette tabs. To reuse the tape for recording, cover the tab hole with adhesive tape.



## Recording from Various Sound Sources

The sound is recorded in monaural.



### Recording with an External Microphone

Connect a microphone to the MIC jack. The raised dot near the MIC jack identifies as the jack for a microphone, not an earphone. For TCM-455V for U.S.A.: Use the supplied microphone. For other models: Use a microphone of low impedance (less than 3 kilohms) such as ECM-T110 (not supplied).

When using a plug-in-power system microphone, the power to the microphone is supplied from this unit.

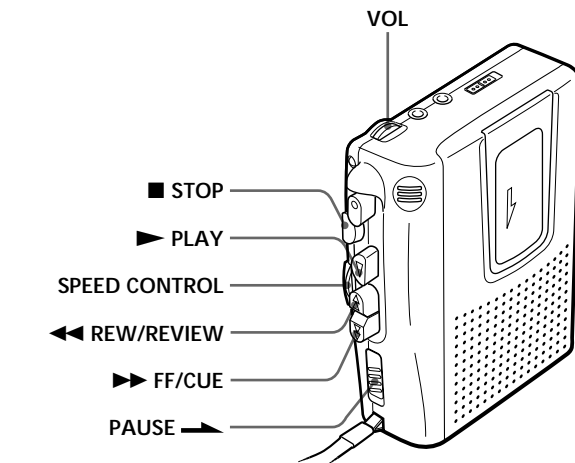
#### Note

When recording with an external microphone, the VOR system may not work properly because of the difference in sensitivity.

### Recording from Another Equipment

Connect another equipment to the MIC jack using the RK-G64HG connecting cord (not supplied).

## Playing a Tape



- 1 Insert a cassette with the side to start playing facing the cassette holder.
- 2 Adjust the tape playback speed. Set SPEED CONTROL to: SLOW (slow) to play back a tape slower. Center position to playback a tape at normal speed. FAST (fast) to play back a tape faster.
- 3 Press ► PLAY then adjust the volume. There is a raised dot to show the direction to turn down volume beside VOL.

At the end of the tape, playback stops and the unit turns off automatically.

To	Press or slide
Stop playback/stop fast forward or rewind	■ STOP
Pause playback	PAUSE ► in the direction of the arrow To release pause playdack, release PAUSE ►*.
Search forward during playback (CUE)	Press and hold ►► FF/CUE and release it at the point you want
Search backward during playback (REVIEW)	Press and hold ◄◄ REW/REVIEW and release it at the point you want
Fast forward**	►► FF/CUE during stop
Rewind**	◄◄ REW/REVIEW during stop
Start recording during playback	● REC

\* PAUSE ► will be also automatically released when ■ STOP is pressed (stop-pause-release function).

\*\*If you leave the unit after the tape has been wound or rewound, the batteries will be consumed rapidly. Be sure to depress ■ STOP.

### To play back a tape recorded in stereo (TCM-473V only)

The built-in speaker on this unit is monaural.

To enjoy stereo sound, use the supplied headphones.

## ► Additional Information

## Precautions

### On power

- Operate the unit only on 3V DC. For AC operation, use the AC power adaptor recommended for the unit. Do not use any other type. For battery operation, use two size R6 (AA) batteries.

### On the unit

- Do not leave the unit in a location near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Should any solid object or liquid fall into the unit, remove the batteries or disconnect the AC power adaptor, and have the unit checked by qualified personnel before operating it any further.
- Keep personal credit cards using magnetic coding or spring-wound watches etc. away from the unit to prevent possible damage from the magnet used for the speaker.
- If the unit has not been used for a long time, set it in the playback mode and warm it up for a few minutes before inserting a tape.

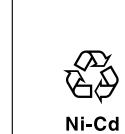
### On tapes longer than 90 minutes

We do not recommend the use of tapes longer than 90 minutes except for a long continuous recording or playback. They are very thin and tend to be stretched easily.

### For the customers in the USA and Canada

#### RECYCLING NICKEL-CADMIUM BATTERIES (Supplied to TCM-454VK only)

#### NICKEL-CADMIUM BATTERY. BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY.



Nickel-Cadmium batteries are recyclable. You can help preserve our environment by returning your unwanted batteries to your nearest Sony Service Center or Factory Service Center for collection, recycling or proper disposal.

**Note:** In some areas the disposal of nickel-cadmium batteries in household or business trash may be prohibited.

For the Sony Service Center nearest you call 1-800-222-SONY (United States only)  
For the Factory Service Center nearest you call 416-499-SONY (Canada only)

**Caution:** Do not handle damaged or leaking nickel-cadmium batteries.

If you have any questions or problems concerning your unit, please consult your nearest Sony dealer.

## Troubleshooting

Should any problem persist after you have made these checks, consult your nearest Sony dealer.

### You cannot press ● REC.

- The tab on the tape has been removed.

### You cannot press ► PLAY.

- The tape has reached the end. Rewind the tape.

### The unit does not operate.

- The batteries have been inserted with incorrect polarity.
- The batteries are weak.
- PAUSE ► is slid in the direction of the arrow.
- The AC power adaptor or car battery cord is not firmly connected.
- The batteries have been inserted, but simultaneously the AC power adaptor is connected and not to be done to the wall outlet.

### No sound comes from the speaker.

- The earphone or headphones is plugged in.
- The volume is turned down completely.

### Tape speed is too fast or too slow in the playback mode.

- SPEED CONTROL is set at a point other than the center.

### The sound drops out or comes with excessive noise.

- The volume is turned down completely.
  - The batteries are weak.
  - The heads are contaminated. See “Maintenance.”
- ### Recording cannot be made.
- Connection is made incorrectly.
  - The batteries are weak.
  - The record/playback head is contaminated.
  - VOR has been set to the improper position when VOR function works.

### Recording is interrupted.

- VOR is set to H or L. When you do not use VOR, set it to OFF.

### Recording cannot be erased completely.

- The erase head is contaminated.
- Recording or erasing is being made using recorded CrO<sub>2</sub> (TYPE II) or metal (TYPE IV) tape.

## Specifications

### Recording system

2-track 1 channel monaural

### Frequency range

TCM-473V: Recording: 250-6,300Hz

Playback: 100-8,000Hz

TCM-455V/454VK/453V: 250-6,300Hz

### Speaker

Approx. 3.6 cm (1<sup>1</sup>/<sub>16</sub> in.) dia.

### Power output

TCM-473V: 130mW (at 10 % harmonic distortion)

TCM-455V/454VK/453V: 300mW (at 10 % harmonic distortion)

### Input

TCM-473V: Microphone input jack (minijack) sensitivity 0.2

mV for 3 kilohms or lower impedance microphone

TCM-455V/454VK/453V: Microphone input jack (minijack)

sensitivity 0.14 mV for 3 kilohms or lower impedance microphone

### Output

TCM-473V: ◯ (headphones) jack (stereo minijack) for 8-300 ohms headphones

TCM-455V/454VK/453V: Earphone jack (minijack) for 8 - 300 ohms earphone

### Variable range of the tape speed

from +30% to -15%

### Power requirements

- Two size R6 (AA) batteries (TCM-455V for U.S.A.: supplied. Other models: not supplied): 3V DC

- Two NC-AA rechargeable batteries (1.2 V) (supplied to TCM-454VK)

DC IN 3 V jack accepts:

- Sony AC power adaptor (supplied to TCM-454VK) or AC-E30HG AC power adaptor (not supplied) suitable in the country where the unit is to be used.

- Sony DCC-E230 car battery cord (not supplied) for use on 12 V car battery.

### Dimensions (w/h/d) (incl. projecting parts and controls)

113 × 91 × 37 mm (4<sup>1</sup>/<sub>2</sub> × 3<sup>3</sup>/<sub>8</sub> × 1<sup>1</sup>/<sub>2</sub> in.)

### Mass (not incl. batteries)

TCM-473V: 185g (6.6 oz.)

TCM-455V/454VK/453V: 170g (6.0 oz.)

### Supplied accessories

Hand strap (1) (attached to the unit)

AC power adaptor (1) (TCM-454VK)

Battery charger adaptor (1) (TCM-454VK)

Rechargeable batteries (TCM-454VK) (2)

(Models for U.S.A. and Canada: NC-AA, 1.2V, 600mAh, Ni-Cd)

(Model for Europe: NC-AA, 1.2V, 700mAh, Ni-Cd)

Cassette tape DC-90 (TCM-455V for U.S.A.) (1)

Sony alkaline battery LR6 (SG) (TCM-455V for U.S.A.) (2)

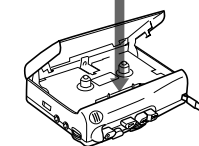
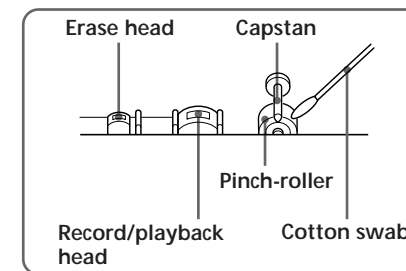
Microphone (TCM-455V for U.S.A.) (1)

Carrying pouch (TCM-455V for U.S.A.) (1)

Headphones (1) (TCM-473V)

Design and specifications are subject to change without notice.

## Maintenance



### To clean the tape heads and path

Wipe the heads, pinch rollers, and the capstans with a cotton swab moistened with alcohol every 10 hours of use.

### To clean the exterior

Use a soft cloth slightly moistened in water. Do not use alcohol, benzine or thinner.

### Note (TCM-473V only)

Clean the headphones plug periodically.

This warranty is valid only in the United States.

