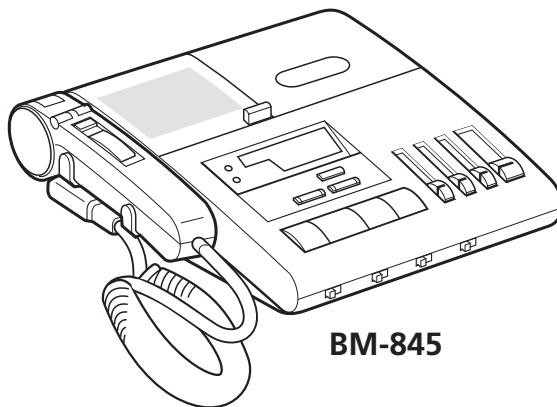


SONY[®]

3-859-341-11(1)

Microcassette Dictator/Transcriber

Operating Instructions



BM-845

BM-845D

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WARNING

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

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

CAUTION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Owner's Record

The model and serial numbers are located on the bottom. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. BM-845 Serial No. _____

Precautions

On safety

- Should any solid object or liquid fall into the unit, unplug the unit and have it checked by qualified personnel before operating it any further.

On power sources

- Operate the unit only on 9 V DC.
- For AC operation, use the AC power adaptor supplied with this unit. Do not use any other AC power adaptor as it may cause malfunction.
- Unplug the AC power adaptor from the wall outlet when it will not be used of an extended period of time. To disconnect the adaptor, pull it out by grasping the adaptor. Never pull it by the cord.
- The AC power adaptor which has been supplied becomes hot if it is connected to an AC outlet for a long period of time. But, this will not cause any trouble.

On placement

- Do not install the unit in a location near heat sources, such as radiators or airducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration, or shock.
- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit near materials (curtains, draperies) that may block the ventilation holes.

If you have any question or problem concerning your unit that is not covered in this manual, please consult the Sony dealer from whom you purchased the unit.

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About This Manual

The instructions in this manual are for the BM-845D. The main unit is the BM-845. You can use the BM-845D as a dictator since the BM-845D is supplied with accessories for dictating. You can also use the BM-845D as a transcriber if you buy the accessories for transcribing such as the foot control unit (not supplied).

Features

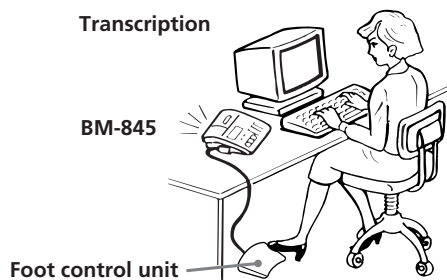
As a dictator

- The hand control unit remotely controls the BM-845.
- The electronic indexing function signal—"LTR" (end of letter) signal—can be recorded on a tape during dictating, listening or in the stop mode.
- The REC/ERASE lamp for checking that the recording or erasing is done.
- Alarm sound and indication on the display window informs recording error.
- With the use of the DE-45 or MDR-U10M earphones (not supplied), you can monitor the sound with the desired sound level during recording.



As a transcriber

- The foot control unit (not supplied) allows you to move the tape without using your hands.
- Auto-stop function quickly accesses instructions and documents.
- Auto backspace function with the REVERSE TIME control makes transcribing easy by enabling the reviewing of the last recorded words each time listening is resumed.
- Two tape speeds (2.4 cm/sec. and 1.2 cm/sec.) can be selected according to the user's needs.
- Rapid erasing function with ERASE and REW buttons.
- The index signals which were recorded using a Sony Professional Dictating Machine are used in the AUTO STOP mode.



Operation Flow Chart

For details, refer to the pages in ().

: Necessary step : Optional step

Dictation



Connect the AC power adaptor to the unit and to an AC outlet (6).

Connect the hand control unit (6).

Set POWER to ON.

Insert a cassette (7).

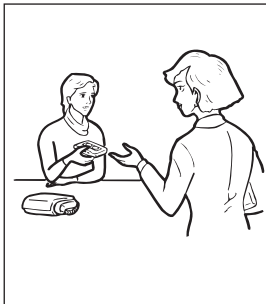
Set TAPE SPEED.

Press RESET to set the digital counter to zero.

Set the function selector of the hand control unit to DICT.
Speak into the microphone.

Quick review playback and correct the dictated material.
Keep the function selector of the hand control unit pressed down toward B. SPACE to rewind the tape until the desired point on the tape is reached. Release the selector and playback of the dictation begins. When the reviewing is completed, set the function selector to DICT to proceed with dictation.

Record the LTR signal at the end of each document (9).

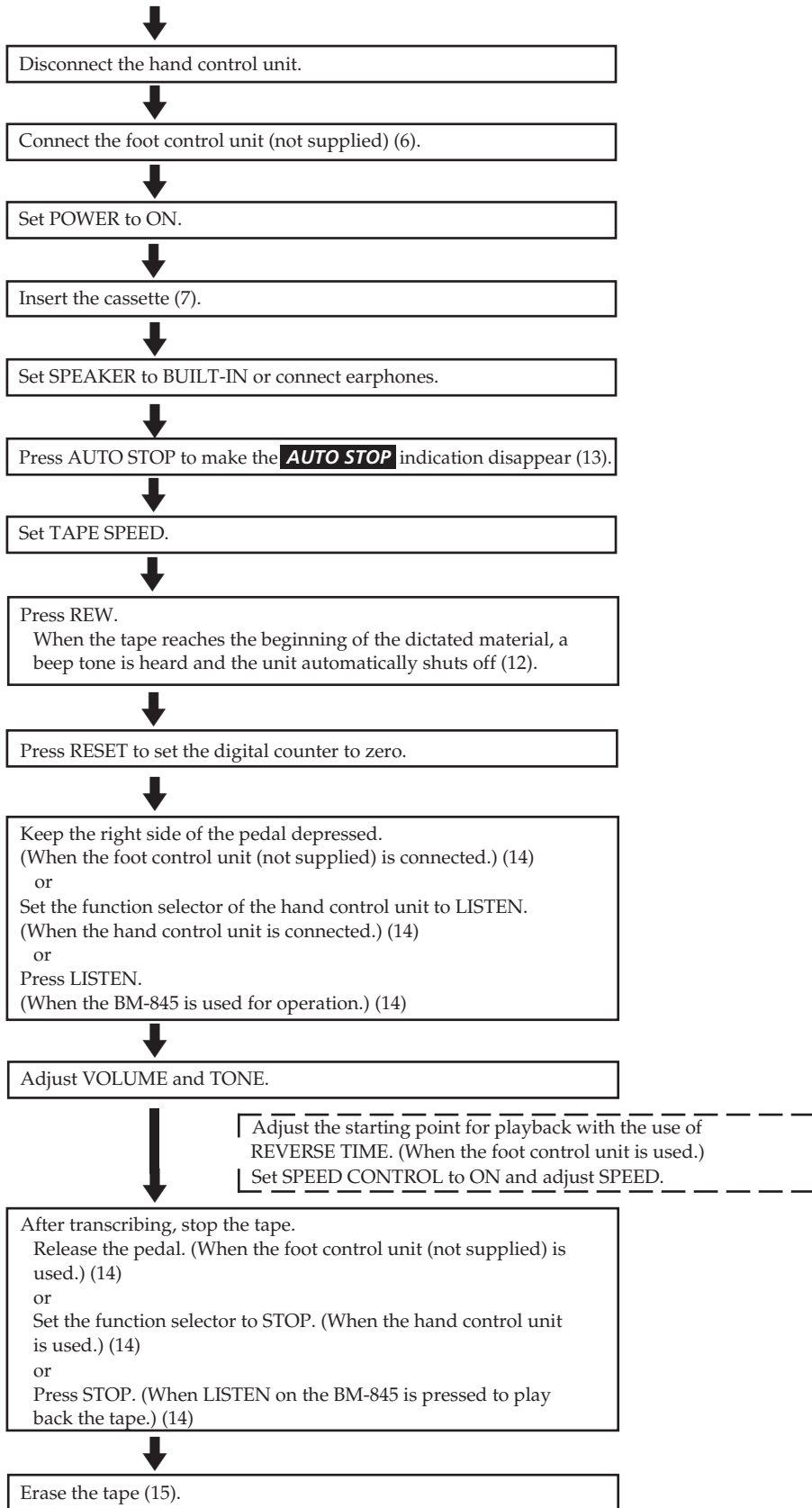


Set the function selector of the hand control unit to STOP.

Press the eject button to remove the cassette.

Hand the cassette to your secretary or transcriptionist.

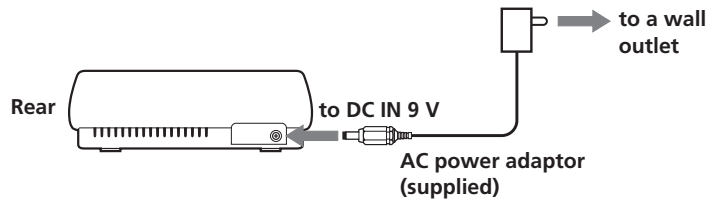
Transcription



Power Connection

Note on the AC power adaptor

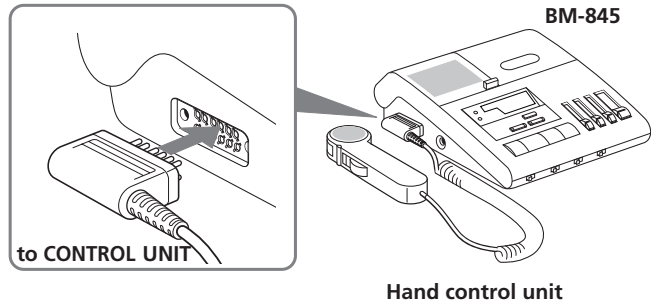
Use only the AC power adaptor supplied. Do not use any other AC power adaptor.



Setting Up the Unit

Connecting the Hand Control Unit

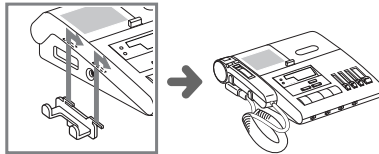
For operation, refer to "Dictation" on page 8.



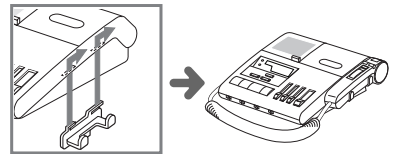
Attaching the cradle

Attach the cradle to the left or right side of the unit. Place the hand control unit on the cradle while not in use. Insert the cradle into the slots and slide to secure it.

Left side

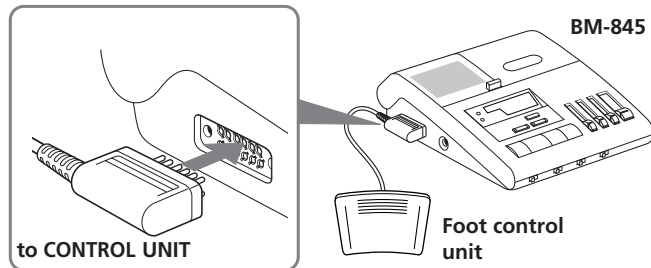


Right side

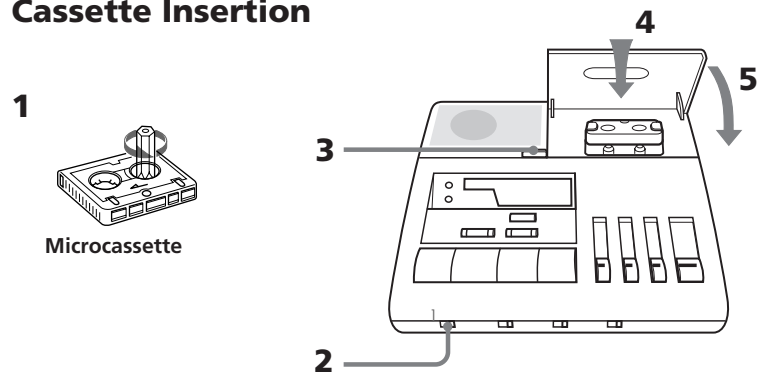


Connecting the Foot Control Unit (not supplied)

For operation, refer to "Transcription" on page 12.



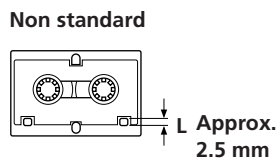
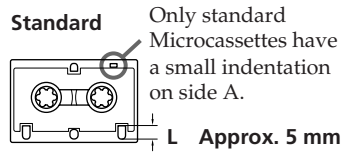
Cassette Insertion



- 1** Take up any slack in the tape.
- 2** Set **POWER** to **ON**.
- 3** Press the eject button to open the cassette holder.
- 4** Insert a cassette into the cassette holder with the side to be recorded on or played back facing upward.
Push the cassette into the holder completely.
- 5** Close the cassette holder.

This unit uses only standard Microcassettes.

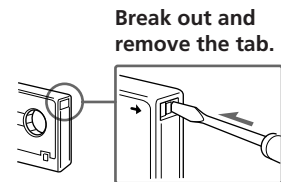
Non standard cassettes cannot be used because their "L" dimension (see illustration) is different.



Notes on the Microcassette

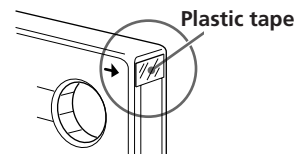
To protect cassettes from accidental erasure

When a recording is made, the previous recording is automatically erased.
To prevent erasure, break the cassette tabs.



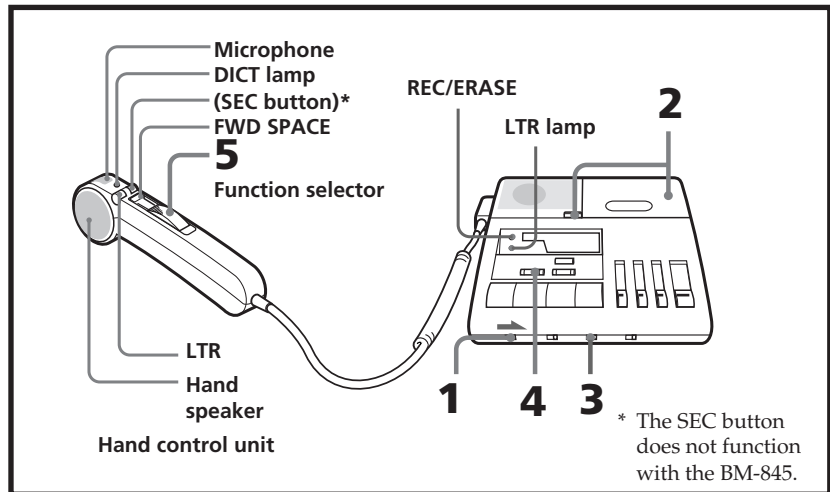
To reuse a cassette

To record on a cassette with removed tabs, cover each slot with a piece of plastic tape.



Dictation

To use the unit as a dictating machine, connect the hand control unit. For connection, see page 6.



Tips for More Efficient Dictation

Before you start dictation

- Organize your thoughts.
- Make notes or an outline of what you want to dictate.
- Check that the cassette is erased. (See page 15.)

When you dictate

- Identify yourself. (Name, department, phone number)
- Indicate the type of dictation. (Memo, letter, etc.)
- Give transcribing instructions. (Type of stationery, number of copies and who they are for, envelopes, etc.)
- Specify distribution. (Names, addresses, etc.)

During dictation

- Relax and speak clearly, at normal speed.
- Short sentences are best.
- Include punctuation.
- Spell difficult or unusual words.
- At the end of each document, record an LTR signal.

Note

Keep the hand control unit away from the BM-845 during recording. Otherwise, noise may be recorded.

1 Set **POWER** to **ON**.

2 Insert a **cassette**. (See page 7.)

3 Set **TAPE SPEED** to the desired tape speed, **2.4** or **1.2** (cm/sec.).

4 Press **RESET** to set the digital counter to zero.

5 Set the function selector to **DICT**.

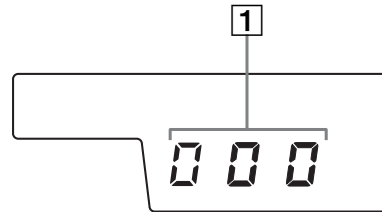
Recording starts. Speak into the microphone. ▶ appears on the display window. The **DICT** lamp on the hand control unit lights up and **REC/ERASE** lamp on the BM-845 blinks when the microphone picks up sound.



To stop the tape

Set the function selector to **STOP**.

Digital Counter While Dictating



1 Tape counter: Numerical reference for recording and listening.

Note

- The numbers on the digital counter are memorized even when the POWER switch is set to STANDBY or a cassette is being removed.

To set the digital counter to zero

We recommend that you press the RESET button before starting dictation. Keep the RESET button pressed for about one second to reset the tape counters to zero.

Convenient Functions

LTR (letter) signal

You can record electronic index signals on the tape while the unit is set in recording (dictation), stop or playback (with the hand control unit) mode.

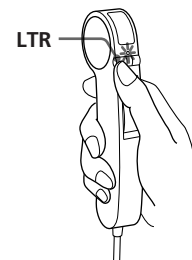
LTR (letter=end of document) signal: Record at the end of each document.

When the AUTO STOP function (see page 13) is activated (AUTO STOP: ON), the tape automatically stops at each index signal when it is rewound or rapidly advanced. Documents can be located without the user's having to listen to the entire tape.

- Before dictating, press RESET to reset the counters to zero.

To record the LTR signal

Press LTR on the hand control unit. Each time the button is pressed, the LTR lamp on the BM-845 lights up for about three seconds.



Notes

- The LTR signal should be recorded with the intervals of more than 6 seconds.
- Playback sound is muted while the LTR signal is recorded. However, the recorded material will be protected.
- While the LTR signal is being recorded with the SPEED CONTROL selector set to ON, the tape will run at normal tape speed.

Recording time

Select the desired tape speed for recording with the use of the TAPE SPEED selector.

2.4 cm: For optimum sound (recommended for normal use)

A 60-minute recording can be made using both sides of the MC-60BM Microcassette.

1.2 cm: For longer recording time

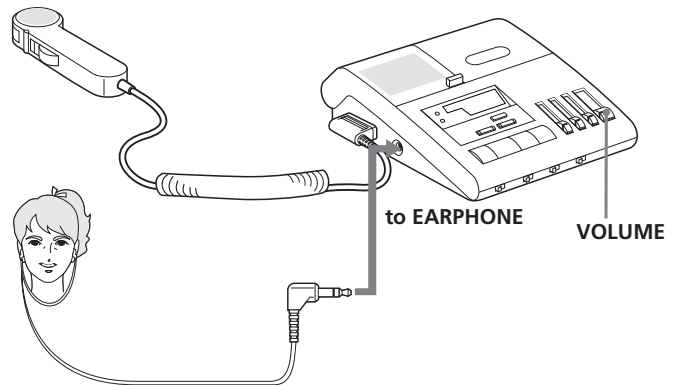
A 120-minute recording can be made using both sides of the MC-60BM Microcassette.

Continued on next page.

Dictation (continued)

Monitoring while dictating

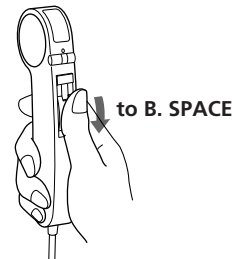
The recording can be monitored through earphones. Connect a Sony DE-45 or MDR-U10M earphones (not supplied) to the EARPHONE jack located on the left side of the unit. Adjust VOLUME if required.



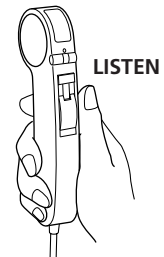
Quick reviewing (playback)/correcting the dictated material

You can easily listen to the dictated material and correct it if required.

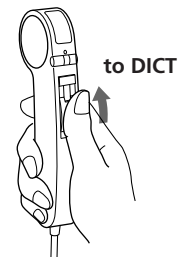
- 1 Keep the function selector of the hand control unit pressed down toward B. SPACE to rewind the tape.**



- 2 Release the selector. Playback of the dictation begins.**

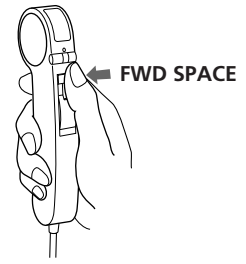


- 3 When the reviewing is completed, set the function selector to DICT to proceed with the dictation.**



For fast winding of the tape

Keep the FWD SPACE button of the hand control unit pressed until the desired portion is reached.

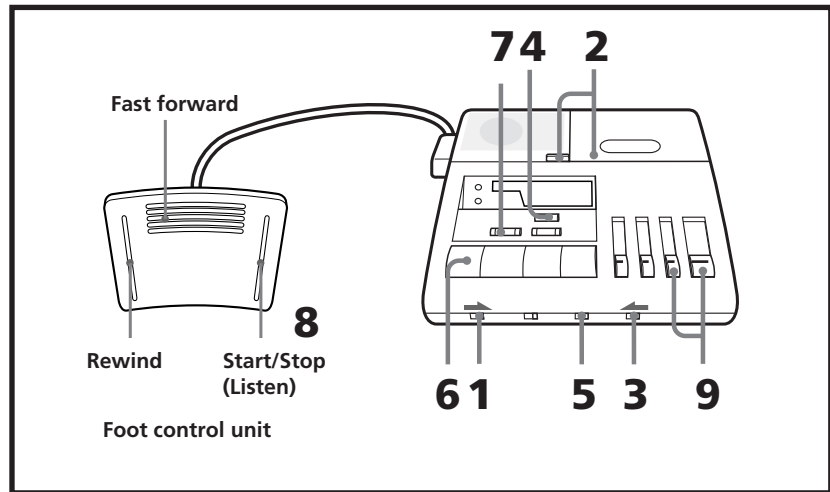


When you have finished dictating

Hand the cassette to your secretary without rewinding the tape.

Transcription

To use the unit as a transcribing machine, connect the foot control unit (not supplied). For connection, see page 6.



Tip on Transcription

Erase the tape when transcription is finished.

Notes

- If you play back in the AUTO STOP mode and the cassette was not recorded using a Sony Professional Dictating Machine (BM-531, 560, 570, 577, 820, 845, 850, 880, 890, etc.),
- an audio signal may be detected as an electronic index signal during fast forward or rewind and the unit will automatically stop with a beep.
 - the auto back space function may not operate correctly.
 - the switching time of the operation modes during fast forward or rewind may be delayed.

1 Set **POWER** to **ON**.

2 Insert a **cassette**. (See page 7.)

3 Set **SPEAKER** to **BUILT-IN**.

4 Press **AUTO STOP** to make **AUTO STOP** disappear (**AUTO STOP** function is off). (See page 13.)

5 Set **TAPE SPEED** to the same tape speed as that used for recording (dictation).

6 Press **REW** to rewind the tape.
When the tape is completely rewound, a beep is heard and the unit automatically shuts off.

7 Press **RESET** to set the digital counters to zero.

8 Keep the right side of the foot control unit pedal depressed to listen to the tape.

9 Adjust **VOLUME** and **TONE**.

To stop the tape

Release the pedal.

To rewind the tape

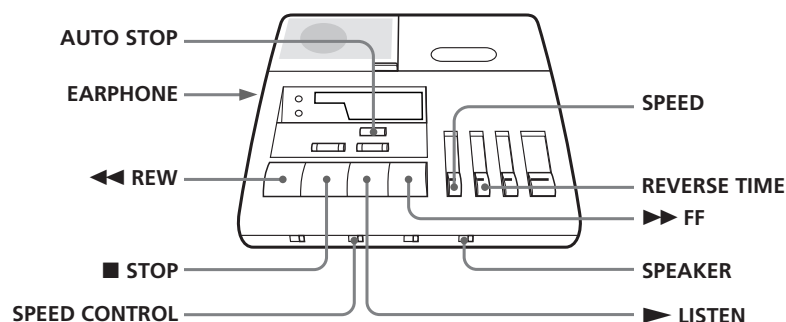
Keep the left side of the foot control unit pedal depressed.

To rapidly advance the tape

Keep the center top of the foot control unit pedal depressed.

Convenient Functions

You can use some convenient functions if you dictate using the BM-845 or Sony other models which can record electronic index signal, or if you play back a tape which was recorded with electronic index signal.



Notes

- The tape does not stop at the LTR signal even if the AUTO STOP function is on while the FF or REW button is continuously pressed.
- When **AUTO STOP** is displayed, the tape automatically stops at each electronic index signal (LTR, SEC or E-INDEX) previously recorded on the tape with the Sony Professional Dictation Machine (BM-577, 850, 890, etc.); however, the unit does not recognize the difference between the LTR and SEC signals.

Notes

- E-INDEX signal of the Sony conventional models BM-577 and so on corresponds to the LTR signal of the model BM-845.
- LTR, SEC and E-INDEX signal do not correspond to the cue signals used for consumer type tape recorder.

AUTO STOP function

This function is useful when you use the tape on which the LTR signal is recorded using the BM-845 or electronic index signal is recorded using other Sony Professional Dictation Machine.

With the AUTO STOP function, recorded documents can be located without the user's having to listen to the entire tape.

This function activates only in rewind or fast forward mode.

When the **AUTO STOP** button is pressed, **AUTO STOP** appears on the display window and the tape automatically stops at each LTR signal previously recorded on the tape. (See "LTR (letter) signal" on page 9.)

When the **AUTO STOP** function is off, the tape does not stop even if the electronic index signals have been previously recorded.

Controlling the speed

Set the SPEED CONTROL switch* to ON to adjust the speed only by the SPEED control. The tape can be played back at higher or lower speed than normal.

When the SPEED CONTROL switch is set to OFF, the tape moves at the normal speed regardless of the position of the SPEED control.

* Tape speed can be changed in the range of about -10% to +50% with the use of the SPEED control.

Continued on next page.

Transcription (continued)

Auto backspace function

This control operates only when the foot control unit is connected. With the use of the REVERSE TIME control, the tape is rewind a little each time it is stopped. Then, the last few recorded words can be reviewed when you resume listening. Adjust the REVERSE TIME control to determine the length of tape to be rewind.

At "9" position, the tape is rewind so that the dictated material can be reviewed for about 5 seconds*. At "0" position, the tape stops without being rewind at all.

Set the REVERSE TIME control to the desired position and keep the right side of the pedal depressed to listen to the tape.

* Measured at some point near the middle of the tape. The reverse time will vary in accordance with the remaining length of the tape.

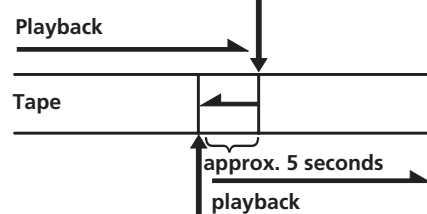
Note

- If the LTR or SEC signal is detected while the tape is being rewind with this function, the length of the reverse time may be longer than the setting you have selected.

REVERSE TIME : at "9" position



STOP is pressed at this point.

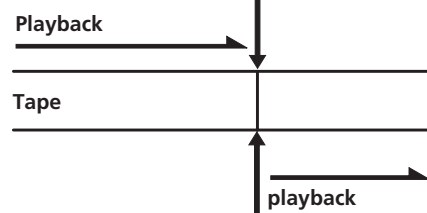


Next playback will start from this point.

REVERSE TIME : at "0" position



STOP is pressed at this point.



Next playback will start from this point.

Tape transport operation

	BM-845	Hand control unit	Foot control unit
Rewind	Press ◀◀ REW.	Keep the function selector pressed down toward B.SPACE.	Keep the left side of the pedal depressed.
Stop	Press ■ STOP.	Set the function selector to STOP.	Release the pedal.
Listen	Press ▶▶ LISTEN.	Set the function selector to LISTEN.	Keep the right side of the pedal depressed.
Fast forward	Press ▶▶▶ FF.	Keep the FWD SPACE button pressed.	Keep the top center of the pedal depressed.

Private listening

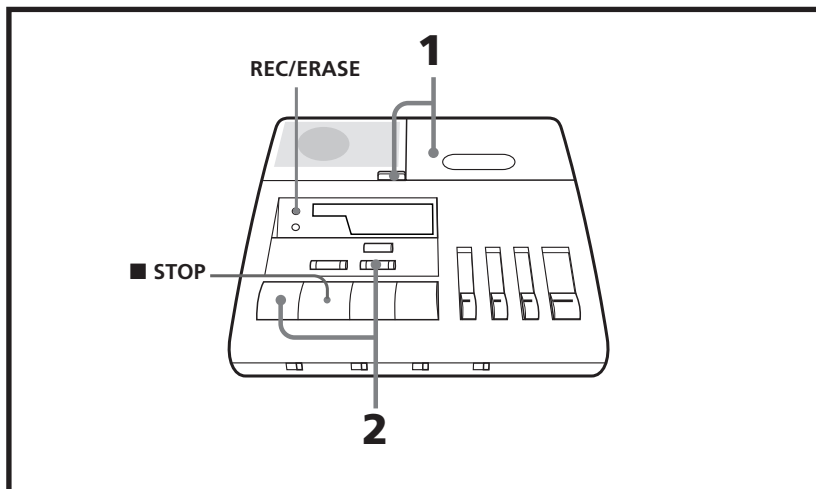
Connect a Sony DE-45 or MDR-U10M earphones (not supplied) to the EARPHONE jack. The sound will be heard through the earphones and speaker sound will be disconnected.

Selecting the speaker

You can listen to the dictated material through the built-in speaker or the speaker on the hand control unit by switching the SPEAKER selector to BUILT-IN or HAND.

Erasing

The recording can be erased rapidly.



1 Insert the cassette with the side to be erased up. (See page 7.)

Be sure not to rewind the tape after transcribing. The end portion of the dictated material to be erased should be positioned at the recording head.

2 Keep ERASE pressed and then press ◀◀ REW.

The REC/ERASE lamp lights up and ◀◀ appears on the display window.

The portion of the tape being rewound is erased.

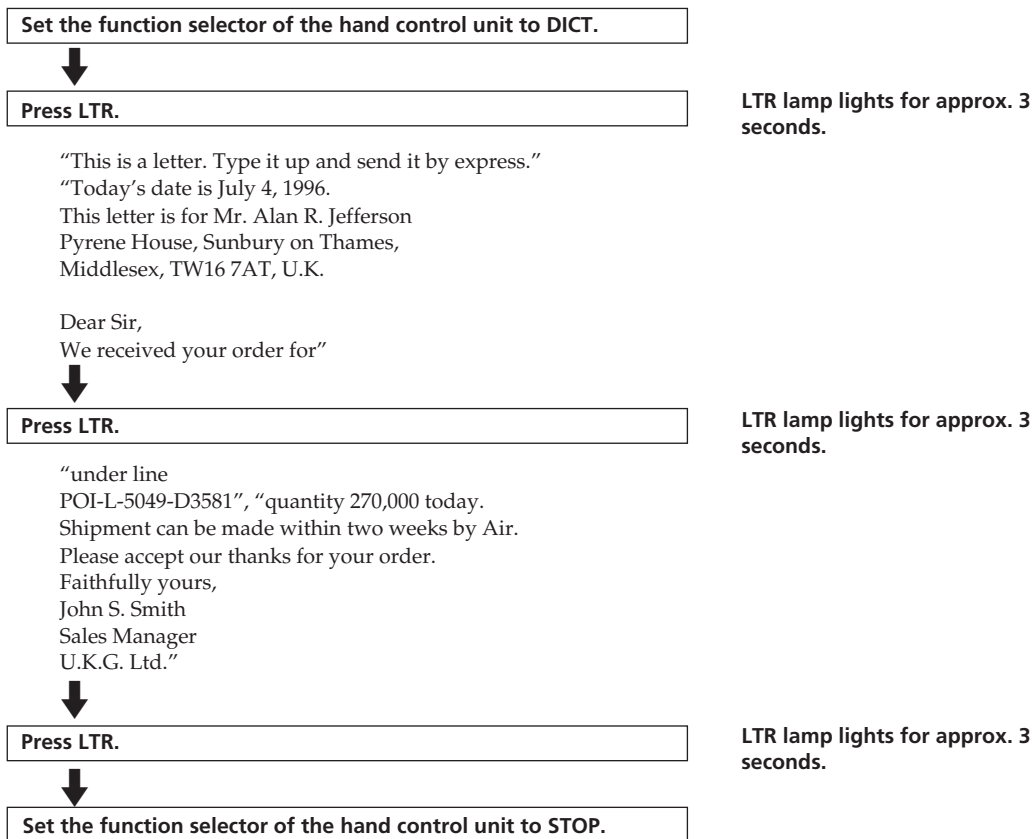


To stop the tape

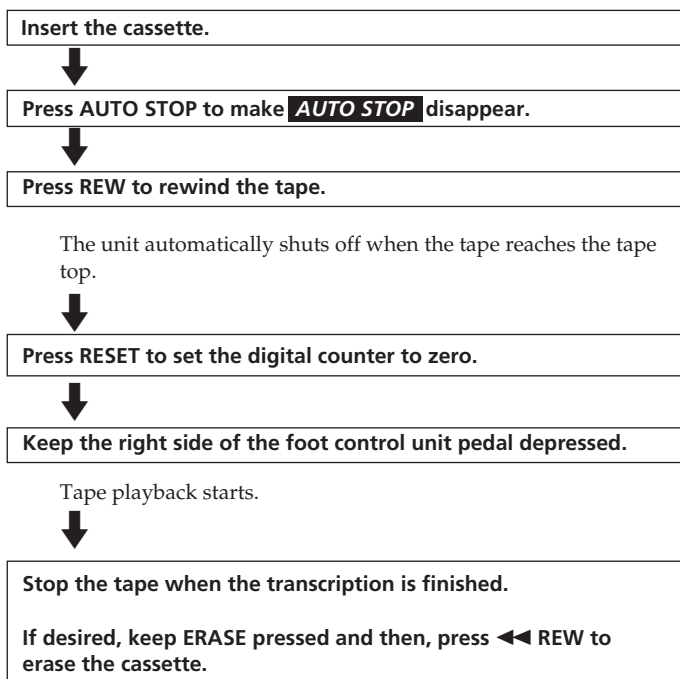
Press ■ STOP.

Example of Dictation and Transcription

Example of Dictation



Example of Transcription



Troubleshooting Guide

Should any problem occur, conduct the following simple tests to determine whether or not servicing is required. If the problem persists after you have conducted these tests, consult the nearest Sony Dictation Systems dealer.

The unit does not operate.

- The AC power adaptor is not plugged into a wall outlet.
- The POWER switch is set to STANDBY.

No sound from the built-in speaker

- The SPEAKER selector is set to HAND.
- The VOLUME control is set in the MIN position.
- An earphone is plugged in.
- The cassette is not inserted properly.

The tape speed is too fast or too slow.

- The TAPE SPEED selector is set incorrectly.
- The SPEED control is set incorrectly.
- The SPEED CONTROL switch is set to ON.

The tape stops in the rewind or fast forward mode and the alarm sounds.

- The entire tape has been wound.
- The AUTO STOP switch is activated and a tape with electronic index signal recorded is used.
- If the BM-845 is used as a transcriber while **AUTO STOP** is displayed and a tape which was recorded with a dictator other than Sony's is used, the BM-845 will detect an audio signal as an electronic index signal and the tape will automatically stop in the rewind or fast forward mode. Be sure to turn off the AUTO STOP function (see page 12).

Recording functions (Dict, Erase, LTR) do not activate.

- The tape is completely rewound.
- The cassette tabs have been removed.

The hand control unit or the foot control unit does not operate.

- The plug is not connected to the CONTROL UNIT connector firmly.
- The BM-845 is operated with the tape operation buttons on the BM-845. Press STOP and proceed with the operation on the hand control unit or the foot control unit.

Sound dropouts, loss of high frequency sounds, or excessive noise

- The heads are dirty. See "Maintenance".

Erasing is unsatisfactory.

- The erase head is dirty. See "Maintenance".

The reverse time of the auto backspace function is not correct.

- A cassette which was not recorded using a Sony Professional Dictating Machine (BM-531, 560, 570, 577, 820, 845, 850, 880, 890 etc.) is played back in the AUTO STOP mode (see page 12).
- The reverse time of the auto backspace function may become longer when the LTR or SEC signal is detected on the tape.

The switching time of the operation modes is delayed.



- When a cassette which was not recorded using a Sony Professional Dictating Machine (BM-531, 560, 570, 577, 820, 845, 850, 880, 890 etc.) is rewound or fast forward in the AUTO STOP mode, the switching time to other operation modes is delayed (see page 12).

AUTO STOP does not appear even if you press the **AUTO STOP** button.

- Remove the AC power adaptor from the AC outlet for more than 5 seconds, and then, connect the adaptor again.

Alarm System

An alarm sounds and an indication appears on the display window in the following situations.

Alarm system	Situation	To release alarm system
When you press a button. → A beep is heard and  blinks.	<ul style="list-style-type: none"> • No cassette is inserted. • The cassette's safety tabs have been removed. 	First, release the button, then <ul style="list-style-type: none"> • Insert a cassette. • Insert a new cassette or cover the safety slot.
The unit shuts off. → A beep is heard and  blinks.	<ul style="list-style-type: none"> • End of tape • The tape is torn. 	<ul style="list-style-type: none"> • Rewind the tape. • Insert a new cassette.
When you press a button. → A beep is heard.	<ul style="list-style-type: none"> • When you put the hand control unit in the dictating mode during the FF, REW or ERASE mode. 	<ul style="list-style-type: none"> • To start recording, put the BM-845 in the stop mode first and then start recording.
The unit shuts off. → A beep is heard in the AUTO STOP mode during the FF or REW mode.	<ul style="list-style-type: none"> • The LTR or SEC signal is detected. 	

Specifications

Tape

MICROCASSETTE[™] (normal position type)

Recording system

4-track 2-channel monaural
(L channel for electronic index signals, R channel for sound signals)

Tape speed

2.4 cm/s ($1\frac{5}{16}$ in./s), 1.2 cm/s ($1\frac{5}{32}$ in./s)

Fast winding time

Approx. 1 min. 50 sec. (2.4 cm/s) with Sony microcassette MC-60BM

Frequency response

200 – 4,000 Hz (at 1.2 cm/s)

200 – 6,000 Hz (at 2.4 cm/s)

Speaker

Approx. 5.7 cm ($2\frac{1}{4}$ inches) dia.

Power output

350 mW (at 10% distortion)

Input

TELEPHONE PICKUP (minijack)

Sensitivity 0.2 mV

Input impedance 10 kilohms

Output

EARPHONE (minijack)

for 8 – 300-ohm earphones

CONTROL UNIT connector

for hand control unit or foot control unit

Power requirements

9 V DC

DC IN 9 V jack accepts the supplied AC power adaptor for use on 120 V AC, 60 Hz

Power consumption

14 W (with the supplied AC power adaptor)

Dimensions

Approx. 200 x 70.5 x 245 mm (w/h/d) ($7\frac{7}{8}$ x $2\frac{7}{8}$ x $9\frac{3}{4}$ inches)

including projecting parts and controls

Mass

Approx. 1.2 kg (2 lb 11 oz)

Accessories supplied

AC power adaptor (1)

Hand control unit (1)

Cradle for the hand control unit (1)

Design and specifications are subject to change without notice.

Optional accessories

Hand control unit HU-80

Foot control unit FS-85

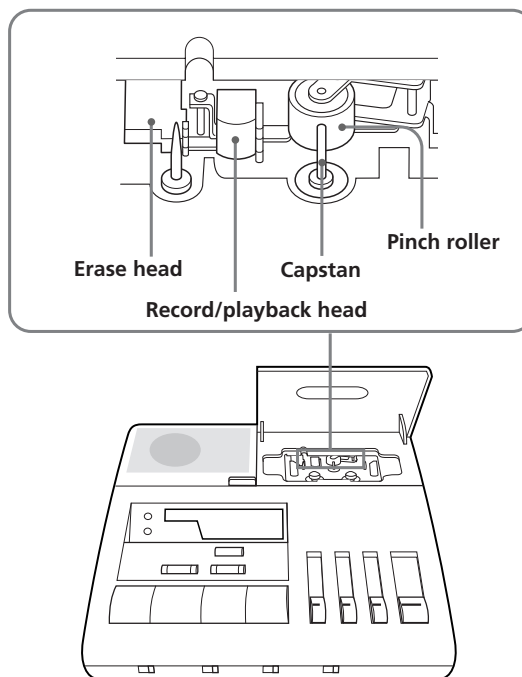
Earphone DE-45

Headphones MDR-U10M

Cleaning kit KK-31

Your dealer may not handle some of the above listed optional accessories. Please ask the dealer for detailed information about the optional accessories.

Maintenance



Cleaning the heads

To produce optimum sound, clean the tape heads after every 10 hours of use.

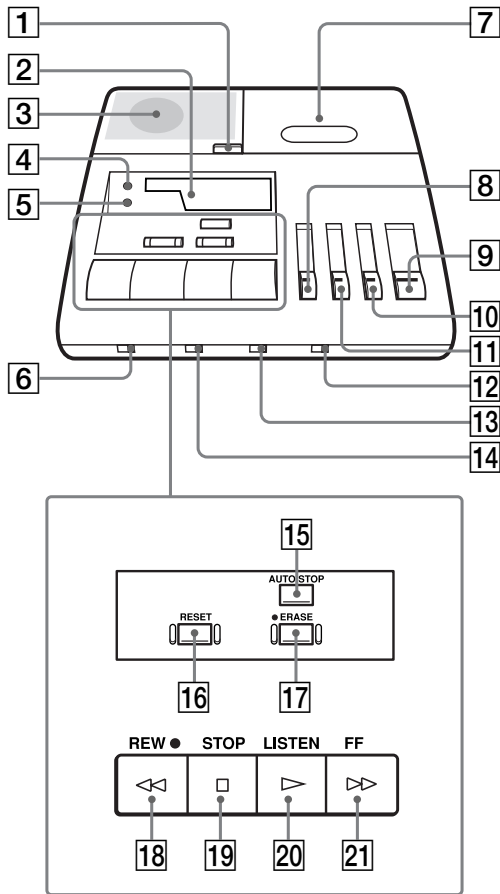
First, disconnect the AC power adaptor. Press EJECT to open the cassette compartment lid. Moisten a cotton swab or a soft cloth with alcohol, and wipe the parts shown on the left.

Cleaning the cabinet

Clean the cabinet with a soft cloth slightly moistened with a mild detergent solution. Never use strong solvents, such as thinner or benzine, since they may damage the finish.

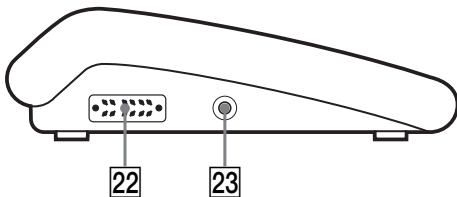
Location and Function of Controls

For details, refer to the pages indicated in ().



- 1 Eject button
Press to eject the cassette.
- 2 Display window (Back cover)
- 3 Built-in speaker
- 4 REC (record)/ERASE lamp (8, 15)
- 5 LTR (letter) lamp (9)
- 6 POWER switch
- 7 Cassette holder
- 8 SPEED control (13)
- 9 VOLUME control
- 10 TONE control
- 11 REVERSE TIME control (14)
- 12 SPEAKER selector (14)
- 13 TAPE SPEED selector (12)
- 14 SPEED CONTROL switch (13)
- 15 AUTO STOP button (13)
- 16 RESET button (9)
- 17 ● ERASE button (15)
- 18 ◀◀ REW (rewind)
- 19 ■ STOP
- 20 ▶▶ LISTEN
- 21 ▶▶ FF (fast forward)

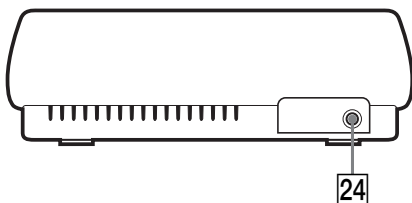
Left side



Left side

- 22 CONTROL UNIT connector (6)
- 23 EARPHONE jack (10, 14)

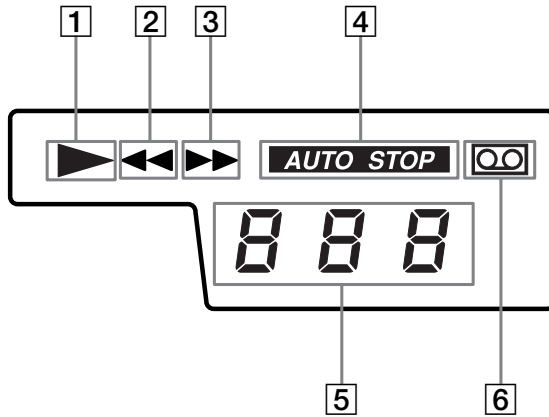
Rear



Rear

- 24 DC IN 9 V (6)

Display Window



- 1 ► indicator
Displayed while the tape is being transported in the forward direction.
- 2 ◀◀ (rewind) indicator
Displayed while the cassette is being rewound.
- 3 ▶▶ (fast forward) indicator
Displayed while the tape is advanced rapidly.
- 4 AUTO STOP indicator
Displayed when the AUTO STOP button is pressed (AUTO STOP function is on).
- 5 Tape counter
- 6 ◻ (cassette) indicator
Normally this indicator is not displayed. However, the indicator blinks in the following cases:
 - One of the LTR and ERASE buttons is pressed or the function selector is set to DICT when no cassette is inserted or when the cassette's safety tabs have been removed.
 - A tape reaches the end.
 - A tape is torn while being rewound.

Notes

- It may be difficult to read the liquid crystal counter display due to the watching angle.
- If you play back a cassette which was not recorded using a Sony Professional Dictating Machine, press AUTO STOP to make **AUTO STOP** disappear (AUTO STOP function is off) (see page 13).