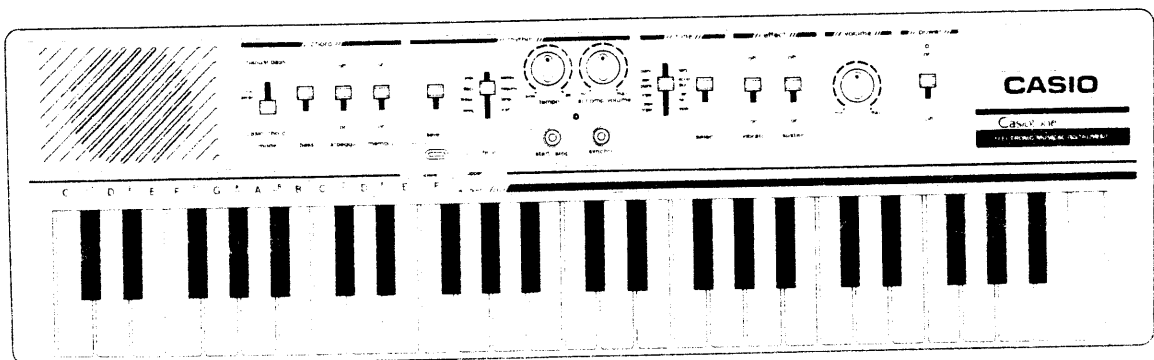


OPERATION

Casiotone MT-46

Operation Manual.....1

Manual de Operación....23



CASIO

Thank you very much for purchasing the Casiotone MT-46. You now have an electronic keyboard instrument that incorporates Casio's unique sound reproduction system, different from any regular electronic keyboards or synthesizers. With this system you can play 8 instrumental sounds with their original clarity. Please read this manual thoroughly so you can bring the Casiotone MT-46 into full play and have many delightful times together.

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Casiotone MT-46
ELECTRONIC MUSICAL INSTRUMENT

Unique features of Casiotone MT-46

8 preset sounds . . . beautifully realistic.

The Casiotone MT-46 gives eight preset sounds that are distinctively different to the renditions of conventional electronic instruments. They allow the player to enjoy, with beautiful realism, such instruments as the piano, violin and clarinet.

Split keyboard offers versatile accompaniment.

The lower one-and-a-half octaves of the Casiotone MT-46 are devoted exclusively to accompaniment. They provide "manual bass", "fingered chord" and "casio chord", all selectable on one slide switch.

Complete auto-rhythm with 8 built-in rhythms and fill-in rhythmic interludes.

The eight built-in rhythms include Pops, Disco, Samba, etc. In addition, it combines a "synchro start" function and "fill-in" sounds to back up your rhythm section.

Skill with chords comes easy with the Casio Chord System.

With this automatic accompaniment function, just a single finger can give you mastery of chord techniques. The chord and bass sounds will be produced automatically, perfectly synchronized with the auto-rhythm.

1 Unique features of Casiotone MT-46

Vibrato and sustain effects add delicate differences to sounds. The Casiotone MT-46 provides special effect switches for vibrato and sustain. With these functions you can give warmth and strength of expression to your performance.

3-Way AC/DC power makes it easy to carry around and play anywhere. Normally, the Casiotone MT-46 operates on regular D size batteries. But with optional adaptors (AD-1, CA-1), it can also be powered by AC (household power) or car battery.

Compact and handy, always ready to play. The Casiotone MT-46 is compact, handy and light-weight. A built-in speaker makes it highly audible indoors or outdoors.

2 Power supply

The unit operates on both AC and DC power.

DC power

Dry batteries:

The unit works on five D size (SUM-1) manganese dry batteries.

Weakened batteries will result in lower volume or poor tonal quality. The power indicator lamp will gradually lose its brightness when the battery power weakens, at this time change batteries or shift to power sources mentioned below.

Battery replacement:

1. Slide open the battery compartment cover on the bottom of the unit and take out dead batteries.
2. Insert new batteries but take care that polarity is not reversed.

* It is advisable to replace all five batteries at the same time for longer battery life.

* For battery life, refer to the specifications.

Car battery adaptor:

With the optional car battery adaptor CA-1, you can take DC power from your car battery via a cigarette lighter socket.

AC power

To connect the unit to an AC outlet, the AC adaptor (optional accessory) is required.

Use only an adaptor with the same voltage rating (100,117,220, or 240V) as your power supply to prevent component damage.

Plug the AC adaptor into the AC outlet and the cord into the unit; this automatically cuts off battery power supply.

* When batteries are not used for a long period of time, it is advisable to remove them from the battery compartment. (Battery leakage may occur and damage electrical parts.)

CAUTION

* WHERE USED FROM THE MAINS THIS UNIT MUST ONLY BE USED WITH A CASIO MAINS ADAPTOR TO PREVENT THE RISK OF DAMAGE.

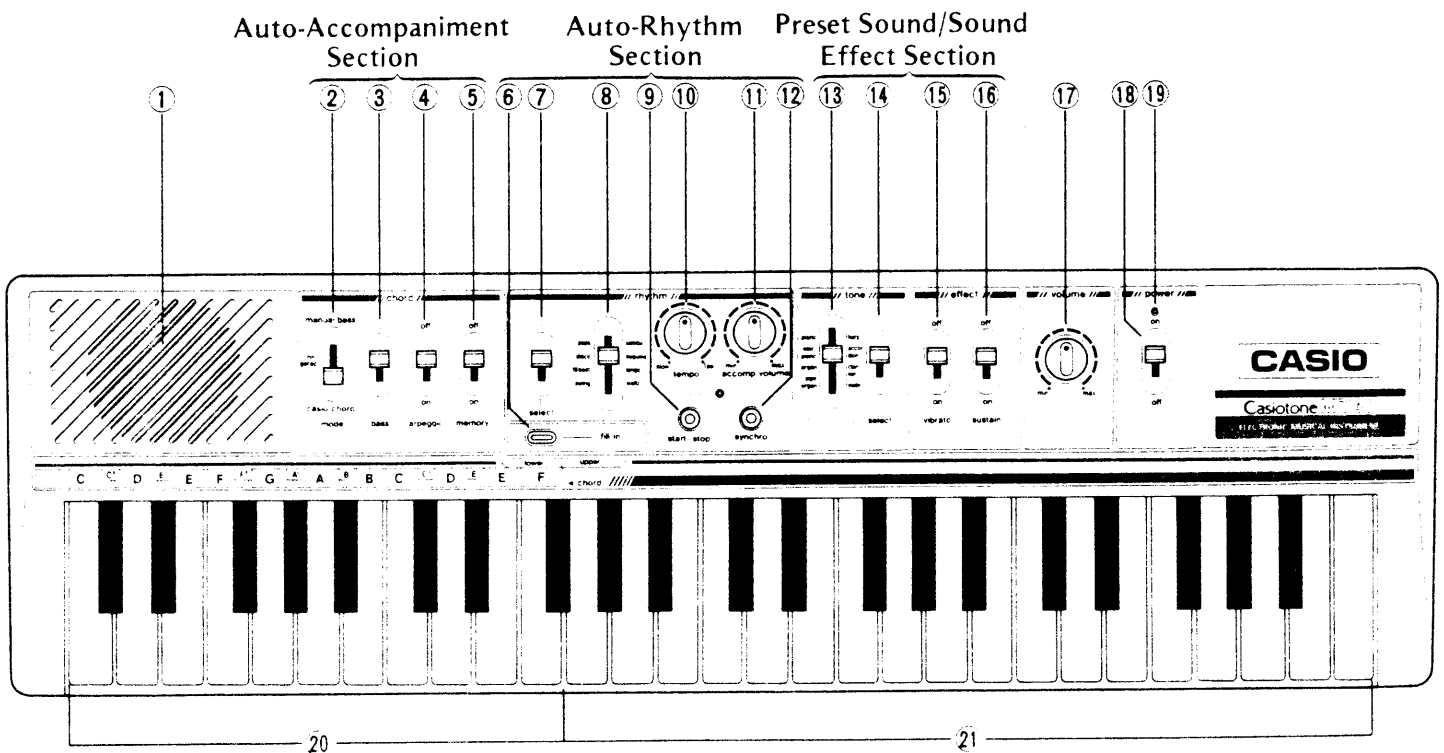
* When the adaptor is left connected to an AC outlet, it may warm up, but this is quite normal. Disconnect the adaptor whenever possible, especially if not used for a long time.

The following misuse may lead to battery burst.

1. Use of an AC adaptor other than a genuine Casio adaptor.
2. Insertion of batteries with incorrect polarities (+, -).

3 General Guide

The function and operation of each section is given in subsequent pages.



- 1 Built-in speaker
 - 17 Main volume control knob
 - 18 Power switch
 - 19 Power indicator lamp
 - 21 Melody keyboard keys
 - 13 Sound selection switch
 - 14 Select switch
 - 15 Vibrato switch
 - 16 Sustain switch
- See page 7
- Preset Sound/Sound
Effect Section
→ See page 7

Auto-Rhythm Section → See page 9

- 6 Fill-in button
- 7 Select switch
- 8 Rhythm selection switch
- 9 Start/Stop button
- 10 Tempo control knob
- 11 Accompaniment volume control knob
- 12 Synchro start button

Auto-Accompaniment Section → See page 11

- 2 Mode selection switch
- 3 Bass selection switch
- 4 Arpeggio switch
- 5 Memory switch
- 20 Accompaniment keyboard keys

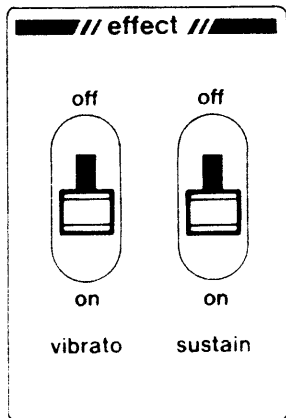
Vibrato

Turn on the vibrato switch to give warmth and strong expression to the sound. It allows full tonal reverberations.

Sustain

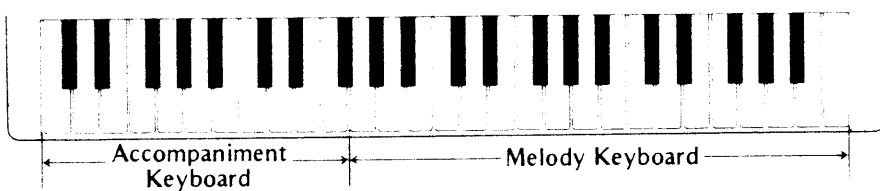
Turn on the sustain switch to get a sustain effect. The sound lingers on, even after the fingers are removed from the keyboard.

* Sound effects can only be used for the melody keyboard.



4 Preparations for a successful performance

The Casiotone MT-46 is a 49-key (4-octave) keyboard, but different from ordinary keyboards, the lower one-and-a-half octaves are devoted exclusively to accompaniment (chords and bass).



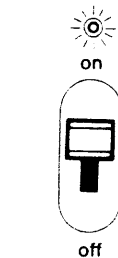
First of all, let's play some sounds using the melody keyboard keys. After mastering the basic operations please read each section of this manual.

1. Turn the power on.

- The power indicator lamp will light up when the power switch is turned on.

2. Adjust the volume.

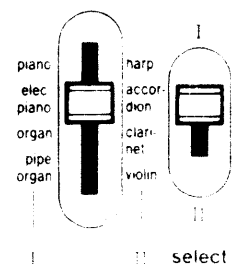
- Set the volume control knob in an initial position as illustrated on the right.



3. Now, start playing.

- Adjust the volume to a comfortable level while pressing the keys.
- Experiment with the 8 preset sounds.

* When the Select Switch is in the "I" (or "II") position, one of the sounds written on the left (or right) of the Sound Selection Switch can be selected.



5 8 Auto-Rhythms

There are 8 kinds of rhythms built-in. With percussion sounds like cymbals, claves, etc., they create distinctive background beat.

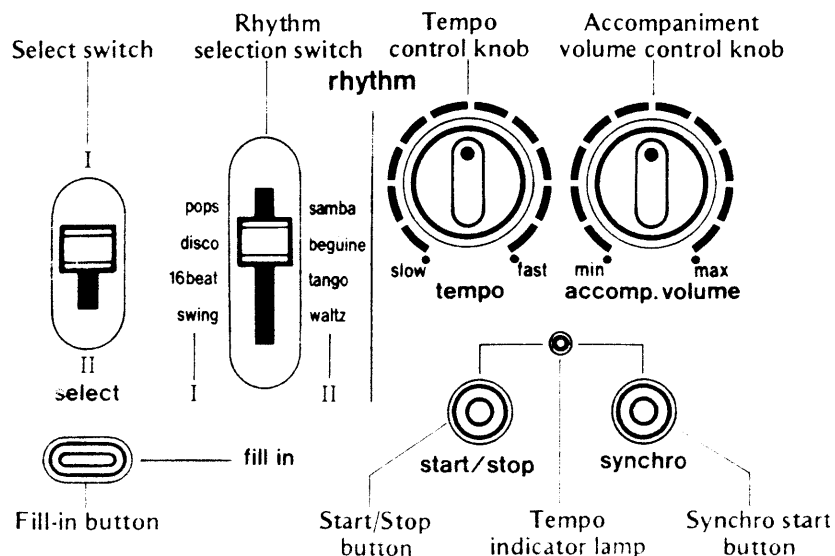
- **Rhythm Selection Switch and Select Switch**

Select the desired rhythm using the Rhythm Selection Switch. When the Select Switch is in the "I" (or "II") position, one of the rhythms written on the left (or right) of the Rhythm Selection Switch can be selected.

- **Start/Stop Button**

The rhythm will start and stop each time this button is pressed.

The tempo indicator lamp blinks on the first beat of the rhythm play.



- **Synchro Start Button**

If this button is pressed, the tempo indicator lamp will light up and synchro start will go to a “wait condition”. Auto-Accompaniment will start along with the rhythm the moment the Accompaniment Keyboard Keys (lower one-and-a-half octaves, C to F) are pressed.

* Press this button once more to cancel the synchro start “wait condition”.

- **Tempo Control Knob**

Adjusts the rhythm speed. Turning the knob to the right increases the tempo.

- **Accompaniment Volume Control Knob**

Adjusts the volume of the accompaniment. Turning the knob to the right increases the accompaniment volume.

When using the Auto-Accompaniment Function (see page 11), the volume levels of both rhythm and accompaniment sections can be adjusted.

* Note that the Main Volume Control Knob controls overall volume, so no accompaniment sound will be heard if the Main Volume Control Knob is set to minimum, even if the Accompaniment Volume Control Knob is at maximum.

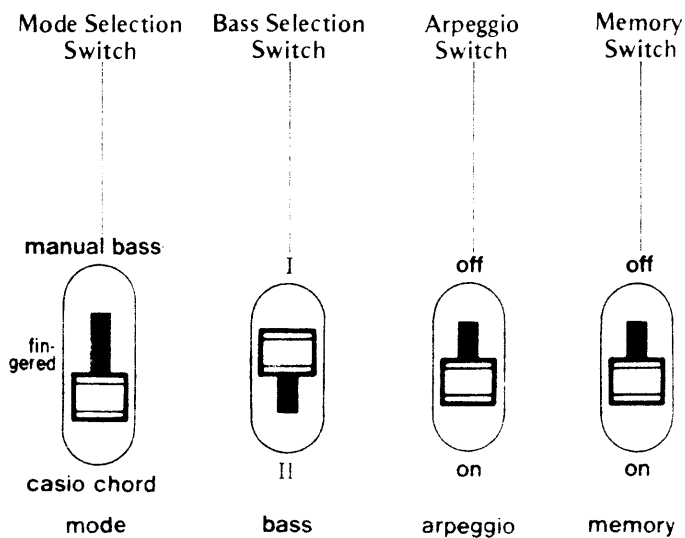
- **Fill-in Button**

If pressed during rhythm play, fill-in (percussive grace) will be added to the background.

6 Auto-Accompaniment (Casio Chord System)

Keyboards are generally played by using the right hand for the melody and the left hand for the accompaniment. This is very difficult for beginners. But with Casio's Auto-Accompaniment feature (Casio Chord System), anybody can play chords, bass, arpeggio with rhythm simply by using one finger.

Putting the Auto-Accompaniment Section Into Play



• Mode Selection Switch

- manual bass For playing bass without auto-accompaniment. The other three switches do not function in this position. Only one note can be played when the switch is in this position.
- fingered For auto-accompaniment by playing the chord.
- casio chord For auto-accompaniment using the one-finger method.

If the chords written below are played with the Mode Selection Switch at "fingered", the bass patterns of the respective chord will be played automatically.

| | |
|-----------|--------------------|
| major | minor |
| 7th | minor 7th |
| major 7th | diminished |
| augmented | minor 7th flat 5th |

6 Auto-Accompaniment (Casio Chord System)

Ways to Use Auto-Accompaniment

- For Auto-Accompaniment using one finger.
 - (1) Set the Mode Selection Switch to "casio chord".
* The other three switches may be in any position.
Select according to the desired effects.
 - (2) Select and start an Auto-Rhythm.
 - (3) Press one of the accompaniment keyboard keys.
The major chord and bass sounds will be played automatically along with the rhythm.

- Bass Selection Switch

There's a selection of two bass patterns, I and II that can be introduced behind each rhythm.

- Arpeggio Switch

off Both chord and bass sounds synchronized with the rhythm will be played automatically. When played without using Auto-Rhythm, chords and bass become continuous sounds.

on Arpeggio, chord and bass sounds synchronized with the rhythm give automatic accompaniment. Arpeggio will not be produced without using Auto-Rhythm.

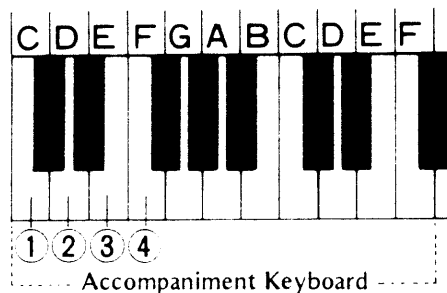
- Memory Switch

. When turned on, accompaniment sounds can be stored in the memory and even if your fingers are removed from the keyboard they continue to sound until the next keyboard key is played.

6 Auto-Accompaniment (Casio Chord System)

Relationship of the chord to the fingered keyboard keys

When the Mode Selection Switch is set to "casio chord", and one accompaniment keyboard key is pressed, it becomes the major chord of that note and the appropriate bass sound is played automatically. When you want to make this a minor chord, press any key on the accompaniment keyboard which is to the right of that note. Under the same conditions, if one more key (three keys in total) is pressed, it becomes a seventh chord. If four keys are pressed, it will be a minor seventh chord.



(Example)

- C (C major chord) — Press 1.
- Cm (C minor chord) — Press 1 2 together.
- C₇ (C seventh chord) — Press 1 2 3 together.
- Cm₇ (C minor seventh chord) — Press 1 2 3 4 together.

* Not only 2, 3 and 4, but any black or white keys can be used as long as they are to the right of 1.

Note: When the Mode Selection Switch is set to "casio chord", the automatically played chords are one of the four kinds — major, minor, seventh or minor seventh.

- **For Auto-Accompaniment by playing the chords.**

- (1) Set the Mode Selection Switch to "fingered". The other three switches may be in any position. Select according to the desired effects.
 - (2) Select and start an Auto-Rhythm.
 - (3) Play a chord on the accompaniment keyboard. The chord (with arpeggio) and bass sounds will be played automatically along with the rhythm.
- * The volume of the accompaniment sound can be adjusted by the Accompaniment Volume Control Knob.

Synchro Start

If the Synchro Start Button is pressed on, Auto-Accompaniment will start along with the rhythm the moment the accompaniment keys are pressed. This makes it very effective when playing an introduction to the music, or a melody to which the accompaniment is added along the way.

- (1) Set the Mode Selection Switch to "casio chord" or "fingered".
- (2) Press on the Synchro Start Button.
 - * The tempo indicator lamp will light up and synchro start will go to a "wait condition". (Press once more to cancel the synchro start "wait condition".)

6 Auto-Accompaniment (Casio Chord System)

- (3) Auto-Accompaniment will start along with the rhythm from the first beat the moment the accompaniment keys are pressed.

Note: Synchro start of rhythm cannot be performed independently.

7 8 sounds and their note ranges

(Note ranges of Casiotone MT-46)

Note ranges: The codes (A,B) in the note range column are shown below.

Sounds: "o" denotes a sustained sound. Sounds continue as long as the keyboard keys are pressed. Blanks denote a fading sound. Sounds fade even though the keyboard keys remained pressed.

| Preset Sound Names | Note Range | Sound |
|--------------------|------------|-------|
| piano | A | |
| electric piano | A | |
| organ | A | o |
| pipe organ | B | o |

| Preset Sound Names | Note Range | Sound |
|--------------------|------------|-------|
| harp | A | |
| accordion | B | o |
| clarinet | B | o |
| violin | A | |

- Note Range of the Melody Keyboard.

The diagram illustrates the note range of the melody keyboard. It features a treble clef staff with six notes: F⁵, C₃, F³, C₄, C₅, and C₆. Below the staff are two keyboard diagrams, A and B. Diagram A shows the keys for F⁵, C₃, F³, C₄, C₅, and C₆. Diagram B shows the keys for F³, C₄, C₅, and C₆.

A ... Piano, Electric Piano, Organ, Harp, Violin.

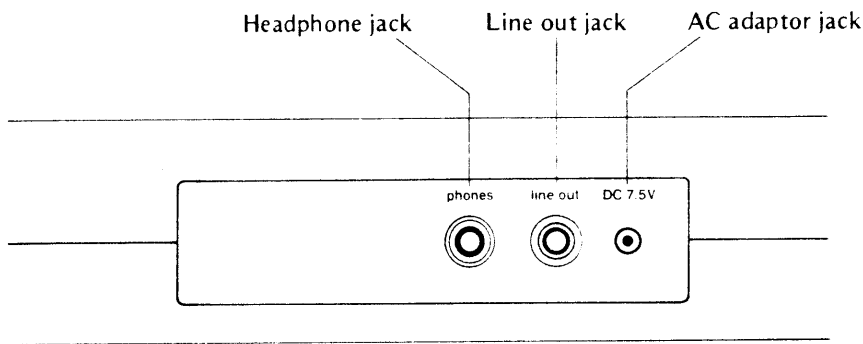
B ... Pipe Organ, Accordion, Clarinet.

* The sounds of the accompaniment keyboard (chords, arpeggio, bass) vary with the position of the Rhythm Selection Switch or the Bass Selection Switch, regardless of Auto-Rhythm.

- Note Range of the Accompaniment Keyboard
(Mode Selection Switch at Manual Bass)

The diagram illustrates the note range of the accompaniment keyboard. It features a bass clef staff with two notes: C and F. Below the staff is a keyboard diagram with dashed lines connecting notes to keys. The diagram shows the keys for C and F.

8 Expanding the system with other equipment



- **AC adaptor**

Plug in an AC adaptor (optional) and the unit can be powered by AC power. Also, if a car battery adaptor (optional) is plugged in, power can be taken from the cigarette lighter socket of your car.

- **Line out (output) jack**

To get more powerful volume from the Casiotone, connect it to audio equipment or a keyboard amplifier, etc. and external speakers.

- **Headphone jack**

If a headphone (optional) is connected, the speaker sound will be cut off automatically and playing can be enjoyed privately. Also, by connection of an FM transmitter (optional), the sound of the Casiotone will be transmitted to remote FM receiving apparatus and can be heard through the external speakers of an FM radio or other audio equipment.

9 Quick troubleshooting chart

| Symptom | Possible cause | Remedy |
|---|--|--|
| No sound from speaker. | <ol style="list-style-type: none"> 1. Power switch at OFF. 2. Main volume control knob at its minimum. 3. Headphone plugged in. | <p>Turn ON the power switch.</p> <p>Adjust main volume control knob to desired level.</p> <p>Plug out headphone.</p> |
| No rhythm emerges. | <ol style="list-style-type: none"> 1. Main volume control knob at its minimum. 2. The accompaniment volume control knob at its minimum. | <p>Adjust main volume control knob to desired level.</p> <p>Adjust volume to desired level.</p> |
| The synchro start of the auto-rhythm does not start. | A key other than a key of the accompaniment keyboard has been pressed to start the rhythm. | Start on the accompaniment keyboard. |
| The accompaniment keyboard does not reproduce sound. | The accompaniment volume control knob at its minimum. | Adjust the volume to desired level. |
| No sound is produced when an external amplifier is connected. | <ol style="list-style-type: none"> 1. Main volume control on the Casiotone is too low. 2. The connection cord is bad. | <p>Turn up the main volume.</p> <p>Replace the connection cord.</p> |
| Distorted high and low range tones. | Volume level too high. (Since the diameter of the built-in speaker is small, it may not reproduce at a high volume level.) | Turn down the volume or connect to capable external speaker. |
| Throbbing noise. | Unit placed near refrigerator, washing machine or other appliances. | Use an AC outlet as far as possible from motorized appliances. |

10 Care of your unit

1. Avoid heat, humidity or direct sunlight.

Do not overexpose the unit to direct sunlight, or place near an air conditioner, or in any extremely hot place.

2. Take care not to drop the unit and avoid strong shocks.

A strong shock may cause malfunctions. When carrying or transporting the unit, protect the keyboard and switches with soft materials.

3. Keep the unit free of liquids, dust, particles, etc.

Do not allow bits and pieces to get between the keys, especially metallic objects such as hairpins, sewing needles or coins. Also, do not wet the unit.

4. Never attempt to modify any parts of the unit.

The unit is a precision piece, made up of electronic parts. Any modification of, or tampering with, inner parts may cause problems.

5. Do not apply a lacquer, thinner or similar chemical.

Clean the keyboard with a soft cloth dampened with detergent. (Soak the cloth in a detergent and squeeze until almost dry.)

6. Don't forget to turn off the power switch.

After using the unit, be sure to turn off the power switch. If the unit is left for many hours with the power switched on, malfunctions may occur. Also when not using the unit for a long period, remove the batteries to avoid corrosion from battery leakage.

7. In case of malfunction.....

When the unit does not work properly, check whether switches, connections, etc. are set correctly as indicated in the troubleshooting chart on page 18 of the manual. If the unit still doesn't work, please contact the original retailer or nearby dealer. Never attempt to repair it yourself. It may result in serious damage of components.



Specifications

| | | | |
|--|---|-------------------------------|---------------------------------|
| Model: | Casiotone MT-46 | | |
| Number of keys: | 49 keys, 4 octaves (mini-keyboard) | | |
| Maximum simultaneous sound: | | Melody Keyboard | Accompaniment Keyboard |
| | Manual Bass | 8-notes | 1-note |
| | Fingered | 8 | 6-notes (chord, bass, arpeggio) |
| | Casio Chord | 8 | 6-notes (chord, bass, arpeggio) |
| Preset sounds: | Melody Keyboard | Accompaniment Keyboard | |
| | 8 preset sounds; Piano, Harp, Organ, Violin, Electric Piano, Pipe Organ, Accordion, Clarinet. | 3 preset sounds | |
| Sound effects: | Vibrato & Sustain | | |
| Built-in rhythms: | 8 rhythms; Pops, Samba, Disco, Beguine, 16 beat, Tango, Swing, Waltz. * Start/Stop Button, Synchro Start Button, Tempo Control Knob, Accompaniment Volume Control Knob, Fill-in Button, Tempo Indicator Lamp. | | |
| Auto-Accompaniment function (Casio Chord System): | Casio Chord System (manual bass/fingered/casio chord) Bass Selection Switch (I/II) Arpeggio Switch (off/on) Memory Switch (off/on) | | |
| Keyboard split system: | Melody keyboard = 2.5 octaves, Accompaniment keyboard = 1.5 octaves. | | |

11 Specifications

| | |
|---------------------------|---|
| Built-in speaker: | 8 cm (3-1/8") dia x 1 (output 1W) |
| Output jack: | Output impedance = 2.8 k Ω Output voltage = 1V (RMS) max |
| Power source: | 3-Way AC/DC power source; • AC: 100, 117, 220 or 240 V ($\pm 10V$), 50/60Hz, with optional AC adaptor AD-1. • DC: Five D size manganese dry batteries. Battery life: High performance manganese dry batteries (SUM-1) last about 30 continuous hours. • Car battery: Power taken via Car Battery adaptor CA-1 (optional accessory). |
| Power consumption: | 1.8 W |
| Dimensions: | 70 (H) x 633 (W) x 188 (D) mm (2-3/4" (H) x 24-15/16" (W) x 7-3/8" (D)) |
| Weight: | 2.5 kgs. (5.5 lbs) |

** Design and Specifications may be subject to change without notice.*

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A. (not applicable to other areas).

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient the receiving antenna
- relocate the computer with respect to the receiver
- move the computer away from the receiver
- plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.