Breakaway™
Music Systems

Vocalizer 1000

Instruction Manual

2 Quick Start

Getting started on the Vocalizer® 1000 is as easy as 1-2-3.

1 Turn on the Vocalizer

♦ Plug the AC adaptor (included) into the connector on the right side panel marked "DC 7.2 V." Or, install six C-size batteries in the rear of the unit, making the Vocalizer a perfect anywhere-anytime instrument.

♦ Plug the handset cable into the jack on the right side panel, marked "Handset," with the arrow on the handset connector pointing downward.

♦ Press the ■ **Power** button on the bottom right corner of the Vocalizer. The green light above the power button comes on when the unit is ready for use.

2 "Vocalize" into the Microphone

♦ Place your mouth approximately 1 inch from the brightly colored mouthpiece on the handset microphone. To get started it may be easier to use the personal mouthpiece, as illustrated on page 3 and described on page 7.

♦ Make a clean, steady "DOOOOO" sound (you're "vocalizing" now, so don't be shy). The higher the pitch you use, the better the Vocalizer responds ("falsetto," or very high-pitched voice, is best). Remember to sustain the sound.

♦ While making a long "DOOOOO" sound, slide the pitch of your voice up and down, like a siren, and listen as the Vocalizer helps select individual notes.

3 Follow the Built-In Demonstration

♦ Press the ■ **Demo** button and follow the instructions on the LCD display just below the top step on the front panel.

For the best sound quality, plug the Vocalizer into your home or portable stereo. (See note 22 on page 8 in this manual.)

Note: The sensitivity of this microphone has been designed for operation in a normal room environment. If the noise level is unusually high where you are playing the Vocalizer, you may adjust the sensitivity of the microphone downward, so not to pick up unwanted room noise.

To adjust the microphone sensitivity, press ● **Option,** on the right side panel, and **Voice Volume** ■ — to decrease the sensitivity, or **Voice Volume** ■ + to increase the sensitivity. When any other button is then pressed, the Vocalizer will remember the latest sensitivity setting, even after the unit has been turned off.
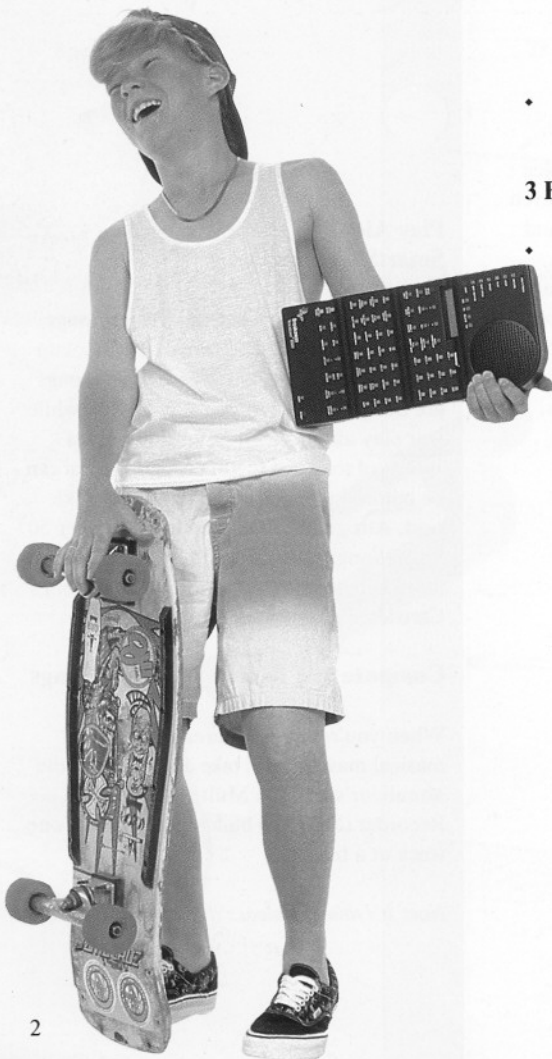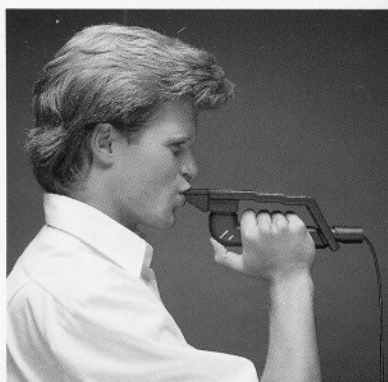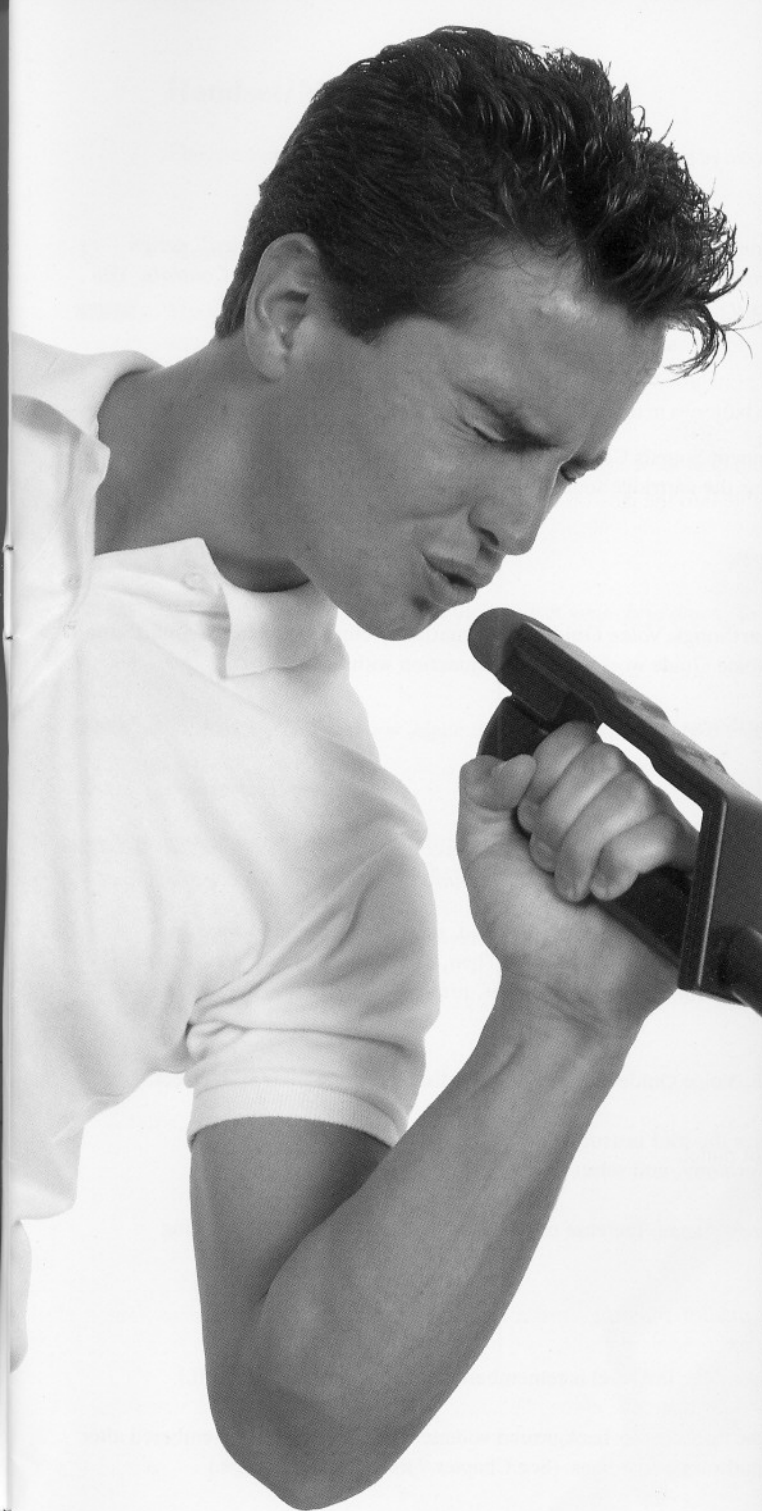
3 Tips on Vocalizing

The best way of "vocalizing" is to make a clear "DOOOOO" sound approximately 1 inch from the microphone (as shown to the left). The sensitivity of the microphone is set so you can vocalize at your normal speaking volume. If the Vocalizer doesn't produce a steady instrument tone right away, try vocalizing a little louder or moving closer to the microphone (or installing the *personal* mouthpiece—see below).

Depending on the instrument you select, you may notice a slight delay between your vocalizing and the instrument sound being generated by the Vocalizer. The same human quality that makes you sensitive to the occasional delay also helps you adapt to it.

To minimize any delay, vocalize at a high pitch. The higher the pitch, the faster the Vocalizer responds. For best results, try vocalizing in a "falsetto" range (much higher-pitch than normal). If the instrument output sounds too high, reduce it an octave by pressing the **Octave ■ —** (octave down) button.

If you want to take the lead with an impressive instrumental solo, use long, sustained "DOOOOO" sounds, rather than several short, quick "DOO"s. Slide your voice up and down, like a siren, to the desired notes. This way, Voice Guide works for you to help pick notes which sound the best.

If you prefer that your voice not be heard over the Vocalizer, you may want to use the *personal* mouthpiece included in the package. To install, just unsnap the standard mouthpiece from the microphone. Then, snap on the personal mouthpiece. Place your lips over the end of the mouthpiece, as shown in the photo to the left, and make the same "DOOOO" sounds as before.

Warning: *This is your personal mouthpiece. For reasons of hygiene, you should not share this mouthpiece with others.*

4 Features and Functions

The Vocalizer is designed for simple access to features and functions. The four steps of the console's patented "wave-step" design correspond to the Vocalizer's four major functional categories: Instruments, SmartSongs, Multitrack Recorder, Master Controls. You simply find the button with the feature you want to use, and press it. The LCD will verify the function you have selected.

1   Instruments

Accesses any of the 28 built-in instrument sounds. When an Instrument Sounds Cartridge is inserted, press desired green button once to access the built-in sounds, and twice in rapid succession to access the cartridge sounds. The name of the instrument selected is shown on the left side of the LCD display.

2   Vocalizing Guides

Voice Guide™: Helps you stay in tune while playing along to SmartSongs. Voice Guide is automatically employed when a SmartSong is started. When Voice Guide is off, staying in tune is up to you. (Voice Guide works *only* in conjunction with SmartSongs.)

Melody Guide: Helps you play the melody (only available for SmartSongs Album Cartridges.)

3   Effects

Chorus (stereo): Gives the instrument a fuller, richer sound. To play two different instruments at the same time (with one slightly delayed) press ● **Option,** on the right side panel, after pressing ■ **Chorus.** Then choose a new lead instrument.

Echo (stereo): Repeats the instrument sound a measure later, in the same instrument as the lead, multiplying the amount of music you can make. To repeat sooner than a measure, press ● **Option,** and then ■ **Echo.** Then, press ☑ until you have reached the desired delay interval. To make the echoed instrument different from the lead instrument, press ● **Option** after ■ **Echo,** and select a new lead instrument.

Slide: Lets you bend notes or slide between notes with your voice. Voice Guide is automatically disabled while Slide is in effect.

Harmony (stereo): Produces a second instrument that accompanies the lead instrument in *harmony.* To have different instruments play in harmony, press ● **Option** after pressing ■ **Harmony,** and select a new lead instrument.

Octave: Expands the human vocal range up to a 7-octave instrument range. Increase or decrease the octave setting by pressing **Octave** ■ + or ■ —. respectively, one or more times.

4   Master Controls

Master Volume: Controls the overall output volume of the Vocalizer. (The last level is remembered after the unit is turned off.)

Instrument Volume: Controls lead instrument volume relative to the SmartSongs background volume. (The last level is remembered after the unit is turned off.) Also adjusts individual track volumes on multitrack recordings. (See Chapter 7 for multitrack usage.)

Voice Volume: Allows you to mix your own voice with the instrument output of the Vocalizer by pressing **Volume** ■ + until the desired voice volume mix is reached. (Voice volume returns to "0" when the unit is turned off.)

5   Demo

Starts the built-in interactive demonstration to lead you through the basic features of the Vocalizer. To operate, press ■ **Demo** and follow the instructions on the LCD display.

6   Power

Turns the Vocalizer on and off. (Power automatically shuts off after 5 minutes, if left alone. To override auto shut-off, press ● **Option** and then ■ **Demo.**)

10

MULTITRACK

RECORD

STOP

PLAY

TRACK

EDIT NOTES

EDIT RHYTHM

CART

YES   NO   DELETE   TAP

Rock Vibes
By David Sparks
SmartSongs™

Multitrack
Malibu
You Be Me
Kanjaro
Dream Free
Sara's Wish
Hip Happy Bee
Cart

This side up.

11

9

8

Hum into mic

SmartSongs™

ROCK 1   SOUL 1   JAZZ

STOP/START   +   +   SONG VARIATIONS   ROCK 2   SOUL 2   BLUES

ENDING   TEMPO   KEY   RHYTHM VARIATIONS   ROCK 3   LATIN 1   REGGAE

DRUMS ONLY   DRUMS & BASS   BASS & CHORD   FULL SMART SONG   ROCK 4   LATIN 2   COUNTRY

7

PIANO   ELECTRIC GUITAR   FLUTE   SAX   VIOLIN   BELLS   SPIRIT

ELECTRIC PIANO   FUZZ GUITAR   WHISTLE   TRUMPET   CELLO   MARIMBA   WARP

PIANO STRINGS   ELECTRIC BASS   CLARINET   TROMBONE   BASS   STEEL DRUM   FUSION

ORGAN   SLAP BASS   HARMONICA   SYNTH BRASS   SYNTH STRINGS   SYNTH DRUMS   SARA

1

VOICE GUIDE   CHORUS   ECHO   +   +   +   +

MELODY GUIDE   SLIDE   HARMONY   OCTAVE   VOICE VOLUME   INSTRUMENT VOLUME   MASTER VOLUME

2

Breakaway™
Vocalizer® 1000

DEMO   POWER

6

3   **4**   **5**

Step 4 — Multitrack Digital Recorder

Step 3 — SmartSongs

Step 2 — Instruments

Step 1 — Master Controls, Effects and Guides

7   SmartSongs™

A detailed description of SmartSongs is presented in Section 5.

Styles/Songs: Starts playing one of the 12 built-in SmartSongs to jam along to. The name of the song is normally displayed on the right side of the LCD display.

Song Variations: Changes from song verse to song chorus, and back again. The variation begins at the beginning of the next song pattern after ■ **Song Variations** is pressed.

Rhythm Variations: Change bass, drum, or individual instrument patterns.

Stop/Start: Stops playing or recording a song. When restarting a song with this button, the song starts up where it was last stopped, acting as a "pause" button.

Tempo: Speeds up (■ +) or slows down (■ —) a SmartSong.

Key: Transposes a SmartSong to a higher (■ +) or lower (■ —) musical key.

Drums Only, Drums & Bass, Bass & Chord, Full SmartSong: Adds and subtracts sections of instruments in the SmartSong.

Ending: Ends the SmartSong with a pre-recorded finale, exclusive to each SmartSong.

8   LCD Display

Gives instructions, and indicates features which are selected when buttons are pressed.

9   Cursor Buttons (△, ▽, ◁, ▷)

Increases/decreases values shown on the LCD display. Responds to instructions on the LCD display, and controls key functions in the MDR.

10   Multitrack Digital Recorder (MDR)

Allows you to record your own musical creations. You can learn the MDR functions by pressing ■ **Multitrack** and following the instructions on the LCD display. (The MDR is fully described in Chapter 7.)

Multitrack: Initiates a multitrack recording session. Follow the step-by-step instructions on the LCD display to create and record a song, one track at a time.

Record: Begins recording.

Stop: Ends recording or playback.

Play: Replays recording from the beginning.

Track: Selects track on which to record or edit.

Edit Notes: Begins session to edit notes on the chosen track. To move through the track note-by-note, use the ▷ **Tap** button. To raise or lower the last sounded note, use △ or ▽ buttons. To delete a note, press ◁ **Delete** after the note has been sounded. To add a quarter note, hum a new note where it is to be inserted.

Edit Rhythm: Begins session to edit the timing, or rhythm, of notes on the chosen track. To trigger when succeeding notes should play, use the ▷ **Tap** button. Hold down the ▷ **Tap** button as long as you want the note to last.

11   Cartridge ("Cart")

Insert SmartSongs and other application cartridges here. To choose a cartridge SmartSong, press ■ **Cart** and then the gray button on the top step of the console which is aligned with the desired song title on the cartridge label (as illustrated in the photo).

Handset/Microphone

The handset contains a microphone mouthpiece (covered by a colored windscreen), a stand extension, and two controls—Octave Up and Slide.

12 **Mouthpiece and Windscreen**

The windscreen is the sponge-like, brightly-colored material over the plastic mouthpiece. The mouthpiece is replaceable—remove by pulling straight out. The windscreen is separately replaceable. Simply slip it off the mouthpiece, and pull a new one back over the mouthpiece.

13 **Octave Up**

Temporarily raises the instrument up one octave *while held down*. To alter the instrument range, use the **Octave** ■ + or ■ − buttons on the Vocalizer console.

14 **Slide**

Allows bending of notes from the handset *while held down*. To remain in slide mode, use the slide button on the Vocalizer console.

15 **Stand Extension**

For hands-free operation, place the handset extension in the cradle of a microphone stand.

16 **Personal Mouthpiece**

Install by removing the standard mouthpiece and snapping the personal mouthpiece onto the handset microphone. Inside this mouthpiece is a black sponge-like filter to prevent moisture from condensing on the internal microphone element. It is recommended that you periodically wash this filter. An extra black filter is included for your convenience. (Warning: This is your personal mouthpiece. For reasons of hygiene, you should not share this mouthpiece with others.)
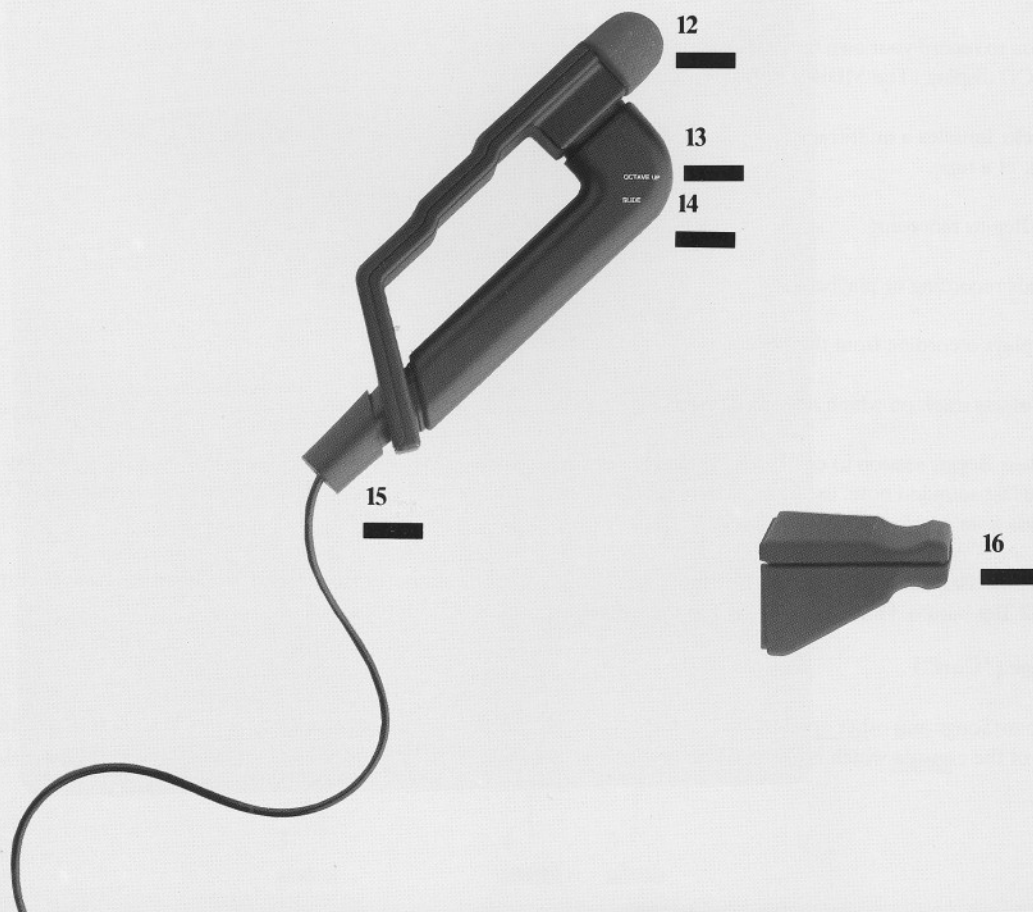
Right Side Panel: Input/Output Connections

17   MIDI In

(MIDI—Musical Instrument Digital Interface) Allows the Vocalizer to be controlled by external MIDI devices, such as computers and keyboard synthesizers.

18   MIDI Out

Allows you to play any MIDI-based synthesizer through the Vocalizer. (See Chapter 10—Using the MIDI Interface.)

19   Option

Accesses MIDI controls. Also expands selected Vocalizer functions such as Echo and Harmony.

20   Handset

Jack for connecting the handset/microphone.

21   Audio In

Jack for plugging in guitars, microphones, or instrument pickups, as an alternative audio source to the voice.

22   Headphones/Audio Out

Jack for stereo headphones, or for plugging the Vocalizer into your home or portable stereo. A special audio-out cable is included in the Vocalizer package. Plug the split end of this cable (two RCA connectors) into the Left and Right "Aux In" or "Audio In" connectors in your stereo receiver or amplifier.

23   Jam Link™

Helps keep two or more Vocalizers in tune with one another for better group vocalizing. Connect Vocalizers together with a standard telephone handset cable, plugged into the "Jam Link" connectors on each end. (See Chapter 6—Jamming with Your Friends.)

24   Tuning

Allows you to tune the Vocalizer up or down one quarter tone to be able to play along with another instrument, such as a piano or bells. To operate, press ● **Tuning.** You will hear the standard tuning pitch (A-440). Alter the tuning pitch by pressing the ⬛ or ⬜ buttons. When the desired pitch is achieved, press ● **Tuning**.

25   DC 7.2 V

Lets you power the Vocalizer with the (included) AC adaptor plugged into any standard 110V wall outlet. *Warning: To avoid damage to the Vocalizer, use only the AC adaptor provided in the Vocalizer 1000 package.*

Rear of Unit

26   Kickstand

For tabletop use, elevates top of Vocalizer console for comfortable viewing and control.

27   Tripod Mount

Allows you to mount the Vocalizer console on a standard tripod stand. Use particular care in operating the Vocalizer while stand-mounted. Do not put undue strain on the upper step of the Vocalizer housing.

28   Instrument Sounds Cartridge Connector

Insert the Instrument Sounds instrument cartridge, label side down. *If you have a song recorded in the Vocalizer's internal memory, you must save it onto a SmartSongs Blank Recording Cartridge before inserting the Instrument Sounds cartridge. If not saved, you may lose the composition.*

29   Battery Compartment

Accepts six C-size batteries, installed as illustrated in the battery compartment. In addition, below the main battery compartment is a space for the lithium battery (type CR2430 or equivalent).

26

27

28

29
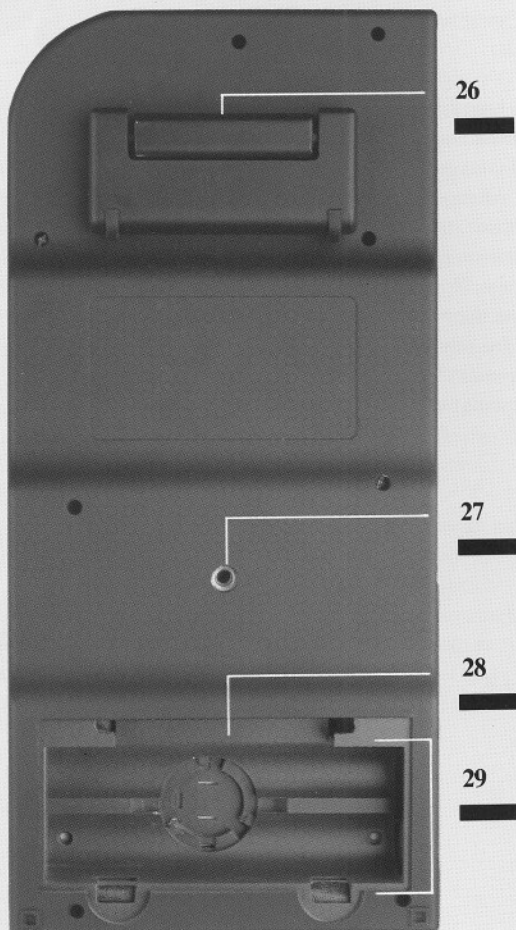
5 Playing Along to SmartSongs™

The Vocalizer has built-in, background stereo songs that you can jam along with. These songs, called SmartSongs Jam Patterns, have special, built-in intelligence that automatically activates the Voice Guide, which tells the unit which notes to allow. Voice Guide works exclusively with *SmartSongs*.

Each SmartSongs Jam Pattern contains drums, bass, and chord patterns. The built-in SmartSongs feature beginnings, middle sections that continually replay, and pre-recorded special finales ("Endings"). Hundreds of SmartSongs Jam Patterns will be available soon on special cartridges (see Chapter 8—Expanding Your Vocalizer).

Pick your favorite instrument (by pressing one of the green buttons) and choose one of the built-in SmartSongs, for example, ■ **Rock 1.** Now slide your voice's pitch up and down, like a siren. Since Voice Guide is automatically activated, the Vocalizer will turn your vocal sliding into hot instrumental leads.

Next, try some of stereo effects to broaden the musical output of the unit. Press ■ **Echo**, and vocalize a measure of a lead, and pause to hear it replay a measure later. After you get comfortable with the echo effect, try to harmonize with the echoed instrument, as if you were doubling yourself on stage. Now try ■ **Harmony**, pressing ● **Option** on the right side panel immediately after ■ **Harmony**, and then pressing another green instrument button. This will create two instruments playing together in harmony.

Also, try the Slide button on the handset while jamming along to one of the SmartSongs. Press ■ **Fuzz Guitar**, ■ **Chorus**, and occasionally press ■ **Slide** on the handset. Then let your "fingers fly" on your fabulous air guitar.

Remember, you can change SmartSongs at any time. You might enjoy going back and forth between different SmartSongs. Try restarting the same SmartSong several times in a row, creating a "rap" effect. When you're ready to stop the song, press ■ **Ending** for a special finale.

It's also a lot of fun to switch between ■ **Drums & Bass** and ■ **Full SmartSong**. Experiment with the buttons on this step for for some pleasant surprises.

6 Jamming with Your Friends

Music is an international language. Listening to music brings people of all ages and backgrounds together. But "listening" to music is only half of the dialogue. "Speaking" with music is just as important. You might try bringing your Vocalizer to a party. Or better yet, try getting a few friends together, with several Vocalizers. With the Vocalizer's patented Jam Link™capability, you can connect the units together and have even more fun jamming as a group.

To use Jam Link, simply plug each end of a standard telephone handset cable into the "Jam Link" connector on the right side panel of each Vocalizer.

Once two Vocalizers are connected, you can plug a SmartSongs Jam Patterns Cartridge into one Vocalizer and begin playing one of the songs on the cartridge. Now, both Vocalizers linked together can play along to the chosen SmartSong.

A good way to jam is to have one person do a short solo on the Vocalizer, which the other person will then try to imitate on the other Vocalizer using a different instrument. Then reverse the roles. Pretend you're on stage. When you want to pass the lead, step back and motion to your fellow "band member."

You might try setting the SmartSong on ■ **Drums & Bass**, and then having one person play chords by pressing ■ **Harmony**. The other person can do fancy guitar licks, with ■ **Chorus** chosen and an occasional sliding of notes.

If you're playing the Vocalizer, and your friends are playing conventional instruments, you'll either want to tune to their instruments or have them tune to the Vocalizer. To tune the Vocalizer, press ● **Tuning** on the right side panel and press the ◳ or ◲ cursor buttons. When you are in tune, press ● **Tuning**.
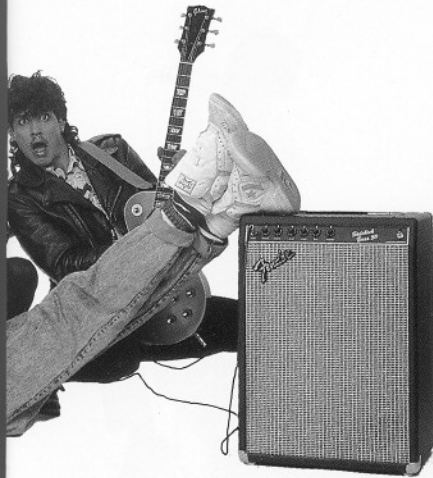
7 Composing Your Own Songs

Built into the Vocalizer® 1000 is a Multitrack Digital Recorder (MDR), capable of recording up to five tracks of a song, one track at a time. The Vocalizer's MDR allows you to:

• Record your vocalizing along with a SmartSong ("Simple Lead Composing"),

• Re-compose up to five tracks of any internal or cartridge SmartSong, *with the help of Voice Guide* ("Smart Composing™"), or,

• Start from scratch and compose the whole song, *without the help of Voice Guide* ("Advanced Composing").

The advantages of using a *digital* recorder, such as the MDR, is that you can record each track at a slow and deliberate pace, and then play back the song at a faster pace. In addition, you can edit individual notes or tracks without having to redo the entire song. The Vocalizer's MDR is a perfect tool to generate the "rough draft" of a song, leaving the fine tuning for later.

Simple Lead Composing

To record a single lead instrument playing along with a SmartSong, choose the SmartSong (internal or cartridge), pick the desired lead instrument, and then press ■ **Record** on the top step. At that time, four click sounds are heard, after which the SmartSong begins to play and the recording session begins. To end the session, either press ■ **Ending** (on the third step) to end with the pre-recorded song finale, or ■ **Stop** (on the top step) to terminate the session at that exact moment. You can now replay the recording by pressing ■ **Play** (on the top step). While you play it back, you can adjust the tempo, key, or lead instrument settings.

Smart Composing™

Smart Composing™ allows you to take advantage of the Voice Guide capability in SmartSongs to help you compose songs that sound harmonious. If you desire more flexibility in the choice of notes, you can use the "Advanced Composing" capability in the MDR, described below. Advanced Composing is more versatile, but it's much more challenging to use without the benefit of Voice Guide.

To begin your Smart Composing session, just press ■ **Multitrack** (on the top step) and follow the instructions on the LCD display. When the question "Smart Composing?" is displayed, press the ◪ **Yes** cursor button.

Smart Composing Session (an example)

Action	Display	Comments
1. Press ■ **Multitrack**	*Multitrack* *Erase Song(Y/N)?*	This message is displayed if you have a song already recorded inside the Vocalizer. If you do, and you want to save it to a Blank Recording Cartridge, follow the instructions in the section "Exiting the MDR," below. To record a new song, then…
2. Press ◩ **Yes**	*Smart Composing?*	Since you want to have the help of Voice Guide, then…
3. Press ◩ **Yes**	*Select SmartSong*	To select an internal SmartSong…
4. Press a blue SmartSongs button	*[Song Name Here]*	To select a SmartSongs Cartridge song, instead of an internal SmartSong…
5. Press ■ **Cart** Press the gray button on the top step aligned with the desired song shown on the cartridge label	*[Cartridge Name Here]* *[Song Name Here]* *Full Song (Y/N)?*	then… At this time you can choose to start with the entire SmartSong and change one track at a time, or start with the drums and bass tracks and build up. If you prefer to start with the full song, press ◩ **Yes**; if just drums and bass, press ☑ **No.** For this example…
6. Press ◩ **Yes**	*Record Track 1*	You may now begin recording on track 1. If desired, you can change to the next track by pressing ■ **Track.** To begin recording…

7. Press ■ **Record**	*Recording Trk 1*	Four clicks immediately follow, at the tempo of the recording session.
		You can vary the song rhythm or verse/chorus selection by pressing ■ **Rhythm Variations** or ■ **Song Variations**, respectively, during the recording of track 1. You can also vary the key on track 1.
		When you want to end recording on track 1, you can either press ■ **Ending** or ■ **Stop**. For this example…
8. Press ■ **Ending**	*Ending Track 1*	After ending with song finale…
	Trk 1 86% Left	The display confirms that you are on track 1 and that you have 86% of memory still available for recording.
		To record the next track…
9. Press ■ **Track**	*Record Track 2*	And you are now ready to record on track 2.
10. Press ■ **Record**	*Recording Trk 2*	You will again hear four clicks and the song will start playing, from the beginning, this time with the new part you recorded being replayed on track 1. The MDR is now recording what you vocalize on track 2, until you press ■ **Stop** (on the top step), or until the song ends. The song is then automatically reset to the beginning.

Repeat steps 7, 8, and 9 until you have composed your new song, up to five tracks. Be sure to monitor the memory indicator so you can complete the song within the capacity of the internal memory of the Vocalizer.

If you would like to create a song longer than that allowed in the Vocalizer's internal memory, you can purchase a SmartSongs Blank Recording Cartridge to expand the unit's memory. (See Chapter 8—Expanding the Vocalizer—for an explanation of the SmartSongs Blank Recording Cartridge).

Advanced Composing

If you want to "start from scratch" and compose each part of a song (except for the drums) *without the assistance of Voice Guide,* then you should answer ☑ **No** when asked "Smart Composing?". This means that you begin only with a drum track and get no pitch correction. It is quite challenging for most people to control their voices so accurately that Voice Guide is not needed; but the more you use the Vocalizer, the better your voice becomes.

If you already play an instrument, advanced composing is ideal. You can use the instrument you already know how to play, instead of your voice, to control the Vocalizer as you record each track of the MDR. (See Chapter 10—Instrumentalists Using the Vocalizer.)

Once you have answered "No" to the prompt "Smart Composing?", you are automatically put into the Advanced Composing mode. The remaining steps, clearly spelled out on the LCD display, follow the same format as in Smart Composing.

Editing

You can edit a song during a recording session or after it has been saved. To edit after the initial recording session, press ■ **Multitrack**. Move through the instructions as though you were going to compose a new song in Smart Composing. When asked to "Select SmartSong," choose the song you just saved in the SmartSongs Blank Recording Cartridge. Then choose the track you desire to edit with the ■ **Track** button. When editing this track, the volume of the track will be twice as loud as the other tracks. At any point, you may re-record the entire track, just as you recorded it the first time. Otherwise, the steps below allow you to edit specific notes or sequences of notes.

Change Pitch

Press ■ **Edit Notes**. Move note-by-note through the song with the ▷ **Tap** button until a note has been played that you want to change. At that time, raise or lower the note with the △ or ▽ keys, respectively. Each press of the key changes the note a semitone.

Change Rhythm

Press ■ **Edit Rhythm**. The Vocalizer will produce four clicks, as in the record mode, but at half the original tempo. This way you can more accurately edit the rhythm. You must then press the ▷ **Tap** cursor button *in the desired rhythm of each note.* Holding down the tap button will produce longer notes. For each tap, the Vocalizer produces the next note previously recorded on that track.

Add or Delete a Note

Press ■ **Edit Notes**. Move to the point on the track where you want to add a note. To add a note, hum the new note into the microphone. If you're not sure exactly what note you want, sustain the note, slide your pitch up or down to the note you desire, and then end the note. The MDR will insert a quarter note at the last pitch achieved. Every time you restart a note, a new quarter note is inserted. To alter the duration of the new note, use ■ **Edit Rhythm**, as described above.

To delete a note, press ◁ **Delete**. The last note played will be deleted, and the next note in the track will be played automatically.

Change Track Volumes

The MDR allows you to adjust the volumes of each track (often referred to as "track mixing"). To change the volume of an individual track, select the track (as described above), and press ■ **Play** on the top step. Then increase or decrease the track volume by pressing **Instrument Volume** ■ + or ■ − to the desired levels.

Change Tempo or Key

To change the tempo or key, press ■ **Play**. Set the desired key by pressing **Key** ■ + or **Key** ■ −. Set the desired tempo by pressing **Tempo** ■ + or **Tempo** ■ −. There can only be one tempo for each song. The last tempo and key setting when the song ends will be remembered. The song can be programmed to change keys at desired points in the song by changing the key while recording track 1.

Exiting the MDR/Saving the Recording

To exit or save, press ■ **Multitrack**. The display will read "Save to Cart?". Pressing ☑ **No** will exit to normal Vocalizer functions. If you want to save the recording, insert a Blank Recording Cartridge, and press ☑ **Yes**. Pressing ☑ **Yes** will prompt the message "Select Cart Slot". Then select one of the six gray buttons on the top step aligned with an open slot on the Cartridge Label. If there is a song already stored in that position, the display will read "Erase Old (Y/N)?". Pressing ☑ **No** goes back to "Select Cart Slot", pressing ☑ **Yes** saves the song and exits the MDR.

Saving the Composition on a Cassette Recorder

You may record the song on a cassette recorder by simply connecting the "audio-out" cable (included) into the line inputs or the microphone inputs of a standard cassette recorder or deck. For microphone input, use the RCA to 1/4" plug converters (included). Begin recording on the cassette recorder, then press ■ **Play** on the top step of the Vocalizer.

Adding Lyrics to Your Composition

With the Vocalizer and a cassette recorder, you can add lyrics to your composition. Prepare the cassette recorder as described above. Once you are connected to the recorder, lower the instrument volume with the **Instrument Volume ■ —** button until the instrument cannot be heard when you vocalize into the handset microphone. Then increase the voice volume with the **Voice Volume ■ +** button until you can hear yourself singing into the microphone at the volume you desire. Begin recording on the cassette recorder, and press ■ **Play** on the top step. Then sing your lyrics into the microphone and the cassette recorder will record the full instrumental and lyrical composition.

Running Out of Memory

If you appear to be getting close to "0% Left", you can either re-record one or more tracks with fewer notes, thus conserving internal memory, or expand the memory through a SmartSongs Blank Recording Cartridge. Plug in the cartridge, press ■ **Multitrack** and save the song, then return to the song as you would if you were editing it.

SmartSongs™ Jam Patterns Cartridges

SmartSongs Jam Patterns in cartridges are functionally equivalent to the SmartSongs built into the Vocalizer. They have beginnings, middle sections that continually replay, pre-recorded finales, and song and rhythm variations. As with the internal SmartSongs, they use Voice Guide to help you stay in tune when you are jamming along.

Each cartridge has six songs, labeled on the cartridge label, as pictured to the right. To choose the desired song, press ■ **Cart** and then the gray button on the top step of the Vocalizer console aligned with the song title on the cartridge label (as shown below).

Instrument Sounds Cartridges

In addition to the 28 built-in instruments, a full range of other instrument sounds are available on Instrument Sounds Cartridges. Each cartridge contains 28 additional high-quality instruments. The cartridge is inserted into a special connector in the battery compartment. Once a cartridge is inserted, you can access 56 instruments from the Vocalizer panel. Both built-in and cartridge instruments are controlled by the green buttons. To choose a built-in instrument simply press the desired green button once. To select the cartridge instrument, press the green button twice in rapid succession. The name of the instrument cartridge is then displayed on the LCD.

You should not insert an Instrument Sounds cartridge until all compositions and recordings have been saved onto an external SmartSongs Blank Recording Cartridge.

SmartSongs™ Blank Recording Cartridges

To save compositions or record longer songs on the MDR, Breakaway offers a SmartSongs Blank Recording Cartridge. To save a composition onto the blank cartridge, insert the blank cartridge and, once in the Multitrack mode, press ■ **Multitrack** again. The LCD will read "Save to Cart?". Press ◿ **Yes**. The display will read "Select Cart Slot". Choose an open slot on the cartridge label in which the composition is to be stored, and initiate the transfer by pressing the gray button on the top step aligned with that position.

9 Using the MIDI Interface

MIDI (Musical Instrument Digital Interface) is a communications standard that allows two devices which are equipped with MIDI to talk to one another.

Controlling Outside Devices with the Vocalizer

When you connect a MIDI cable from "MIDI Out" on the Vocalizer into "MIDI In" of an external synthesizer, the Vocalizer is ready to talk and the synthesizer is ready to listen. Every note you vocalize is sent to the external synthesizer to be played.

To play a SmartSong through an external synthesizer, set the external synthesizer to "multi" mode and the MIDI base channel to the lowest number available. The Vocalizer will send each track of the SmartSong to a separate MIDI channel. You can then choose different instruments for each SmartSong track.

When playing in slide mode, you may find that your synthesizer cannot bend notes as far as is possible on the Vocalizer. You can adjust the Vocalizer's pitch bend range to match that of the external synthesizer by pressing ● **Option**, then immediately pressing ■ **Slide** (on the bottom step of the console). Then use the ⬒ or ⬓ buttons to set the range in semitones.

You can even connect a Vocalizer to a computer, and, with the proper software, record your music onto a computer disk, and print out your composition in traditional music notation.

Controlling the Vocalizer with Outside Devices

The Vocalizer can be controlled by external MIDI devices, such as keyboards, guitars, or computers. To control the Vocalizer in this way, connect a MIDI cable from the MIDI Out of your controlling device into the MIDI In of the Vocalizer (consult the manuals of your MIDI equipment for more information).

Ordinarily, you can play only one note at a time on the Vocalizer (unless you're using Harmony, Chorus, or Echo). But by using an external MIDI controller like a keyboard, you can simultaneously play up to 10 notes on the Vocalizer.
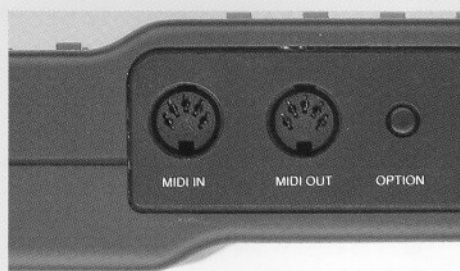
10 Instrumentalists Using the Vocalizer® 1000

If you already play an instrument, the Vocalizer can substantially enhance your music-making ability. If you play guitar or keyboards, you can use the Vocalizer as your all-in-one accompaniment section. If you play woodwinds or horns, you can convert your instrument into a synthesizer or MIDI controller.

The Vocalizer multiplies the amount of music one person can make. The synthesis technique used in the Vocalizer is that of "sampling" and is the same as that used by some of the more popular professional synthesizers.

Additionally, the Vocalizer is an ideal composer's tool. With its easy-to-use multitrack recording capability, the Vocalizer can help you quickly create a "first draft" composition, allowing you to focus on the creative, instead of the mechanical, process.

Woodwind and Horn Players
(and Guitarists, playing one note at a time)

To control the Vocalizer with your instrument, it's best to install an electronic pick-up on the instrument. Plug the cable from the pick-up into the "Audio In" jack on the right side panel of the Vocalizer.

You can also plug a microphone into "Audio In" and play your instrument into the microphone. However, the Vocalizer performs much better when a pick-up is used.

It is critical, in either case, to tune the Vocalizer to your instrument, or visa versa. To tune the Vocalizer, press the ● **Tuning** button on the right side panel and press the ⬚ or ⬚ keys. When you are done, press ● **Tuning** again.

Also, you may want to play in the slide mode (■ **Slide** on the console), so you can bend notes with your instrument, or "Voice Guide Off" mode (press ■ **Voice Guide** on, then off) to play in a discrete note mode. Remember that you can use MIDI Out to access any MIDI-equipped synthesizer.
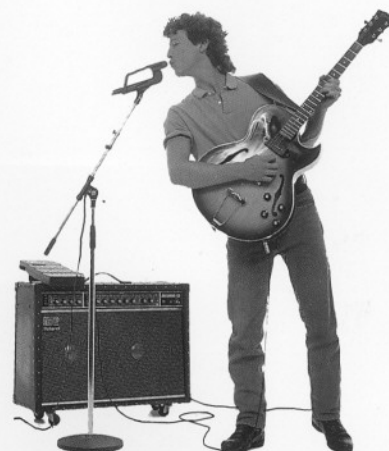
Keyboard and Guitar Players

Since you play instruments that can play chords, you may want to use the Vocalizer to complement your chord playing by setting the SmartSongs track mix to ■ **Drums & Bass**. Then you can play an instrumental lead (with any effects, such as harmony or echo) on the Vocalizer, while playing the chords on your keyboard or guitar.

11 Care and Troubleshooting

Care

The Vocalizer® 1000 has been designed to bring you many hours of trouble-free entertainment. To get the most out of the unit, store it in its original packaging, in a cool and dry location. Avoid extreme heat or cold, and never leave it in direct sunlight. Do not immerse any part of the Vocalizer in liquid, and if liquid spills onto the Vocalizer, wipe it up right away. Do not use the unit near water, as this may result in shock.

To clean your Vocalizer, use only mild soap and a damp cloth. The plastic used is a very high-quality, impact - resistant variety; however, as with nearly all plastics, it can be marred or defaced if put in contact with chemicals such as gasoline, turpentine, nail polish remover, abrasive cleansers, etc.

Every two to three years it will be necessary to remove and replace the lithium battery which is in its own special compartment within the main battery compartment. To replace this cell, remove the battery door and remove the C-size batteries. The lithium cell compartment is indicated by a label. Simply twist the cover slightly to release the catch and remove the cover. The cell is a coin-shaped cell that is available at most drug stores and camera equipment stores. Replace the cell with a CR-2430 or its equivalent.

Trouble Shooting

The Vocalizer is designed to assist you in troubleshooting any potential problems. In fact, every time you turn on the Vocalizer, the unit automatically runs through a quick test of its components.

Below are listed the steps you should take if you believe a problem exists:

1. *Check for weak batteries.* If trouble occurs during normal operation, first replace the C-size batteries. If the problem is with loss of the internal memory, then first replace the lithium cell.

2. *Check all connections.* Ensure that all connectors (handset, AC-Adaptor, Audio Out, etc.) are firmly plugged in. Check the connectors to ensure that no connectors are deformed or pins bent. If using an external source of amplification, check to make sure that the unit is plugged in and turned on, and that the volume is turned up.

3. If the problem persists, *initiate the Vocalizer "self test".* Hold the ● **Option** button down, while simultaneously pressing the ■ **Power** button. The Vocalizer will begin a series of internal electronics tests. During the test, the LCD will display messages such as "System ROM OK" and "Synth ROM OK." The test includes testing of the console buttons. Simply follow the instructions on the LCD to complete the self test. If the Vocalizer is defective, record the message on the LCD at the end of the self test onto your warranty card. Then return the Vocalizer console, handset and warranty card, with proof of purchase, to the store at which you purchased the unit.

If you need additional assistance, call the Customer Service Hotline, 415-341-4879.

Specifications

Synthesis	Stereo, sampled waveforms
Sound Tracks	10 notes polyphonic and polytimbral
Octaves	Over 7 octave range
Instruments	28 preset lead instruments, built-in: piano, electric piano, piano strings, electric organ, electric guitar, fuzz guitar, electric bass guitar, slap bass guitar, flute, whistle, clarinet, harmonica, saxophone, trumpet, trombone, synthesizer brass, violin, cello, string bass, synthesizer strings, bells, marimba, steel drum, synthesizer drums, and four zany sounds; plus five drums: snare drum, bass drum, high hat, cymbal, tom
Effects	Stereo chorus, stereo harmony, stereo echo, slide (continuous) control
Voice Guide™	Voice Guide, and Melody Guide (for song cartridges with known melodies)
SmartSongs™ Styles	12 Jam Pattern styles: rock 1, rock 2, rock 3, rock 4, soul 1, soul 2, latin 1, latin 2, jazz, blues, reggae, and country; each with different drum, bass and chord patterns
SmartSongs™ Options	
Variations	Each background has two "song" variations (verse and chorus), and two "rhythm" variations (bass or drum rhythm variations).
Levels of Accompaniment	4 levels of accompaniment: Drums only Drums and bass Bass and chord Full background SmartSong
Ending	Special pre-recorded finale to each SmartSong™
Tempo	Tempo up and tempo down
Key	Transposes up 6 steps and down 6 steps

Multitrack Digital Recorder (MDR)	5-track digital recording Memory capacity over 1,000 notes Recording modes: Simple Lead Composing, Smart (assisted) Composing, Advanced (unassisted) Composing Editing: pitch, tempo, key, instrument, rhythm, note insertion and deletion Playback options: same as SmartSong™ options (tempo, key, etc.)
Demonstration Function	Interactive, "step-through" demonstration using easy-to-follow messages on the LCD display Modes demonstrated: Basic instrument vocalization, changing instruments, changing SmartSongs, and simple lead recording
Input Terminals	Handset controller, audio input (microphone, electric guitar or other instrument pickup) MIDI input
Output Terminals	Audio Out/Headphones MIDI Out (musical instrument digital interface) Jam Link™ (linking 2 or more Vocalizers)
Tuning	±1/2 semitone
Speaker	3½″ (output capacity: 2W)
Power Supply	3-ways: 6 C-size 1.5 V batteries, household current (with AC adaptor), car battery (optional CA-1 car adaptor) Battery life: approximately 8-10 hours continuous use (measured using alkaline batteries)
Power Consumption	6.2W, depending on speaker volume
Dimensions	164mm (W) x 45 mm (D) x 354mm (H), or 6.5″ (W) x 1.77″ (D) x 13.94″ (H)
Weight	Approximately 1.4 kg (including batteries), or 3.1 lbs
Accessories Included	AC adaptor, Free SmartSongs Cartridge, Audio-Out cable, two RCA to 1/4″ phone plug adaptors, *Breakaway Studio* card, personal mouthpiece, additional windscreen
Accessories Available Separately	SmartSongs Cartridges, Instrument Sounds Cartridges, telephone handset cable for Jam Link (available at local electronics or telephone store).
Package Dimensions	15.9″ (W) × 3.6″ (D) × 12.8″ (H)