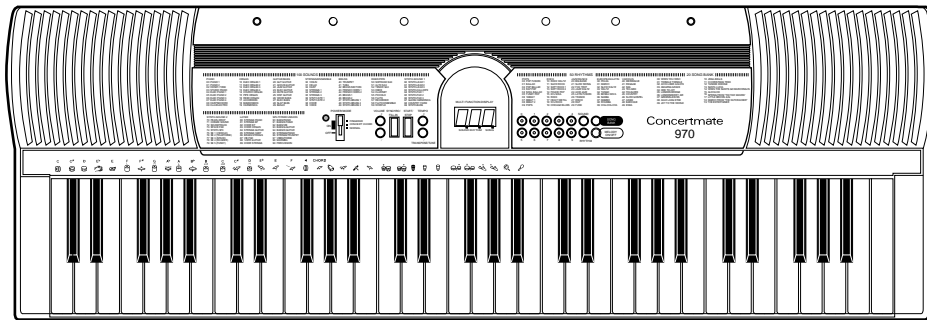




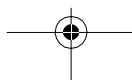
OWNER'S MANUAL **Concertmate® 970** **Portable Electronic Keyboard**

Please read before using this equipment.



Cat. No. 42-4032

OPTIMUS®





FEATURES

Your Optimus Concertmate 970 Portable Electronic Keyboard is a state-of-the-art musical instrument with many exciting features. You can set the keyboard to sound like 100 different musical instruments or sound effects. To accompany your music, the keyboard has 50 rhythms, as well as auto accompaniments and percussion sounds.

Your Concertmate 970's features include:

20 Juke Box Tunes — let you hear a sample of what you and the Concertmate 970 can do. You can also turn off the melody portion so you can play along with accompaniment.

100 Sounds — let you set your Concertmate 970 to sound like anything from a harpsichord to a honky-tonk piano.

12-Note Polyphonic Sound — lets you play and hear up to 12 notes at the same time so you can play or create almost any type of music.

Tempo Control — lets you speed up or slow down the tempo of any selected music pattern.

50 Auto-Rhythms — give you a steady beat for many styles of music from rumba to slow rock.

Fill-In Rhythm — lets you insert a short variation into any auto-rhythm.

Auto Accompaniment — lets you automatically play a preset harmonic pattern to match the selected auto-rhythm.

Tune Control — lets you adjust the pitch of your keyboard so you can play in tune with other instruments.

Transpose Function — lets you instantly change the key of the music, even while you are playing.

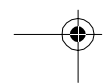
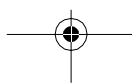
Two Built-In Speakers — provide excellent sound to help make your music come alive.

Headphones/Output Jack — lets you connect headphones so you can play without disturbing others, or an external amplifier so you can play for a crowd.

Three Power Options — let you power the keyboard from internal batteries (not supplied), standard AC power (with an optional adapter), or your vehicle's cigarette lighter socket (with an optional adapter) so you can make music almost anywhere.

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RadioShack is a trademark used by Tandy Corporation.





To fully enjoy the features and functions of this electronic keyboard, please read this manual carefully and completely.

Note: This owner's manual explains how to use this electronic keyboard. It does not teach music.

We recommend you write your Concertmate 970's serial number here. The number is on the bottom of the Concertmate 970.

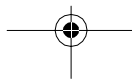
Serial Number _____

THE FCC WANTS YOU TO KNOW

This keyboard complies with the limits for a Class B digital device as specified in Part 15 of *FCC Rules*. These limits provide reasonable protection against radio and TV interference in a residential area. However, your keyboard might cause TV or radio interference even when it is operating properly. To eliminate interference, you can try one or both of the following corrective measures:

- Increase the distance between the keyboard and the radio or TV
- Use outlets on different electrical circuits for the keyboard and the radio or TV

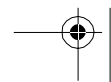
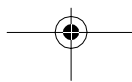
Consult your local RadioShack store or an experienced radio/TV technician if the problem still exists.





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PREPARATION

CONNECTING POWER

You can power your Concertmate 970 in any of these ways.

- Internal batteries (see “Using Batteries”)
- Standard AC power using an optional AC adapter (see “Using AC Power” on Page 6)
- A vehicle’s cigarette lighter socket using an optional DC adapter (see “Using Vehicle Battery Power” on Page 6)

Notes:

- Connecting an AC or DC adapter automatically disconnects internal batteries.
- Always disconnect the adapter when you finish using the Concertmate 970.

Using Batteries

Your Concertmate 970 can use six AA batteries (not supplied) for power. For the best performance, we recommend alkaline batteries, such as RadioShack Cat. No. 23-557.

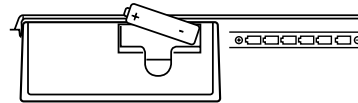
Cautions:

- Only use fresh batteries of the required size and type.
- Be sure **POWER/MODE** is set to **OFF** while you install batteries.

1. Press the tab on the battery compartment cover, then pull up to remove the cover.



2. Put the batteries in the compartment as indicated by the polarity symbols (+ and -) marked beside the compartment.



3. Replace the cover.

Notes:

- If you won't be using the Concertmate 970 with batteries for a week or more, or if you will be using only AC or vehicle battery power, remove the batteries.
- If the Concertmate 970 sounds weak or does not work properly, replace all six batteries. Do not mix old and new batteries.

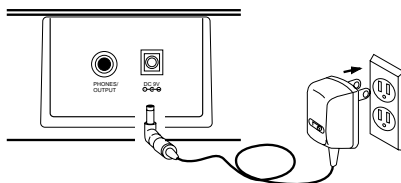
Caution: Dispose of old batteries promptly and properly.

Using AC Power

You can power your Concertmate 970 from standard AC power using a 9-volt AC adapter (not supplied), such as RadioShack Cat. No. 273-1656.

Cautions:

- You must use an AC adapter that supplies 9 volts and delivers at least 800 milliamps. Its center tip must be set to negative, and its plug must correctly fit the Concertmate 970's **DC 9V** jack. The recommended adapter meets these specifications. Using an adapter that does not meet these specifications could damage the Concertmate 970 or the adapter.
- Always plug the AC adapter into the Concertmate 970 before you plug it into the AC outlet. Always unplug the AC adapter from the AC outlet before you unplug it from the Concertmate 970.
- Be sure **POWER/MODE** is set to **OFF** when you connect or disconnect the adapter.



1. Insert the adapter's barrel plug into the **DC 9V** jack on the back of the Concertmate 970.

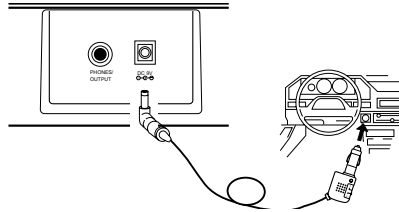
2. Plug the adapter into a standard AC outlet.

Using Vehicle Battery Power

You can power your Concertmate 970 from your vehicle's cigarette lighter socket using a 9-volt DC adapter (not supplied), such as RadioShack Cat. No. 270-1562.

Cautions:

- You must use a DC adapter that supplies 9 volts and delivers at least 800 milliamps. Its center tip must be set to negative, and its plug must properly fit the Concertmate 970's **DC 9V** jack. The recommended adapter meets these specifications. Using an adapter that does not meet these specifications could damage the Concertmate 970 or the adapter.
- Always plug the DC adapter into the Concertmate 970 before you plug it into the cigarette lighter socket. Always unplug the DC adapter from the cigarette lighter socket before you unplug it from the Concertmate 970.
- Be sure **POWER/MODE** is set to **OFF** while you connect or disconnect the adapter.

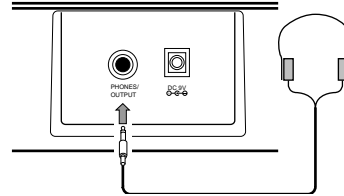


1. Plug the 5.5 mm outer diameter/ 2.1 mm inner diameter barrel plug into the cable so it reads – TIP.
2. Set the adapter's voltage switch to 9 volts.
3. Insert the adapter's barrel plug into the **DC 9V** jack on the back of the Concertmate 970.
4. Plug the other end of the adapter into the vehicle's cigarette lighter socket.

CONNECTING HEADPHONES

To listen to your Concertmate 970 without disturbing others, you can connect a pair of 1/4-inch plug stereo headphones (not supplied). Your local RadioShack store sells a wide selection of headphones.

To connect a pair of headphones, insert the headphones' 1/4-inch plug into the **PHONES/OUTPUT** jack on the back of the keyboard.



Note: Connecting headphones disconnects the Concertmate 970's built-in speakers.

Listening Safely

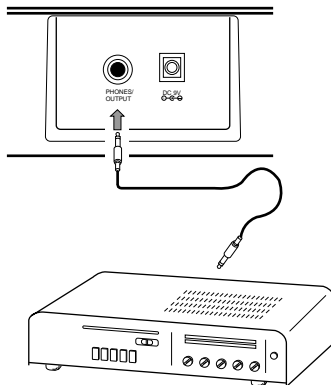
To protect your hearing, follow these guidelines when you use headphones.

- Set the volume to the lowest setting before you begin listening. After you begin listening, adjust the volume to a comfortable level.
- Do not listen at extremely high volume levels. Extended high-volume listening can lead to permanent hearing loss.
- Once you set the volume, do not increase it. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.

CONNECTING AN EXTERNAL AMPLIFIER

To amplify your Concertmate 970's sound, you can connect it to an external amplifier (not supplied) using an audio cable with a 1/4-inch plug (not supplied).

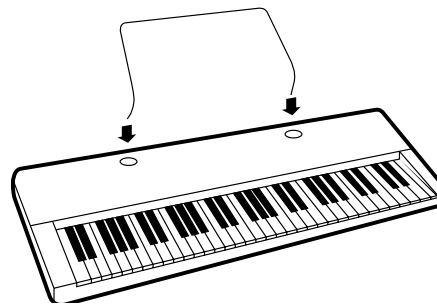
To connect an external amplifier to your keyboard, insert the cable's 1/4-inch plug into the **PHONES/OUTPUT** jack on the back of the keyboard, and connect the cable's other end to the amplifier's input jack(s) (such as AUX IN or TAPE IN).



Your local RadioShack store sells a full line of amplifiers, speakers, and connection cables.

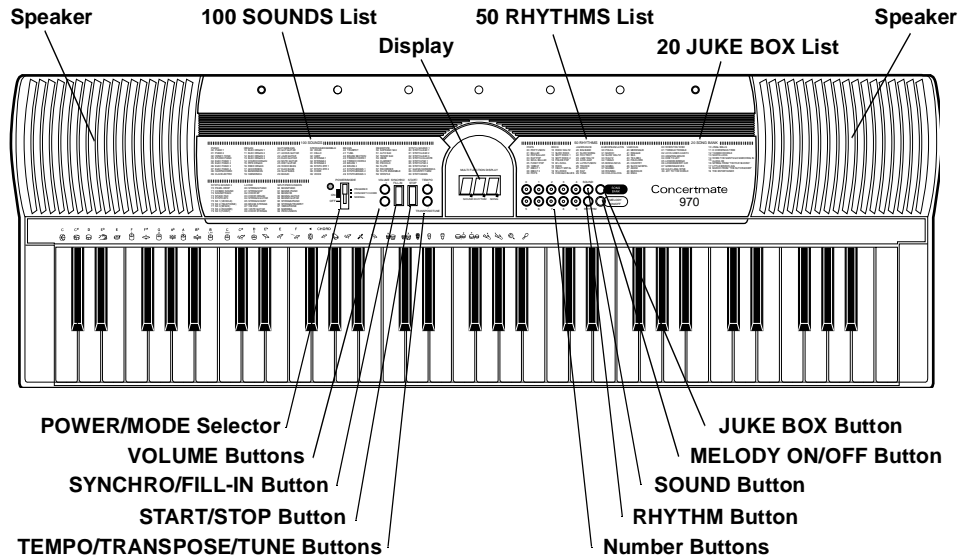
USING THE SHEET MUSIC STAND

To easily view sheet music while playing your Concertmate 970, insert the supplied sheet music stand into the holes on the top back panel.



A LOOK AT YOUR KEYBOARD

UNDERSTANDING THE CONTROLS



READING THE DISPLAY

The Concertmate 970's display lets you view the keyboard's sound, rhythm, and juke box settings.

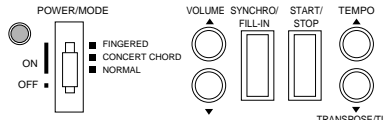
00 . (decimal on the right) — shows the juke box setting. See "Using the Juke Box" on Page 11.

.00 (decimal on the left) — shows the sound setting. See "Using the Preset Sounds" on Page 12.

0 . 0 (decimal between the first and second digits) — shows the rhythm setting. See "Using the Preset Auto-Rhythms" on Page 15.

OPERATION

BASIC OPERATION



1. To turn on the Concertmate 970, set **POWER/MODE** to **NORMAL**. The **POWER/MODE** indicator lights.

Note: To save power, the keyboard automatically turns off after about 6 minutes if you do not press a key. To turn the keyboard on again, set **POWER/MODE** to **OFF** then back to **NORMAL**. (To cancel the auto power off feature, see "Changing Auto Power Off" on Page 20.

2. Begin playing the keyboard.

Notes:

- The Concertmate 970 automatically selects the sound **PIANO** (No. 00) when you turn the power on. To select a different sound, see "Using the Preset Sounds" on Page 12.
- To select an auto-rhythm, see "Using the Preset Auto-Rhythms" on Page 15.
- To play auto accompaniment, see "Using Auto Accompaniment" on Page 17.

- The scores of the Juke Box songs appear in this Owner's Manual (see "Songbook" on Page 29).

3. Press **VOLUME s** to increase the sound level or **VOLUME t** to decrease it. The current setting appears on the display.

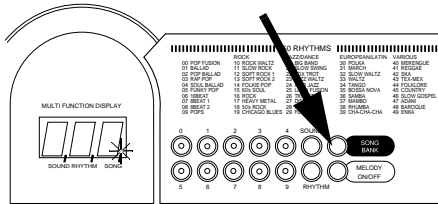
Notes:

- The volume setting range is between 0 (no sound) and 9 (maximum). Each time you turn on the keyboard, the volume setting is set to 7.
 - To quickly change the volume setting, press and hold **VOLUME s** or **t**.
 - You can also adjust the volume by pressing either **VOLUME** button once so the current setting appears on the display, then entering the desired volume setting using the number keys (0-9).
 - To return to the default setting of 7, press both **VOLUME** buttons at the same time.
 - The volume level differs depending on the sound, accompaniment, or song you selected.
4. To turn off the Concertmate 970, set **POWER/MODE** to **OFF**. The **POWER/MODE** indicator turns off.

USING THE JUKE BOX

You can sit back and listen to the 20 tunes that come prerecorded in the juke box, or you can turn off a song's melody and play along on the keyboard.

Playing Back a Juke Box Tune



1. Press **JUKE BOX**. The **JUKE BOX** indicator lights and the number of the current juke box tune appears on the display.

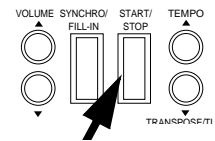
Note: The Concertmate 970 automatically selects the song SERENADE "EINE KLEINE NACHTMUSIK" (No. 00) when you turn the power on.

2. Choose a tune from the 20 **JUKE BOX** list and enter its 2-digit number on the keypad.

Notes:

- Precede a single-digit number with 0. For example, to select 07 Greensleeves, press **07**.
- If you incorrectly enter the first digit, press **JUKE BOX** to clear your entry, then enter the correct digit.

3. Press **START/STOP** to start playing the tune.



You can change the tune by repeating Step 2 even while a tune is playing.

Note: Each tune plays a different preset sound for the melody, but you can change to another sound even while the tune is playing. Follow the steps under "Selecting/Playing a Preset Sound" on Page 13 to select a different sound.

4. Adjust the volume as desired.
5. To change the tempo, press **TEMPO** t or s. The current tempo setting appears on the display.
6. To stop playing the tune, press **START/STOP** again.

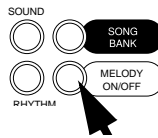
To exit the juke box mode, press **JUKE BOX** so the **JUKE BOX** indicator turns off.

Playing Along with a Juke Box Tune

Follow these steps to have the Concertmate 970 not play the melody of a juke box tune, so you can!

1. Select the tune you want to play.

2. Press **MELODY ON/OFF** to turn off the melody.

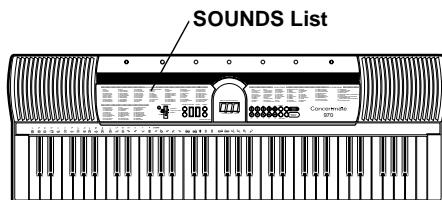


3. Press **START/STOP** to start playing the tune.
4. Adjust the tempo and volume as desired.
5. Play along with the tune on the keyboard.

Note: You can turn the melody on or off by repeating Step 2 even while the current tune is playing.

USING THE PRESET SOUNDS

Your Concertmate 970 can sound like 100 different musical instruments or sound effects. The name and two-digit number of each preset sound is listed on the Concertmate 970's top panel.

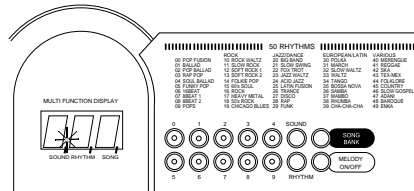


Notes:

- The Concertmate 970 has 12-note (maximum) polyphonic sound. This means that you can play up to 12 different notes at the same time with most of the keyboard's preset sounds. Many of the keyboard's preset sounds, however, are capable of only 6-note polyphony.
- Most sounds on this keyboard have been recorded and processed using a technique called digital sampling. To ensure a high level of tonal quality, samples are taken in the low, mid, and high ranges and then combined to sound amazingly close to the originals. You might notice very slight differences in volume or sound quality for some sounds when you play them at different positions on the keyboard. This is an unavoidable result of multiple sampling and is not a malfunction.
- Sounds 75–79 (which are sound effects) do not follow the musical scale when played, but change effect as you play them in different octaves on the keyboard.

Selecting/Playing a Preset Sound

1. Press **SOUND**. The SOUND indicator lights and the current sound's number appears on the display.



Note: The Concertmate 970 automatically selects the sound PIANO (No. 00) when you turn the power on.

2. To play a different sound, choose a preset sound from the 100 SOUNDS list and enter its two-digit number on the keypad. As you press the keys, the selected digits appear on the display.

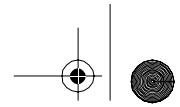
Notes:

- Precede a single-digit number with 0. For example, to select ELEC PIANO 1, press **0 4**.
- If you incorrectly enter the first digit of the sound, press **SOUND** to clear your entry, then enter the correct digit.

3. Play the keyboard to hear the selected sound.




































4. Adjust the volume to the desired level.

5. To select a different sound, repeat Steps 1 and 2.

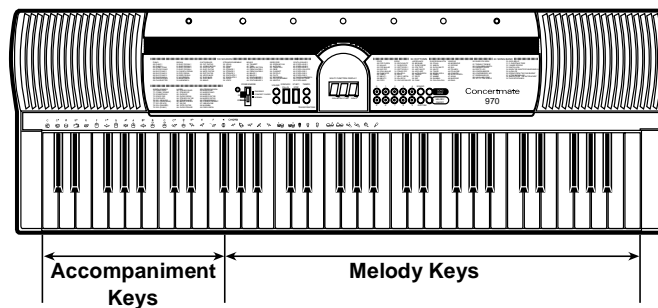


Percussion Sounds

PERCUSSION (No. 99) lets you play the 35 different percussion sounds shown below. The symbol for each percussion sound appears above each percussion key.

 Bass Drum	 High-Mid Tom	 High Bongo
 Side Stick	 Crash Cymbal 1	 Low Bongo
 Acoustic Snare	 High Tom	 Mute High Conga
 Hand Clap	 Ride Cymbal 1	 Open High Conga
 Electric Snare	 Chinese Cymbal	 Low Conga
 Low Floor Tom	 Ride Bell	 High Timbale
 Closed Hi-Hat	 Tambourine	 Low Timbale
 High Floor Tom	 Splash Cymbal	 High Agogo
 Pedal Hi-Hat	 Cowbell	 Low Agogo
 Low Tom	 Crash Cymbal 2	 Cabasa
 Open Hi-Hat	 Claves	 Maracas
 Low-Mid Tom	 Ride Cymbal 2	

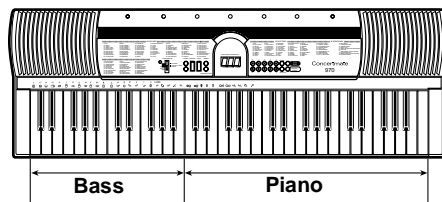
Note: When you select the Fingered or Concert Chord mode, the keys in the lower 1½ octaves become the accompaniment keys and do not produce percussion sounds. See “Using Auto Accompaniment” on Page 17.



Keyboard Split Sounds

The Keyboard Split preset sounds (90-96) let you play two instrument sounds independently on opposite halves of the keyboard. The instrument listed first in the sound's name plays on the left half of the keyboard (below middle C). The instrument listed second plays on the right half of the keyboard (above middle C).

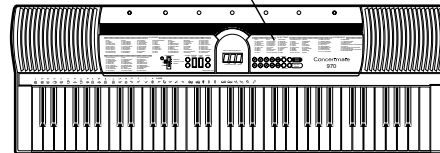
For example, BASS/PIANO (No. 90) plays a bass sound on the left half of the keyboard and a piano sound on the right.



USING THE PRESET AUTO-RHYTHMS

Your Concertmate 970 has 50 preset auto-rhythms that provide a steady beat for your music. The name and two-digit number of each preset auto-rhythm is listed on the Concertmate 970's top panel.

RHYTHMS List

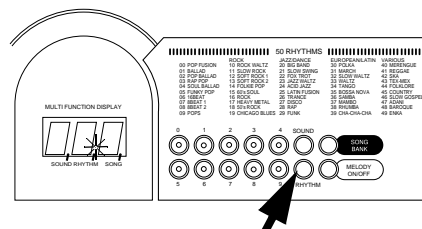


You can play a preset auto-rhythm on the Concertmate 970 in any of the following ways:

- Select and play a rhythm (see "Selecting/Playing an Auto-Rhythm").
- Synchronize the start of a rhythm with your music (see "Using SYNCHRO" on Page 16).
- Briefly vary the pattern of a rhythm (see "Using FILL-IN" on Page 17).

Selecting/Playing an Auto-Rhythm

1. Press **RHYTHM**. The RHYTHM indicator lights and the number of the current auto-rhythm appears on the display.



Note: The Concertmate 970 automatically selects the rhythm POP FUSION (No. 00) each time you turn it on.

- To select a different rhythm, choose an auto-rhythm from the 50 RHYTHM list and enter its two-digit number on the keypad.

Notes:

- Precede a single-digit number with 0. For example, to select FUNKY POP (No. 05), press 0 then 5.
 - If you incorrectly enter the first or second digit of the rhythm, press **RHYTHM** to clear your entry and return to the last selected auto-rhythm.
- Press **START/STOP** to start the selected auto-rhythm.
 - Adjust the volume to the desired level.
 - To change the auto-rhythm speed, press **TEMPO t** or **s**. The current tempo setting appears on the display.

Notes:

- You can adjust the tempo to play an auto-rhythm from between 40 to 255 beats per minute.
- To quickly slow down or speed up the tempo, press and hold **TEMPO t** or **s**.
- You can also adjust the tempo by entering the desired number of beats per minute (040 to 255), using the keypad.

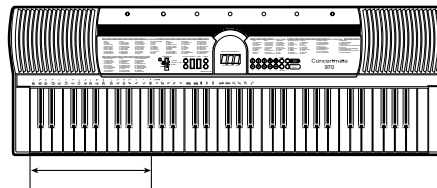
- To reset the tempo to its default (original) speed, press **TEMPO s** and **t** at the same time.

- Play the keyboard to hear the selected preset tone along with the auto-rhythm.
- To select a different rhythm, repeat Steps 1 and 2.
- To stop the auto-rhythm, press **START/STOP** again.

Using SYNCHRO

The Concertmate 970's SYNCHRO feature lets you synchronize the start of an auto-rhythm with the beginning of your music.

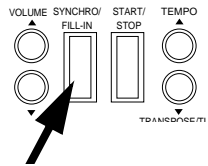
After you select and enter an auto-rhythm, press **SYNCHRO/FILL-IN**, then begin playing the keyboard. The rhythm automatically starts to play when you press any key within the first 1½ octaves of the lower end of the keyboard (the first 18 keys from the left side of the keyboard).



Using FILL-IN

The FILL-IN feature lets you insert a short (1- to 2-measure) variation in the beat pattern of a selected auto-rhythm.

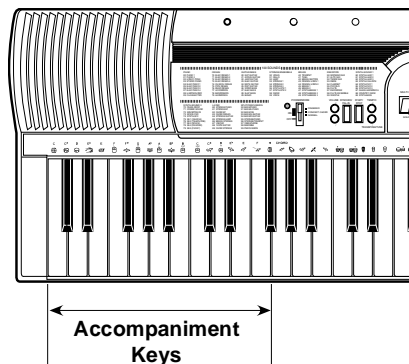
Simply press and release **SYNCHRO/FILL-IN** while the auto-rhythm is playing.



The Concertmate 970 inserts a 1- to 2-measure variation, then the original rhythm automatically resumes at the end of the current measure.

USING AUTO ACCOMPANIMENT

The 18 keys on the left side of the keyboard with note labels above them are called accompaniment keys.



You can set the Concertmate 970 to play two different types of auto accompaniment using the accompaniment keys.

- *Concert Chord* — lets you play chords on the accompaniment keys using chord formations of from one to four notes. The number of keys you press determines the type of chord that plays (see “Concert Chord” on Page 17).
- *Standard Fingering* — lets you play chords on the accompaniment keys using standard chord formations of three or four notes (see “Standard Fingering” on Page 19).





Notes:

- You can use the Concertmate 970's rhythm controls (**FILL-IN** and **SYNCHRO**) with both types of auto accompaniment.
- After you press the auto accompaniment keys, the Concertmate 970 plays the same chord until you press other keys to play a different chord or you press **START/STOP**.

Concert Chord

The concert chord method lets beginning keyboard players easily select and play a chord.

The number of accompaniment keys you press determines the type of chord that plays. The following table shows the type of chord that plays when you press one, two, three, or four accompaniment keys at the same time.

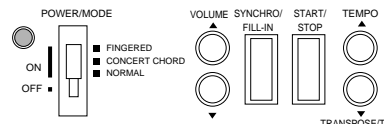
Number of Keys Pressed	Chord Type
	Major
	Minor (m)
	Dominant Seventh (7)
	Minor Seventh (m7)

The lowest note you play determines the key of the chord. For example, if the lowest note is C, the keyboard plays a C chord.

Note: You can press *any* labeled note(s) to the right of the lowest note in the chord to produce a minor, a dominant seventh, or minor seventh chord.

Follow these steps to start concert chord auto accompaniment.

1. Set **POWER/MODE** to **CONCERT CHORD**.



2. Select and enter an auto-rhythm.
3. To start the auto-rhythm before the auto accompaniment, press **START/STOP**.

To synchronize the start of the selected auto-rhythm with your accompaniment, press **SYNCHRO/FILL-IN**.

4. Begin the accompaniment at the desired interval by pressing the desired accompaniment key(s).

To play a melody along with the accompaniment, press any key(s) to the right of the accompaniment keys.

5. Adjust the tempo and volume to the desired levels.
6. To change chords without interrupting the rhythm, simply press the auto accompaniment key(s) required to form the new chord.
7. To stop auto accompaniment and the auto-rhythm, press **START/STOP**.

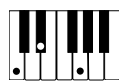
Standard Fingering

The standard fingering method uses standard formations of three or four notes, and lets the experienced musician play a wider variety of accompaniment chords.

You can play the following 15 chord types on your Concertmate 970, in any key, using the standard fingering method.



Major (M)



Minor (m)



Augmented
(aug)



Suspended
4th (SUS4)



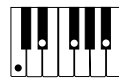
Dominant
7th (7)



Minor 7th
(m7)



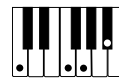
Major 7th
(M7)



Minor Half-
Diminished
(m7-5)



Major Half-
Diminished
(M7-5)



Dominant
Suspended
4th (7sus4)



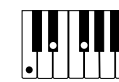
Major 9th
(9)



Minor 9th
(m9)



Minor/Major
7th (mM7)



Diminished



Diminished
7th (dim 7)

Notes:

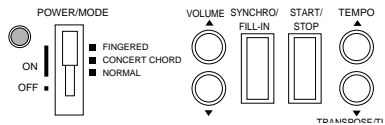
- To produce a 7, m7, M7, mM7, 9, or m9 chord, omit the finger positions shown in parentheses.
- When producing a 7-5 or dim7 chord, the lowest note you play determines the root of the chord. Be sure that your fingering correctly defines the root you want.
- The diagrams above show only one possible fingering position for each chord. It is possible to play a chord using several different positions. For example, the following three fingering positions produce the same C chord.



Note: See “Standard Fingering Chord Chart” on Page 25 for a list of all the chords you can play on your Concertmate 970 using standard fingering auto accompaniment.

Follow these steps to start standard fingering auto accompaniment.

1. Set **POWER/MODE** to **FINGERED**.



2. Select and enter an auto-rhythm.
3. To start the auto-rhythm before your auto accompaniment, press **START/STOP**.

To synchronize the start of the selected auto-rhythm with your accompaniment, press **SYNCHRO/FILL-IN**.

4. Begin the accompaniment at the desired interval by pressing at least three accompaniment keys to play the desired chord.

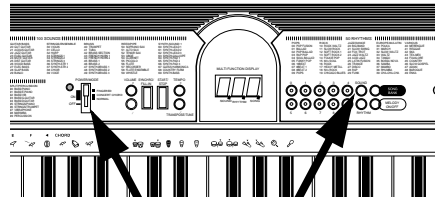
To play a melody along with the accompaniment, press any key(s) to the right of the accompaniment keys.

5. Adjust the tempo and volume to the desired levels.
6. To change chords without interrupting the rhythm, simply press the auto accompaniment keys required to form the new chord.

7. To stop auto accompaniment and the auto-rhythm, press **START/STOP**.

CHANGING AUTO POWER OFF

To have the keyboard not automatically turn off during a session, turn the keyboard on while pressing and holding down **SOUND**.



The next time you turn the Concertmate 970 off then back on again, it will automatically turn off after about 6 minutes.

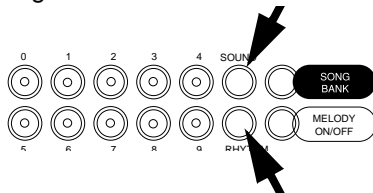
SPECIAL FEATURES

CHANGING KEYS

The Concertmate 970 automatically selects the key of middle C each time you turn it on.

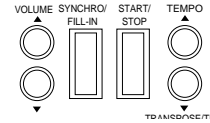
For added flexibility as you make music, the Concertmate 970 lets you change (transpose) the musical key in which it plays.

1. Press and hold **SOUND**, then press and release **RHYTHM**. The display shows the current key setting.



Note: The number on the display is the number of “semitones” to which the keyboard is set, compared to its default key. A semitone is a measurement that represents the acoustical interval between the keys of any two keys on the keyboard. For example, the difference between C and C# or B and B \flat is one semitone. You can transpose the key down 6 semitones (to an F#) and up 5 semitones (to an F) — a full octave.

2. Within 5 seconds, press **TRANSPOSE/TUNE** s or t to raise or lower the key. Each time you press the key, the number on the display increases or decreases by 1 (semitone).



As you raise the key, **1** is C#, **2** is D, and so on. As you lower the key, **-1** is B, **-2** is B \flat , **-3** is A, and so on.

Notes:

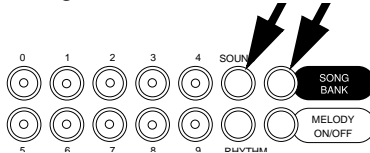
- You can also use the number keypad to quickly raise the key. Press the desired semitone value (1 to 5).
- To reset the keyboard to its default key (middle C), press both **TRANSPOSE/TUNE** s and t at the same time. **0** appears on the display.
- You cannot change the key while the juke box mode is turned on.
- The Concertmate 970 automatically resets the key to the default value of 0 (middle C) each time you turn off the keyboard or play the juke box tunes.
- Each preset sound plays within a specified range. If a key change causes a note to exceed its range, the same note sounds in the nearest octave.
- When you select preset sounds 90-96 after changing the key, the keyboard split changes accordingly.
- Changing the key does not affect the PERCUSSION (No. 99) preset sound.

TUNING THE KEYBOARD

Although your Concertmate 970 never goes out of tune, it does let you adjust its pitch to match other instruments or musical recordings.

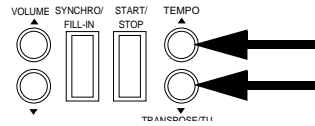
Note: You cannot tune the keyboard while the juke box mode is turned on.

1. Press and hold **SOUND**, then press and release **JUKE BOX**. The display shows the current pitch setting.



Note: The number on the display is the number of “cents” to which the keyboard is currently tuned, compared to its default pitch. A cent is the measurement that represents the acoustical interval between two tones. 1200 cents equal 1 octave.

2. Within 5 seconds, repeatedly press **TRANSPOSE/TUNE s** or **t** to raise or lower the keyboard's pitch. Each time you press the key, the number on the display increases or decreases by 1 (cent).



Notes:

- You can tune the Concertmate 970 to within ± 50 cents (101 levels) of its default pitch.
- You can use the number keypad to raise the pitch by entering the desired cent value.
- To reset the keyboard to its default pitch, press both **TRANSPOSE/TUNE s** and **t** at the same time. **00** (cents) appears on the display.

The Concertmate 970 automatically resets the tuning pitch to the default value of 00 (cents) each time you turn off the keyboard or play the juke box tunes.

TROUBLESHOOTING

If the Concertmate 970 is not performing as it should, these suggestions might help. If you still cannot solve the problem, take the keyboard to your local RadioShack store for assistance.

Trouble	Possible Cause	Remedy
No sound, even if keys are pressed.	The keyboard has turned off automatically.	Set POWER/MODE to OFF then ON again.
	Volume is turned down.	Turn up the volume
	Headphones are connected.	Disconnect headphones.
	Power supply problem.	Check the power supply. <ul style="list-style-type: none"> • Are battery symbols (+/-) facing correctly? • Are the batteries fresh? • Is the AC or DC adapter connected properly?
	You are pressing too few accompaniment keys while POWER/MODE is set to FINGERED .	Set POWER/MODE to NORMAL or CONCERT CHORD . Press 3 or 4 keys to form a chord while POWER/MODE is set to FINGERED .
No sound when connected to an external amplifier.	Volume is turned down.	Turn up the volume.
	Defective connection cord.	Replace the connection cord.



CARE AND MAINTENANCE

Your Optimus Concertmate 970 Portable Electronic Keyboard is an example of superior design and craftsmanship. The following suggestions will help you care for your Concertmate 970 so you can enjoy it for years.



Keep the Concertmate 970 dry. If it gets wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.



Handle the Concertmate 970 gently and carefully. Dropping it can damage circuit boards and cases and can cause the keyboard to work improperly.



Use and store the Concertmate 970 only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.



Keep the Concertmate 970 away from dust and dirt, which can cause premature wear of parts.



Wipe the Concertmate 970 with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the Concertmate 970.

Modifying or tampering with the Concertmate 970's internal components can cause a malfunction, might invalidate its warranty, and void your FCC authorization to use it. If your Concertmate 970 is not performing as it should, take it to your local RadioShack store for assistance.

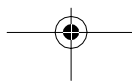


STANDARD FINGERING CHORD CHART

Chord Root \ Type	M	m	7	m7	dim7
C					
C [#] /D ^b					
D					
D [#] /E ^b					
E					
F					
F [#] /G ^b					
G					
G [#] /A ^b					
A					
A [#] /B ^b					
B					



Chord Type Root	M7	m7-5	dim	aug	sus4
C					
C#/D♭					
D					
D#/E♭					
E					
F					
F#/G♭					
G					
G#/A♭					
A					



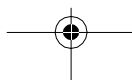
Chord Type Root	7sus4	m add9	mM7	7-5	add9
C					
C#/D♭					
D					
D#/E♭					
E					
F					
F#/G♭					
G					
G#/A♭					
A					
A#/B♭					
B					



SPECIFICATIONS

Number of Keys	61
Polyphonic Sound	12-note (Max.)
Preset Tones	100
Auto-Rhythm	50
Tempo:	Adjustable (40–255 Beats Per Minute)
Other:	Fill-in and Synchro Start
Accompaniments	Concert Chord, Fingered
Juke Box	20 Tunes
Transpose	(F#~C~F: half-notes)
Tuning	Adjustable A4 = 440 Hz ±50 cents
Built-in Speakers	4 Inch × 2 (Output 2W + 2W)
Terminals:	
Power Supply	9V DC Jack
Headphones Stereo Standard Jack	Output Impedance: 66 Ohms
	Output Voltage: 2.8V (RMS) MAX
Power Sources	DC: 6 AA batteries (Cat. No. 23-552)
	AC: 120V, 60Hz, with AC adapter
	Vehicle Battery: 9V with DC adapter
Power Consumption	7.7 W
Dimensions (HWD)	3 ¹ / ₂ × 35 × 12 ¹¹ / ₁₆ Inches
	(90 × 910 × 322 mm)
Weight (Without Batteries)	8 lb 10 oz
	(3.9 kg)
Included Accessory	Sheet Music Stand

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.



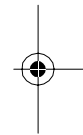
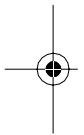


SONGBOOK



SONGS

No.	Title	No.	Title
00	Serenade "Eine Kleine Nachtmusik"	10	Jingle Bells
01	Twinkle Twinkle Little Star	11	O Christmas Tree
02	Ach Du Lieber Augustin	12	Yankee Doodle
03	Amazing Grace	13	Santa Lucia
04	Ode to Joy	14	When the Saints Go Marching In
05	London Bridge	15	Aloha Oe
06	Londonderry Air	16	Spring from "The Four Seasons"
07	Greensleeves	17	Little Brown Jug
08	Auld Lang Syne	18	March from "The Nutcracker"
09	Joy to the World	19	The Entertainer

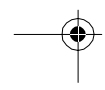
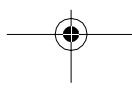


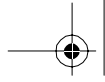
LEVELS OF DIFFICULTY

	Easy		Difficult
	Normal		Very Difficult

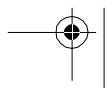
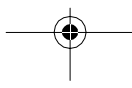
SCORE EXAMPLE

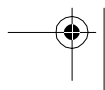
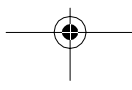
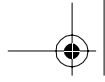
Note: Each score shows the starting beat count and the introductory phrase.





NOTES







Limited One-Year Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

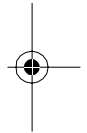
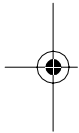
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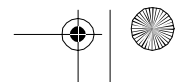
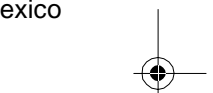
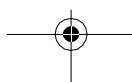
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