

(FC-20)

AUTO ARPEGGIO(FC-20only)

This function automatically produces arpeggios (a series of notes, most often derived from a chord, in which one note at a time is played in succession, from the lowest note to the highest), providing a sparkling background accompaniment. Due to technological advancement, what once took many hours of practice to be able to execute can now be accomplished automatically by simply holding one or more notes on the Lower Keyboard.

To familiarize yourself with the operation of this function, please try the following example:

1) Select a rhythm and press SYNCHRO START.

Auto Arpeggio operates in synchronization with the Auto Rhythm Unit, and therefore, you must activate the rhythm in order to hear the arpeggios. Please note that in this case, because SYNCHRO START is being used, the rhythm and arpeggio will start simultaneously (when you reach step #4).

2) Select and press one of the Pattern Selectors.



The patterns will vary when a rhythm different in the time pattern is selected.

3) Select and press one of the Voice Selectors.



4) Pull the VOLUME slide control toward you, and hold some notes on the Lower Keyboard. You will now hear an arpeggio based on those notes which you have pressed. Because arpeggios are generally derived from chords, your Auto Arpeggio section will also produce arpeggios when the Auto Bass Chord (see page 9) function is in use.

- ★ Arpeggios will be produced based on any chords created by the Single Finger Chord system.
- ★ With Fingered Chord and Custom A.B.C., arpeggios will be produced based on the Lower Keyboard notes pressed.
- ★ If MEMORY is on, the arpeggio will continue to play even after your fingers are removed from the Lower Keyboard.

SUSTAIN

By using the SUSTAIN control, you can produce a sustained arpeggio. Moving the control toward LONG will increase the sustain effect and prolong the arpeggio.

Initiant growth even more. Initiant of Automatically providing the basis with the prothe pided corresponding to the atom you are proving the same time, because the podent are independent of Lover Reyboard the the podent are independent of plex harmonic structures become available. For exama C major 9 chord can be obtained by playing a C pe

III. USEFUL INFORMATION ABOUT USING THE ELECTONE



ACCESSORY JACKS

Several jacks have been included in the design of your Electone in order that a variety of optional accessories may be used.

HEADPHONES Jack

This jack is to be used to connect monaural headphones (optional). When headphones are connected, there will be no sound from the Electone's speakers. This allows you to play your Electone at any time without disturbing others.

NOTE: You can also use stereo headphones with this jack without damaging either the Electone or the headphones. IMPORTANT: Do not use this jack for any purpose other than connecting headphones!

AUX.OUT Jack

This jack has been provided to permit connection of your Electone to most tape recorders that have a "Line In" jack. This allows a direct recording without any outside noise.

AUX. IN Jack

The "Aux. In" jack can be used to connect most tape recorders/players having "Line Out" jacks. This permits you to play back recordings through the Electone's speaker system. By using this jack, you can also perform together with previously recorded music.

NOTE: The sounds reproduced utilizing this jack are not controlled by the volume pedal.

EXP.IN Jack

This jack accepts a monaural signal from synthesizers or similar accessories. The volume of the equipment attached here will be controlled by the Electone expression pedal.

WARNING: The connection or disconnection of any accessory (other than headphones) while the Electone is ON, can result in extensive damage to the Electone and/or the accessory.

Damage caused by the improper connection of accessories is not covered by the manufacturer's warranty.

ELECTROMAGNETIC INTERFERENCE

"Interference" can be a two way street; something you are operating can interfere with others or, something someone else has may interfere with something of yours. Naturally, it is also possible that two or more of your own electronic (electric) devices may interfere with each other. Your Electone has been designed to minimize all these possibilities and meets all applicable standard worldwide.

Electromagnetic interference with your Electone can show itself in a variety of ways. You may hear speech, music, "beeps", static, or buzzing noises. Yamaha Electones are designed to reject RF (radio frequency) signals that are many times the levels found in any normal environment. If, however, you are in the immediate proximity of a very high power transmitter, some interference may still occur.

If this should happen, please try to identify the radio (TV) station and record the time of day that the interference occurs. Station identification is essential in order that the offending frequencies can be established and the authorized (legal) operating power level of the transmitter causing the interference can be verified. If the interference continues, please follow the corrective measure suggestions provided later in this section.

If the interference is in the form of occasional buzzing or static, it is highly probable that the cause can be traced to the turning on or off of some household appliance. The offending appliance can also be outside your own residence. Usually a "time" pattern (i.e., evenings only, etc.) will be involved. Noises of this type rarely originate in the Electone itself. If the condition continues, please contact your local authorized Yamaha Electone dealer for assistance.

Main power line disturbances and electrical storms (lightning) can also be the source of static interference. Generally speaking, problems generated by these two sources will also be present in your other audio or video equipment. Lightning can also be very destructive. The following special warning also applies to virtually all electronic products.

IMPORTANT NOTICE

Modern electronic products, (i.e., computers, video games, electronic organs, etc.), contain components that, under normal conditions, extend the service free life of the products they make up by an almost unbelievable period of time. This is especially true when you consider the vast number of equivalent components incorporated within one given part. These "parts," called "integrated circuits," are however, subject to destruction by high voltage discharges, such as a close proximity lightning strike. This can occur even if the unit is turn IN PERIODS OF ELECTRICAL STORM PROB-ABILITY, IT IS ADVISABLE THAT YOU DISCON-NECT ANY ELECTRONIC DEVICE NOT ACTUAL-LY IN USE, FROM ITS WALL SOCKET.

INSTALLATION AND MAINTENANCE

Your new Electone does not require professional installation or routine maintenance. However, it is IMPORTANT that you be aware of the following:

INSTALLATION

- 1. WARNING: Do not allow your Electone or its bench to rest on or be installed over power cords of any type. An electrical shock and/or fire hazard could possibly result from this type of improper installation.
- 2. WARNING: Do not place objects on your Electone power cord or place it in a position where anyone could trip over, walk on or roll anything over it. An improper installation of this type creates a personal injury/fire hazard possibility.
- 3. Main Power Supply Verification: Your Electone has been manufactured specifically for the main supply voltages used in your area. If you should move, or if any doubt should exist, please consult your local authorized Electone dealer for instructions.
- 4. Environment: Your Electone should not be installed in a position that exposes the cabinet to direct sunlight or air currents having high humidity or heat levels. This type of installation can cause contact oxidation, case joint separation, and cabinet finish problems.
- 5. Vinyl Products: Do not set vinyl items, (i.e., headsets, vinyl doilies, etc.) on the finished surfaces of your Electone or use a polyvinyl material to cover the unit for any extended period of time. A chemical reaction may occur between the finish chemicals and those contained in the polyvinyl products resulting in a permanent marring of the finish.
- 6. Electromagnetic Interference (RFI): Your Electone has been type tested and found to comply with all applicable regulations. However, if it is installed in the immediate proximity of other electronic devices, some form of interference may occur.

MAINTENANCE

- **1. SERVICE:** Your Electone contains no user serviceable components. Refer all service to qualified service technicians only.
- 2. BENCH STRUCTURAL INTEGRITY: If any motion or an "unsteady" sensation is noted in the bench, please check its structural integrity immediately. Discontinue use until any and all troubles are resolved. The bench was designed for seating only. No other applications are recommended.
- **3. POWER/PILOT LIGHT:** When not in use, always turn your Electone "OFF." A PILOT LIGHT (visible when the roll top is closed) has been provided as a reminder.

4. CLEANING/CARE

A) GENERAL: DO NOT use chemically harsh (i.e., alcohol, paint thinner, etc.) or abrasive cleaners on any portion of your Electone.

B) KEYS/CONTROL PANEL: When cleaning the keys and control panels of your Electone, please use a soft absorbent-type cloth that has been dampened with a very mild solution of liquid soap and lukewarm water.

C) CABINET/BENCH: Clean the cabinet wood/ veneer portions of your Electone with a slightly dampened cloth containing a neutral cleaning agent. The cleaning agent selected should not contain a high wax content or any other substance that would have a tendency to fill the pores of the wood or form a "build-up" on the wood surface.

IMPORTANT NOTICE: This product has been tested and approved by independent safety testing laboratories in order that you may be sure that when it is properly installed and used in its normal and customary manner, all foreseeable risks have been eliminated. DO NOT modify this unit or commission others to do so unless specifically authorized by the manufacturer. Product performance and/or safety standards may be diminished.

Claims filed under the expressed warranty terms may be denied if the unit is/has been modified. The warranty of title (patent infringement, etc.) will not be defended by the manufacturer in the area(s) that relate to the modification. Implied warranties may also be affected.

TROUBLESHOOTING

The following chart contains a few examples of conditions that may be misleading. Naturally, there are idiosyncracies not included in this table. When in doubt, please don't hesitate to contact your dealer for assistance, if the information found in this owner's guide does not adequately answer your questions.

Phenomenon	Possible Cause	Probable Solution
No sound—All indicator lights function normally.	Nothing is On in the Ensemble Section and/or the Volume Sliders are at the MINIMUM position. (FC-20)	Turn on at least one section in the Ensemble Section and make sure that the Volume Slider for that Section is "ON".
Extraneous Sounds coming from the Speaker System (Voices, Chirps, Buzzing Sounds, etc.).	Radio Frequency Interference, CB, Electric Appliances, etc.	See Electromagnetic Interferences Section on Page 13.
Extraneous sounds not being reproduced through the Speaker System (Buzzes, Vibra- tion, etc). Everything has a critical point where it will vibrate. This phe- nomena is called "Reson- ance," and may also be referred to by your technician as "Sym- pathetic Vibration."	A Combination of excessive volume and a phenomenon called "resonance." The con- tinuous nature of the tones developed by electronic musical instruments, the varia- tion of the frequencies, and the power levels (volume) involved will naturally cause some objects (i.e., windows, objects on shelves, pictures, etc.) to vibrate.	If the rattle is outside of the Electone, iden- tify and move the object causing the rattle. It is possible that something within the Electone itself could generate a rattle, especially if the volume used approaches the maximum and/or a specific note is held for some time. A slight reduction in volume should eliminate the rattle. If satisfactory results are not achieved using this method, please contact your dealer for assistance.
TV or Radio Reception is degraded when the Electone is "ON".	The Radio, TV, or their antennas are insta- led too close to the Electone.	Relocate either the Electone or the Radio or TV. See Electromagnetic Interference Section on Page 13.
One Pedal Plays constantly. Pedals to the right of this note will play. Pedals to the left of this note will not.	Bent Pedal Actuator.	Straighten and adjust actuator of pedal that plays constantly.
Lower and Pedal Keyboard con- tinues to produce sound, even when hands/feet are removed.	The Memory button (located in the Auto Bass Chord Section) is on.	If the light is illuminated, that effect is begin used. To cancel the effect, press that but- ton until the light goes out.
Even if Auto Bass Chord is set, the Lower Orchestra voices do not switch to guitar or piano.	The Auto Rhythm Unit is not being used.	Please set both Auto Bass Chord and Auto Rhythm.
Sustain does not work. (FC-20)	The Knee Lever is in the vertical position.	Either move the Knee Lever to the right (to add the sustain effect) or return it to its up and locked position.

YOUR ELECTONE MUSIC BOOK IHR ELECTONE NOTENHEFT VOTRE CAHIER DE MUSIQUE ELECTONE LIBRO DE MÚSICA PARA SU ELECTONE

















Nocturne

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Green Sleeves *

American Folk Song















El Condor Pasa

P. Simon & D.A. Robles















Danube Waves Waltz *

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Chanson Dámour

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Wayne Shanklin



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Nino Rota













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Black Magic Woman

Peter Green



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SPECIFICATIONS/TECHNISCHE DATEN SPECIFICATIONS/ESPECIFICACIONES

FC-20

KEYBOARDS

Upper:	44 Keys f-c4 (3 2/3 Octaves)
Lower:	44 Keys F-c3 (3 2/3 Octaves)
Pedals:	13 Keys C-c (1 Octave)

UPPER COMBINATION/ORCHESTRA

Voices: Combi. 1, Combi. 2, Combi. 3, Combi. 4, Combi. 5, Strings, Brass, Reed Control: Volume

UPPER SPECIAL PRESETS

Voices: Piano, Harpsichord, Vibraphone, Guitar Control: Volume

UPPER (/LOWER) CUSTOM VOICES

Voices: Flute, Saxophone, Trumpet, Trombone Control: Volume

LOWER COMBINATION

Voices: Combi. 1, Combi. 2 Control: Volume

LOWER ORCHESTRA

Voices: Strings (A.B.C. Guitar), Brass (A.B.C. Piano) Control: Volume

PEDALS

Voices:	Bass 1, Bass 2, Contra Bass, Electric
	Bass
Control:	Volume

ENSEMBLE

Upper Combi. Orches., Upper Special, Upper Custom, Custom To Lower

EFFECTS/CONTROLS

Vibrato: Delay, Depth Sustain: Upper Sustain (Switch), Upper, Pedal

AUTO RHYTHM

RhythmMarch, Waltz, Swing, Slow Rock, JazzPattern:Rock, Disco, Tango, Bossanova, Rhumba,
Mambo, Samba, 16 beatAuto Variation: On (4 Bar), 8 Bar
Controls:Synchro Start, Start, Tempo, Volume,
Tempo Indicator Lamp, Rhythm Stop
(Foot Switch Control)

AUTO BASS CHORD

Normal, Single Finger Chord, Fingered Chord, Custom A.B.C., Constant, Memory

AUTO ARPEGGIO

Pattern: 1, 2, 3, 4 Voices: 1, 2 Controls: Sustain, Volume

MAIN CONTROLS

Manual Balance, Master Volume, Expression Pedal, Knee Lever, Foot Switch, Power Switch, Pilot Lamp

OTHER FITTINGS

Headphones Jack, Aux. Out Jack, Aux. In Jack, Exp. In Jack, Music Rest, Matching Bench

AMPLIFIERS

30W (rms)

SPEAKERS

30 cm (12"), 5 cm (2")

CIRCUITRY

Solid State (incl. LSIs and ICs) Power Consumption: See Electone Nameplate Power Source: 50/60 Hz AC

DIMENSIONS

WEIGHTS

Models without roll-top: 51 kg (112 lbs.) Models with roll-top: 55 kg (121 lbs.)

FINISH

American Walnut Grain

* Specifications subject to change without notice.

[Where to find the nameplate] [Hier ist das Typenschild angebracht] [Emplacement de la plaque signeleitique] [Dónde locarizar el membrete]



FC-10

KEYBOARDS

Upper:	44 Keys f-c4 (3 2/3 Octaves)
Lower:	44 Keys F-c3 (3 2/3 Octaves)
Pedals:	13 Keys C-c (1 Octave)

UPPER SPECIAL/COMBINATION/ORCHESTRA

Voices: Piano, Harpsichord, Combi. 1, Combi. 2, Combi 3, Combi 4, Strings, Brass Volume

UPPER CUSTOM VOICES

Voices: Flute, Saxophone, Trumpet, Trombone Control: Volume

LOWER COMBINATION

Voices: Combi. 1, Combi. 2 Control: Volume

LOWER ORCHESTRA

Voices: Strin Piano Control: Volu

Strings (A.B.C. Guitar), Brass (A.B.C. Piano) Volume

PEDALS

Voices: Bass 1, Bass 2 Control: Volume

EFFECTS/CONTROLS

Vibrato: Delay, Depth Sustain: Upper Sustain (Switch), Upper, Pedal

AUTO RHYTHM

Rhythm Pattern:March, Waltz, Swing, Slow Rock,
Jazz Rock, Disco, Tango, Bossanova,
Rhumba, Mambo, Samba, 16 beatControls:Synchro Start, Start, Tempo, Volume,
Tempo Indicator lamp

AUTO BASS CHORD

Normal, Single Finger Chord, Fingered Chord, Custom A.B.C., Constant, Memory

MAIN CONTROLS

Manual Balance, Master Volume, Expression Pedal, Power Switch, Pilot Lamp

OTHER FITTINGS

Headphones Jack, Aux. Out Jack, Aux. In Jack, Exp. In Jack, Music Rest, Matching Bench

AMPLIFIERS

30W (rms)

SPEAKERS

30 cm (12"), 5 cm (2")

CIRCUITRY

Solid State (incl. LSIs and ICs) Power Con-See Electone Nameplate sumption: Power Source: 50/60 Hz AC

DIMENSIONS

Models without103roll-top:(40Models with114roll-top:(45

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It 103.6(W) × 54.0(D) × 89.8(H) cm (40 3/4" × 21 1/4" × 35 1/3") 114.4(W) × 55.5(D) × 92.8(H) cm (45" × 21 3/4" × 36 1/2")

WEIGHTS

Models without roll-top: 45kg (99lbs.) Models with roll-top: 54kg (119lbs.)

FINISH

American Walnut Grain

★ Specifications subject to change without notice.

