



Getting Acquainted
with Your New YAMAHA

Electone
MODEL E-5AR

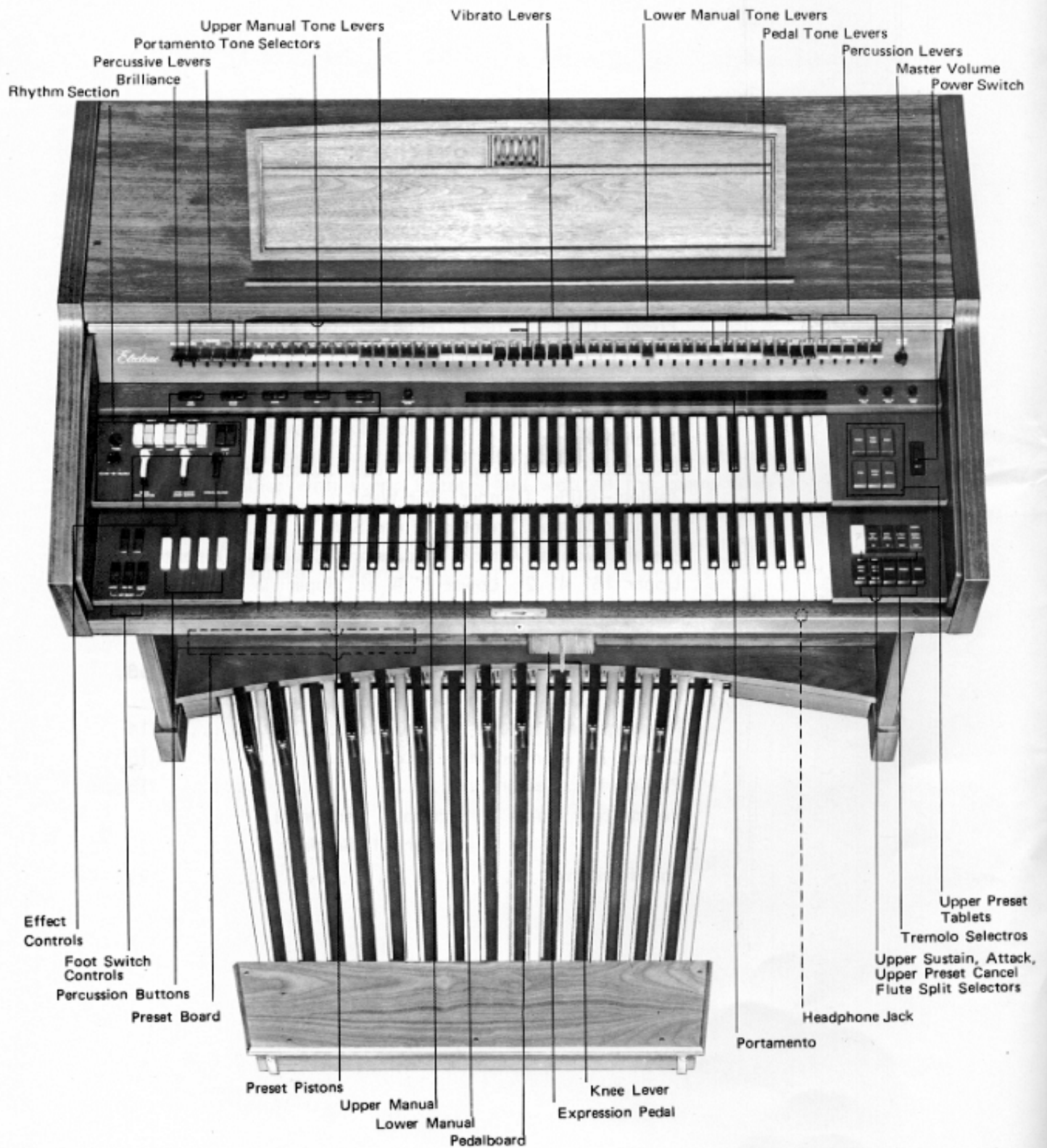
Congratulations upon your selection of this exciting musical instrument. Whether you are a beginner or master of organ techniques, you now have command of a wide array of expressive possibilities.

Please read this manual thoroughly to be sure you are familiar with every feature, and with all the many ways you can use each one. With proper care and a little time together you and your Electone can become lifelong partners in musical creativity.

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Main Sections and Controls



The Tone Levers

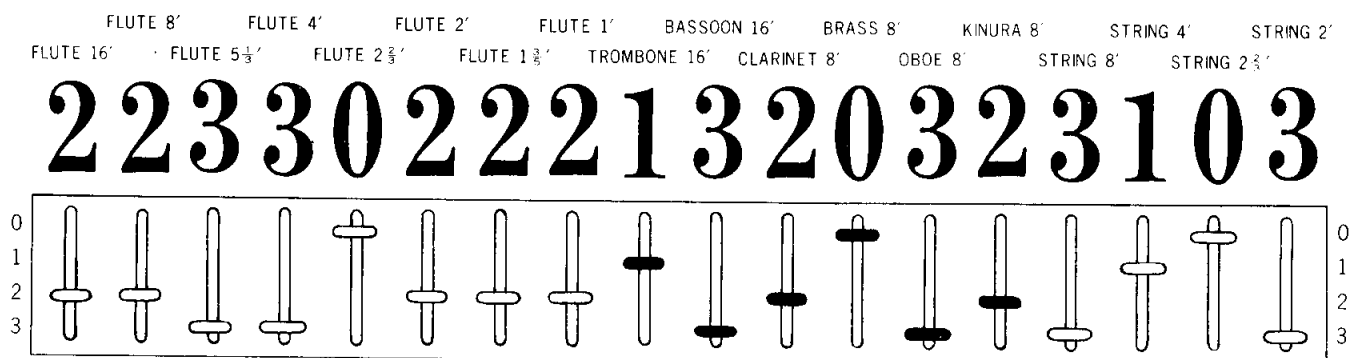
Each of these levers imparts its particular voice to the notes played on the manual. There are two ways to set each lever. If you are a beginner or just learning a new registration, use the click-stop positions shown in the illustration. By noting down or remembering the positions for each lever in a particular combination, that registration can be exactly duplicated at any time without guesswork. The numbers corresponding to the tone lever click-stop settings are used in all Yamaha notation and registration suggestions.

As you gain self-assurance and mastery of the Electone registrations, the click-stops may prove to be a limitation. In that case, simply ignore them. Each lever is continuously variable from off to full, so you can blend in any tone precisely as strong as you want it.

Remember that each tone lever is in fact a volume control for that voice, so the more fully you combine voices for a manual, the louder that manual's overall volume becomes. This can be compensated for with the Manual Balance control.

What's a 'Foot'?

Tone lever voices come in several types: 16', 8', 5 1/3', 4', 2 2/3', 2', 1 3/5' and 1'. These foot marks indicate the relative pitch; they at one time referred to the length of the pipe in a pipe organ, with longer pipes producing lower tones. The 8' voice is a "fundamental," which means that it creates a tone when a key is pressed the same as that produced when the same key on a piano is played — in other words, it corresponds to the written note. A 16' tone is exactly one octave lower, 4' one octave higher than 8', 2' still another octave higher and 1' an octave above that. The other harmonics are not octaves. These various harmonics can be combined for extra tonal richness.

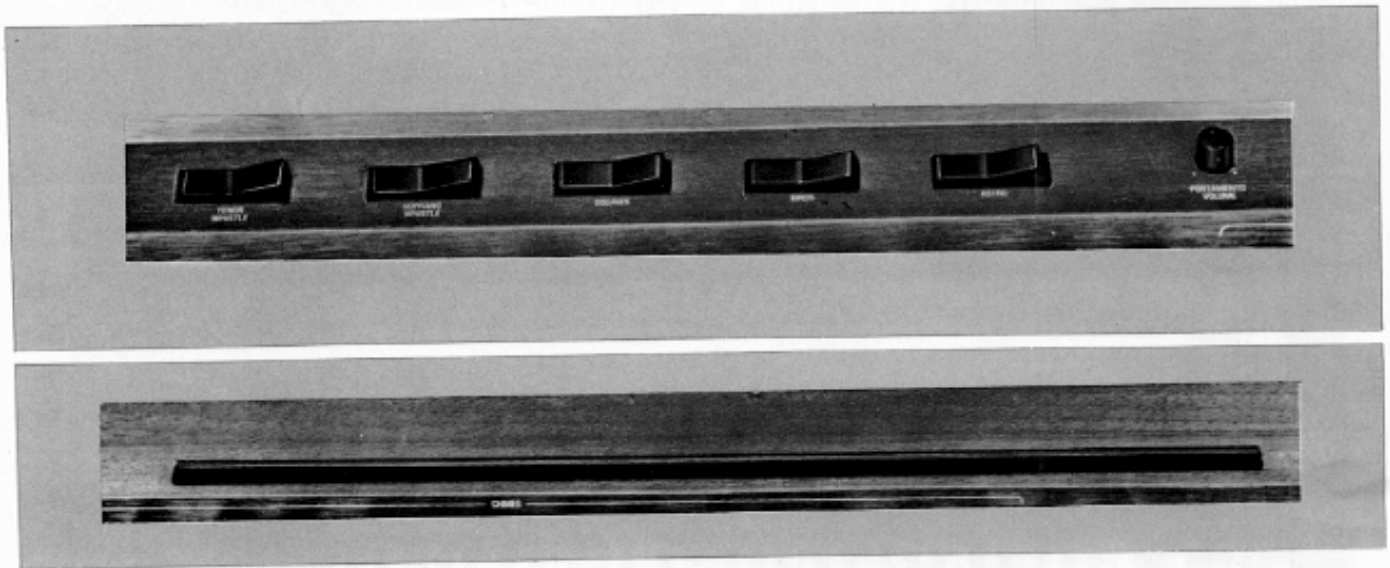


Portamento

The Portamento strip produces a continuously pitch-shifted sound just like the one created by a finger sliding on a violin string. There are five different portamento voices, all preset combinations. Precedence among the portamento voice selector tablets is to the right; if two or more are set on, the one(s) to the left are cancelled, except for Tenor and Soprano Whistles which will play together.

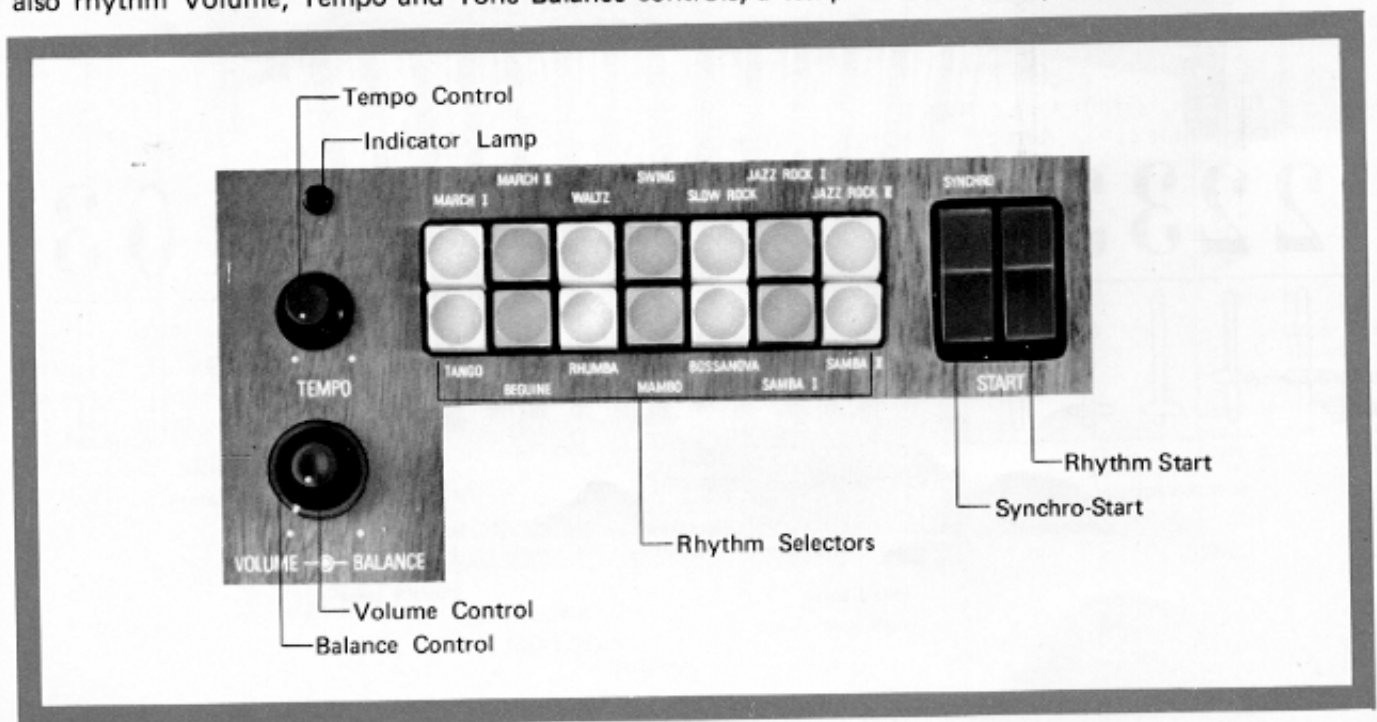
This section has its own volume control, continuously adjustable so that the portamento volume can be perfectly balanced with the other sections.

Do not forget that the portamento strip can be played by sliding your finger up and down, and also one note at a time by tapping with the fingertip at the appropriate places.



Auto Rhythm Section

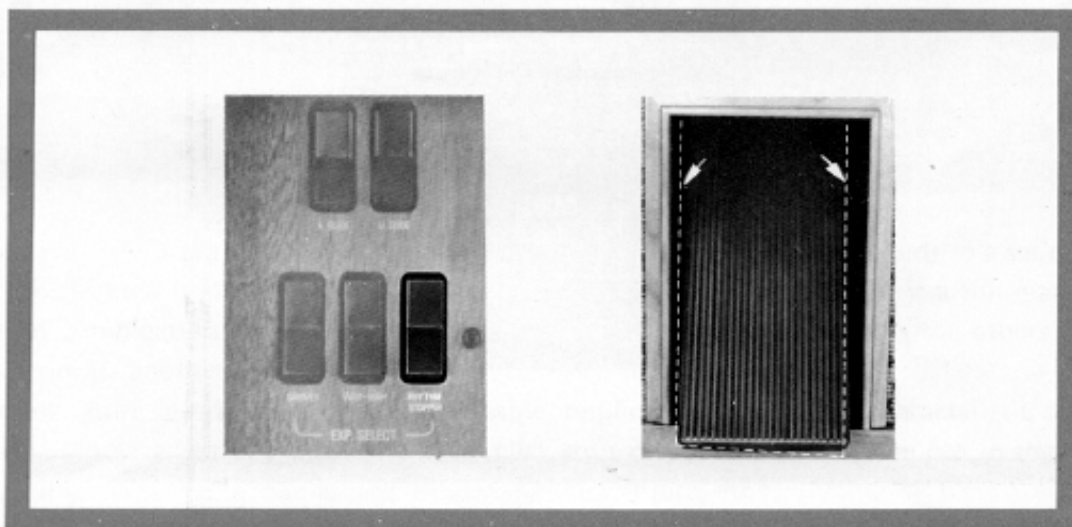
This section has 14 different rhythm accompaniments, each with its own selector button. There are also rhythm Volume, Tempo and Tone Balance controls, a tempo indicator lamp and two start switches.



To use the rhythm section, first push the desired selector button (or buttons – you can combine rhythms). Then switch on normal Start. The rhythm will begin and you can adjust the tempo, volume and tone balance. Now switch the Start button back off and you are ready. If the Start button is switched on, the rhythm will begin immediately. You can also leave it off and switch on Synchro-Start instead. This will automatically begin the rhythm the instant a lower manual note or a pedal note is played, letting you lead in with a melody or introductory notes on the upper manual first.

Rhythm Stop

Switch the Rhythm Stop tablet on. The expression pedal, can be moved from side to side to switch on and off it's tablet-controlled effects. Move to the left once to stop the rhythm instantly at any time without using your hands; move to the left once again to restart. This switch functions only when the rhythm section is operating.



Note: When a rhythm is playing the tempo indicator lamp will flash the first beat of every measure. When the Synchro-Start switch is on and a rhythm set, but the section is not operating because

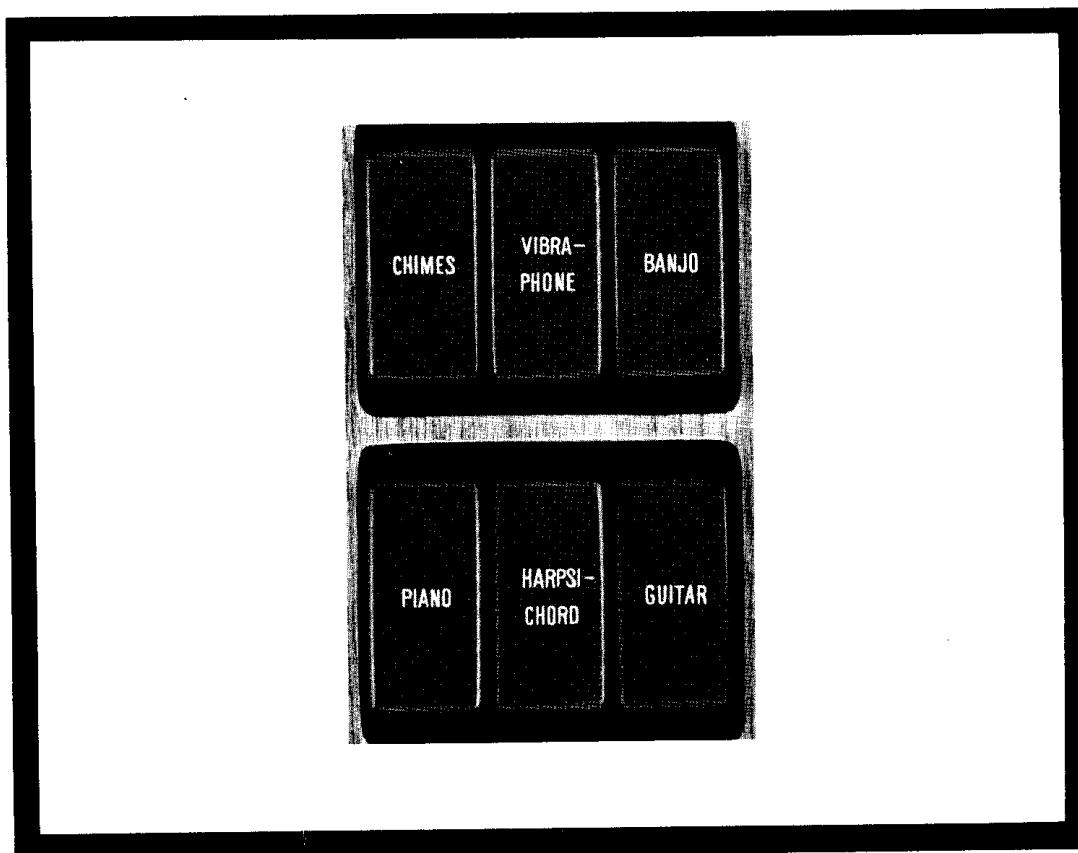
- no lower manual or pedal note has been played,
- or
- it has been stopped by the foot switch,

the lamp will flash every quarter note.

Preset Tones

There are two series of on/off preset combination selectors: upper manual preset tablets and preset pistons which work with the pull-out drawer.

Preset Tablets



Precedence is to the right and down for these tablets. In other words, Banjo takes precedence over Vibraphone and Piano over Banjo, while the Guitar will cancel any other tablet set. In addition, any tablet will also automatically cancel all individual voice levers for the upper manual. This unusual feature lets you switch back and forth between panel setting and preset combination at the flick of a single lever.

Upper Preset Cancel (Knee lever)

To switch back and forth between a piston and any upper manual setting, first press the U.Preset Cancel tablet. This brings the knee lever into play. When the knee lever is then pressed, the upper manual panel setting (individual voices or preset tablet) will play; when the knee lever is released, the piston setting will play.

Preset Pistons



The piston combinations are set by the voice preset board. Each piston corresponds to a set of miniature tone levers on the board. Pistons (1) and (2) are upper manual voices only, (3) is a full manual set and (4) is a special combination preset at the factory. The black (C) piston cancels the others. To switch from one piston to another it is not necessary to use the (C) piston.

Each of the miniature levers is continuously variable, duplicating this unique characteristic found in the console levers. These levers also have the same click-stop positions and are arranged in the same order for quick setting. The voice names are abbreviated (FL=Flute, etc.).

The pistons take precedence over all other upper manual settings — in other words, they cancel both individual voice levers and the preset levers. When a piston combination is on, that piston's built-in lamp will light.

Pedal Solo Piston

This piston frees the pedals from the other manuals so that it becomes an independent section of the organ, with its own volume adjustment knob. This lets you accentuate the bass tones for pedal solo, etc.

Percussive

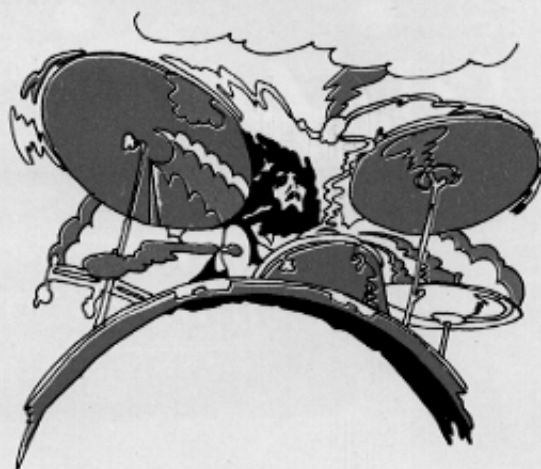
Changing the beginning of some or all notes can do wonders for lively selections. The three percussive levers will each add a special accent to all upper manual tones. Each is also continuously variable, so you can match the percussive effect to any selection. Use the Length lever to control the time of decay for this effect.

Percussive adds a very modern touch, and is ideal for jazz and rock music.

Note: The 4' Percussive lever will not function when the Sustain tablet is on.

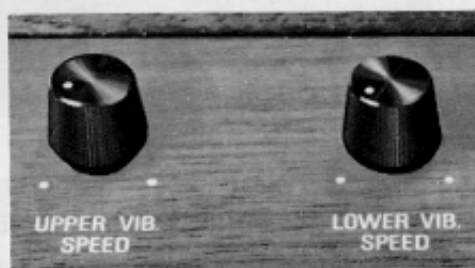
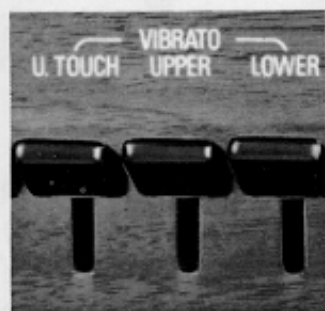
Attack $1\frac{1}{3}'$

This effect gives you greater definition to the beginning of notes played imparting new clarity and vigor to jazz and other lively pieces. Please note that this effect can only be used for the upper manual tones; the pitch is two octaves and a fifth above the fundamental.



Upper Vibrato, Lower Vibrato

Use these two continuously variable levers to achieve an automatic vibrato on upper or lower manuals, or both, perfectly tailored to your selection. Each Vibrato lever controls the effect's intensity, and there is also a special knob for each, controlling its speed.



Touch Vibrato

This world-famous Yamaha exclusive gives the organist the same fingertip expression enjoyed by violinists. Switch on the lever and move your finger laterally on the key; the Electone will respond with a vibrato that translates your emotion into sound.



Expression Pedal

Push down the pedal to control the volume of each note or phrase. This pedal is extremely important for adding emotion to your playing. The pedal is balanced to stay in any position once set. Rest the entire right foot on the pedal and relax it, pressing with the toe to increase volume, with the heel to decrease it. The overall volume — that is, the range in which the expression pedal works — should be set with the Master Volume control.

Expression Pedal Switch and Tablets

The expression pedal, in addition to moving up and down to control the Electone's overall volume, can also be moved from side to side to switch on and off five different tablet-controlled effects.

One of these, Rhythm Stop, has been discussed in the Auto Rhythm section, and for this effect the switch works on a click-on, click-off basis. For the Glides and Damper, the switch works on a click-on/release-off basis; its effect lasts only as long as the pedal is swiveled to the left.

To fully activate the Wah-Wah, the pedal must be swiveled from far left to far right.

Glide

With either of these tablets set the pitch of any note on that manual will drop approximately one half tone when the foot switch is swiveled left, rising to its true pitch as soon as the switch is released.

Glide also cancels the vibrato effect at the same time that it lowers the pitch.

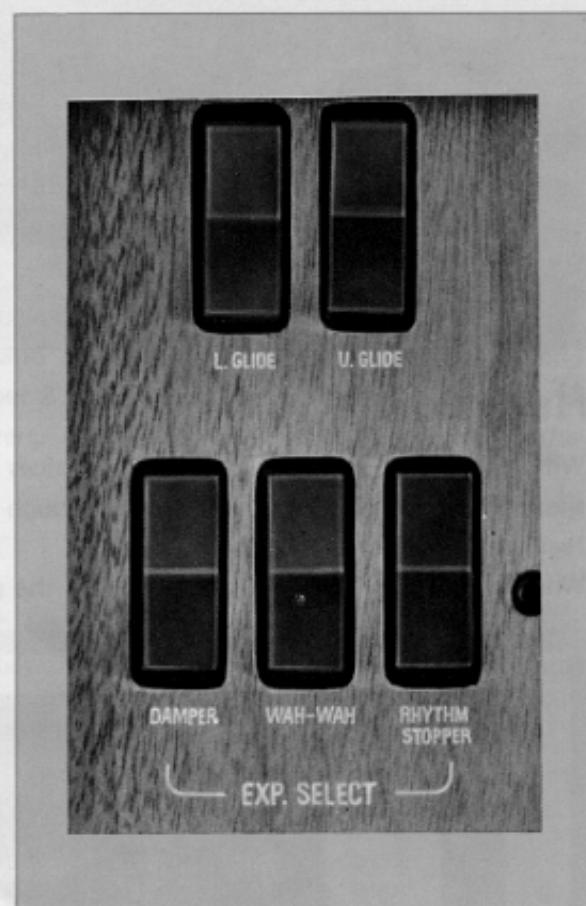
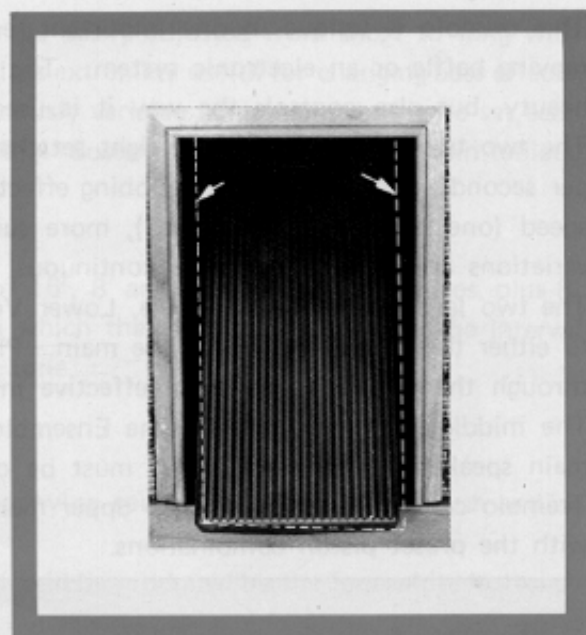
Damper

This effect functions like the piano damper mechanism to sustain all notes for these five upper manual preset voices:

- Piano, Harpsichord, Guitar,
- Vibraphone, Chimes

Wah-Wah

With this tablet on, each time the foot switch is swiveled, it makes the upper manual tones sound like a trumpeter had just closed and opened his mute.



Sound-in-Motion Tremolo

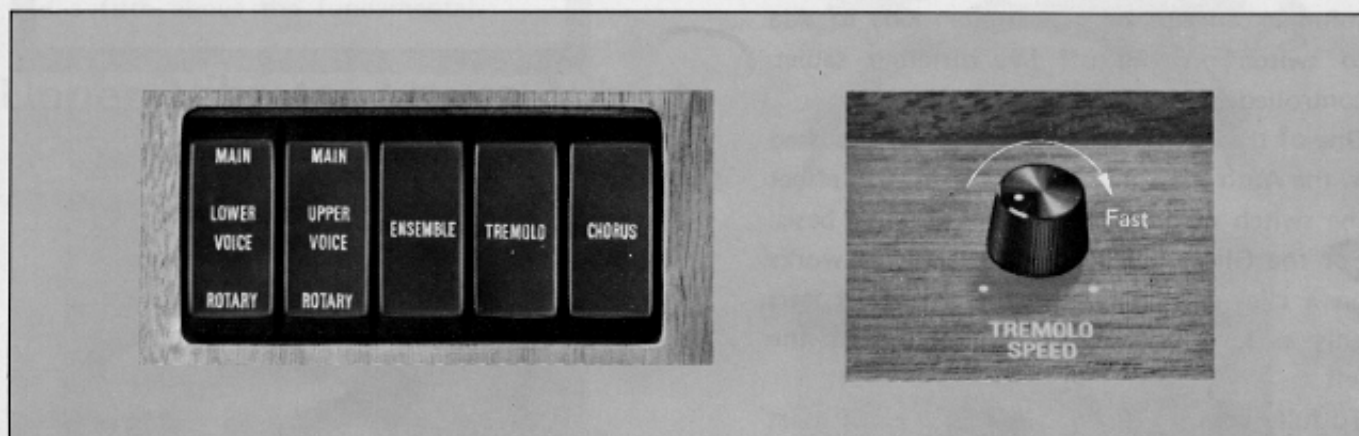
This tremolo is unique in one important respect: it is produced by a rotating speaker, not simply a moving baffle or an electronic system. The fact that the speaker rotates not only explains its realistic beauty, but also controls the way it is used.

The two tremolo tablets on the right set the rotating speed. Tremolo is faster (approx. six revolutions per second), and adds a rich throbbing effect reminiscent of a mighty theater organ. Chorus is a slower speed (one revolution per second), more suited to stately or liturgical numbers. More subtle speed variations are possible with the continuous Tremolo Speed control knob.

The two left tablets (Upper Voice, Lower Voice) feed the upper manual, lower manual or both signals to either the rotary speaker or the main. Playing one manual through the main speaker and the other through the rotary is extremely effective in changing the emotional color of your renditions.

The middle tablet switches on the Ensemble system, which plays each note through both rotary and main speakers. The voice tablet must be on "Rotary" for the ensemble tablet to work.

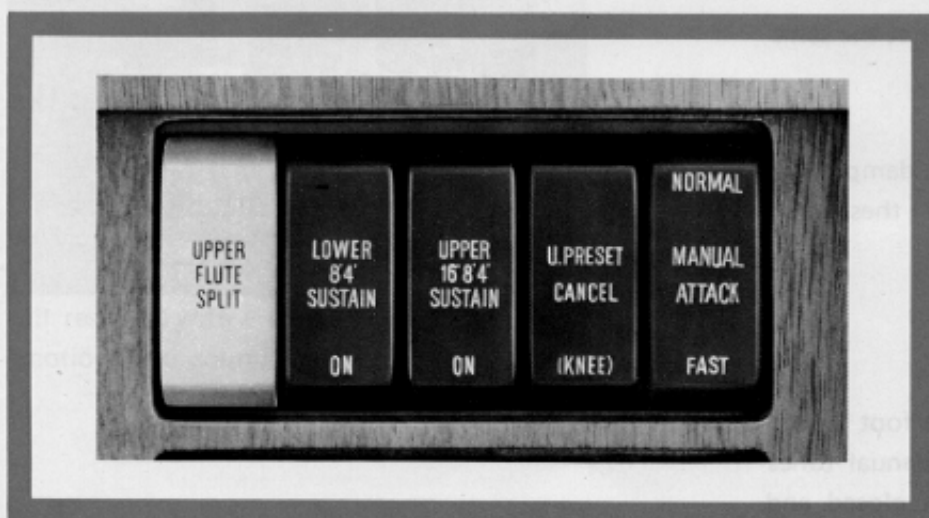
Tremolo cannot be used with the upper manual preset tablet voices (Piano, etc.), but it will function with the preset piston combinations.



Flute Split

With this tablet switched on all flute voices coming from the upper manual are fed through the rotary speaker, while all others are heard through the main speaker. The result adds that special theatrical feeling via a special tremolo effect.

When the Upper Flute Split tablet is on, the setting of the Upper Voice tremolo selector will be canceled.



Note:

The Tremolo and Chorus tablets switch the tremolo speaker mechanism on and off. If both these tablets are off, the speaker will not rotate, and no tremolo will be produced even though one or more of the other three tablets is feeding signals through this speaker.

Sustain

Pedal Sustain is continuously variable and this effect can be easily adjusted from short to long with the special control located to the left of the upper manual. It is extremely useful for changing bass effects. The manual Sustain controls offer the same type of continuously variable adjustment, but once set, each can then be instantly switched on or off via the Upper 16' 8' 4' Sustain and Lower 8' 4' Sustain tablets.

Manual Attack

This effect provides changing definition to the beginning of 16', 8' and 4' upper manual voices, plus 8' and 4' lower manual voices. It determines the speed with which these voices speak — i.e., the interval between the time the key is depressed and the resulting tone.

Percussion

As their names imply, three of these levers provide accompanying sounds to each note — brush and/or cymbal for lower manual notes, cymbal for pedal tones.

In addition, the two Button levers determine the sounds which will be produced by the four white buttons. The percussion levers, as all other effect levers, are continuously variable.

Couplers

The coupler levers have an extremely important influence upon the Overall tonal versatility of the E-5AR. Because of their function, they are on/off only, not continuous.

Upper to Upper 16'. 4'. 2'

When this coupler is used with 16', 8' and 4' upper manual voices it adds three consonant harmonics to each voice (16', 4' and 2' harmonics to 8' voices, 8', 2' and 1' harmonics to 4' voices and 32', 8' and 4' harmonics to 16' voices). For example, added to Clarinet 8' it provides Clarinet 16', Clarinet 4' and Clarinet 2', none of which are available through the tone levers. In this way the lever serves to expand the E-5AR's range of complex tonal possibilities.

Lower 8'. 4' to Upper

With this lever on, all 8' and 4' lower manual voices which are set on will be produced with any upper manual key. This lets you create a deep cathedral effect, especially when used with lower manual Vibrato.

Note: The String Celeste will not couple up to the upper manual as it is already borrowed from the upper manual generator.

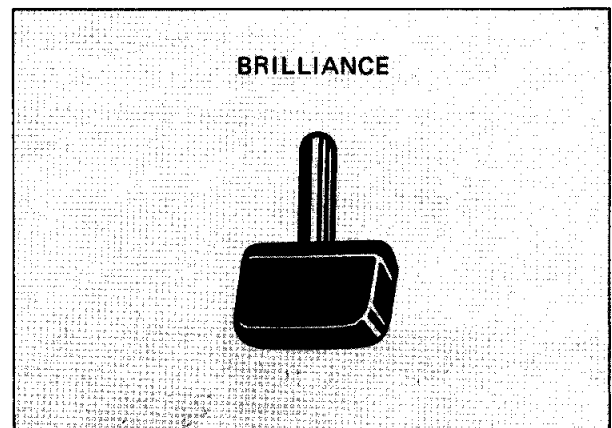
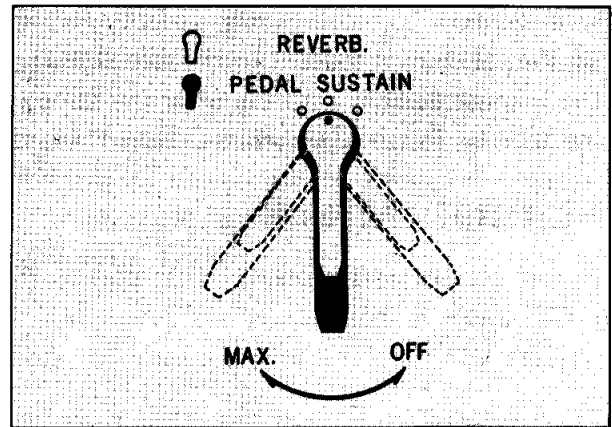
Reverb

This continuous control lets you add a fullness to your playing much like the acoustics of a concert hall. Use Reverb to compensate for a "dead" room with dull acoustics (due to furniture, rugs, drapes, etc.).

Brilliance

This continuously variable lever changes the overall mood of both manuals, making them quiet and sombre or providing brighter, richer tonal effects. For example, it affects string voices in the same way as a violinist would brighten his tone by adding more rosin to his bow.

Brilliance affects only upper and lower manuals.



Roll-Top Fallboard

When the organ is not in use the keys can be protected against dust and damage by rolling down the fallboard. Pull the fallboard by its front edge so that it rolls in the side tracks; do not attempt to lift up. Open it in the same way – by sliding it in the tracks. The fallboard can be locked if necessary. The fallboard is also coupled to the power switch. When the fallboard is closed the power is automatically shut off, regardless of the switch position.

Power Switch

Incorporates a built-in lamp which lights whenever the switch is on and power is flowing. Make it a practice to turn this switch off whenever you leave the Electone.

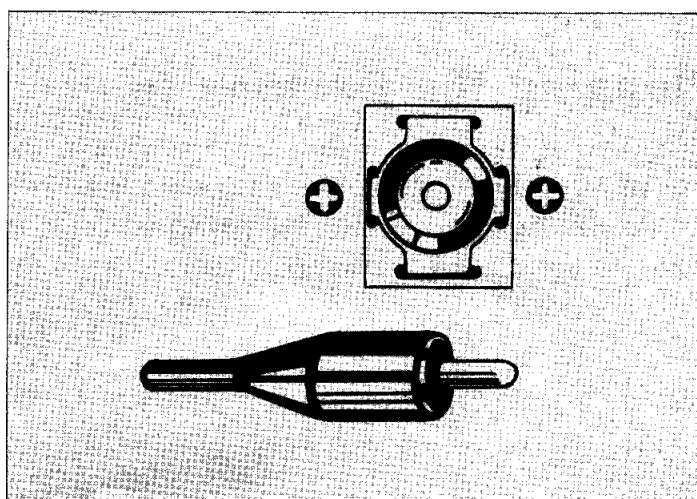
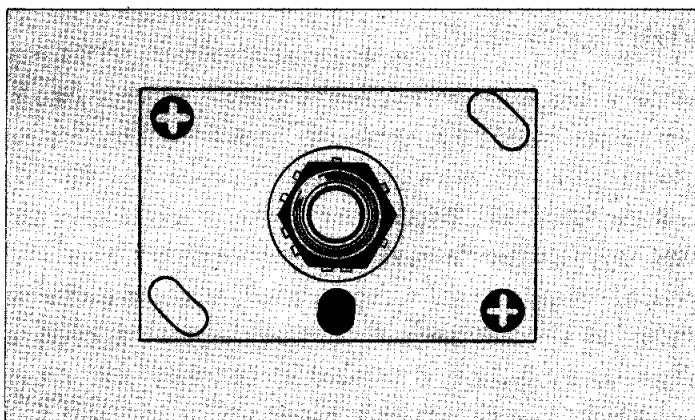
Headphone Jack

An optionally available Yamaha headphone set can be plugged into this jack. With the headphones connected, the speakers are automatically shut off, allowing you to play or practice at any volume level without disturbing anyone else in the house.

Ext. In Jack

This small jack is located on the rear of the Electone. You can connect a tape recorder, record player or radio to it and then play through the Electone amplifier and speaker. When connecting other equipment, however, be sure to match impedances; the Ext. In jack has an impedance of 30Kohms.

Signals entering through the Ext. In jack are not regulated by the expression pedal, so you can play along with recorded or broadcast music in this way. If you have a recording of yourself on the Electone, you can play it back in this way and form a one-man duet.



Electone Care

The organ console and bench are manufactured using select woods, naturally and kiln dried for absolute warp-free dependability. Treat the finish as you would that of any other fine piece of furniture. Keep it free of dust and moisture, and polish with high quality furniture polish (avoid preparations containing silicone). Always dust thoroughly (although lightly) before polishing, so that accumulated dust is not ground into the finish.

Dampness or water has an adverse affect on wood. Never wipe the finish with a cloth dampened in water. Be careful not to let any water spill on the finish.

The expression pedal, pedalboard keys, manual keys, levers, tablets and buttons, on the other hand, are made of special materials which resist dampness, and they can therefore be cleaned with a soft, damp cloth.

Moving the Electone

Two hand holes are provided on the back of the Electone for easier handling. The unit should slide easily on its built-in casters. If the set is to be moved to a different building, for example, when you move your residence, check with your local Electone dealer concerning necessary precautions.

Maintenance

Yamaha Electone dealers are available for help and servicing almost everywhere in the world. These dealers are part of a thorough network of service and education, and they receive complete technical information and parts from the Yamaha factory. They are also assisted by graduates of the Yamaha Factory Training Schools, men who know every aspect of every Electone.

That is why you should always consult a Yamaha Electone dealer if you have any questions or need service. Only Yamaha representatives are capable fo providing this service.

Under no circumstances should you open the cover or attempt to test or repair the Electone yourself. While its sophisticated integrated circuitry will provide the highest standards of durable, trouble-free performance when properly cared for, it can also be seriously damaged by improper checking or maintenance procedures.

Plugging the Electone In

Your Electone is set to operate on local current, and is ready to play as soon as the plug is inserted into an AC consent. If you have any reason to believe the power regulation is improper, or if you move to a locale where you believe the power supply is different, check with your local Yamaha Electone dealer to avoid possible damage.

Do not Be Alarmed If...

the Electone does not operate when the power switch is turned on, check the following:

1. Is the plug fully inserted into an AC outlet (the same as you use for a lamp, etc.)? Reinsert it to be sure.
2. Is there power coming from that outlet? Unplug the Electone and plug in a lamp; then see if the lamp will light. If it does not, the problem is probably in your home's electrical system. Check your fuses or circuit breakers.
3. If you find that there is power in the outlet, but the Electone does not play, unplug the cord and call your nearest Yamaha dealer. There are NO USER-SERVICEABLE PARTS in the Electone.

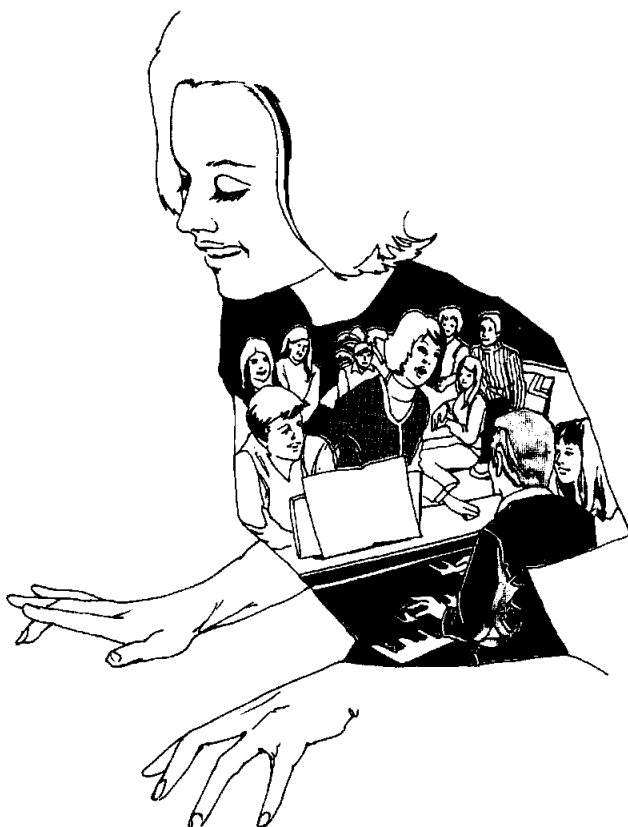
Playing the Electone

First turn on the power switch. No warm-up period is required. You can tell that the power is on because the pilot lamp will light; the Electone is so quiet that this lamp will be the only way you can check whether the Electone is on when you are not playing.

Next, set up a registration (set all the levers and controls you wish to use for the upper and lower manuals and the pedals). Select tone combinations according to suggestions in the music you are going to play, or experiment with your own combinations. Remember that the registration noted on any sheet of music is no more than a suggestion, and your idea may well be even more suitable.

By the same token, do not be alarmed if you have a piece of music with no registration for your organ. With a bit of imagination you can approximate the registration for a different organ, going on to improvise on your own. This will be an ever-new source of creative enjoyment as you become more and more familiar with the various Electone controls and effects.

Many new song collections now have Electone registrations. See your Yamaha dealers.



Registration Guide

Now that you are the owner of a new Yamaha E-5AR, you will probably want some ideas for exploiting the versatility of this magnificent instrument. The E-5AR was designed to be the most flexible home organ ever offered to the public. The concept we had in mind was to provide the basis for any of the many different types of organ sounds and musical moods, from classical, theater and orchestral tones to special effects and professional, commercial sounds.

All of this is now at your fingertips. The purpose of the following pages is to give you just a few of the possible combinations, some of the more interesting ones we have discovered. We have tried to be representative of all tastes. Experiment on your own to find the sounds that you like best, for that is a significant part of the fun in owning such a diversified instrument.

The registrations are divided into four sections:

- I. SOUND EFFECTS (A partial listing and explanation of some of many sound effects the E-5AR is capable of.)
- II. GENERAL COMBINATIONS (General set-ups for all the various styles of straight organ playing.)
- III. SOLO SOUNDS (Various solo voices . . . orchestral and organ.)
- IV. SPECIAL EFFECTS

In the upper, right hand corner of the console, directly above the power switch, you will find three variable knobs for control of vibrato speed (lower and upper) and tremolo speed. Normally, these should be set with the dot on the knobs in the approximate position of 1 o'clock on the face of a standard clock. Of course, the reason they are controllable is to allow for differences in taste; so please feel free to experiment. The same applies to the tuning of the two generators from the knobs in the setter-drawer. You will find suggested tunings with every registration, usually 11 o'clock upper and 9 o'clock lower. If a variant from these settings is indicated, it is usually a necessary part of the registration. Enjoy your new E-5AR!



Section I

TRAIN: Set up the registration for "Train" found in Section IV. To start the train, hold down all the notes on the upper keyboard from the lowest "B" down to the lowest "F", including the black keys. With the Repeat Speed lever in approximately the first position, you should now be hearing a very slow chug . . . chug . . . chug . . . as the train starts out. Increase the speed gradually by slowly depressing the Repeat Speed lever further down until the desired speed is attained. To blow the whistle, play "F, A, C#" above "middle C" on the lower manual and move the expression pedal to the left a couple of times ("L. Glide should be on). To go through a tunnel, cancel all upper manual stops except the Flutes 16' and 8' and add a little Flute 2²/₃'. To come out of the tunnel, return to the original registration. You can cross a bridge by adding the String 4. To stop the train, just reverse the whole procedure. When you've stopped the train completely, you can let the steam out of the brakes by depressing the right hand white button (closest to the keyboard) to the left of the lower manual.

SIREN: Using the "Squawk" on the Portament, start at the far right end of the felt strip at a low volume. Move your finger as you think a siren should sound as you increase the volume.

CAT CALL: Register "Soprano Whistle" on Portament and move your finger as you would your tongue if you were whistling.

BIRDS: Register "Birds" on the Portament and using short right to left strokes, execute your bird calls at different pitches all along the felt strip.

OCEAN SURF: To the left of the lower manual, there are four white percussion buttons. While holding down the two closest to the keyboard, intermix the two "Button" controls at the far right end of the stop rail. Push the first one down slowly and then add the second . . . decrease one at a time in the same manner.



Section II

FULL ORGAN (Theater)

UPPER:		
Brilliance		(2)
Flute	16'	(3)
Flute	8'	(3)
Flute	4'	(3)
Flute	2'	(3)
Flute	1'	(3)
Bassoon	16'	(3)
Kinura	8'	(3)
String	8'	(3)
String	4'	(3)
String	2'	(3)
Coupler L. 8' 4' to U. On		
Vibrato - Upper		(1)
LOWER:		
Vibrato - Lower		(1)
Flute	8'	(3)
Flute	4'	(2)
Flute	2 2/3'	(1)
Flute	2'	(1)
Diapason	8'	(3)
Diapason	4'	(2)
String	8'	(3)
String	4'	(2)
String Celeste		(3)
PEDAL:		
Bass	16'	(3)
Bass	8'	(1)
Tuba	16'	(2)
Tuba	8'	(2)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Rotary	
Tremolo:	On	
Flute Split:	On	
Manual Attack:	Normal	
TUNING (Pitch):		
Upper:	12 O'Clock	
Lower:	9 O'Clock	

PIANO & ORGAN ENSEMBLE

UPPER: (Both Hands)		
Brilliance		(3)
Coupler L. 8' 4' to U. On		
UPPER PRE-SETS:		
Piano	On	
LOWER:		
Vibrato - Lower		(1)
Flute	8'	(3)
Flute	4'	(2)
Diapason	8'	(3)
Diapason	4'	(2)
Cello	8'	(3)
Cello	4'	(2)
String Celeste		(3)
PEDAL:		
Bass	16'	(3)
Bass	8'	(1)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance:	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Main	
Tremolo:	On	
Manual Attack:	Normal	
Damper:	On	
TUNING (Pitch):		
Upper:	12 O'Clock	
Lower:	9 O'Clock	

CLASSICAL ORGAN (8 va)

UPPER:		
Brilliance		(3)
Attack	1 1/3'	(2)
Flute	8'	(3)
Flute	4'	(3)
Flute	2'	(3)
Flute	1'	(3)
Kinura	8'	(3)
String	2'	(3)
Coupler U. to U. 16' 4' 2'		
Coupler L. 8' 4' to U. On		
LOWER:		
Flute	2'	(3)
Diapason	8'	(3)
Diapason	4'	(3)
PEDAL:		
Bass	16'	(3)
Bass	8'	(3)
Bass	4'	(3)
Tuba	16'	(3)
Tuba	8'	(3)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance:	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Rotary	
Chorus:	On	
Flute Split:	On	
Manual Attack:	Normal	
Pedal solo - On	Full	
TUNING (Pitch):		
Upper:	11 O'Clock	
Lower:	9 O'Clock	

THEATER ENSEMBLE

UPPER:		
Brilliance		(1)
Flute	16'	(3)
Flute	4'	(3)
Flute	1 3/5'	(3)
Bassoon	16'	(2)
String	8'	(3)
Coupler L. 8' 4' to U. On		
Vibrato - Upper		(1)
LOWER:		
Vibrato - Lower		(1)
Flute	8'	(3)
Flute	4'	(2)
Diapason	8'	(2)
Cello	8'	(2)
String Celest		(3)
PEDAL:		
Bass	16'	(3)
Bass	8'	(1)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance:	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Rotary	
Tremolo:	On	
Flute Split:	On	
Manual Attack:	Normal	
TUNING (Pitch):		
Upper:	12 O'Clock	
Lower:	9 O'Clock	

EARL GRANT SOUND #1

UPPER:		
Brilliance		(3)
Length		(1)
Up Perc.	2 2/3'	(1)
Flute	16'	(3)
Flute	8'	(3)
Flute	5 1/3'	(3)
Flute	4'	(3)
Flute	2 2/3'	(3)
Flute	2'	(3)
Flute	1 3/5'	(2)
Flute	1'	(1)
Vibrato - Upper		(1)
LOWER:		
Flute	8'	(3)
Flute	4'	(2)
Vibrato - Lower		(1)
PEDAL:		
Bass	16'	(3)
Bass	8'	(2)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance:	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Rotary	
Tremolo:	On	
Manual Attack:	Fast	
TUNING (Pitch):		
Upper:	11 O'Clock	
Lower:	9 O'Clock	

EARL GRANT SOUND #2

UPPER:		
Brilliance		(2)
Flute	16'	(3)
Flute	8'	(1)
Flute	1 3/5'	(1)
Flute	1'	(3)
Coupler L. 8' 4' to U. On		
Vibrato - Upper		(1)
LOWER:		
Vibrato - Lower		(1)
Flute	8'	(3)
Flute	4'	(1)
PEDAL:		
Bass	16'	(3)
Bass	8'	(1)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance:	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Rotary	
Tremolo:	On	
Manual Attack:	Fast	
TUNING (Pitch):		
Upper:	11 O'Clock	
Lower:	9 O'Clock	

FULL TIBIAS

UPPER:		
Brilliance		(3)
Flute	16'	(3)
Flute	8'	(3)
Flute	4'	(3)
Flute	2 2/3'	(2)
Flute	2'	(2)
Flute	1'	(2)
Coupler L. 8' 4' to U. On		
Vibrato - Upper		(2)
LOWER:		
Vibrato - Lower		(2)
Flute	8'	(3)
Flute	2 2/3'	(1)
Flute	2'	(2)
PEDAL:		
Bass	16'	(3)
Bass	8'	(1)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance:	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Rotary	
Tremolo:	On	
Manual Attack:	Normal	
TUNING (Pitch):		
Upper:	11 O'Clock	
Lower:	9 O'Clock	

JAZZ ORGAN

UPPER:		
Brilliance		(3)
Length		(1)
Up. Perc.	4'	(1)
Flute	16'	(3)
Flute	8'	(3)
Flute	5 1/3'	(3)
Flute	1 3/5'	(3)
Flute	1'	(3)
Vibrato - Upper		(1)
LOWER:		
Flute	8'	(3)
Flute	4'	(1)
Vibrato - Lower		(1)
PEDAL:		
Bass	16'	(2)
Bass	8'	(2)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance:	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Rotary	
Ensemble:	On	
Chorus:	On	
Manual Attack:	Fast	
TUNING (Pitch):		
Upper:	11 O'Clock	
Lower:	9 O'Clock	

FUNKY ORGAN

UPPER:		
Brilliance		(3)
Length		(1)
Up. Perc.	2 2/3'	(1)
Flute	16'	(3)
Flute	5 1/3'	(3)
Flute	5 1/3'	(3)
Vibrato - Upper		(1)
LOWER:		
Vibrato - Lower		(1)
Flute	8'	(3)
Flute	4'	(1)
PEDAL:		
Bass	16'	(3)
Bass	8'	(2)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance:	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Rotary	
Tremolo:	On	
Flute Split:	On	
Manual Attack:	Fast	
TUNING (Pitch):		
Upper:	11 O'Clock	
Lower:	9 O'Clock	

HYMNS

UPPER:		
Brilliance		(3)
Flute	8'	(3)
Flute	4'	(3)
Flute	2'	(3)
Flute	1'	(2)
Coupler L. 8' 4' to U. On		
LOWER:		
Flute	2'	(3)
Diapason	8'	(3)
Diapason	4'	(3)
PEDAL:		
Bass	16'	(2)
Bass	8'	(2)
EFFECT CONTROLS:		
Reverb:	·-·-	
Pedal Sustain:	·-·-	
Manual Balance:	·-·-	
EFFECT SWITCHES:		
Lower Voice:	Rotary	
Upper Voice:	Rotary	
Ensemble:	On	
Chorus:	On	
Manual Attack:	Normal	
TUNING (Pitch):		
Upper:	11 O'Clock	
Lower:	9 O'Clock	

Section III

LENNY DEE SOUND

UPPER:
 Brilliance (3)
 Flute 8' (1)
 Flute 5 1/3' (1)
 Flute 4' (2)
 Flute 2 2/3' (2)
 Flute 2' (3)
 Flute 1 3/5' (3)
 Flute 1' (3)
LOWER:
 Flute 8' (2)
 Flute 4' (2)
 Flute 2 2/3' (3)
 Flute 2' (3)
PEDAL:
 Bass 8' (3)
 Tuba 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Rotary
 Ensemble: On
 Chorus: On
 Manual Attack: Fast
TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

THEATER SOLO I 16'

UPPER:
 Brilliance (3)
 Flute 16' (2)
 Flute 4' (3)
 Bassoon 16' (2)
 Coupler L, 8'4' to U On
 Vibrato - Upper (1)
LOWER:
 Vibrato - Lower (1)
 Flute 8' (3)
 Flute 4' (2)
 Diapason 8' (2)
 Cello 8' (3)
 Cello 4' (2)
 String Celeste (3)
PEDAL:
 Bass 16' (3)
 Bass 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Rotary
 Tremolo: On
 Flute Split: On
 Manual Attack: Normal
TUNING (Pitch):
 Upper: 12 O'Clock
 Lower: 9 O'Clock

SLIDE TROMBONE

UPPER:
 Brilliance (3)
 Trombone 16' (3)
 U. Touch Vibrato (1)
LOWER:
 Vibrato - Lower (1)
 Flute 8' (2)
 Diapason 8' (2)
PEDAL:
 Bass 16' (2)
 Bass 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
 U. Glide On
TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

COMBO ORGAN

UPPER:
 Brilliance (3)
 Length (2)
 Up. Perc. 2 2/3' (2)
 Flute 16' (3)
 Bassoon 16' (3)
 Oboe 8' (3)
 Kinura 8' (3)
 Coupler U to U. 16'4'2' On
LOWER:
 Flute 8' (3)
 Flute 4' (2)
 Flute 2 2/3' (1)
PEDAL:
 Bass 16' (3)
 Bass Guitar II (3)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Main
 Upper Voice: Main
 Flute Split: On
 Manual Attack: Fast
TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

THEATER SOLO II 8'

UPPER:
 Brilliance (3)
 Flute 8' (2)
 Flute 4' (3)
 Flute 1' (3)
 Kinura 8' (3)
 String 2' (3)
 Coupler L, 8'4' to U. On
 Vibrato - Upper (1)
LOWER:
 Vibrato - Lower (1)
 Flute 8' (3)
 Flute 4' (2)
 Diapason 8' (2)
 Cello 8' (3)
 Cello 4' (2)
 String Celeste (3)
PEDAL:
 Bass 16' (3)
 Bass 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Rotary
 Tremolo: On
 Flute Split: On
 Manual Attack: Normal
TUNING (Pitch):
 Upper: 12 O'Clock
 Lower: 9 O'Clock

WAW-WAW TRUMPET

UPPER:
 Brilliance (3)
 Brass 8' (3)
LOWER:
 Vibrato - Lower (1)
 Flute 8' (2)
 Diapason 8' (2)
 String Celeste (2)
PEDAL:
 Bass 16' (3)
 Bass 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Fast
 Wah-Wah: On
TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

SAXOPHONE

UPPER:
 Brilliance (3)
 Flute 16' (2)
 Trombone 16' (3)
 Bassoon 16' (2)
 U. Touch Vibrato (1)
 or
 Vibrato - Upper (3)
LOWER:
 Flute 8' (3)
 Flute 4' (2)
 String Celeste (2)
PEDAL:
 Bass 16' (2)
 Bass 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voices: Main
 Tremolo: On
 Manual Attack: Normal
TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

CONCERTINA

UPPER:
 Brilliance (3)
 Brass 8' (2)
 String 8' (3)
 String 4' (3)
 Coupler L, 8'4' to U. On
LOWER:
 Flute 8' (3)
 Cello 8' (3)
 Cello 4' (3)
PEDAL:
 Bass 16' (2)
 Bass 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
TUNING (Pitch):
 Upper: 2 O'Clock
 Lower: 10 O'Clock

VOX HUMANA

UPPER:
 Brilliance (3)
 Flute 4' (3)
 Kinura 8' (3)
 Vibrato - Upper (2)
LOWER:
 Vibrato - Lower (1)
 Flute 8' (3)
 Flute 4' (2)
 String Celeste (3)
PEDAL:
 Bass 16' (3)
 Bass 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Rotary
 Tremolo: On
 Manual Attack: Normal
TUNING (Pitch):
 Upper: 12 O'Clock
 Lower: 9 O'Clock

ACCORDIAN

UPPER:
 Brilliance (3)
 Clarinet 8' (3)
 Brass 8' (3)
 String 8' (3)
 String 4' (1)
LOWER:
 Vibrato - Lower (1)
 Flute 8' (3)
 Flute 4' (2)
 Flute 2' (1)
PEDAL:
 Bass 16' (3)
 Bass 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

WALTER WANDERLY SOUND

UPPER:
 Brilliance (3)
 Length (3)
 Up. Perc. 2 2/3' (1)
 Flute 16' (3)
 Flute 2 2/3' (2)
LOWER:
 Flute 8' (3)
 Flute 4' (2)
 Flute 2' (1)
PEDAL:
 Bass 16' (3)
 Bass 8' (2)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Fast
TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

VIOLIN

UPPER:
 Brilliance (3)
 Kinura 8' (3)
 String 8' (3)
 U. Touch Vibrato (1)
LOWER:
 Vibrato - Lower (1)
 Flute 8' (2)
 Diapason 8' (2)
 String Celeste (2)
PEDAL:
 Bass 16' (2)
 Bass 8' (1)
EFFECT CONTROLS:
 Reverb: . . .
 Pedal Sustain: . . .
 Manual Balance: . . .
EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

Section IV

XYLOPHONE

UPPER :
 Brilliance (3)
 Attack 1 1/3' (3)
 Flute 4' (3)
 LOWER:
 Flute 8' (2)
 Flute 4' (1)
 String Celeste (2)
 PEDAL:
 Bass 16' (2)
 Bass 8' (1)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Upper Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
 Upper Sustain: On
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

BANJO (Reiterating)

UPPER:
 Brilliance (3)
 Flute 4' (2)
 Flute 2 2/3' (3)
 Brass 8' (3)
 String 8' (3)
 Repeat Speed (3)
 LOWER:
 Flute 8' (3)
 Flute 4' (2)
 Flute 2 2/3' (1)
 String Celeste (2)
 PEDAL:
 Bass 16' (3)
 Bass 8' (1)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Fast
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

ORCHESTRA BELLS

UPPER:
 Brilliance (3)
 Attack 1 1/3' (2)
 Flute 8' (3)
 LOWER:
 Flute 8' (2)
 Flute 4' (1)
 Cello 8' (2)
 String Celeste (2)
 PEDAL:
 Bass 16' (2)
 Bass 8' (1)
 EFFECT PEDAL:
 Reverb:
 Pedal Sustain:
 Upper Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
 Upper Sustain: On
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

MARIMBA

UPPER:
 Brilliance (3)
 Flute 8' (3)
 Repeat Speed (3)
 LOWER:
 Flute 8' (2)
 Flute 4' (1)
 PEDAL:
 Bass 16' (3)
 Bass 8' (1)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

MANDOLIN

UPPER:
 Brilliance (3)
 String 8' (3)
 String 4' (2)
 Repeat Speed (3)
 LOWER:
 Flute 8' (2)
 Flute 4' (1)
 String Celeste (2)
 PEDAL:
 Bass 16' (3)
 Bass 8' (1)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

TRAIN SET-UP

UPPER:
 Brilliance (3)
 Flute 16' (3)
 Flute 8' (2)
 Flute 4' (1)
 Clarinet 8' (2)
 Brass 8' (1)
 Kinura 8' (2)
 Repeat Speed (1)
 LOWER:
 Flute 4' (3)
 Diapason 8' (3)
 EFFECT CONTROLS:
 Reverb:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Rotary
 Ensemble: On
 Manual Attack: Normal
 Lower Glide: On
 Button 1 (3)
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

HARP — Lower Manual

UPPER:
 Brilliance (3)
 Any complimentary voice
 LOWER:
 Diapason 8' (3)
 Cello 8' (1)
 PEDAL:
 Bass 16' (3)
 Bass 8' (1)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Lower Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Main
 Lower Sustain: On
 Manual Attack: Normal
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

MUSIC BOX

UPPER:
 Brilliance (3)
 Attack 1 1/3' (2)
 Flute 4' (3)
 LOWER:
 Flute 8' (2)
 Flute 4' (1)
 Cello 8' (2)
 String Celeste (2)
 PEDAL:
 Bass 16' (2)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Upper Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
 Upper Sustain: On
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

LES PAUL SOUND

UPPER:
 Brilliance (3)
 Brass 8' (3)
 Repeat Speed (2)
 Vibrato — Upper (2)
 LOWER:
 Vibrato — Lower (1)
 Flute 8' (3)
 Flute 4' (2)
 Diapason 8' (2)
 String Celeste (2)
 PEDAL:
 Bass 16' (3)
 Bass 8' (1)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Upper Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
 Upper Sustain: On
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

RINKY TINK PIANO

UPPER:
 Brilliance (3)
 Coupler L. 8' 4' to U. On
 UPPER PRE-SETS:
 Guitar On
 LOWER:
 Diapason 8' (3)
 Diapason 4' (3)
 PEDAL:
 Bass 16' (3)
 Bass 8' (2)
 Bass Guitar 1 (2)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Lower Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Main
 Upper Voice: Main
 Lower Sustain: On
 Damper: On
 TUNING (Pitch):
 Upper: 5 O'Clock
 Lower: 7 O'Clock

HAWAIIAN GUITAR

UPPER:
 Brilliance (3)
 Flute 8' (2)
 Flute 4' (2)
 Clarinet 8' (3)
 Brass 8' (2)
 Vibrato — Upper (2)
 LOWER:
 Vibrato — Lower (1)
 Flute 8' (3)
 Diapason 8' (3)
 Cello 8' (3)
 PEDAL:
 Bass 16' (3)
 Bass 8' (1)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Upper Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Upper Sustain: On
 Tremolo: On
 Manual Attack: Normal
 U. Glide: On
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

GRAND HARPSICHORD

UPPER:
 Brilliance (3)
 Oboe 8' (2)
 Kinura 8' (3)
 Coupler U. to U. 16' 4' 2" On
 LOWER:
 Flute 8' (2)
 Flute 4' (1)
 Cello 8' (2)
 String Celeste (2)
 PEDAL:
 Bass 16' (2)
 Bass 8' (1)
 EFFECT CONTROLS:
 Reverb:
 Pedal Sustain:
 Upper Sustain:
 Manual Balance:
 EFFECT SWITCHES:
 Lower Voice: Rotary
 Upper Voice: Main
 Tremolo: On
 Manual Attack: Normal
 Upper Sustain: On
 TUNING (Pitch):
 Upper: 11 O'Clock
 Lower: 9 O'Clock

Specifications

DIVISIONS

Upper Manual	61 keys C ~ c4
	(5 octaves)
Lower Manual	61 keys C ~ c4
	(5 octaves)
Pedalboard	25 keys C1 ~ c
	(2 octaves)
Portamento	3 octaves c ~ c3

TONE LEVERS

Upper Manual	
Flute	16' Bassoon 16'
Flute	8' Clarinet 8'
Flute	5 1/3' Brass 8'
Flute	4' Oboe 8'
Flute	2 2/3' Kinura 8'
Flute	2' String 8'
Flute	1 3/5' String 4'
Flute	1' String 2 2/3'
Trombone	16' String 2'
Lower Manual	
Flute	16' Diapason 8'
Flute	8' Diapason 4'
Flute	4' Cello 6'
Flute	2 2/3' Cello 4'
Flute	2' String Celeste
Horn	8'
Pedalboard	
Bass	16' Tuba 8'
Bass	8' Bass Guitar I
Bass	4' Bass Guitar II
Tuba	16'

COUPLERS

Upper to Upper	16' · 4' · 2'
Lower 8' · 4' to Upper	

PRESET TONE SELECTORS (UPPER)

Piano	Banjo
Harpichord	Vibraphone
Guitar	Chimes

PORTAMENTO TONE SELECTORS

Tenor Whistle	Birds
Soprano Whistle	Astro
Squawk	

EFFECT LEVERS

Brilliance (Upper & Lower)
Percussive 4' (Upper)
Percussive 2 2/3' (Upper)
Percussive 2' (Upper)
Percussive Length (Upper)
Attack 1 1/3' (Upper)
Repeat Speed (Upper)
Touch Vibrato (Upper)

Upper Vibrato

Lower Vibrato

EFFECT CONTROLS

Upper Sustain
Lower Sustain
Pedal Sustain
Reverb
U & L Balance

EFFECT SELECTORS

Upper Flute Split
Upper 16' · 8' · 4' Sustain
Lower 8' · 4' Sustain
U & L Attack
Upper Preset Cancel

EXP. PEDAL EFFECT SELECTORS

Upper Glide
Lower Glide
Wah-Wah (Upper)
Damper (Upper preset tones)
Auto Rhythm Stop

TREMOLO SELECTORS

Upper Voice (Main/Rotary)
Lower Voice (Main/Rotary)
Ensemble
Tremolo
Chorus
Upper Flute Split

PISTONS

Pedal Solo
Preset Pistons
1 ~ 2 Upper
3 Upper, Lower, Pedal
4 Full Organ (Factory set)
C Cancel

PERCUSSION SECTION

Percussion Levers
Lower Brush
Lower Cymbal
Pedal Cymbal
Button I
Button II
Percussion Buttons (Four)

AUTO RHYTHM SECTION

Rhythm Selectors	
March I	Tango
March II	Beguine
Waltz	Rhumba
Swing	Mambo
Slow Rock	Bossanova
Jazz Rock I	Samba I
Jazz Rock II	Samba II

Rhythm Controls

Rhythm Start
Synchro-Start
Rhythm Stop (Exp. pedal control)
with Indicator Lamp
Tempo
Volume
Tone Balance
Tempo Indicator Lamp

OTHER CONTROLS

Preset Board (Drawer type)	
Knee Lever	
Master Volume	
Portamento Volume	
Pedal Solo Volume	
Expression Pedal (Dual control)	
Upper, Lower Pitch Controls	
Upper, Lower Vibrato Speed Controls	
Tremolo Speed Control	
Power Switch with Pilot Lamp	
OTHER FITTINGS	
Piston Indicator Lamps (Five)	
Tone Cabinet Socket	
Headphone Jack	
External Input Jack	
Roll-top Fallboard with Auto Switch and Lock	
Music Rest	
Matching Bench with Music Storage Space	
NATURAL SOUND SPEAKERS	
Main: JA5101A 59x48cm(23 1/4"x14 1/2")	
JA-1704A 22x28cm(8 3/4"x11")	
Rotary: JA-1701B 16x23cm(6 1/2"x9")	
Electro-control 2-speed	

CIRCUITRY

Solid State (Incl. ICs and FETs)
Main Amplifier: OCL System Dual-channel
Total Continuous Output Power: 120Watts
Power Consumption: 250Watts
100/110/117/125/220/240V AC, 50/60Hz

DIMENSIONS

	Cabinet	Bench
Width:	130cm (51 1/4")	106cm (41 3/4")
Depth:	75cm (29 1/2")	35cm (14")
	w/pedals 115cm (45 1/2")	
Height:	106cm (41 3/4")	60cm (23 3/4")
WEIGHT	140kg (308lbs.)	17kg (37lbs.)


FINISH

Natural American Walnut, Oil Finish

Specifications subject to change without notice.

Special Instructions for British-Standard Model

As the colours of the wires in the mains lead of the apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows.

The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  or coloured GREEN or GREEN-and-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

IMPORTANT

THE WIRES IN THE MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

GREEN-AND-YELLOW:	EARTH
BLUE:	NEUTRAL
BROWN:	LIVE

WARNING:

THIS APPARATUS MUST BE EARTHED.

SINCE 1887  **YAMAHA**
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN