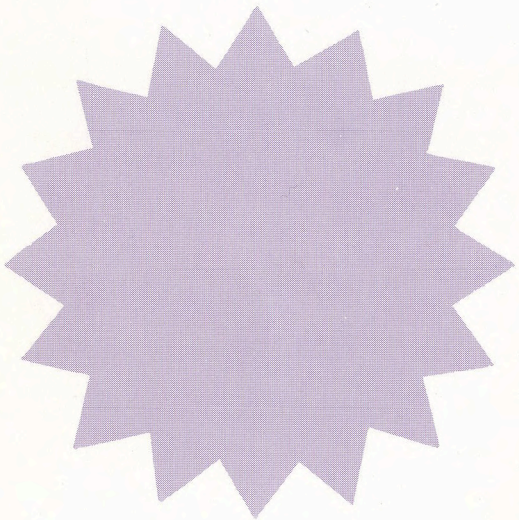
OWNER'S MANUAL

ELECTROHOME ELECTRONIC ORGAN

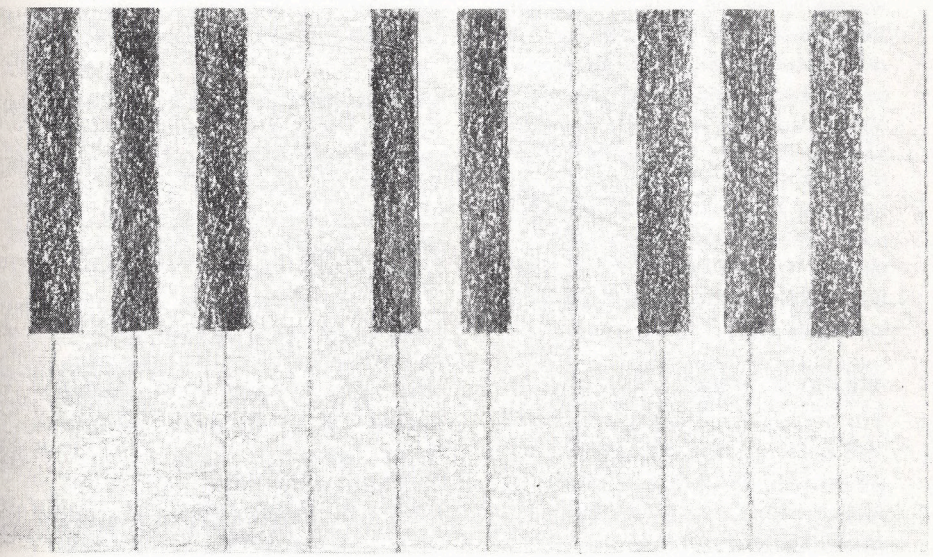


Welcome to the ever-growing circle of discriminating people who are deriving enjoyment and satisfaction from ownership of an Electrohome Electronic Organ.

This Owner's Manual offers information which will help you to appreciate and utilize all the features and voices of this fine musical instrument. The playing hints and suggested registrations were prepared by expert musicians so that you may take full advantage of the Electrohome Organ's great versatility.

Your Electrohome guarantee card is enclosed. Please fill in the requested information and mail promptly.

May your Electrohome Electronic Organ prove to be a source of lifetime inspiration and enjoyment for you!



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INSTALLATION

Your Electrome Organ is designed to operate from the standard 117 volt 60 cycle alternating current line. Never plug the organ into a direct current (DC) outlet or serious trouble may result. If you have any question as to the voltage or frequency of your power line, call your public service company before installation.

If at all possible your Electrohome Organ should not be placed close to a radiator nor should direct sunlight be allowed to fall on the console.

Electrohome Organs can be adapted to any acoustical condition under which they may be called upon to perform. When the organ is installed your dealer can adjust it to match the acoustics of your living room and to your preference as far as top (or total) volume, brilliance, vibrato speed, and pedal loudness are concerned. These controls may be described as follows:

MASTER VOLUME—This control is located on the main amplifier chassis and permits the maximum volume of the organ to be adjusted for the size of the room in which the organ is placed. The master volume control should be set to the desired volume with the expression pedal in the maximum loudness position.

BRILLIANCE or TIMBRE CONTROL—This control, located on the voicing panel, on some models, can be used to raise or lower the relative volume of the upper harmonics of the organ string and reed stops. It can be adjusted to suit the acoustics of the room and the preference of the owner. On older models this control was located on the main amplifier chassis and can be adjusted through the opening in the cabinet back (check chassis layout card for location).

VIBRATO SPEED — Standard vibrato speed is 6-7 cycles per second and each organ is set at this speed at the factory. Faster or slower vibrato rates may be readily re-set to the customer's need by shifting the vibrato speed control, which is also located on the main amplifier chassis.

PEDAL BALANCE—The pedal section includes its own complement of voices or stops which the organist can select to balance whatever voices he may wish to use on the manuals. However, various room acoustics may tend to suppress or emphasize the pedal notes. For this reason a pedal balance control is provided on most models. By means of this control, the pedal volume can be set so that soft pedal stops balance soft manual stop combinations, and vice versa, in any installation.

LOWER MANUAL BALANCE—(on some models) Lower, or Great manual voices are also effected by room acoustics and the level of reproduction may be controlled by either a balance control or accent tabs.

All Electrohome models contain a factory-installed Dampp Chaser as protection against possible trouble due to excessive humidity. These heaters consume only a very small amount of power and are so connected that they become operative only when the organ switch is in the "OFF" position. For this reason the organ should always be left plugged in even though not in use.

In some models, underneath the keyboard at the top of the knee panel you will find a phone jack. This is provided so that you may

plug in a pair of headphones and practice without disturbing anyone. The speakers are automatically shut off when the phones are plugged in. Your dealer can supply you with the proper type of phones.

Your new Electrohome Organ is years ahead in electronic design and requires only six tubes to generate all its beautiful tones. Eventually some tubes will have to be replaced, but those used in the organ are standard and are not expensive. Undoubtedly you have owned a radio which operated for five years or more without a tube replacement. The majority of the components in your Electrohome Organ are designed to last a lifetime and such items as keys, stop tablets, bass pedals and expression pedal will never have to be replaced.

The beautiful tones of your new Electrohome Organ are produced by electronic circuits. There are no reeds or revolving tone wheels to get out of adjustment. In fact, with the exception of the keys, stop tablets, and expression pedal, there are no moving parts in the entire organ. The basic generated tones, each containing the full complement of harmonics required for the richest of orchestral voices, are fed through switching circuits in the keyboards into the unique registration circuits which are controlled by the stop tablets. These formant circuits have the ability to emphasize only those harmonics which are required, suppressing all others, to give you the rich tone of the oboe or the throbbing note of the violin. Therefore, you have at your command, in the Electrohome Organ, practically the entire ensemble of a symphony orchestra.

Next, the tones are fed to an especially designed amplifier and speaker system where the electrical vibrations are changed to acoustic vibrations and thence to the listener's ear. A great deal of study and thought went into the design of the amplifier and speaker system as it has to be the highest of high fidelity. The function of the organ is, not to reproduce tones, but to produce them. Therefore, the design has to be considerably different from a conventional high fidelity system. The lowest note produced is low "C" on the bass pedal, 32 cycles per second. The highest, a harmonic of the 4′ string stop, approximates 10,000 cycles per second. These tones have to blend perfectly with no distortion. Hence, the careful design of the amplifier and the specially manufactured speakers.

getting acquainted

The enjoyment you derive from your Electrohome Organ will be in direct proportion to your understanding of the instrument. On this and following pages you will find much information that will help you increase the satisfaction you have in owning a truly fine electronic organ. A brief description of the various parts of the organ will form a basis for getting acquainted.

STARTING SWITCH—The OFF-ON switch is located at the left hand end of the console on a cont-

rol (Timbre, Vibrato, or Pedal Balance, depending upon the model) and controls the entire organ. In the "ON" position, the pilot light associated with the switch will light up. Approximately 15 seconds of warm-up time are required before the organ voices will speak when a key is depressed, and a slight amount of additional time is required before the vibrato circuits will become operative.

UPPER KEYBOARD: The upper keyboard is usually called the solo or "swell" manual. The solo or melody parts of a given selection are generally played on the upper manual by the right hand.

LOWER KEYBOARD: The lower keyboard is called the accompaniment or "great" manual. Here the left hand usually plays the accompaniment parts of the given selection. Some music is written for both hands to be played on a single manual and it may be desirable at times to play solo parts on the lower manual. It should be emphasized that there are no rigid rules that need to apply in playing on one or both manuals. It is mainly a matter of personal taste.

PEDAL KEYBOARD: The pedal keyboard is sometimes called the pedal clavier. On the Electrohome Organ it consists of 13 keys, 25 on Model Clarion. The pedal keys add great depth to a chord as played on the manuals and they are used principally to provide the rhythm or "beat" for the music played by the hands on the manuals.

VOICING PANEL: The voicing panel is the soul of the organ, for the various circuits on this panel, controlled by the voicing tablets or "stops", impart to the organ voice the characteristic sounds of the instruments whose names are engraved on the stops. The voicing tablets or stops are arranged in three appropriately marked groups, one group each controlling the upper, lower and pedal keyboards. The tablets are color-coded to indicate tonal families where flute voices are coded blue, string voices are coded red, reed voices are coded green and diapasons are coded black.

VIBRATO CONTROL: Your Electrohome Organ features a continuously variable vibrato control. Vibrato is the pitch "wavering" effect that is so pleasing on certain instruments such as the violin, cello and trombone. The ability to vary continuously the amount of vibrato used permits one to approach true duplication of the orchestral voices on the organ.

VIBRAGLIDE FOOT SWITCH — (on some models) Located on the left hand edge of the Expression Pedal provides a pleasing glissando glide commonly used in Hawaiian guitar effects. Rocking the foot gently to the left will defeat the Vibrato, keeping in mind that the longer you hold the switch in the off position, the longer the time required to return to full vibrato. If you desire a short rapid return to normal vibrato, hold the switch off only momentarily.

PERCUSSION COLOR—On some models a separate group of stop tablets controls the **percussions** or **sustain** voices. All the percussion voices speak at 8′ pitch. Use of these tablets alone or in combination with the regular organ voices permits the organist to achieve bell, Hawaiian guitar, harp, harpsichord and other percussive effects.

SUSTAIN CONTROL: This makes available a variable sustain for the percussion tones. A piano effect is obtained by using the 8′ Flute stop with the control in the short position. In the full or long position the sustain is long and, in combination with the proper percussion tone color, will simulate bell tones or vibraharp. When the sustain control is at the full position, with no percussion tablets on, all of the 8′ voices on the upper manual will have natural reverberation.

EXPRESSION PEDAL: The expression pedal is so-called because by its use the organist can change the volume of the organ at will from a mere whisper to full volume. Proper use of this pedal permits a great deal of self-expression in the music you play.

TREMULANT CONTROL— (on some models) The Rotodyne Tremolo, an exclusive Electrohome development, is designed to provide the same rich vibrant sound found in large theatre organs. With the tremulant control mounted on the

Voicing Panel, it provides easy choice of a myriad of tone colorations that can be achieved with the continuously variable speed control and permits instantaneous start or stop of the Rotodyne effect. On later models an off-on tab has been provided to permit instantaneous control of the tremulant effect. Unlike Vibrato which provides the pitch waver so desirable in the reproduction of violin and cello tones, the true tremulant effect achieves a pipe-like quality which provides complete musical adequacy and when used in conjunction with the Vibrato control, a very pleasing Chorus effect can be achieved.

COUPLERS— (on some models) Manual to Manual and Manual to Pedal couplers provide a ready means whereby the voicing tablets of, for example, the Swell manual can be added to the Great manual and therefore provide additional 8′ voices to the lower manual.

at the console

It is not the purpose of this manual to teach you how to play your new Electrohome Organ, but to acquaint you with the operational controls. These are equivalent to the controls on the dashboard of a new automobile or the dials on a new automatic washer. A proper understanding of these controls will enable you to obtain immediate pleasure from your Electrohome Organ.

If you have had no experience with keyboard music, we recommend the "Pointer System for the Electrohome Organ" as an excellent "short cut" method. These instruction books are obtainable from your dealer or any large music store. Ideally, of course, a qualified organ teacher is recommended.

Let us first consider the proper use of the tone color controls located on the voicing panel. When tilted toward you, the tablet controls the speaking of the voice over the entire keyboard. This simple type of control permits registering any number of variations and combinations of tone, allowing all to be cancelled by a single sweep of the fingers on the back of the stop tablets. Controls are then ready to be set again.

You will note that each stop tablet is also marked with a "footage" number which tells the pitch at which that voice speaks. Eight foot is the normal or unison pitch. If you play the middle "C" key ("C" just to the left of the center of the organ) with an 8′ voice, you will hear the normal middle "C" pitch of about 262 cycles per second. If you play the middle "C" key with a 16′ voice you will hear the note whose pitch is an octave below middle "C". Similarly, 4′ pitch is an octave above 8′ and 2⅔′ pitch is the twelfth interval above 8′, or approximately the third harmonic. This is used for special tone coloring effects with other voices.

So that you may become more familiar with the "footages" marked on the stop tablets, try the following experiment. Using the 8′ Flute tablet in the upper keyboard section of the voicing panel, hold down a key near the middle of the upper keyboard. You will hear the 8′ or unison pitch. Now actuate the 16′ Tibia or Flute stop, still holding the same key. You will now hear a pitch one octave lower. Next actuate the 4′ Flute (some models only). This sounds at a pitch one octave higher. In other words, you now have two/three octaves, or different pitches of one note sounding on the same key. Notice how the use of different "footages" gives body and timbre to the organ tone. Actually the terminology of "footage" is a holdover from pipe organs and referred to the longest pipe in the rank of pipes. Although your Electrohome Organ is completely electronic and has no bulky pipes the term "footages" is still the best way to describe the octave relationship of the notes.

Therefore, each stop tablet is identified by a number. The number or "footage" indicates the pitch of the particular tablet. Thus, we have stops in three octaves: 8′ being the same as a piano in pitch: 16′ being one octave lower than 8′; 4′ being one octave higher than 8′.

Each stop tablet is also identified by color as well as a number. There

are four colors used on the tablets, representing four "families" of true organ tones. They are identified as follows:

Blue—Flute family

Green—Reed family

Red—String family

Black—Diapasons

The color code method of imprinting the stop tablets allows easier identification, quicker combining of tones all of one family, or fast contrasting changes in registration.

If we want to use flute tone, the question may occur: "What pitch do we choose?" That depends on the selection being played and the effect desired by the organist. You will learn that playing the organ may be compared to preparing a tasty dish. There are many ingredients available, but the choice made by the chef will determine the results. To become an artist at the organ console takes practice, but richly rewards your investment in time and effort.

The Tibia 16′ (blue) adds mellowness and can be used to create a nostalgic mood. The 8′ Flutes are almost always suitable. The 4′ Flute alone might simulate a whistling effect, a piccolo, or be used for an obligato, whereas the 16′ Flute will be deep and resonant.

When 16′, 8′ and 4′ are combined, there is a full chorus of flutes in octaves and always in tune.

To obtain a "hollow" effect, omit 8′ voices and use just 16′ and 4′

The best way to learn is to experiment. Try each stop individually, then in combinations. You'll soon discover what limitless possibilities your Electrohome voicing panel offers.

Rules to remember: Listen to yourself. Hear your choice of tone color the way other people hear you. Is it well-seasoned with tone suited to the music? Some music demands raucous, strident tonal harmonics, where other types need the blending of smooth, mellow orchestral instruments. The whole orchestra is at your command with the Electrohome Organ. How well do you direct it?

CONTRAST: Offer a well-balanced variety of contrasting voices. Use your stop tablets frequently . . . vary the vibrato setting frequently . . . take advantage of the special percussion tablets. Don't just set up the voicing panel with stops you particularly like and then leave it that way for all your playing.

experiments while playing (Dependent on model)

1. Depress Tibia 16′ . . . and . . . Tibia or Flute 4′. Now add Oboe 8′.
2. Depress Tibia 16′ . . . and . . . Tibia or Flute 4′. Now add English Horn 8′.
3. Depress Tibia 16′ . . . and . . . Tibia or Flute 4′. Now add Clarinet 8′.

You are thinking in terms of tone-color families. You are changing different reed (green) voices while surrounding them with flutes.

4. Depress Kinura 16′ . . . and . . . Clarion 4′. Now add Diapason 8′.
5. Depress Kinura 16′ . . . and . . . Clarion 4′. Now add Salicional 8′.

Your "surrounding" voices are now reeds, and you may continue to go through the whole complement of 8′ voices, noticing the difference in effect when changing from one family of tone color to another.

6. Depress Tibia 16′ . . . and . . . String 4′. Now add Stopped Flute or Tibia 8′.
7. Depress Kinura 16′ . . . and . . . String 4′. Now add Trumpet 8′.

You have now started "mixing up" your surrounding or "outside" voices. Continue on, using different stops of the 8′ groups.

By now you have become color and pitch conscious. Continue to be so when you are choosing voices for your music. Organ registration is simply a matter of musical good taste.

MAINTENANCE INFORMATION

CABINET: The beautiful console of your Electrohome Organ was designed and crafted by one of the leading furniture manufacturers in Canada. It is an outstanding example of expert craftsmanship and deserves to be treated as such. Extreme temperature changes have an adverse effect on furniture woods. Normal temperature changes are harmless, but close proximity to heating units and direct sunlight will tend to dull the beautiful finish and may cause cracking of wood. Winter storage in an unheated building is also harmful.

CLEANING: A cloth dampened in a mild soap and water solution may be used to clean the keys and stop tablets. Wash the cabinet with a soft cloth moistened in "sudsy" water. Wipe clean with a soft, dry cloth, rubbing with the grain. Dust regularly, for dust darkens and dulls, but dust lightly for dust is abrasive.

POLISHING: There are many grades of furniture polish on the market, many are good, some are not so good. Purchase a good grade of polish and follow instructions included with polish.

CARE OF SWEDISH WALNUT FINISH: The finish used on this cabinet has been specially formulated to give a beautiful dull satin finish. Gloss type waxes, while excellent on glossy or rubbed finishes, tend to give this finish a disagreeable shine which distracts from its original satin appearance. A flat oil and solvent type polish such as DEILCRAFT'S FLAT FURNITURE POLISH or O'CEDAR'S ALL PURPOSE POLISH gives satisfactory results; or, if you prefer a cream polish, a flat cream such as JOHNSON'S JUBILEE CLEAN UP WAX or O'CEDAR'S INSTANT CREAM FURNITURE POLISH may be used. Both these polishes impart a minimum of shine to the surface. Polishing should be done not more frequently than once a month, and preferably only at intervals of three to four months. For routine cleaning, wipe with a sponge or soft cloth moistened (not soaked) in warm soapy water, or a mild detergent solution, followed by a soft dry cloth. Alcohol spills are readily removable after exposure of up to several hours. However, glasses left standing in alcohol spills overnight will leave a ring which will be difficult to remove. Some rubber based articles will discolour the surface if left for extended periods.

ELECTRICAL: All the vacuum tubes in the Electrohome Organ are standard and may be obtained at any radio or television store. Tube life is dependent on how much the organ is used, but since there are only 19 to 22 tubes, exclusive of the percussion unit, tube replacement will never be expensive. Highest quality electronic components are used throughout.

TUNING: Although the organ was carefully tuned against a standard tone source at the factory, transportation jarring and, in time, tube aging may cause it to need re-tuning. This is a simple procedure which your dealer's technician can perform in a very few minutes.

OWNER MAINTENANCE: Your Electrohome Organ is built with the finest quality electronic and mechanical parts obtainable, and it is constructed with the greatest of care by skilled craftsmen. However, not even the best components are absolutely infallible. Minor difficulties can occur and your Electrohome Organ may, once in a great while, require service.

If the organ gives trouble, your dealer-serviceman is always ready to help you. However, you may find that some simple action on your part, such as changing a tube, may save you the inconvenience of a service call. Even if you are unable to correct the fault, you may be able to pinpoint the exact source of trouble. This information, passed on to your dealer-serviceman, may be of considerable help to him.

If the organ is completely inoperative, make the following checks:

1. Make sure the line cord is plugged into a live AC outlet.

2. Check the "ON-OFF" switch. Pilot light will normally indicate, but as these sometimes burn out, visually check whether tubes are lighted.

3. If switch is on, but tubes do not

light, check the circuit breaker which is located on the main amplifier next to the power cord. (See Rear View of Organ.)

The mechanically reset circuit breaker eliminates old - fashioned fuses in the chassis . . . and never needs replacing. Electrical overload will cause the Circuit Breaker contacts to open, and the equipment will fail to function. Simply reset the circuit breaker by depressing the red button. Shipping and handling may also cause the contacts to open, in which event, the same procedure should be followed.

Should the Circuit Breaker—by requiring continuous resetting—fail to maintain contact, disconnect equipment from the power supply and call in a qualified service technician.

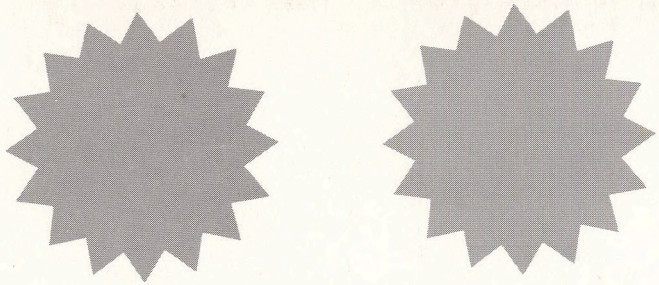
4. Remember that at least one stop tablet on each manual must be on for the organ to play.

If the organ sounds weak, check the position of the expression pedal, the top volume control on the amplifier chassis, and the Accent Tablets.

Your Electrohome Organ is designed to permit a simple and logical approach to finding any cause of malfunction. All the octaves of any one note are associated with one tone generator. For example, all of the "A" notes are generated by a printed circuit panel which can be removed from the generator assembly by your dealer or serviceman. Each printed circuit combines two notes such as "C" and "C#" together. As a result, there are only six tone generator printed circuit panels in the instrument.

The percussion keying circuits are located on removable printed circuit panels under the upper keyboard. Each tube controls the keying of two notes. The bus amplifier intensifies the organ tones before they reach the voicing panel. The tones for each "footage" are amplified separately.

The main amplifier and power supply are accessible by removing the back panel. Sudden loss of volume, rumbling noises or failure of vibrato can be caused by defective tubes in this assembly. These tubes are clearly marked as to their location and can be purchased at a local radio store.



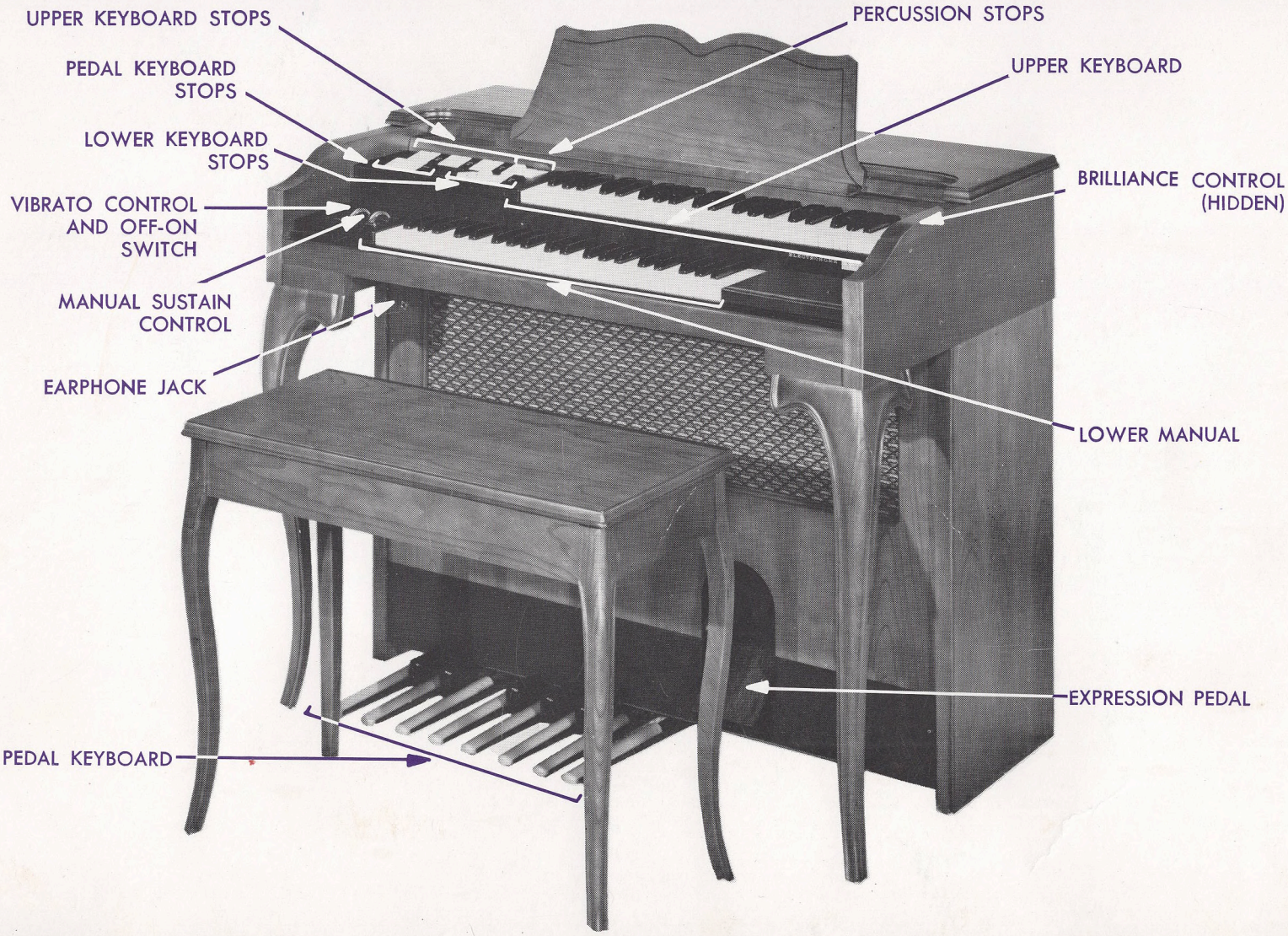
ELECTROHOME

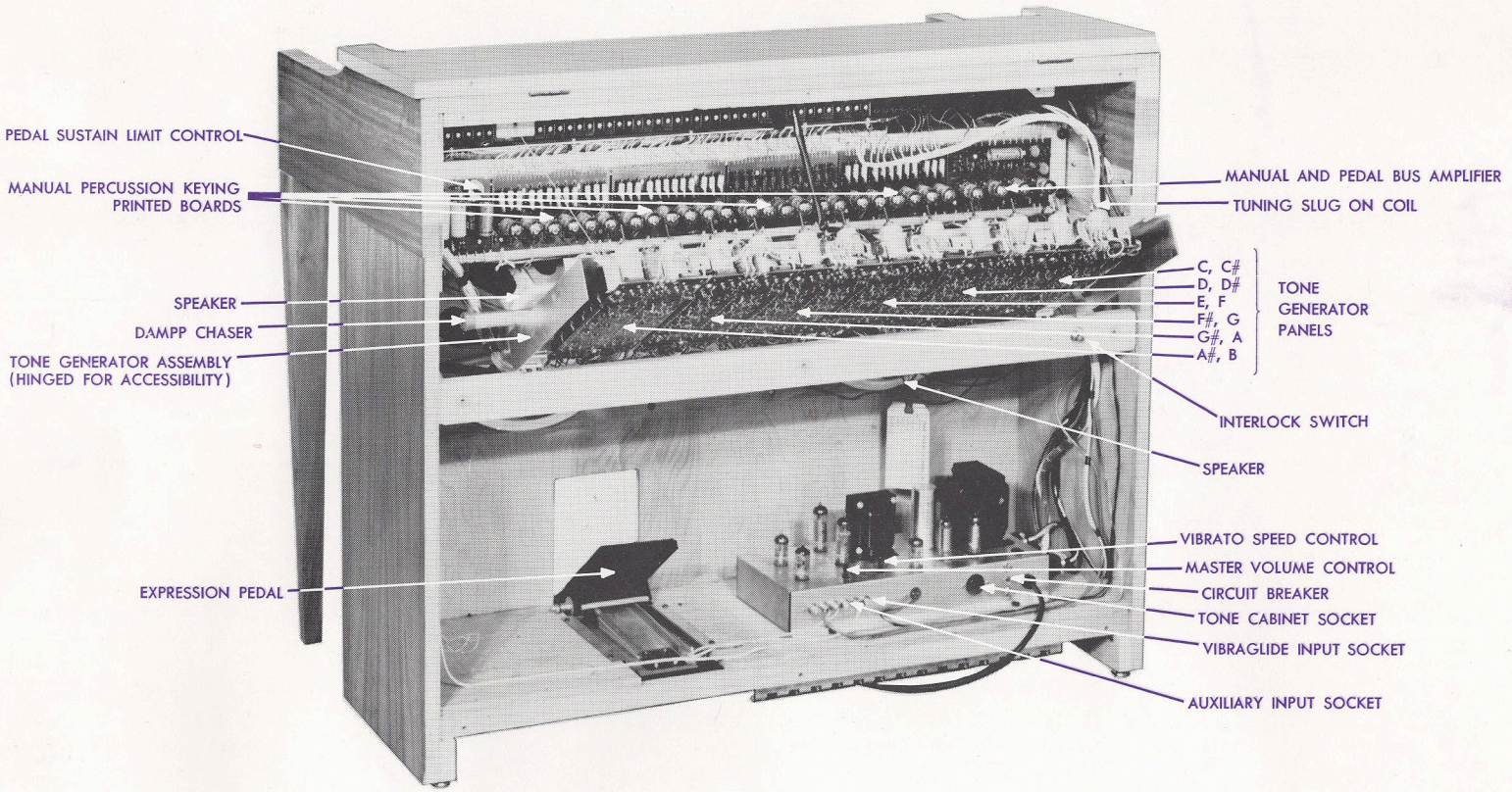
Electronic Home Organs
Quality-crafted by
Canada's Own Electrohome
Kitchener, Ontario

Specialists in Sound Reproduction Since 1907

54-1195-04

ELECTROHOME ELECTRONIC HOME ORGAN




PEDAL SUSTAIN LIMIT CONTROL
MANUAL PERCUSSION KEYING PRINTED BOARDS
SPEAKER
DAMPP CHASER
TONE GENERATOR ASSEMBLY (HINGED FOR ACCESSIBILITY)
EXPRESSION PEDAL
MANUAL AND PEDAL BUS AMPLIFIER
TUNING SLUG ON COIL
C, C#
D, D#
E, F
F#, G
G#, A
A#, B
TONE GENERATOR PANELS
INTERLOCK SWITCH
SPEAKER
VIBRATO SPEED CONTROL
MASTER VOLUME CONTROL
CIRCUIT BREAKER
TONE CABINET SOCKET
VIBRAGLIDE INPUT SOCKET
AUXILIARY INPUT SOCKET

ELECTROHOME

ELECTRONIC HOME ORGANS

SUGGESTED REGISTRATION

(Accent tablets in OFF position unless indicated in registration)

	BALLADS	BALLADS	BALLADS	BALLADS	BALLADS	RELIGIOUS
PEDAL	Bourdon 16′ Flute 8′ Accent	Bourdon 16′ Flute 8′ Accent	Bourdon 16′ Flute 8′ Accent	Bourdon 16′ Flute 8′ Accent	Bourdon 16′ Flute 8′ Accent	Bourdon 16′ Cello 16′ Flute 8′ Accent
UPPER	Tibia 16′ Accent 16′ Tibia 8′	Clarinet 8′ Accent 8′	Tibia 16′ Tibia 8′	Tibia 16′ Accent 16′ String 4′	Tibia 16′ Kinura 16′ Accent 16′ Tibia 4′	Tibia 16′ Kinura 16′ Tibia 8′ Accent 8′ String 4′ Accent 4′
LOWER	Diapason 8′ String 8′	Flute 8′ Diapason 8′	Flute 8′ String 8′	Diapason 8′ Melodia 8′ Accent 8′	Flute 8′ Diapason 8′ Accent 8′	Flute 8′ Diapason 8′ Melodia 8′ Accent 8′
VIBRATO	Full	Medium	Full	Full	Full	Off
VOICE			Flute	String	Flute	
PERCUSSION						
SUSTAIN	Short	Short	Medium	Medium	Long	Long

	RELIGIOUS	MUSIC BOX ORIENTAL	PIANO	MARCH	MARCH	MARCH	HARP	WALTZ
PEDAL	Bourdon 16′ Flute 8′ Accent	Bourdon 16′ Flute 8′ Accent		Bourdon 16′ Cello 16′ Flute 8′ Accent	Bourdon 16′ Cello 16′ Flute 8′ Accent	Bourdon 16′ Cello 16′ Flute 8′ Accent		Bourdon 16′ Flute 8′ Accent
UPPER	Kinura 16′ Accent 16′ Tibia 8′ Accent 8′			Tibia 16′ Kinura 16′ Accent 16′ Tibia 8′ Accent 8′	Tibia 16′ Tibia 4′ Kinura 16′ String 4′ Tibia 8′ Accent 4′ Accent 8′	Tibia 16′ Clarinet 8′ Kinura 16′ Tibia 4′ Accent 16′ Accent 4′	String 4′	Tibia 16′ Accent 16′ Tibia 8′ Accent 8′ String 4′
LOWER	Flute 8′ Diapason 8′ String 8′	Flute 8′ Diapason 8′		Flute 8′ String 8′ Accent 8′	Flute 8′ Diapason 8′ Accent 8′	Flute 8′ Diapason 8′ Melodia 8′ Accent 8′		Flute 8′ Diapason 8′ String 4′
VIBRATO	Full	Off Off	Off	Full	Full	Full	Off	Full
VOICE		Flute Oboe	Flute	String		Flute Oboe	Flute	Flute
PERCUSSION								
SUSTAIN	Short	Long Short	Short	Long	Long	Medium	Medium	Long

	WALTZ	WALTZ
PEDAL	Bourdon 16′ Flute 8′ Accent	Bourdon 16′ Flute 8′ Accent
UPPER	Tibia 16′ Accent 16′ Tibia 8′ Tibia 4′	Kinura 16′ Accent 16′ Tibia 8′ Accent 8′ String 4′ Accent 4′
LOWER	Flute 8′ Diapason 8′ Accent 8′	Flute 8′ Diapason 8′ Accent 8′
VIBRATO	Full	Full
VOICE PERCUSSION SUSTAIN	String Long	Long

54-1190-07

TONE FLOW DIAGRAM FOR ELECTROHOME ELECTRONIC ORGAN