

GUIDE
TO
YOUR
YAMAHA
ELECTONE
MODEL D-2B



SINCE 1887

NIPPON GAKKI CO., LTD.
Hamamatsu, Japan

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Introduction

The new Yamaha Electone Model D-2B provides not only the rich tonal effects of full orchestral treatment, but also a wide range of vibrant percussion effects as well as both singing vibrato and Natural Sound tremolo.

Yamaha's success in designing a truly great home spinet organ is amply demonstrated by the way in which the D-2B has become a center of attention among eminent creative musicians as well.

The tone generator circuitry — *all-solid state* of course — is newly engineered to provide the exquisitely balanced tonal stimulus necessary in bringing out the full possibilities of the *Natural Sound Speaker* system.

This system, an acoustic revolution in itself, is productive of tonal clarity and richness so outstanding that it has rendered the conventional cone speaker obsolete. We at Yamaha are gratified with the world-wide acclaim which this revolutionary speaker has achieved, and in offering this new system, comprising one giant main speaker and a smaller rotating speaker for tremolo and chorus effects, we feel we offer a tonal experience which suits the D-2B for professional use, as well as for light home use.

The following operational instructions are intended to serve you as guide, helping you to fully enjoy a wide range of tonal effects offered by Yamaha Electone D-2B.



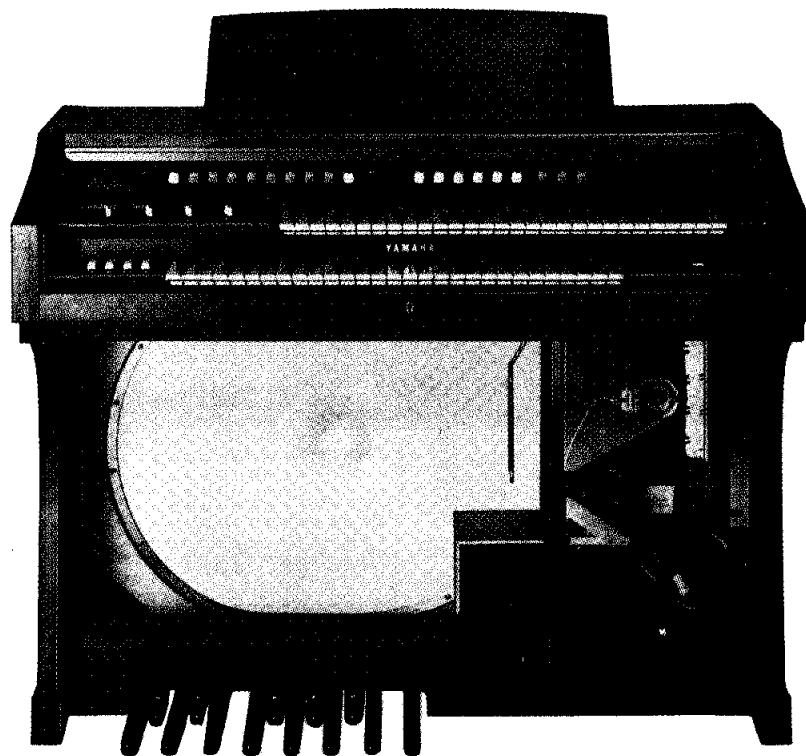
Yamaha Natural Sound Speaker

There's really so much that's exceptional about the Electone D-2B that it's difficult to single out any specific feature for emphasis. However, we believe that the design concepts embodied in the new, larger *Natural Sound Speaker*, incorporated in the D-2B are worthy of particular attention.

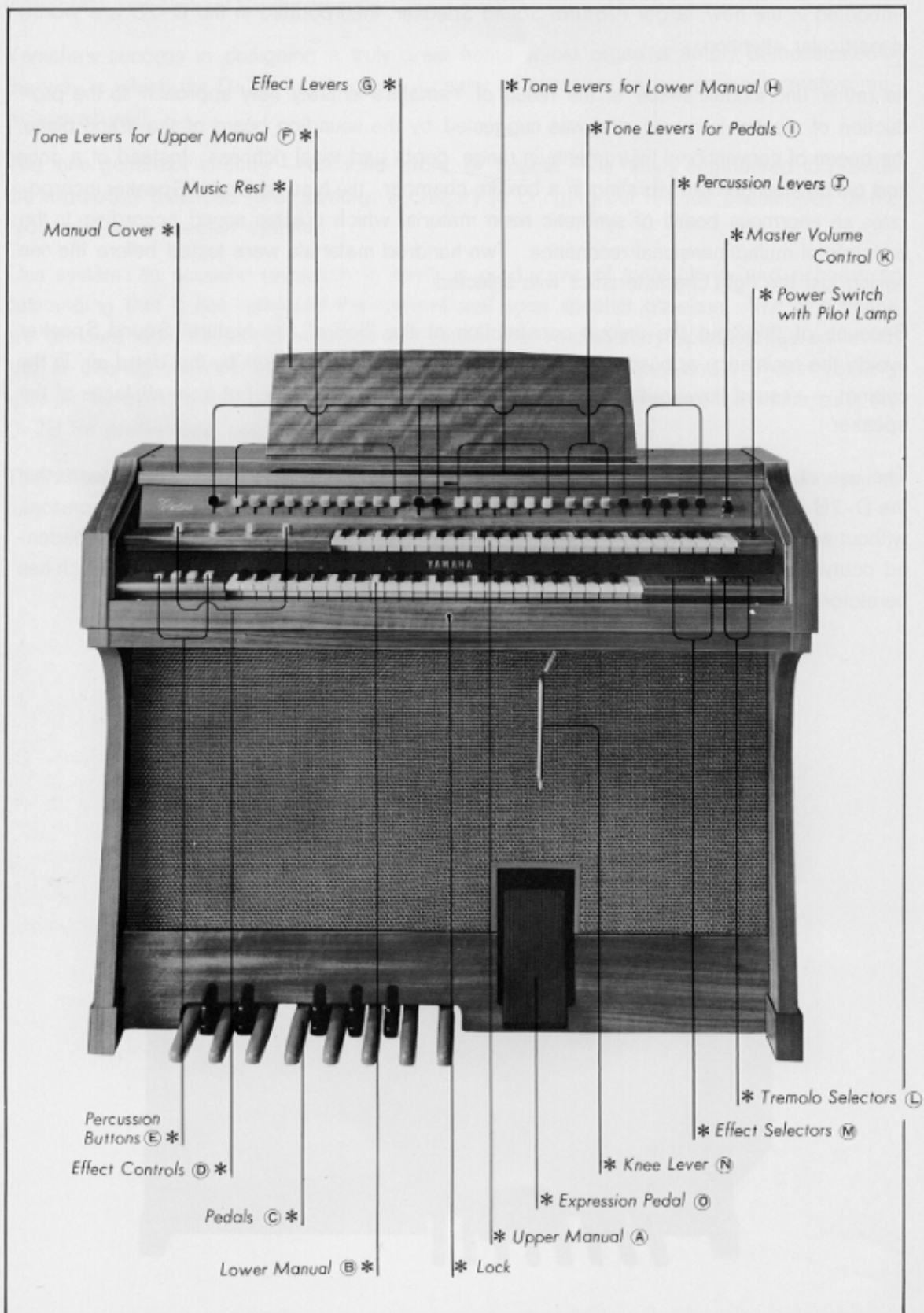
Its rather unorthodox shape is the result of Yamaha's entirely new approach to the production of electronic music, and was suggested by the sounding board of the grand piano, the queen of conventional instruments in range, depth and tonal richness. Instead of a cone and piston arrangement vibrating in a boxlike chamber, the Natural Sound Speaker incorporates an enormous board of synthetic resin material which creates sound according to the principle of multidimensional resonance. Two hundred materials were tested before the one having just the right characteristics was selected.

Because of this, and the unique construction of the 'board', the Natural Sound Speaker avoids the resistance applied to the cone of a conventional Speaker by the 'dead air' in the cabinet — sound flows out fully and freely; not only from the front, but from all faces of the speaker.

The use of the new, enlarged and improved version of this Queen of Speakers means that the D-2B is the first electronic organ in its range to offer *the full 32 cycle bass organ tone* without additional equipment. With such distortion-free tonal quality throughout the broadened octave range, this Natural Sound Speaker allows you the pleasure of music which has heretofore come only from the finest conventional instruments.

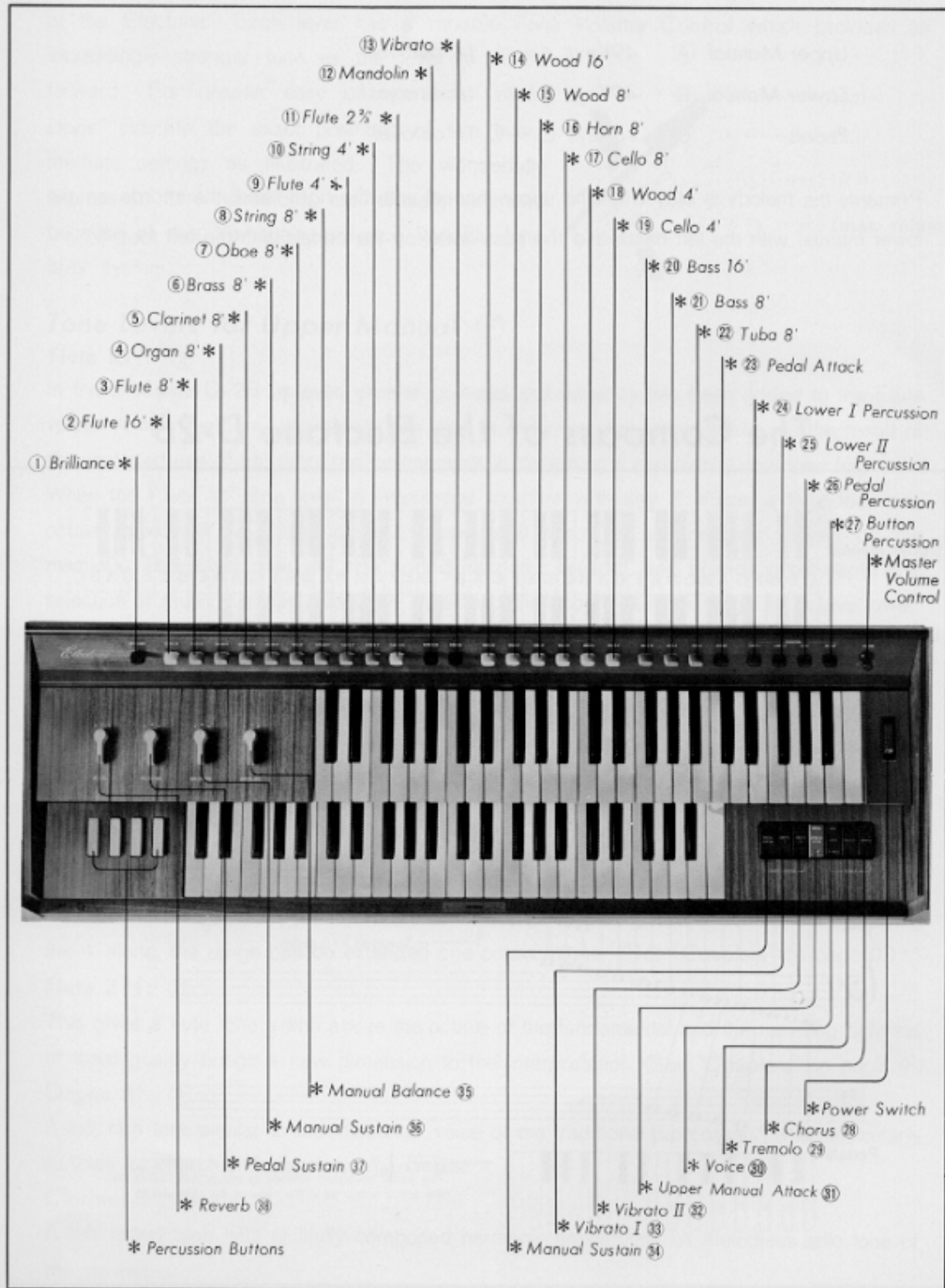


Here is your Yamaha Electone D-2B



Tone Levers

Keyboards



The circled numbers refer to explanatory section in the text to follow.

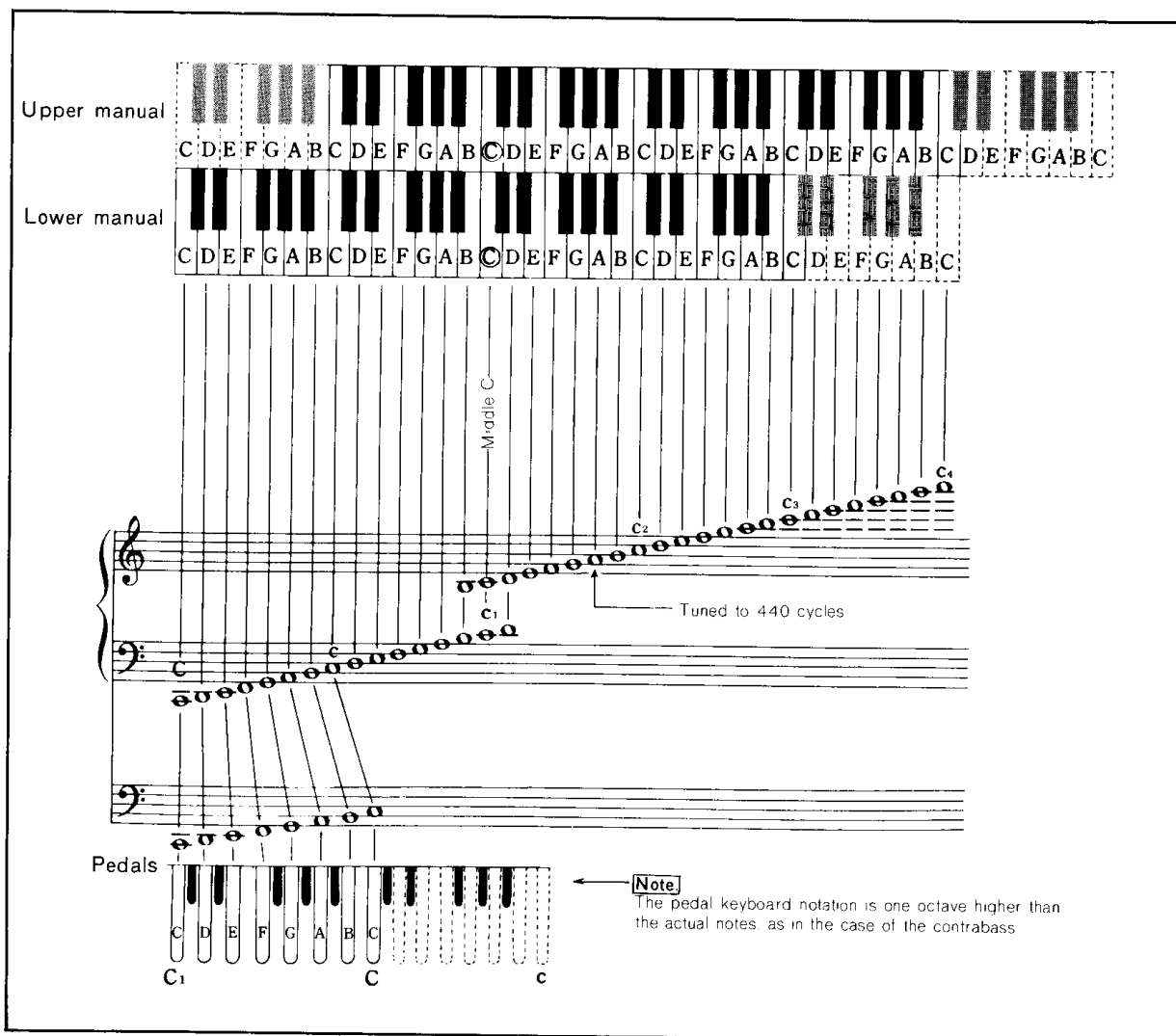
Keyboards

The Electone D-2B has three keyboards. Two of them are *manuals*, and the rest is *pedals*. They are as follows:

- Upper Manual (A) 49Keys c ~ c₄ (4 octaves)
- Lower Manual (B) 49Keys C ~ c₃ (4 octaves)
- Pedals (C) 13Keys C₁ ~ C (1 octave)

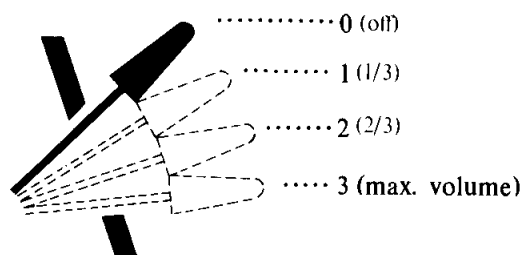
Primarily the melody is played on the upper manual with the right hand, the chords on the lower manual with the left hand, and the bass notes on the pedals with the left foot.

The Compass of the Electone D-2B



Tone Levers

Tone levers of the Electone ②③④ impart the distinctive tonal qualities of each voice of the Electone. When pulled forward, singly or in combination, they determine the tone color of the Electone. Each lever has a variable *Tone Volume Control* which provides an increasingly stronger tone as the lever is pulled forward. For greater ease of operation, "click-stops" indicate the exact positions of two intermediate settings as illustrated. The wonderfully expressive tone variations are virtually unlimited because of this Yamaha's exclusive variable tone lever system.



Tone Levers for Upper Manual ②

Flute 16' : ②

In the Electone D-2B an even greater richness and vibrancy has been added to the Flute voice. A new harmony and beauty can also be achieved with other voices, as the result of the unstinted use of transistorized components in designing a completely new tone filter. When the Flute 16' tone lever is depressed together with any 8' Voice, a flute tone one octave lower will be added to the fundamental 8' tone (i.e., the note as played on the manual). This lower note will give added harmonic breadth, and provide great depth to a selection of music. It may also serve to extend the upper manual's range an octave lower. This broadening of range is one of the ways in which couplers may be used, and applies equally to other couplers. (See "Couplers" on page 9.)

Flute 8' : ③

The flute is originally an open-pipe woodwind with a strong fundamental and a relatively small harmonic component. It thus gives a simple yet darkened feeling to the mood of the music.

Flute 4' : ⑨

The sound of the flute one octave higher than 8' tone. When this tone is added to the fundamental, the sound becomes more vivid, and by lessening the 8' component or playing the 4' alone, the range can be extended one octave higher. (See "Couplers" on page 9.)

Flute 2 2/3 : ⑪

This gives a flute tone a fifth above the octave of the fundamental and the resulting richness of tonal quality brings a new dimension to the interpretation. (See "Couplers" on page 9.)

Organ 8' : ④

A full, rich tone similar to the 'diapason' voice of the traditional pipe organ. It is particularly suitable for church and classical organ music.

Clarinet 8' : ⑤

A full, round tone with skillfully composed harmonic enrichment. A melodious solo tone of the clarinet.

Brass 8' : ⑥

Harmonics multiply and remultiply toward the upper registers to produce a rich, penetrating sound that recalls the brilliant clarity of the brass instruments.

Oboe 8' : ⑦

This lever lessens the fundamental and enriches the harmonics to produce the plaintive, haunting timbre characteristic of the double reed woodwinds. It is excellent in adding harmonic color to quiet passages and, when combined with a string tone, produces an extremely clear but penetrating effect.

String 8' : ⑧

The wealth of harmonic color which can only be achieved by the higher stringed instruments.

String 4' : ⑩

A note with the same timbre as the String 8', and the only difference being produces the brighter tone of a string ensemble. (See "Couplers" on page 9.)

Tone Levers for Lower Manual ⑨**Wood 16' : ⑭**

A tone whose timbre resembles that of the Wood 8'. Since, however, the note sounds one octave below the note actually struck, it adds a greater depth to the sound of the lower manual and also increases its compass one octave lower. (See "Couplers" on page 9.)

Wood 8' : ⑮

This is a characteristic tone of the woodwind instrument. It is rather simple, but with a slightly stronger harmonic component to produce a brighter tone than the Flute 8'.

Wood 4' : ⑰

An octave higher woodwind tone. Particularly suited to bringing out with clarity, melodic passages played on the lower manual. Of course, it may also be used to broaden the range of the lower manual. (See "Couplers" on page 9.)

Horn 8' : ⑰

Overtone multiply to produce the rich, smooth texture of the horns.

Cello 8' : ⑰

Rich harmonics blend to produce the soft, mellow tone characteristic of the cello.

Cello 4' : ⑰

Produces the cello tone an octave above the note as played. (See "Couplers" on page 9.)

Tone Levers for Pedals ①**Bass 16 : ⑳**

With great penetrating power, this lever sounds the lowest reaches of the D-2B's compass. (See "Couplers" on page 9.)

Bass 8' : ⑳

By pitching the note an octave above the Bass 16' this lever allows a clearer penetration of bass sound, and thus permits melody to be played on the pedalboard.

Tuba 8' : ㉑

Features a stronger harmonic component than the bass. Another 8' tone for the pedals.

Couplers

16', 4' and 2½' tone levers are called 'couplers' or 'harmonics' while 8' tone levers are called 'fundamentals'. As the name indicates, the couplers serve to couple two notes together, so that you can play a number of notes by depressing only one key.

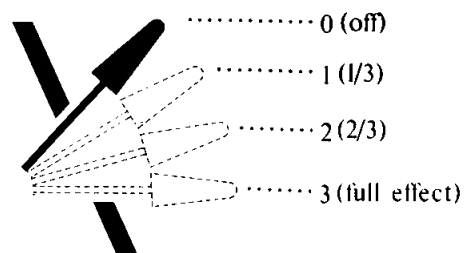
If the *Flute 16'* lever is depressed, you will find a note is sounded one octave lower (i.e., 16' C sounds when 8' C key is struck). Thus the lower harmonic can be added to the fundamental when combined with 8' voice. This is as if two keys an octave apart were struck simultaneously, and gives an added dimension of clarity and power. Similarly, depressing both the *Flute 8'* and *Flute 4'* levers also gives the effect of playing two notes an octave apart, this time an octave above the fundamental.

Tone Lever	Note
8'	<i>Fundamental</i>
16'	<i>One octave below the fundamental (Consonant harmonic)</i>
4'	<i>One octave above the fundamental (Consonant harmonic)</i>
2½'	<i>One octave and a fifth above the fundamental (Dissonant harmonic)</i>

Moreover there is another feature. Yamaha's exclusive *variable tone lever system* enables you to vary the relative strength of the coupled notes, and to obtain an even greater variety of sound. Furthermore, you need not necessarily confine the use of the couplers to flute-flute or wood-wood combinations. It is also possible to use, say, *String 4'*, *Clarinet 8'* and *Flute 16'*, and these combinations can be freely selected from the tone levers used with any one keyboard. There is literally no limit to the number of different combinations that can be achieved. Please study "*Let's Play the Yamaha Electone*" – *Primary Course* – provided with your Electone and *Intermediate Course* – also available, and try to create your own tone color.

Effect Levers

Effect levers ⑥ of the Electone D-2B provide a wide range of tonal effects which add to the breadth and variety of possible interpretations. These levers have the same operation as the tone levers and allow the organist to vary the depth of their effects according to their stop positions as illustrated.



Brilliance : ①

This is the lever used to obtain the difference in mood necessary in the performance of quiet, sombre works or in the production of brighter, richer tonal effects. When this lever is set to off, a softer, more mellow tone is imparted, reminiscent of muted violins. An example of a work suited to this type of tonal treatment would be Sarasate's "*Zigeunerweisen*." This effect can also resemble the distant sound of a flute played *pianissimo*. On the other hand, depressing this lever produces a progressively richer, brighter tonal quality. When applied to 8' voices coupled with 4' and or 2 3/4', the brilliance lever provides the possibility of a light and dazzling treatment both of a single melodic line, and of chords.

Mandolin : ⑫

Use of this lever *chops-up*, so to speak, notes played on the upper manual deriving a double-strummed effect similar in sound to the mandolin.

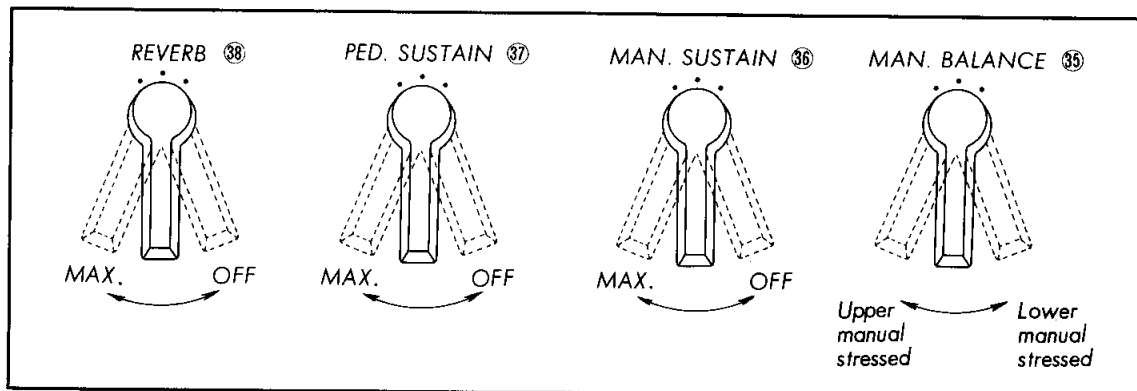
Vibrato : ⑬

Vibrato is a scarcely noticeable waving of the tone. The use of vibrato increases the emotional quality of the tone and add a brisk and lively air in passages of relative simplicity. A more sophisticated *Singing Vibrato* effect is also available on this Electone. Please see "Singing Vibrato" on page 13.

Pedal Attack : ⑳

By accenting the initial portion of each note, this lever provides an effective rhythmical element reminiscent of the string bass played *pizzicato*. This effect is particularly effective in rhythmic works.

Effect Controls



Reverb : 38

Reverberation is the quality that is imparted to musical sound as a result of the acoustical properties of a large auditorium or hall. The use of this effect, therefore, allows you to attain this grandeur at will, evoking the aura of professional performance in your own living room. The knob includes a regulator so that the strength of the reverberatory effect can be varied continuously softer or louder as the music requires.

Pedal Sustain : 37

The pedal sustain control knob provides a sustain effect, the prolonging of notes, applied to the 8' and 16' voices of the pedals. The length of the effect can be controlled as illustrated above. If used together with the Pedal Attack Lever 23, it produces the real base tone played *pizzicato*.

Manual Sustain : 36

In the Electone D-2B, the prolonging of notes on the upper manual, so essential in effective legato performance is effected through use of a three-way control.

Manual Sustain Control Knob 36 is used for maximum setting before or during the performance. The knob is turned fully to the left for no sustain and progressively to the right for longer sustain as illustrated above.

Manual Sustain Tablet 34 is used to select manual sustain effect. (See the next page.)

Knee Lever N is operated with the right knee for passage-by-passage, or even phrase-by-phrase sustain control precision.

In producing the manual sustain effect, set the *Manual Sustain Control Knob* first to the desired effect length, turn on the *Manual Sustain Tablet*, and then open the *Knee Lever* to the right. Sustain can be switched on and off with a slight pressure of the knee.

In passages where sustain is not required, the *Manual Sustain Tablet* can be left at *On* position since no sustain effect will be produced unless there is pressure on the *Knee Lever*. Also pressure on the *Knee Lever* alone is not good enough to produce the sustain effect unless the *Manual Sustain Control Knob* is set to the right and the *Manual Sustain Tablet* turned on.

Manual sustain can be applied to all 8' and 4' voices of the upper manual and is not divided on the last octave. Length of sustain is particularly long and enables you a full selection of extra effects such as piano, harpsichord, harp, celesta etc. to be imitated on this Electone.

Manual Balance : 35

The manual balance knob governs the relative strength of the upper and lower manuals. It is normally left in the center position. But when it is desired to strengthen one manual, for example, when the upper manual plays a melody and the lower its accompaniment, the knob can be turned (in this case to the right) to emphasize the upper manual. Similarly, the balance knob is turned to the left when strongly played accompaniment is required or when the melody is played on the lower manual and requires greater emphasis.

Effect Selectors



Manual Sustain : 34

This tablet is used to produce manual sustain effect in conjunction with the Manual Sustain Control Knob 36 and the Kene Lever N. A full explanation appears above.

Vibrato I : 33 & Vibrato II : 32 (Singing Vibrato)

These two black tablets control "Singing Vibrato" effect, one of the exclusive features of the Yamaha Electone D-2B. It enables you to make the organ "sing". A full explanation will appear on the next page.

Upper Manual Attack : 31

Controlled by the middle tablet in the bank, this effect gives greater definition to the beginning and end of notes played on the 8' and 4' voices of the upper manual, imparting new clarity and vigor to jazz and other lively pieces. Please note that this attack effect cannot be obtained when the manual sustain is on.

Singing Vibrato

In addition to the ordinary vibrato effect which is standard with all Electone models, the D-2B features a three tablet control which produces an entirely unprecedented 'singing vibrato'.

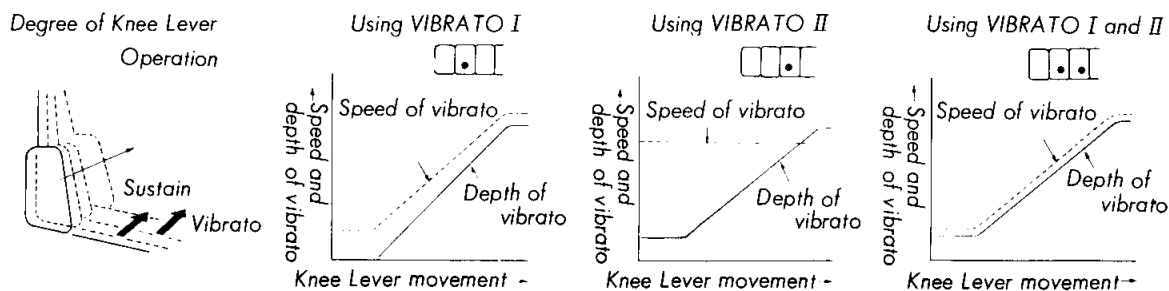
Perhaps everyone who enjoys music has listened in rapture to the depth of tone and feeling produced by the accomplished violinist or cellist through the vibrating motion of the left hand on the strings. Other instrumentalists achieve similar effects on clarinet, trumpet or flute. This singing vibrato — *fast or slow; subtle or strong* — can now be reproduced with unsurpassed fidelity. Melodies take on new life and new meaning, and yet another jewel is added to the crown of the D-2B Natural Sound Electone.

This revolutionary effect comes from innovations which enable you to vary both the depth of the vibrato effect and its speed, in combination.

When the **VIBRATO I** tablet is selected, it cancels the *Vibrato Lever* control (13) on the control panel and no vibrato effect is produced. Then, as the *Knee Lever* (N) is opened to the right, a progressively faster and deeper vibrato is produced.

When the **VIBRATO II** tablet is selected, it also cancels the *Vibrato Lever* control (13), and pressure on the *Knee Lever* increases depth of vibrato only.

When *both tablets* are used together, a slow, shallow vibrato is produced without any pressure on the *Knee Lever*, and as the *knee lever* is applied, it sweeps into a full, rich vibrato as in the case of **VIBRATO I**. A slow, shallow vibrato thus produced is similar to the chorus effect given by the tremolo speaker, and useful for religious or slow tempo music.



Subtle knee pressure on the lever enables you to implement these singing vibrato effects smoothly and naturally mid-way in a piece, and to provide instant, effortless response of the singing vibrato to any variety of musical mood.

Combined with the String voices and Sustain on the upper manual, for example, it imparts a true violin tone, closing the knee lever for staccato notes and opening the lever for sustained notes. This also can be applied to oboe, cello, clarinet and flute sounds. It also enables you, with the movement of the knee, to change from a staccato, non-vibrato organ into a beautiful, sustained, vibrant, melodious one.

Tremolo and Chorus

A rich vibrant production of sound that can only leave you wondering whether its source is really a single instrument! This is the *tremolo* which imparts a vibrancy subtly different from that of the vibrato to all notes played on the Yamaha Electone D-2B. This tremolo is produced by the speaker's unique construction, featuring a smaller version of Yamaha's unique *Natural Sound Speaker*, already well known for its revolutionary tonal realism.

The uniqueness of this construction is such that instead of the rotating acoustic reflector of conventional systems, a small Natural Sound Speaker itself rotates. Rotation at either one (*Chorus*) or seven (*Tremolo*) per second is possible so that use of this effect lends itself equally well to light popular music and to the grandeur and magnificence of religious compositions. The smooth, rich tones which originate from the Yamaha Electone D-2B create a circle sound within your own room. The tremolo and chorus effects are controlled using the three *Tremolo Selectors* (L) located to the right of the *Effect Selectors* (M).



Voice Tablet : 30

The Voice tablet switches the organ sound from the main speaker to the *tremolo speaker* and vice versa. When set to 'Tremolo' together with Tremolo or Chorus tablet, this tablet will produce tremolo and chorus effect respectively.

TREMLO SELECTORS



Tremolo Tablet : 29

When the Tremolo tablet is set to ON, the built-in small *Natural Sound Tremolo Speaker* starts to rotate, and when the Voice Tablet is switched to 'Tremolo', it produces a rich, vibrant tremolo effect. Moving and natural pulsations of sound lend greater depth, fuller meaning to serious passages, and add a touch of genius to pieces which have perhaps lost some of their original freshness. This effect is especially useful for rich, tremulant work.

TREMLO EFFECT



Chorus Tablet : 28

When the Chorus tablet is set to ON, the tremolo speaker also starts rotating at a slower speed than in the case of tremolo, and provides the dignity and solemnity of *choral voices* which is very effective in the performance of sacred music or other works of slow tempo.

CHORUS EFFECT



Percussion

To permit even wider variation of interpretation, the Electone D-2B features a built-in percussion section offering a professional range of versatility. The range of sound's attainable, indeed, frees the organist's imagination to run over a whole range of sounds heretofore inaccessible to the keyboard instrumentalist.

The percussion section enables you to provide a rhythm accompaniment to your performance. The lower manual has two percussion sounds and the pedals have another one fed into each keyboard. In addition, there are *four Percussion Buttons* to control four kinds of percussion sounds such as Conga, Bongo, Claves and Maracas. These effects are selected by the *Percussion Levers* (J) on the control panel.



Lower I (Lower manual)

This lever provides a sharp, quickly-fading percussion beat similar to the sound of *the pinched cymbal or maracas* with notes played on the lower manual.



Lower II (Lower manual)

This lever overlays a longer percussion beat which fades more gradually than that of Lower I, and imparts to the lower manual notes a similar sound to *the brush cymbal*.

Pedal (Pedals)

This lever overlays the pedal notes with a percussive sound like *the pedal cymbal* which adds sharpness and zest to the music you play.

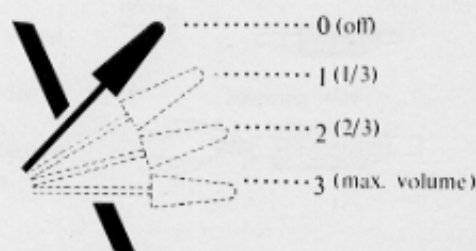
Button (Percussion Buttons)

When this lever is set to ON, you can obtain four different percussion sounds by manipulating the *Percussion Buttons* (E) located to the left of the lower manual. Percussion buttons give, from the left, *Conga*, *Bongo*, *Claves* and *Brush snare* effects. The last one also can be used to simulate sounds from nature, such as the raging wind or the roar of waves dashing on the shoe.

What is most useful is that the volume of percussion effects can be varied independent of the melody according to a click-stop position of each lever, bringing a new dimension in realism to your interpretation.

It can easily be seen that in accenting martial music or in the playing of up-tempo jazz or Latin music, the presence of these percussion effects is essential to the achieving of a natural rendition.

Percussion Lever



Other Controls

Master Volume Control : (K)

This knob determines the maximum volume obtained from the Electone and can be varied as desired.

Expression Pedal : (O)

Expressive shading within each piece, and the accenting of individual notes can be achieved with this pedal, within the overall range set by the Master Volume Control (K). A full explanation will appear on page 24.

Knee Lever : (N)

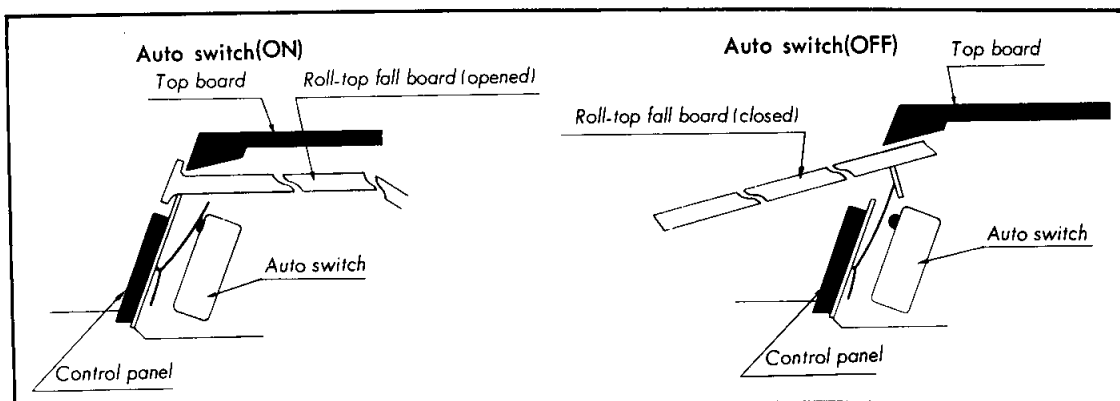
The metal lever folded horizontally under the keybed is the Knee Lever. It should be pulled down for use and should be operated by the right knee. This lever allows passage-by-passage, or even phrase-by-phrase control precision of the following effects:

Manual sustainin conjunction with the Manual Sustain Control and the Manual Sustain Tablet (See 'Manual Sustain' on page 11.)

Singing vibratoin conjunction with the Vibrato I and II Tablets
(See 'Singing Vibrato' on page 13.)

Automatic Power Switch

The automatic power switch is linked to the sliding manual cover. When the manual cover is closed, it automatically switches off the Electone and on again when reopened. There is thus no danger of the organ being left on inadvertently. This is however designed as a safeguard, and power should normally be turned on and off using the main switch.



To enjoy fully your Electone ...

Besides many tone levers and effect controls through which almost infinite varieties of voice and expression can be obtained, the Yamaha Electone D-2B offers you some extra special features to further enhance your pleasure.

Earphone Jack

An earphone is provided, and its use cuts out the main speaker so that you can practice in privacy without disturbing others. This also means that while you can hear yourself practice, others will not hear you until you feel ready. The earphone jack is located under the keyboard.

Tone Cabinet Socket

This socket is available at the lower lefthand corner of the back of the Electone. (See the photo below.) It allows you to connect Yamaha Tone Cabinets without rewiring the amplifier. Yamaha Tone Cabinets T-30 and R-60 equipped with Yamaha Natural Sound Speakers will give increased tonal power and stereophonic effect.

External Jack

This jack is located to the right of the Tone Cabinet Socket. (See the right photo.) It allows you to connect directly a tape recorder, record player or radio, using the amplifier and the Natural Sound Speaker of the Electone. It will produce a natural sound and give you an opportunity to broaden your musical experience.

Also, being completely separate from the Expression pedal, you can play a tape recording or a record of an orchestra and "sit in" on the organ with this orchestra.

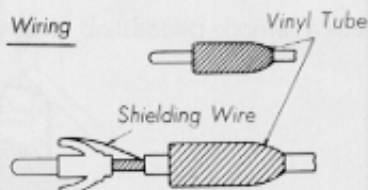
Alternatively, you can record yourself playing a piano or organ, replay the tape, and be your own duet partner.

In addition, the *Mini-Pops*, a rhythm cabinet distributed by Yamaha may be connected here for even more advanced percussion effects.

Note: 1 CONNECTION

- 1 Connect the Ext. Jack and the output jack of a tape recorder or any other source with a shielding wire. Use a spare plug inserted in the Ext. Jack.
- 2 Volume setting for replaying tends to differ with the make or model of tape recorder you use.
- 3 Adjust the volume of the Electone and the tape recorder in order to avoid distortion of the sound quality.
- 4 Make absolutely sure never to touch or otherwise interfere with the circuits or the internal elements of the Electone.

Back View of the Electone

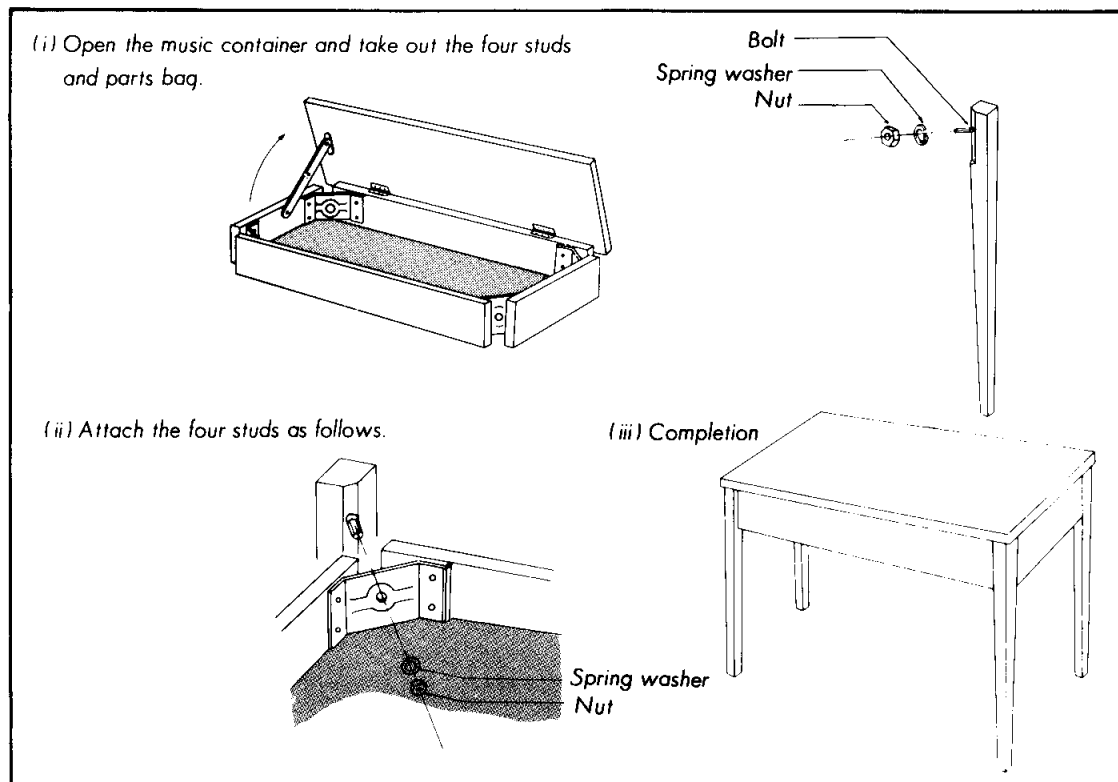


Care of your Electone

In general you should treat your Electone D-2B with the same care you would give any fine musical instrument. However, the following points are suggested to assure optimum enjoyment.

1. Be sure to use your Electone only on the correct voltage. If it is necessary to change the voltage of the Electone, please consult your Yamaha Electone service agent.
2. If any trouble develops, contact your Yamaha Electone service agent. In any case, make absolutely sure never to touch or otherwise interfere with the circuits or the internal elements of the Electone.
3. When you have finished playing, be sure to turn off the power switch.
4. In order to clean the plastic keys, tabs, etc., use a damp cloth. Never apply organic solvents such as alcohol as it may result in damage to the plastic materials used.
5. Do not expose the Electone cabinet to the direct rays of the sun, as this may result in bleaching of the finish or separation along the joints of the wood.
6. It is also advisable to place the Electone in such a way that it is not exposed to excessive humidity or currents of heated air.
7. In opening and closing the manual cover, grasp the handle with both hands and slide the cover gently in its groove. Never attempt to raise the manual cover directly upwards, and do not place heavy objects on it.

HOW TO SET UP THE BENCH



Do not be alarmed If...

1. **A note should sound the instant you turn on the switch.**

This merely indicates normal operation consequent to a flow of electricity in the main amplifier.

2. **Flute 2 $\frac{2}{3}$ ' voice is not obtainable from keys above F in the highest octave.**

This means that the highest note which the Electone D-2B can produce is c5.

3. **Only one note is produced even when two pedals are depressed simultaneously.**

When the pedal sustain effect is used, notes overlap following notes. In order to achieve tonal clarity, the Electone is designed so that a note is electronically suppressed the instant the next note is struck. If two pedals are struck simultaneously, only the higher one sounds.

4. **Neighboring objects resonate.**

Since the Electone produces a continuous stream of sound, windows, china or other such objects may be found to resonate. To prevent this, reduce the volume of the Electone or take steps to remove resonance.

5. **Occasional unpleasant static.**

In the majority of such cases, the cause can be traced to the turning on or off of refrigerators, washing machines, electric pumps or other household appliances. Electrical fault in a neighboring outdoor neon sign may also be to blame.

When the cause is a home appliance, connect the Electone to an outlet as far as possible away from the offending appliance. This phenomenon, although perhaps annoying, poses no danger to the Electone's circuitry.

If the cause is a fault in neon or fluorescent lighting fixtures, the fault should be repaired. When the cause is unknown, or in case of doubt, contact your Yamaha dealer.

6. **The pedals seem pitched high, or the treble of the upper manual low.**

This is particularly noticeable in comparison with the piano, and results from the difference in the harmonic composition of the tones. The piano has a greater wealth of harmonic overtones, particularly in the upper and lower reaches of the compass. Thus tuning cannot be done on the basis of the fundamental alone but must take into account the many harmonics. On the other hand, the Electone has a set number of harmonics and therefore cannot be tuned like the piano. It must be tuned on the basis of the fundamental alone.

In this sense, the piano and the Electone are fundamentally different. This is common in all organs.

7. **The Electone reproduces radio or TV sound signals.**

This kind of phenomenon can occur when there is a powerful radio or TV transmitter, or an amateur radio operator located in the vicinity. If this situation is distracting, contact your Yamaha dealer.

Specifications

Keyboards

Upper Manual 49 Keys c—c4
Lower Manual 49 Keys C—c3
Pedals 13 Keys C1—C

Tone Levers

Upper Manual Flute 16'
Flute 8'
Organ 8'
Clarinet 8'
Brass 8'
Oboe 8'
String 8'
Flute 4'
String 4'
Flute 2 $\frac{3}{4}$ '
Lower Manual Wood 16'
Wood 8'
Horn 8'
Cello 8'
Wood 4'
Cello 4'
Pedals Bass 16'
Bass 8'
Tuba 8'

Effect Levers

Brilliance
Vibrato
Mandolin (*Upper Manual*)
Pedal Attack

Effect Controls

Reverb
Manual Balance (*Upper/Lower*)
Manual Sustain (*on 8' & 4's*)
Pedal Sustain

Effect Selectors

Manual Sustain
Vibrato I
Vibrato II
Upper Manual Attack

Tremolo Section

Voice (*Main / Tremolo*)
Tremolo
Chorus

Percussion Section

Lower I
Lower II
Pedal
Button
Percussion Buttons 4

Other Controls

Master Volume
Expression Pedal
Knee Lever (*to control Manual Sustain & Singing Vibrato*)
Power Switch
(*manual & automatic*)

Other Fittings

Earphone Jack
External Input Jack
Tone Cabinet Socket
Sliding Manual Cover
Lock
Pilot Lamp
Music Rest

Speakers

Yamaha Natural Sound x 2
JA-6001 & JA-1701 (*Tremolo*)

Electrical Ratings

All transistorized
Circuit Boards Transistors : 453
Diodes : 71
Main Amplifier SEPP
Transistors : 7
Diodes : 4
Output Power 30 Watts
Power Consumption 130 Watts
100/110/117/125/220/
240/V AC 50/60 Hz.

Dimensions

Width 116 cm (45 $\frac{1}{2}$ in.)
Depth 70 cm (27 $\frac{1}{2}$ in.)
Height 94 cm (37 $\frac{1}{8}$ in.)
Weight 110 Kg (242 lbs)

Finish

Queensland Walnut