**SPECIFICATIONS**

- **Vibrato Rate**: 0.7 – 8 Hz
- **Power Consumption**: 9W
- **Dimensions**: 300 (W) x 250 (D) x 93 (H) mm
- **Weight**: 3.1 kg

**Parts List**

- **Pot EVHRRA360A15 (13219101)**
- **Knob N-112 (2247011200)**
- **Panel N-325 (2245229500) N-359 (2245229510)**
- **Connector (w/Lock shell) SLC-1204-2324F (13429405)**
- **Lock shell SLC-1204-24L2 (12139302)**
- **Power switch ESB-70294 (13129110) common to all voltages Button N-510 (2247051000)**
- **Jack HJ-1307-01-030 (13449216)**
- **Rubber foot N-331 (2236333100)**
- **Chassis (bottom) N-265 (22813265)**
- **Handle (RL same) N-204 (2231020000) Washer N-701 (2213370101)**
- **Pot EVHRRA360B54 (13219104)**
- **LED TLR-105 (15029109)**
- **Holder (fuse) N-267 (2215267000)**
- **Power transformer PT-N-236NA (22453236N1) 100V PT-N-237CA (22453237CA) 117V PT-N-238DA (22453238D1) 220V/240V**
- **Heat sink N-424 (22463424)**
- **VOICING Board OP9223-030 VOICE (79223030V)**
- **Flat cable N-970 (2343390000)**
- **PCB Post LCBS-6N (22199502)**
- **CONTROL Board OP9223-030 CONTROL (79223030C)**
- **Foot switch w/matt N-803 (2312800300)**
ADJUSTMENTS VOICE BOARD

Panel illustration-common to para. 1 and 2

1. RESONANCE
1-1. Turn VR2 FOW (viewed from component side), VCPs will oscillate. Reverse VR2 until VCPs cease oscillation, further rotate CCW 5 degrees.

2-1. Connect scope to TP-8 of VOICE board with timebase set to 1ms/div and vertical to 50mV/div.
2-2. Pluck 1st string on 7th fret.
Set VR1 of CH-1/2 for maximum amplitude on the screen - 100-150mV p-p.

2-3. Pluck 2nd string on 7th fret. The waveform should be approx. 140mV p-p. Since the same control voltage determined by that VR1 is also applied to the rest half of IC3 for CH-2, not all gain difference between two VCPs is a resultant of VR1 misadjustment.


CAUTION

<table>
<thead>
<tr>
<th>CH</th>
<th>FBR100 (msec)</th>
<th>FREQ (Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>494</td>
</tr>
<tr>
<td>2</td>
<td>2.8</td>
<td>370</td>
</tr>
<tr>
<td>3</td>
<td>3.5</td>
<td>294</td>
</tr>
<tr>
<td>4</td>
<td>4.6</td>
<td>220</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>164</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>123</td>
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</tbody>
</table>

GR 100

VOICE BOARD

2SVDC x 2 Ø 150mA

RECORDING RATING

POWER SUPPLY
OP9223-030 VOICE (P/N 7922303001V)

OP9223-030 CONTROL (P/N 7922303001C)
ADJUSTMENTS CONTROL BOARD

1. BBD BIAS

Controls setting: unconditional

Input: no signal

1-1. Connect scope to TP-8 (pin 7 or 8 of ICB) of CONTROL BOARD.

1-2. Set scope vertical to 50mV/div, AC coupling and adjust timebase to display waveforms as shown in figure B.

1-3. Adjust VR6 to align DC levels of BBD outputs: narrow and center the brighter portion (thicker in Fig. B) of traces. This is successfully done, if microsec range is provided for timebase, by displaying two cycles and adjusting VR6 to overlap two traces. See Fig. C.

Prepare an amplifier for monitoring.

2-1. Turn VR5 CCW when facing the foil side.

2-2. Stroke 6 strings forte, advance VR5 until the tone colors change, then reverse VR5 as little enough as tones are restored. MODULATION CONTROL should now be set at a critical point.