SECTION 6 CALIBRATIONS

6.1 Synthesizer Board Trim Procedure

REF.	TRIMMER	TRIM PROCEDURE
R22	VCF CVR	1. Monitor pin 10 of filter module M1 with an oscilloscope. 2. Put the VCF FREQ slider and VCF RESONANCE slider fully DOWN. 3. Put the VCF "ADSR" slider fully UP. 4. Set the ADSR sliders as follows: ATTACK DOWN, DECAY 3/4 UP, SUSTAIN DOWN, RELEASE DOWN. 5. Adjust R22 for minimum amplitude when keys are depressed.
R16	VCF CAL	1. Monitor pin 10 of filter module M1 with an oscilloscope. 2. Clip a 33K ohm resistor from pin 10 of M1 to pin 2. 3. Put the VCF FREQ slider fully DOWN and the VCF RESONANCE slider fully UP; put all other sliders DOWN. 4. Adjust R16 for a 16Hz sinewave.

6.2 Synthesizer Control Board Trim Procedure

R14	SYNTH VCA CVR	1. Monitor the high level output of the Omni with an oscilloscope. 2. Set all VOICE SELECTION switches OFF (out). 3. Put the MIX slider fully LEFT (synthesizer). 4. Put the MASTER VOLUME fully RIGHT (maximum). 5. Set ADSR sliders as follows: ATTACK DOWN, DECAY 3/4 UP, SUSTAIN DOWN, RELEASE DOWN. 6. Put all other sliders at minimum. 7. Adjust R14 for minimum deflection of the oscilloscope trace while repeatedly depressing keys.
R33	STRING VCA CVR	1. Perform the synth. VCA CVR trim procedure. 2. Move the MIX slider to fully RIGHT (string). 3. Depress (turn on) the STRING BASS voice selection switch (only). 4. Adjust R33 for minimum deflection of the oscilloscope trace while repeatedly depressing keys in the highest octave.

6.3 Phaser Board Trim Procedure

R116	HFO CAL 1	1. Monitor TP7 (Z102) with a frequency counter. 2. Attach a 100K ohm resistor from +15V supply to TP6. 3. Adjust R116 for an 11 microsecond period square wave (+0.1 microseconds).
R216	HFO CAL 2	1. Monitor TP9 with a frequency counter. 2. Attach a 100K ohm resistor from the +15V supply to TP8. 3. Adjust R216 for a 20.4 microsecond period squarewave (+0.1 microseconds).
R316	HFO CAL 3	1. Monitor TP11 with a frequency counter. 2. Attach a 100K ohm resistor from the +15V supply to TP10. 3. Adjust R316 for a 11.3 microsecond period squarewave (+0.1 microseconds).

6.4 Power supply Trim Procedure

R19	+15 VOLT SET	1. Monitor the power supply's +15 volt output with a digital voltmeter. 2. Adjust R19 for exactly +15.00 volts.
R20	-15 VOLT SET	1. Set R5 (+15 volts) first. 2. Put the digital voltmeter's ground lead on the power supply's -15 volt output and put the meter's plus lead on the power supply's ground output. 3. Adjust R20 for exactly +15.00 volts (reversed polarity).