MODULE BOARD

TP1, TP2, TP22, TP21, TP20, Analog Ground, Analog Ground, TP3

TP14, TP8 (CH1), TP9 (CH2), TP10 TP11 (CH3)(CH4), TP13 (CH6), TP12 (CH5), TP19 (CH1), TP18 (CH2), TP17 (CH3), TP16 (CH4), TP15 (CH5), TP14 (CH6), TP15 TP16 TP17 TP18 TP19, TP7, TP4, Digital Ground, TP6 TP5

→ Not provided on early PCBs: Connect to the hot terminal of trimmers defined as TP14—TP19.

KEY DESIGNATION

C2   C4 D4 A4   E5   C7

442Hz

5. VCF RESONANCE (MODULE BOARD)

CAUTION

This adjustment must be done after 10 minutes has passed and after 3. VCA BIAS has been finished.

Test instrument:	Oscilloscope
Test point:	TP19 (CH1) to TP14 (CH6)
Key assignment:	POLY 1 (UNISON during test mode).
BANK:	3

5-1. While holding down C4 key, adjust the trimmers listed below, respectively, for ~~4.8Vp-p~~ sine wave. **2.4Vp-p**

VR NO.	26	21	16	11	6	1
CH NO.	1	2	3	4	5	6

6. VCA GAIN (MODULE BOARD)

CAUTION

This adjustment must follow 5. VCF RESONANCE.

Test instrument:	Oscilloscope
Test point:	TP8 (CH1) to TP13 (CH6)
Key assignment:	POLY 1 (UNISON during test mode)
BANK:	3

6-1. While holding down C4 key, adjust the following trimmers, respectively, for ~~6Vp-p~~ sinewave. **3Vp-p**

VR NO.	27	22	17	12	7	2
CH NO.	1	2	3	4	5	6

7. VCF FREQUENCY (MODULE BOARD)

CAUTION

This adjustment must be performed after 10-minute warmup has passed.

Test instrument:	Frequency counter or Tuner
Test point:	TP8 (CH1) to TP13 (CH6), or OUTPUT
Key assignment:	POLY 1 (UNISON during test mode) or POLY 1 + POLY 2 (ROTARY during test mode) -- when checking at OUTPUT
BANK:	3

7-1. While holding C4 key, adjust the trimmers listed below, respectively, for 248Hz (B3 pitch).

VR NO.	29	24	19	14	9	4
CH NO.	1	2	3	4	5	6

8. VCF WIDTH (MODULE BOARD)

CAUTION

Perform this adjustment after at least 10-minute warm-up.

Test instrument:	Frequency counter or Tuner
Test point:	TP8 (CH1) to TP13 (CH6), or OUTPUT (tuner method)
Key assignment:	POLY 1 or POLY 1 + POLY 2 (OUTPUT)
BANK:	3

8-1. Holding C6 key down, adjust each trimmer listed below respectively for 992Hz (equal to B5 note).

VR NO.	28	23	18	13	8	3
CH NO.	1	2	3	4	5	6

NOTE: Procedures 7 and 8 interact. Repeat the steps in both paragraphs until satisfactory result is obtained (within ± 10 cents on the tuner).
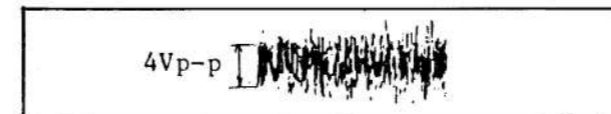
9. NOISE LEVEL (MODULE BOARD)

CAUTION

6. VCA GAIN must have been finished before this adjustment is performed.

Test instrument:	Oscilloscope
Test point:	TP8
Key assignment:	POLY 1
BANK:	6

9-1. Holding any key on the keyboard down, adjust VR32 for 4Vp-p on the scope.
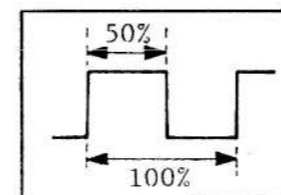

4Vp-p

10. PWM (MODULE BOARD)

CAUTION

2. DCO CV OFFSET must have been finished.

50%

Test instrument:	Oscilloscope
Test point:	TP8 (CH1) to TP13 (CH6)
Key assignment:	POLY 1
BANK:	5

10-1. While holding C4 key down, adjust VR31 for a 50% duty cycle.
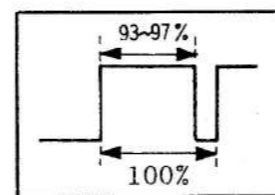

Tolerance: 48—52%

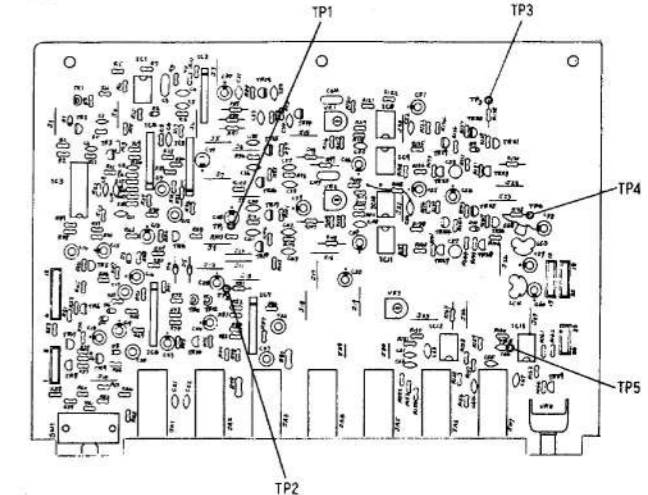10-2. Confirm that the duty cycles of the rest channels (TP9 — TP13) are within 48 — 52%.

95%

10-3. Holding C4 key down, confirm that duty cycle of all channels are within 93 — 97% with PWM set at 10.

NOTE: If, incidentally, the PWM knob has been set at 10, lower it then raise to 10 again.
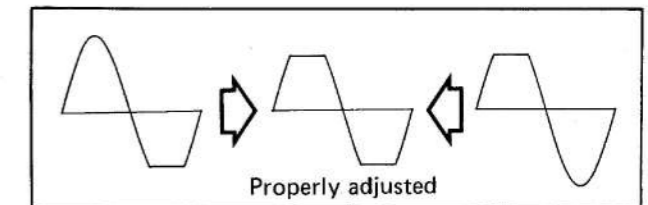

JACK BOARD

TP1, TP3, TP4, TP5, TP2

11. CHORUS BIAS (JACK BOARD)

Test instrument:	Oscilloscope, Audio generator
Test point:	TP1 (CH1), TP2 (CH2)
VCA LEVEL:	0
CHORUS:	I

11-1. Feed 10Vp-p, 1kHz, sine wave into TP2 of the MODULE BOARD.

11-2. Adjust VR1 (CH1) and VR2 (CH2) on the JACK Board respectively so that positive and negative halve are symmetrical with respect to the center horizontal line.

Properly adjusted

12. LOAD OFFSET (JACK BOARD)

Test instrument:	Voltmeter with 1mV resolution
Test point:	TP5

12-1. Adjust VR3 for 0mV reading.

13. MIDI FUNCTION SWITCH CHECK

13-1. Verify the following with FUNCTION set at respective position.

    I: only VERIFY LED lights
    II: only SAVE LED lights
    III: no LEDs light