(5) MG adjustment.

Leaving other controls at the normal setting, set MG FREQUENCY to 10, LEVEL to 10, and MOD SW to VCA.

1) Observe connector CN03-5 on oscilloscope.

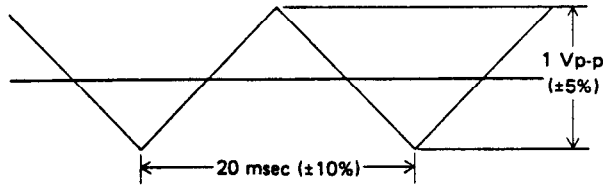

Fig. 2.

2) Adjust VR2 to obtain 1Vp-p(±5%) level; adjust VR5 to obtain frequency of 50Hz (20msec ±10%). If these values cannot be obtained after replacing IC LM13600, adjust R78 and R52 respectively.
3) Leave the other controls at the same settings as above, but change MG FREQUENCY to 0. Confirm a cycle of 10 ~ 40 sec.
   Leave other controls at same settings but change MG FREQUENCY to 4, and DELAY to 10. Confirm that the waveform appears 8 ~ 12 seconds after a key is depressed.

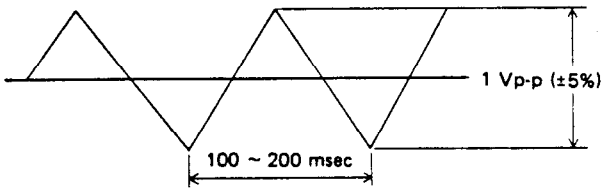

Fig. 3. (LEVEL 1Vp-p; frequency about 10Hz.)

(6) PW/PWM check and adjustment.

Set waveform to PW and PWM SPEED to 0, and PW/PWM to 10.

1) Connect oscilloscope and DVM to CN05-11.
2) Adjust VR3 to obtain +2.2V (±1%).
3) Change WAVEFORM to PWM and PWM SPEED to 10. Adjust VR4 to obtain a frequency of 20Hz.
   Use resistor inseries with VR4 if adjustment cannot be obtained in the same way as for the MG.

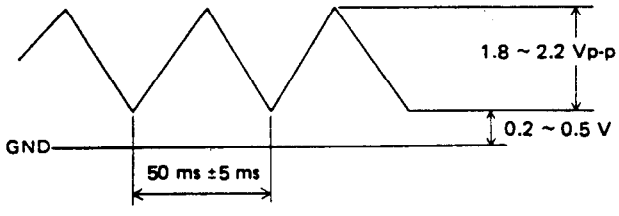

Fig. 4.

4) At this time confirm that there is a DC component of +0.2 ~ +0.5V.

4. KLM-366 check and adjustment. Obtain ground at TP5.

(1) VCF offset adjustment.

Leaving other controls at standard settings, set WAVEFORM to PW and PW/PWM to 10.

1) Use oscilloscope or DVM to check Q5 (2SC945) collector.
2) Adjust VR7 to obtain 0mV ±2mV.
3) Repeat steps 1 & 2 for units No. 0 ~ No. 5.

(2) VCA level adjustment.

Set OCTAVE to 4; leave others at normal setting.

1) Connect oscilloscope to SIG OUT (TP-1).
2) Play C3 and adjust VR9 to obtain a sawtooth waveform amplitude of 1Vp-p (±5%).
3) Repeat for units No. 0 ~ No. 5.

(3) VCF RESONANCE adjustment.

Set OCTAVE to 8, WAVEFORM to PW, and PW/PWM to 10. Check CN05-7 with DVM and adjust to obtain 0.000V ±20mV.

Check CN05-11 with DVM and adjust RESONANCE VR to obtain 8.000V ±20mV.

Leave other controls at normal setting.

1) Check SIG OUT (TP1) with oscilloscope and frequency counter.
2) Play any single key and adjust VR6 so that the VCF waveform amplitude is 300mVp-p ±20mV.
3) Repeat for units No. 0 ~ No. 5.

(4) VCF *fo* adjustment.

Set RESONANCE to 10; leave others at same setting as above (3).

1) Check oscillation frequency with frequency counter and tuner (WT-12, properly calibrated, chromatic dial set to C).
2) Adjust VR8 to obtain *fo*=523Hz (±10 cent).
3) Repeat for units No. 0 ~ No. 5.
4) Turn CUTOFF from 0 to 10 and check to see that each unit's oscillation frequency is 10 ~ 25Hz at 0 and 19 ~ 24kHz at 10; amplitude should be at least 300mVp-p throughout.

(5) EG INTENSITY adjustment.

Set WAVEFORM to PW, PW/PWM to 10, CUTOFF to 0, RESONANCE to 10, EG INT to +5. Leave others at normal setting.

1) Check SIG OUT (TP-1) with oscilloscope and frequency counter.
2) Play any single key and adjust VR4 to obtain an oscillation frequency of 5kHz (±500Hz) for units No. 0 ~ No. 5.
3) Set EG INT to +3 and check to see that there is no wide variation in pitch between units No. 0 ~ No. 5.
4) Set octave to 4', RESONANCE to 0, EG INT to +5, SUSTAIN to 0, DECAY to 5. Leave others at same setting as 3) above.
   Check to see that there is no click noise for units No. 0 ~ No. 5.

(6) KBD TRACK adjustment.

Set OCTAVE to 16', connect DVM to CN05-6, and adjust KBD TRACK VR to obtain +1.6V.