

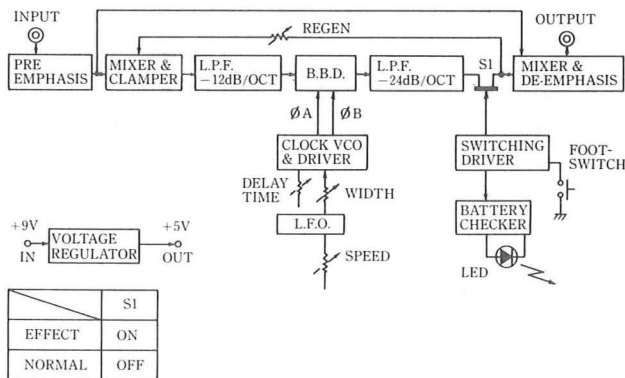
# Ibanez FL9

## Flanger

### Service Manual NO. 002



#### ★ BLOCK DIAGRAMS



#### ★ ADJUSTMENT PROCEDURES

##### CLOCK

1. Set SPEED, REGEN, WIDTH & DELAY TIME controls fully CCW.
2. Connect the SYNCHROSCOPE & the FREQUENCY COUNTER at marked CP1
3. Adjust VR101 for a frequency of 40KHz.
4. Set DELAY TIME control fully CW and check frequency for about 500KHz ~ 600KHz.
5. Set WIDTH control fully CW and check clock frequency to be sweep from 40KHz to about 500KHz~600KHz.

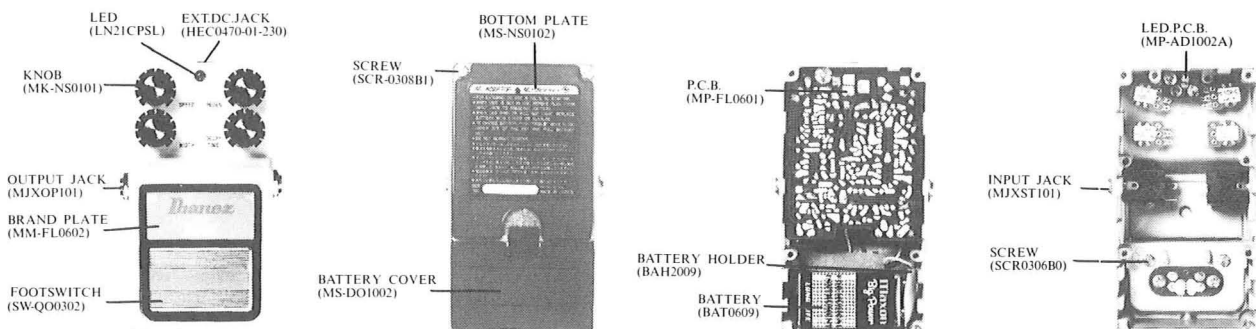
##### BIAS

1. Set REGEN & WIDTH controls fully CCW.
2. Put +5dBm ~ +10dBm (2.5V) 400Hz sinewave into INPUT.
3. Touch the probe of the SYNCHROSCOPE on the head of C115 and adjust VR102 for the clipped wave to be symmetrical.

##### REGEN

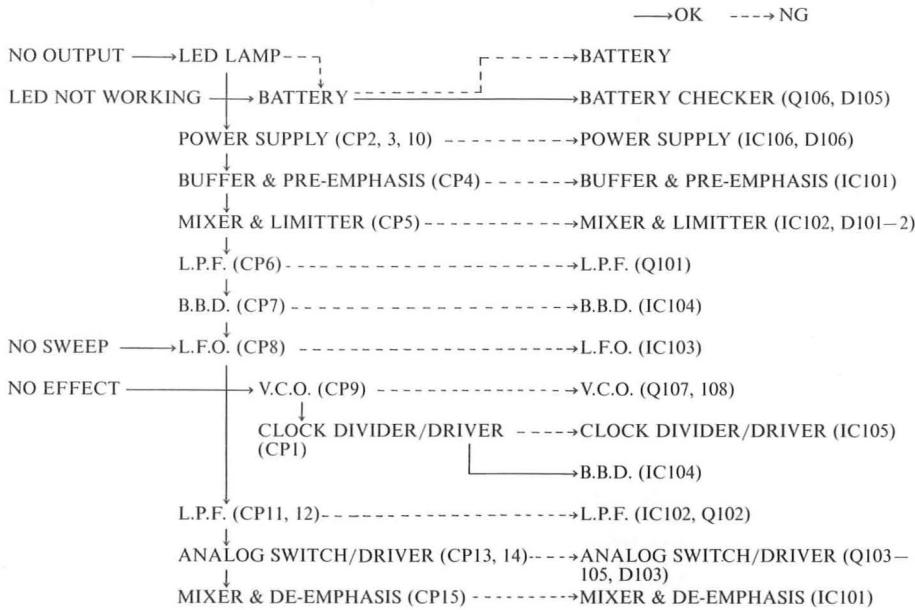
1. Set SPEED, REGEN & WIDTH controls fully CW.
2. Connect the SYNCHROSCOPE to OUTPUT with no input signal.
3. Adjust VR103 for a oscillating position and remove VR103 slowly about 10 degrees not to be oscillate.

#### ★ DISPOSITION OF PARTS





★ TROUBLE SHOOTING



REMARK: SIGNAL OF CP IS THE WAVE INPUTTING A SINE WAVE SIGNAL TO INPUT.

V—VOLTAGE  
S—SIGNAL

CP1	CP2	CP3	CP4	CP5	CP6	CP7	CP8	CP9	CP10	CP11	CP12,13	CP14	CP15
S	V	V	S	S	S	S	S	S	V	S	S	EFFECT	NORMAL
	4.5	5							9			8	0.5

✓ ✓ ✓ 2 X 2 2 13 ✓

D103 good  
Q104 + 105 good

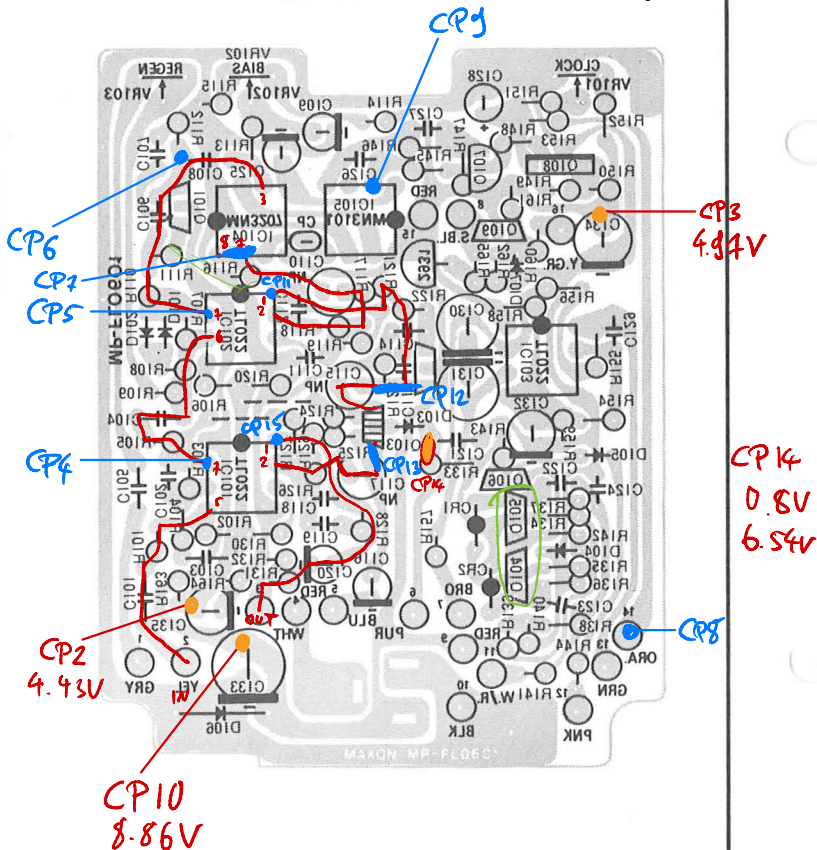
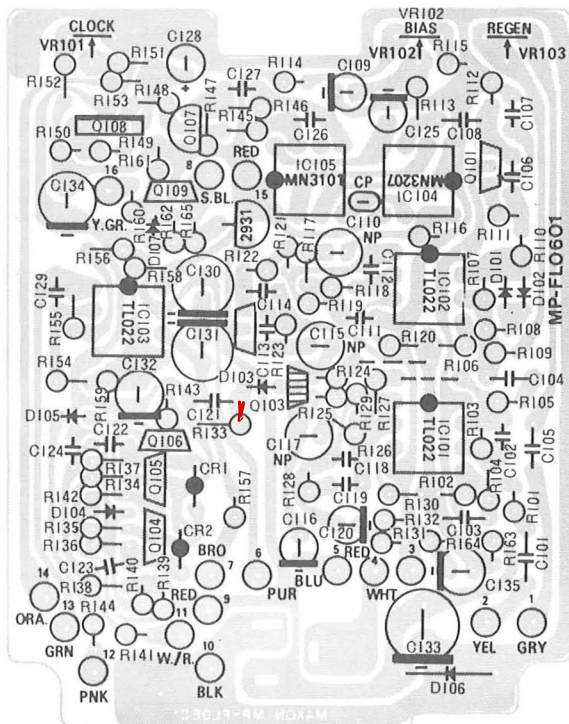
All cable connections good

All electrolytic caps good  
MN3207 + 3102 good  
JFET switching good  
IC103 good  
D105 good

★ P.C.B.

(TOP VIEW)

(BOTTOM VIEW)



★ SCHEMATIC DIAGRAMS

