



Combo Products
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Service News

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CS-80

PREVENTION OF FLUCTUATING PITCH OF LOW TONES

In the CS-80 Polyphonic Synthesizer, the pitch of a low-frequency sound may fluctuate when keys of low- and high-pitched sounds are depressed simultaneously. If this happens, take the actions described below.

CAUSE:

The cause is the clock pulse interfering with the voltage which determines the frequency of VCO. This results in a fluctuating pitch of a low-pitched sound or sounds. (The interference is related with wiring and very complicated.)

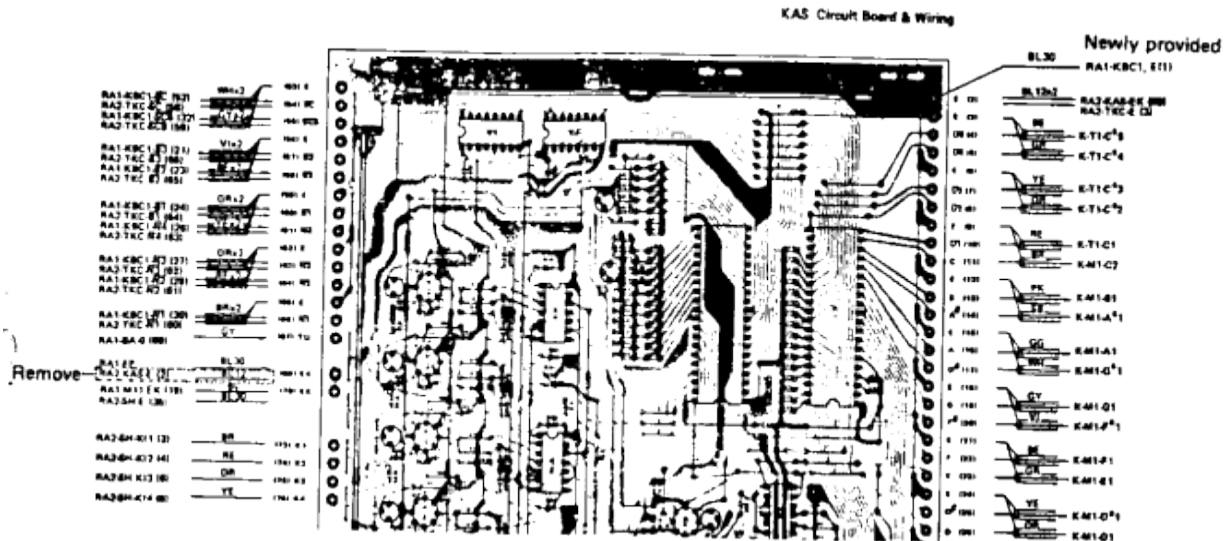
COUNTERMEASURES:

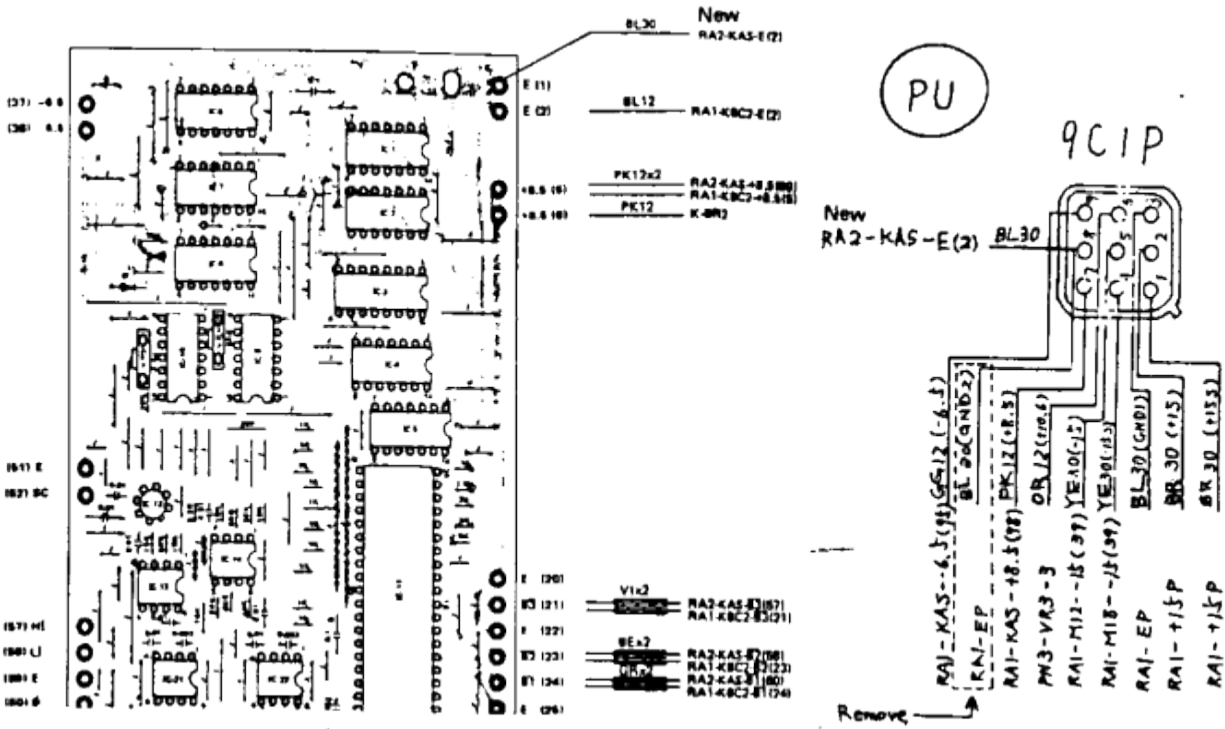
1. Separate the analog earth line from the digital one.
 2. Minimize the distance of KEY VOLTAGE line between the SAMPLE HOLD and M Circuit Boards.
 3. Change the earth line on the KAS Circuit Board.
 4. Add a tantalum capacitor (1/25) to the KAS Circuit Board.
- * These measures are to be taken for finished products.

HOW TO TAKE THE ABOVE MEASURES:

STEP 1

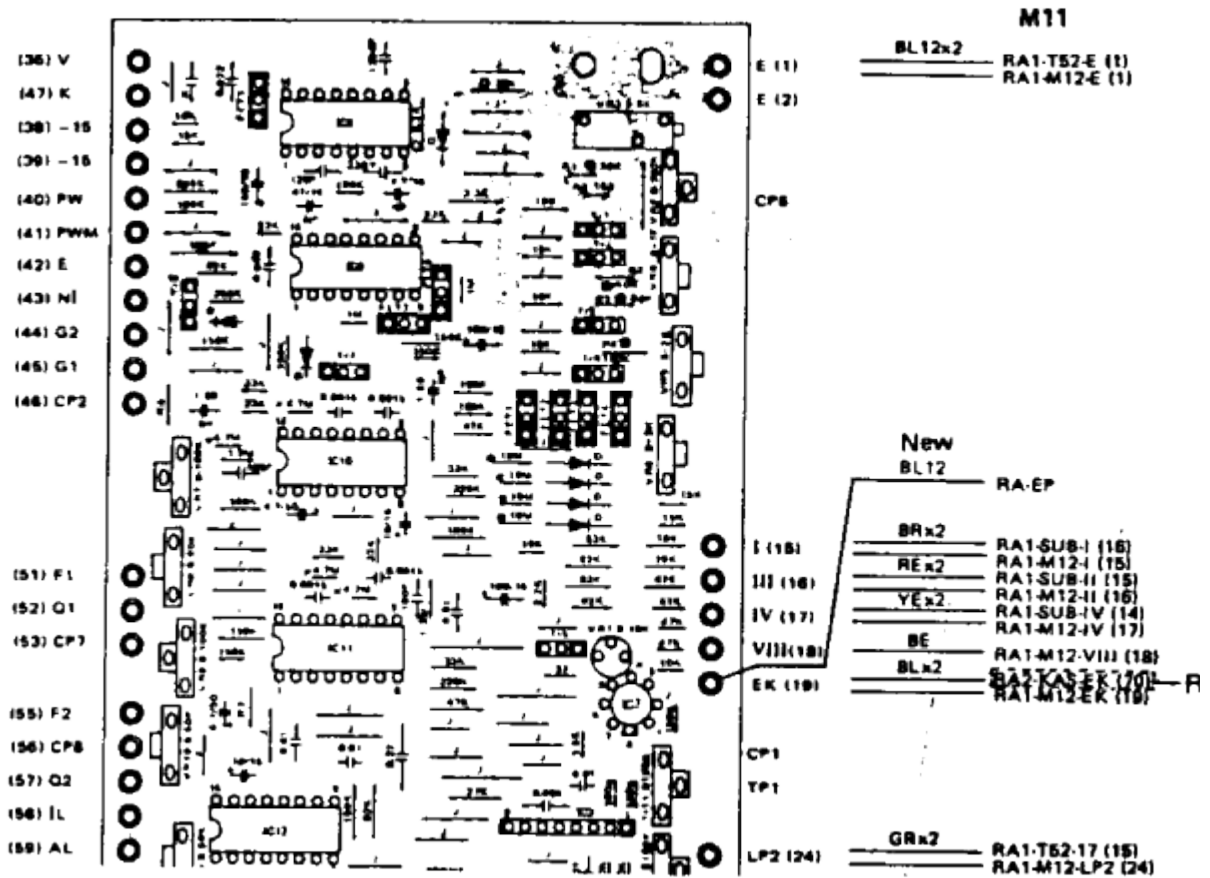
1. Remove "BL12" from terminal EK (69) on the KAS Circuit Board.
2. Remove "BL30" from 9C1P PIN 8 of the power supply and cut it off at the bottom. Prepare new "BL30" (of about 130 cm). Solder it to PIN 8 and connect E(2) of the KAS Circuit Board.
3. Connect E (2) of the KAS Circuit Board and E (1) of the RA KBC1 Circuit Board with "BL 30" (of about 140 cm).





STEP 2

1. Remove the BL connecting EK (19) of the RA M11 Circuit Board and EK (70) of the KAS Circuit Board. Separate it from the wire harness for about 15 cm and cut it off.
2. Connect EK (19) of the RAM M11 Circuit Board and RA EP with "BL12" (of about 50 cm).



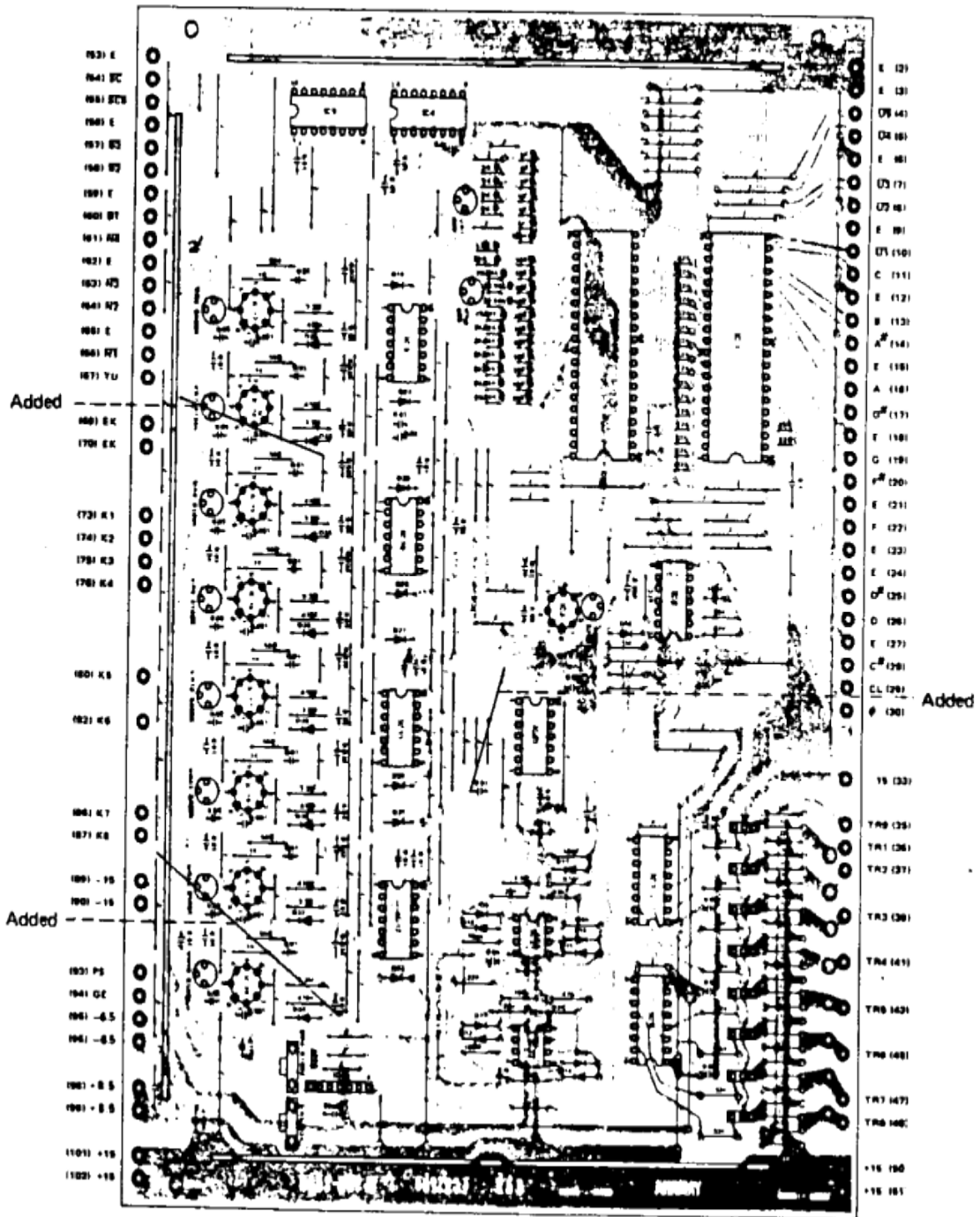
Note: Separate disconnected wires from wire harness and cut them off.

The above measures of steps 1 and 2 reduce the fluctuation of pitch to about one third. Take the measures of steps 1 and 2 when the trouble is detected.

The following modification is incorporated, adding to steps 1 and 2, for products which are not finished yet.

1. The earth line is changed on the KAS Circuit Board. As shown below, jumper wires are added as earth lines.

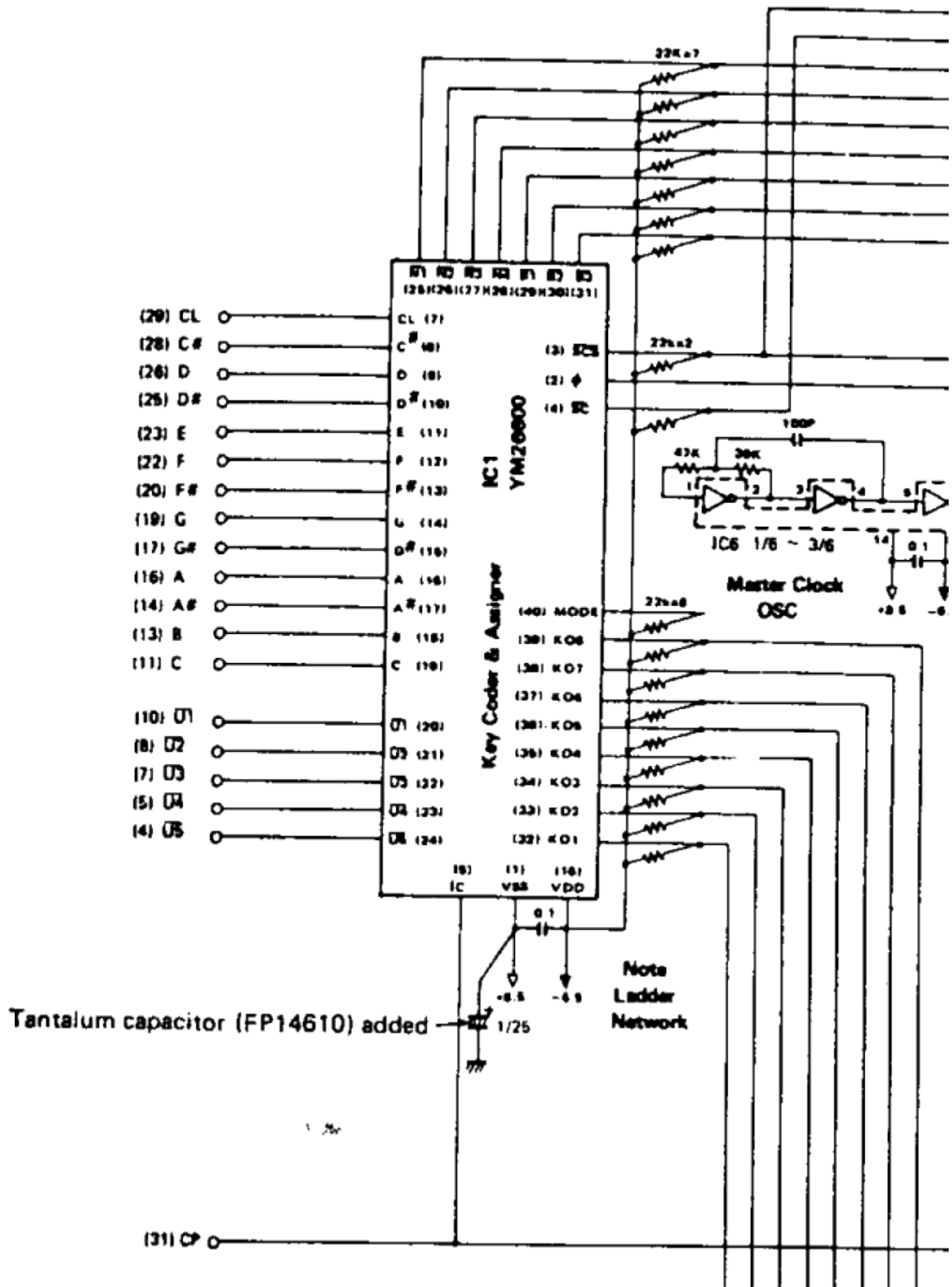
KAS Circuit Board & Wiring



Accompanying the above modification, the Circuit Board is changed.

Old New
KAS Circuit Board LC21265 → LC21266

2. A tantalum capacitor (1 μ F/25V) is added on the KAS Circuit Board.



Accompanying the above modification, the Circuit Board is changed.

Old	New
KAS Circuit Board LC21265	→ LC21266

Accompanying the above modifications, the CS-60 and CS-80 use different KAS Circuit Boards.

Old	New
CS-60, 80 KAS Circuit Board NA03580	→ CS-60 KAS Circuit Board NA03580 CS-80 KAS Circuit Board NA80449

SERVICE PARTS:

CS-80's KAS Circuit Board (NA80499) will be supplied as a service part after the parts which are currently in stock are used up. The KAS Circuit Board (NA80449) is interchangeable with the KAS Circuit Board (NA03580) but that NA80449 incorporates modifications against fluctuating pitch.

INCORPORATION OF MODIFICATIONS:

Provisional measures on the Circuit Board and wires.

CS-80 produced between August and October, 1978 No. 1,593 - 1,717

Permanent measures on the printed Circuit Board and wires.

CS-80 produced after November, 1978 No. 1,719 and up