AKAI SERVICE MANUAL

EXTERNAL SRAM BOARD
MODEL SXM007 S/X

SXM007-S : For model S700

SXM007-X : For model X7000

SCHEMTIC DIAGRAM

SXM007s/x

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 25WV (Z)

SXM007s/x
SCHEMATIC DIAGRAM
No. 880201A

B (POWER SUPPLY) LINE

PARTS LIST

2. P.C.BOARD

Ref. No.	Part No.	Description
BT	EC-381294J	BATTERY LITHIUM
D1	ED-376335	D SCHOTTKY SB02-03S-T
D2	ED-376335	D SCHOTTKY SB02-03S-T
D3	ED-301911	D SILICON H DS448
IB1	EH-353790	COMP R RKC1/8B4 223J
IB2	EH-353790	COMP R RKC1/8B4 223J
IB3	EH-347743	COMP R RKC1/8B4 103J
IB4	EH-347743	COMP R RKC1/8B4 103J
IB5	EH-347743	COMP R RKC1/8B4 103J
IB6	EH-378917J	COMP R RML-S4-J104
IB7	EH-378917J	COMP R RML-S4-J104
IB8	EH-378918J	COMP R RML-S8-J104
IC1	EI-381286J	IC MB84256-12LL
IC2	EI-381286J	IC MB84256-12LL
IC3	EI-381286J	IC MB84256-12LL
IC4	EI-381286J	IC MB84256-12LL
IC5	EI-381286J	IC MB84256-12LL
IC6	EI-381286J	IC MB84256-12LL
IC7	EI-381286J	IC MB84256-12LL
IC8	EI-381286J	IC MB84256-12LL
IC9	EI-381286J	IC MB84256-12LL
IC10	EI-381286J	IC MB84256-12LL
IC11	EI-381286J	IC MB84256-12LL
IC12	EI-381286J	IC MB84256-12LL
IC13	EI-381286J	IC MB84256-12LL
IC14	EI-381286J	IC MB84256-12LL
IC15	EI-381286J	IC MB84256-12LL
IC16	EI-381291J	IC TC74HC138F
IC17	EI-381291J	IC TC74HC138F
IC18	EI-381291J	IC TC74HC138F
IC19	EI-381292J	IC TC74HC133F
IC20	EI-381293J	IC TC74HC08F
IC21	EI-381290J	IC TC74HC245F
IC22	EI-381288J	IC TC74HC373F
IC23	EI-381287J	IC TC74HC374F
IC24	EI-381289J	IC TC74HC257F
IC25	EI-376373	IC TC74HC32F
IC26	EI-377044	IC TC74HC14F
IC27	EI-376373	IC TC74HC32F
IC28	EI-376373	IC TC74HC32F
IC29	EI-378806J	IC TC74HC125F
IC30	EI-364253	IC PST520D-2
J1	EJ-367389	SOCKET IL-W-36S-SD

3. FINAL

Ref. No.	Part No.	Description
1	MH-371594	SPACER SUPPORT 3675
2A	EI-381296J	IC TMM27128AD-20X7000-V2.0 (X7000)
2B	EI-381297J	IC TMM27128AD-20-S700-V2.0 (S700)

MODEL: S700

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001 Subject: Trouble countermeasure and improvement of operation

Symptom : "Bad data on disk" appears when LOAD or VERIFY are executed or the
motor in QD unit stays rotating when LOAD, SAVE or VERIFY are
executed, especially when cold.

Cause : Variables in QD mechanism, e.g. flexibility of Head wire, pressure
of tension spring and etc.

Remedy : Replace with a new ROM IC Version V1.2 which searches a head of
data repeatedly.

	Ref. No.	Part No.	Description
(NEW)	6-IC8	EI-367554-C	IC TMM27128AD-20-S700 V1.2

With this ROM, an operational change has been made to ease the setting of
programs.
Previously, the sine-wave test tone was programmed into P1 to P6 (P16 with
ASK70). In order to clear these programs, either sampling the new sound
into S1 to S6 (S16 with ASK70) or re-setting high key range (H=0) of P1 to
P6 (P16 with ASK70) have to be executed.
Now, the test tone is programmed only in P1/S1. Refer to page 23 of
Operator's Manual.

Key split function

Now try using the key split function to assign various sampled
sounds to a single program number.
Using the S700 , it is possible to split various sampled sounds
onto different areas of the keyboard for a maximum of 6 sounds
(16 using the ASK70).

When the S700 is initialized when the power is turned on, the
following sine wave test tone is programmed:

```
P1  :S1:-:-:-:-:-
```

The key range for this test tone is L=24, H=99.
The test tone is cleared when a sampled sound is set for sample
number 1, but the test tone can be stopped when the key range
setting shown below is set:

```
P1  :S1:L=24:H=0
```

(Set high key range to 0.)

Changed from : February 1987
Service Ref. No. : CNL0284A

002 Subject: Trouble countermeasure

Symptom : 1) Malfunction in MIDI System Exclusive operation.
             Failure in sending out the complete bytes. (V1.3)
          2) Malfunction in Rec. trigger function.
             In foot switch operation, Recording started when audio input
             signal exceeds the threshold level even though the foot switch
             is not activated. (V1.4)

Remedy : Replace ROM IC of version V1.4 in CPU P.C. Board.

	Ref. No.	Part No.	Description
(NEW)	6-IC8z	EI-367554-E	IC TMM27128AD-20 S700 V1.4

Note   : In order to set the unit in Foot Switch Trigger mode, turn the
          control knob to shift the trigger level to the left side of LCD
          display once and then turn the control knob again to set the
          trigger level back to its far right position. When the trigger
          level is set in a lower position, recording starts as input
          signal exceeds the trigger level disregarding the foot switch.
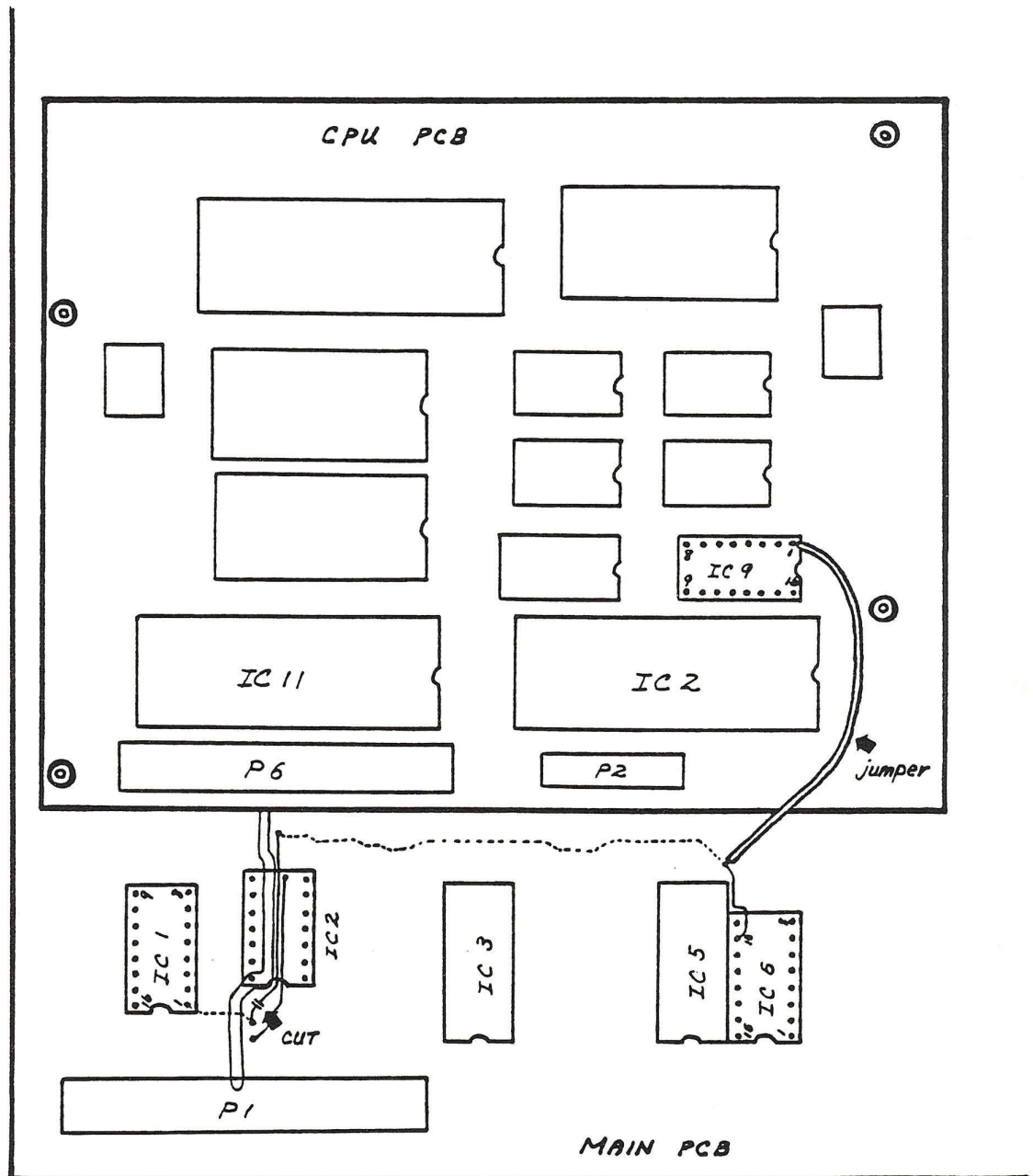
Changed from : May 1987
Interchangeability : Only NEW to FORMER and NEW.
Service Ref. No. : CNL 0383 CNL 0402

003 Subject: Trouble countermeasure

Symptom : Sample sound may become noisy after hours of use.

Remedy : Change Pin10 connection of IC6 in Main P.C. Board to get Clock
          signal from Pin1 of IC9 in CPU P.C. Board. Cut a P.C.B. pattern
          and add a jumper wire as shown.

Note   : The Main P.C. Board with this modification is not interchangeable
          and will not work correctly when installed to an old unit without
          a jumper wire to CPU P.C. Board.

004   Subject: Trouble countermeasure

Symptom: 1) All memorized sound program is cleared and the initial
              sine-wave tone or no sound is played while playing.
              2) The notes may continue to sound even after keys are released
              and may not accept any operation afterwards except turning the
              unit off.

Remedy: Replace ROM IC with Version V1.5 ROM.

	Ref. No.	Part No.	Description
(NEW)	6-IC8z	EI-367554J6	IC TMM27128AD-20 S700 V1.5

Changed from : Sept. 1987
Interchangeability : Only NEW part to FORMER and NEW units
Service Ref. No. : CNL 0550

005   Subject: Trouble countermeasure

Symptom: 1) Noise may be produced when Sample memorized is played with
              SXM007-S installed.
           2) "Verify Error" may appear when verified after S700 is turned
              off and turned on again with SXM007-S installed.

Cause :   Momentary drop in Power Supply voltage of SRAM board when S700 is
           turned off.
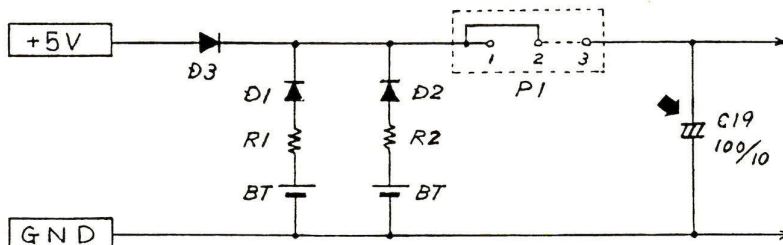
Remedy :   Install additional C19 tantalum capacitor(100uF/10V) in Power
           Supply Line.

	Ref. No.	Part No.	Description
(NEW)	2-C19z	EC-385802J	C TT V S99 101M 10.0DC

Changed from :April 1988
Interchangeability : NEW parts to NEW and FORMER units.
Service Ref. No. : K-003-88

006   Subject: Trouble countermeasure

Symptom: No AUDIO TRIGGER function when SXM007-S is installed.

Cause :   Bug in software program.

Remedy :   Change CPU ROM IC S700 V2.0 (previously labeled as SX7S V1.0) to
           new ROM V2.1 in CPU PCB.

	Ref. No.	Part No.	Description
(NEW)	3-2Bz	EI-381297J1	IC TMM27128AD-20 S700 V2.1

Changed from :April 1988
Interchangeability : NEW parts to NEW and FORMER units.
Service Ref. No. : K-004-88

005 Subject: Trouble countermeasure

    Symptom: 1) Noise may be produced when Sample memorized is played with
                 SXM007-X installed.
             2) "Verify Error" may appear when verified after X7000 is turned
                 off and turned on again with SXM007-X installed.

    Cause :   Momentary drop in Power Supply voltage of SRAM board when X7000 is
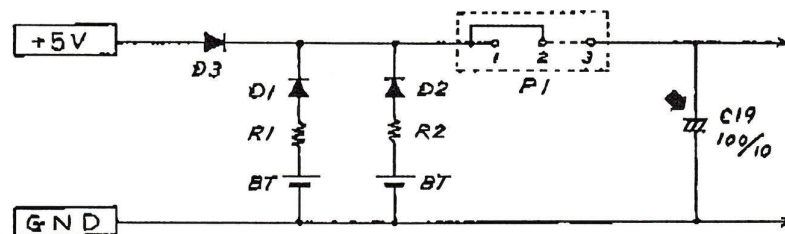   turned off.

    Remedy :   Install additional C19 tantalum capacitor(100uF/10V) in Power
            Supply Line.

	Ref. No.	Part No.	Description
(NEW)	2-C19z	EC-385802J	C TT V S99 101M 10.0DC

Changed from :April 1988
Interchangeability : NEW parts to NEW and FORMER units.
Service Ref. No. : K-003-88

006 Subject: Trouble countermeasure

    Symptom: No AUDIO TRIGGER function when SXM007-X is installed.

    Cause :   Bug in software program.

    Remedy :   Change CPU ROM IC X7000 V2.0 (previously labeled as SX7X V1.0) to
            new ROM V2.1 in CPU PCB.

	Ref. No.	Part No.	Description
(NEW)	3-2Az	EI-381296J1	IC TMM27128AD-20 X7000 V2.1

Changed from :April 1988
Interchangeability : NEW parts to NEW and FORMER units.
Service Ref. No. : K-004-88