YAMAHA

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Combo
Instruments

SERVICE NEWS

DX 7

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ROM Version Change

- *Purpose:*

  For adaptation to the newest MIDI specifications and performance improvement

- *Modifications:*

  1. Change of MIDI codes
  (1) Change of After touch status: B003 ⟶ D0
  (2) Change of Active sensing: F043 ⟶ FE
  (3) Addition of EOX (End of exclusive) to the end of the bulk data transfer of System exclusive (F7H)
  (4) Change of "Mono mode all notes off"

  2. Addition of new MIDI receive function
     The bulk data of performance memory (DX-1 function data) can be received with new ROM version.

  3. Change of the 8th item in MIDI Test program
     Refer to the list of "TEST PROGRAM MODIFICATIONS" in page 5.

  4. Change of operation methods
  (1) The initial function parameters display at Power ON shows the last function parameters before Power OFF. And the LED display is indicated in 88 format.
  (2) In the original ROM version model, at Power ON the function is initialized at the MASTER TUNE. Therefore, when the model is turned off and on again after tuning to the other instrument(s), the tuning is off by sliding Data entry lever. This happens often on the stage after tuning it at some other place. On the other hand, in the new ROM version model, at Power ON the function is initialized at the last state before Power OFF. Therefore, the above complication does not occur.
  (3) The switching operations in L/R changeover and CURVE/DEPTH changeover in KEYBOARD LEVEL SCALING are changed. In the new ROM version model, when the LCD display indicates "CURVE (DEPTH)" at the L (R) side and then DEPTH (CURVE) is pushed, the LCD display indicates "DEPTH (CURVE)" at the L (R) side and thus DEPTH/CURVE changeover is carried out, but L/R remains unchanged. When L/R changeover is desired, DEPTH (CURVE) button is pushed again.
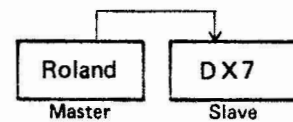
● *Problems on MIDI communication:*

The examples of problems between DX-7 and an other brand are explained below.

     * As for problems between YAMAHA products, refer to the table of "MIDI CROSS REFERENCE TABLE" in page 6.
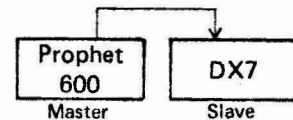
(1) In connection with a Roland's product:

During keyboard performance on the Roland side as master, chopped sounds are heard. That is because, when all keys are released at the Roland side, "All note off" data from the Roland is fed to DX-7 as slave and all decaying sounds at the DX-7 are deadened (Applied to DX-7's before S/# 2600 only).

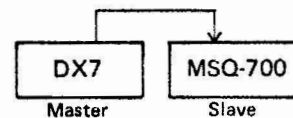| Roland	DX7
Master	Slave

(2) In connection with Prophet-600:

When "Sequencer" or "Auto arpeggio" mode is selected in Prophet-600, F8H data are output. On receiving these data, DX-7 runs for about 30 seconds and stops with pop noise at the DX-7 side, indicating "MIDI DATA ERROR" in the display. (Applied to DX-7's before S/# 2660 only.) In this case, however, Prophet-600 can be used normally and DX-7 will also recover by disconnection.
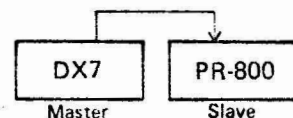
Prophet 600	DX7
Master	Slave

(3) In connection with Sequencer MSQ-700:

MSQ-700 does not run due to a different Active sensing code employed.

DX7	MSQ-700
Master	Slave

(4) In connection with Piano-Recorder PR-800:

PR-800 does not run due to the different Active sensing code employed.

DX7	PR-800
Master	Slave

(5) In connection with Rhythm-Machine TR-909:

AUTO RHYTHM in TR-909 does not run. But the TR-909 drum sound is generated from DX-7 due to the same reason as (2).

● *Servicing:*

When any problem has occured on MIDI connection (YAMAHA↔YAMAHA) or (YAMAHA ↔Other brand), service with replacing the ROM.
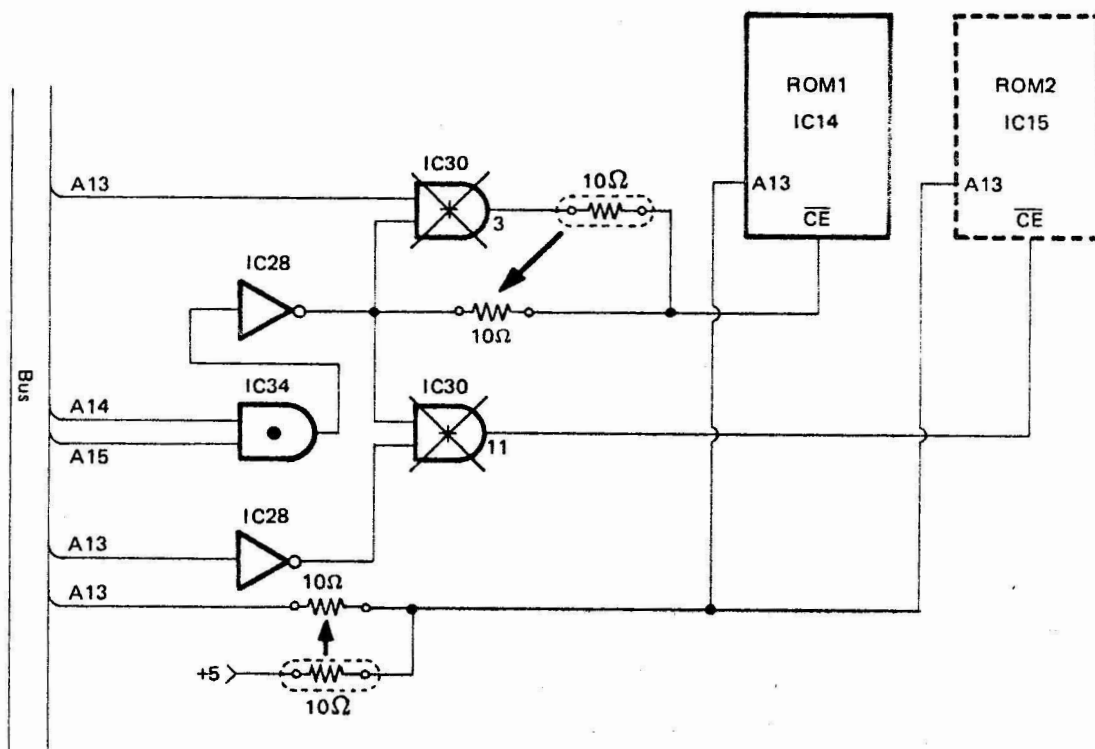
Important!
NOTE 1:

After the replacement, the function data are distroyed, so that desired operation cannot be obtained. Therefore, re-input all function parameters one by one.
(1) While the function switch is ON, turn on Switch 1, then slide Data entry lever up and down.
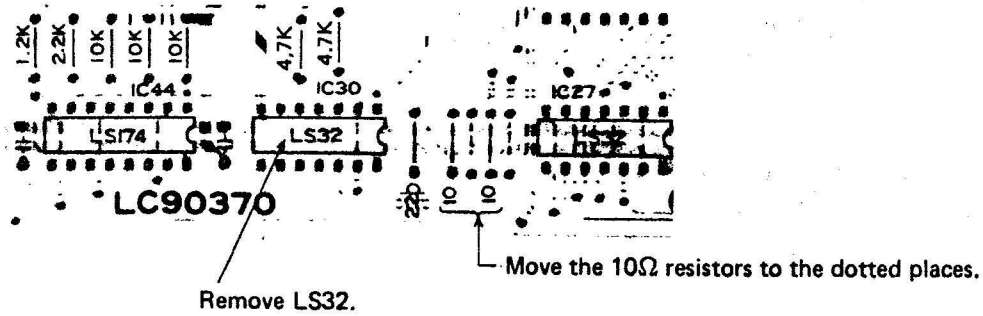(2) Proceed as Step 1 from Switch 2 to Switch 32 in order.

NOTE 2:

Since two 64 K EPROM's (IC 14 and 15) are employed in model before S/# 2660, the following circuit modification is required because of one chip 128 K MASK ROM employed in new model.
(1) Remove ROM IC 14, 15 and IC 30 (OR gates).
(2) Install MASK ROM at the place of ROM IC 14.
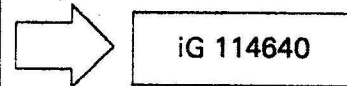(3) Change the locations of the two 10Ω resistors.

Mounting Diagram

Remove LS32.

Move the 10Ω resistors to the dotted places.

● *Parts:*

QLD versions		NEW version
iG 175700	S/# 1001 ~ S/# 2660	iG 114640
iG 175750		
iG 1146100	S/# 2661 ~ S/# 24880	
	S/# 25125 ~ S/# 26005	

● *Effective Serial Numbers:*

S/# 24881 ~ S/# 25124
S/# 26006 ~

MIDI TEST PROGRAM MODIFICATIONS

Test No.	Original	New
Test 1	TEST 1 LEVEL ADJ VR 3	TEST 1 LEVEL ADJ VR 3 M1.0—1.6 MIDI Version Number ——┘ ┌ ┘ SYSTEM Version Number ——┘
Test 2	The full LED display simultaeously flashes.	Each segment of the LED display lights up in order.
Test 3	After "ERROR" displayed, when the designated switch has been pushed and if "ERROR" is not displayed again, the LED display indicates the switch to be pushed next.	● After "ERROR" displayed, the LED display fixes to "61". ● Foot switch tests for SUSTAIN and PORTAMENT are added.
Test 4	When any switch except keyboard or any A/D conversion is operated, "ERROR" is displayed.	● Switch operations except keyboard and A/D operations are ignored. ● The initial touch data are detected and the make contacts are checked. At the error ocurrence, "TOUCH ERROR" is displayed and the initial touch adds to the sound.
Test 5	The test numbers can be jumped during Test 5 operation.	Once A/D conversion test is started, all 6 tests are carried out before changing test numbers.
Test 6	When a Read Test cartridge is not inserted or the read error has occured, "ERROR EEPROM" is displayed.	When a Read/Write cartridge is not inserted, "INSERT CARTRIDGE" is displayed, and when the read error has occured, "!ERROR!" is displayed.
Test 7	When a RAM cartridge is not inserted, WRITE PROTECT of RAM cartridge is on, or the write error has occured, "WRITE ERROR" is displayed.	When WRITE PROTECT of RAM cartridge is on, "MEMORY PRO—TECTED" is displayed, and when RAM cartridge is not inserted or the write error has occured, "WRITE ERROR" is displayed.
Test 10 or Test 11	At TEST 11, pushing on +1 returns to the main program.	At TEST 10, pushing on +1 returns to the main program. (TEST 11 is abolished)