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DATE: June 3Ø, 1986

REVISION DATE: June 3Ø, 1986

BULLETIN NO: 3ØØØHL:1

PRODUCT: 25-4Ø7Ø Tandy 3ØØØHL

SUBASSEMBLY: AX-Ø142 Main Logic Board

SUBASSEMBLY REVISION: Rev. A, Rev. B

PURPOSE: To provide a listing of main logic board modifications.

DISCUSSION:

The following is a listing of manufacturing modifications to the main logic board in the Tandy 3ØØØHL. These modifications will have been installed at the factory; however, in case of accidental damage during the shipping or manufacturing process, they should be carefully checked. If any are found which have not been performed, or have been performed incorrectly, the condition should be corrected. These modifications are absolutely required for reliable operation.

** **Compliance With This Bulletin Is Mandatory** **

PROCEDURE:

Check for correct implementation of the following:

(1) On the solder side of the board, jumper RP7, pin 6 to J15, pin 8. **(Rev. A boards only.)**
(2) On the solder side of the board, add a 6 pin single-inline resistor pack to U39, the 8Ø287 socket. Attach it according to the following table (on **Rev. A boards only**):

6-pin SIP	U39
pin 1	pin 9
pin 2	pin 8
pin 3	pin 7
pin 4	pin 6
pin 5	pin 5
pin 6 *	N/C

* Cut this pin off the resistor pack.

(3) On the solder side of the board, add an 8 pin single-inline resistor pack to U39, the 8Ø287 socket. Attach it according to the following table (on **Rev. A boards only**):

8-pin SIP	U39
pin 1	pin 9
pin 2 *	N/C
pin 3	pin 11
pin 4	pin 12
pin 5 *	N/C
pin 6	pin 14
pin 7	pin 15
pin 8 *	N/C

* Cut these pins off the resistor pack

(4) On the solder side of the board, cut the trace between E1Ø and E11. **(Rev. A boards only.)**

(5) On the component side of the board, cut the trace at U8Ø, pin 3.

(6) On the solder side of the board, add a jumper from U8Ø, pin 3 to U81, pin 13. **(Rev. A boards only.)**

(7) On the component side of the board, add a jumper wire in the holes at the empty IC location U69 from U69, pin 9 to U69, pin 13. **(Rev. A boards only.)**

(8) On the component side of the board, add a jumper wire from pin 12 of the empty IC location U65 to the feedthrough closest to U74, pins 11 and 12. **(Rev. A boards only.)**

(9) The following ground straps for RFI suppression should be installed **(Rev. A and B boards)**:

(a) Using 24 ga. wire, install a jumper from the ground side of R53 to the common pad for C141-C154.

(b) Using 24 ga. wire, install a jumper on the component side of the board from the ground (-) side of C139 to the nearest feedthrough on the chassis ground run adjacent to the capacitor.

(c) Using 24 ga. wire, install a jumper on the solder side from U78 pin 2Ø to the nearest feedthrough on the chassis ground run nearby.

(d) Referring to Figure 1, add 2 (two) 22 ga. wire jumpers on the solder side of the board from the indicated board feedthroughs to the indicated feedthroughs on the board mounting holes.

(e) Using 24 ga. wire, add a jumper which is between 1 and 1.5 inches long from the ground side of C144 to U79 pin 2Ø.

(1Ø) Two types of data separators may be found in the Tandy 3ØØØHL. They are the WD9232 and the WD9216. If the WD9216 is used, it will be necessary to change the position of a wire-wrap jumper on the Rev. A board, and change a jumper position on the Rev. B board. Match the unit's configuration to one of those below and check the appropriate modifications.

(a) Rev. A board, U8Ø data separator is a WD9232.
-- wire-wrap jumper should be present which runs from U8Ø, pin 3 to U81, pin 13 on the solder side.

(b) Rev. A board, U8Ø data separator is a WD9216.
-- remove the wire-wrap jumper running from U8Ø, pin 3 to U81, pin 13 and add a jumper from U8Ø, pin 3 to U81, pin 9 on the solder side.

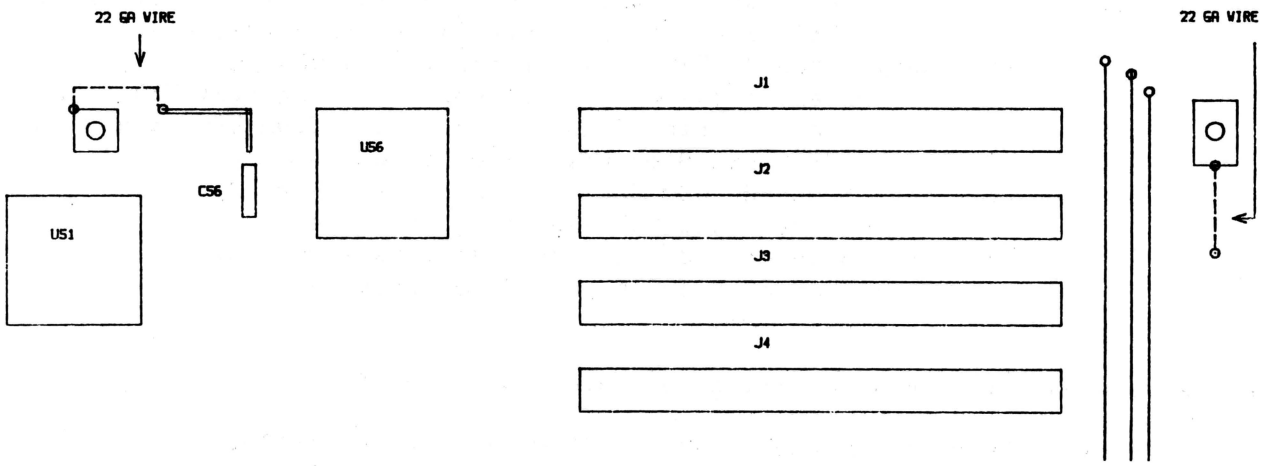
(c) Rev. B board, U8Ø data separator is a WD9232.
-- Jumper E16-E17 should be installed.

(d) Rev. B board, U8Ø data separator is a WD9216.
-- Jumper E15-E16 should be installed.

The parts needed for these modifications are available as:

8 pin 4.7K resistor pack	Part # ARX-Ø3Ø7	Cat. # 25-1ØØØ
6 pin 4.7K resistor pack	Part # ARX-Ø24Ø	Cat. # 25-4ØØ1

Figure 1



DATE: August 25, 1986

REVISION DATE: August 25, 1986

BULLETIN NO: 3ØØØHL:2

PRODUCT: 25-4Ø7Ø Tandy 3ØØØHL

SUBASSEMBLY: AX-Ø142 Main Logic Board

SUBASSEMBLY REVISION: Rev. A, B, B-2

PURPOSE: To correct a problem with keyboard operation when the 3ØØØHL is switched to 4 MHz mode.

DISCUSSION:

A problem may exist with keyboard operation in some early production Tandy 3ØØØHL's when the 3ØØØHL is switched to 4 MHz mode. The 8Ø42 which is responsible for keyboard control expects to see an 8 MHz clock; in the units in question, it receives a 4 MHz clock when the 3ØØØHL switches to 4 MHz mode instead of this 8 MHz signal. This will allow the keyboard to be read but not written to. Symptoms of this problem are that when the computer is switched to 4 MHz mode the CAPS light will not light when pressed, and software which reprograms the keyboard will not work. All units should be checked for this modification.

** **Compliance With This Bulletin Is Mandatory** **

PROCEDURE:

1) Cut the trace at U53, pin 7 on the solder side of the board.

2) Add a jumper from R42, pin 2 (the lead of R42 which is towards the keyboard connector) to U68, pin 1 on the solder side of the board.

Verify correct operation using diagnostics and MS-DOS.

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DATE: October 6, 1986

REVISION DATE: October 6, 1986

BULLETIN NO: 3ØØØHL:3

PRODUCT: 25-4Ø7Ø Tandy 3ØØØHL

SUBASSEMBLY: AX-Ø142 Main Logic Board

SUBASSEMBLY REVISION: Rev. B

PURPOSE: To insure correct power up of real time clock circuit.

DISCUSSION:

To insure the correct power up of the real time clock circuit, it is necessary to change a resistor in the Q1 voltage divider network.

PROCEDURE:

Check the value of R1Ø on the main logic board. If it is not 39K, remove the old resistor and replace it with a 39K, 1/4 watt resistor. This part is available as:

part # N-Ø33ØEEC, cat. # 26-9999R

Note: This is a multi-layer board, so appropriate caution should be used when removing components. Refer to Technial Bulletin INF:1Ø for correct procedures.

DATE: November 19, 1986

REVISION DATE: February 24, 1987

BULLETIN NO: 3ØØØHL:4

PRODUCT: 25-4Ø7Ø Tandy 3ØØØHL

SUBASSEMBLY: Entire Item

SUBASSEMBLY REVISION: N/A

PURPOSE: To reduce memory to 256K for special applications.

DISCUSSION:

Some application programs require only 256K of RAM in order to function properly and will not work if there is more RAM present. Since the 3ØØØHL comes standard with 512K, the memory will have to be changed to cause the computer to access only 256K.

PROCEDURE:

To reduce memory to 256K:

(1) Install a 128K 3ØØØHL RAM upgrade kit. Install the 4 64K by 4 bit RAMS in sockets U1 through U4 on the main logic board; install the 2 64K by 1 bit RAMS in U5 and U6. This kit is available as catalog number 25-4Ø82.

(2) Jumper E1Ø-E11 and E8-E9 on the main logic board.

(3) Run the "Setup" program and set the memory size to 256K.

To configure the computer for normal operation:

Since the computer now contains all the RAM necessary for either 512K or 64ØK operation, it will be necessary to choose the amount of RAM to be used.

(1) **For 512K operation,** remove jumper E1Ø-E11.

(2) **For 64ØK operation,** remove jumper E8-E9.

(3) Run the "Setup" program and set the memory size to the proper configuration.