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TANDY COMPUTER PRODUCTS

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**Tandy 2500XL 25-4074 (figure 235):**

The Tandy 2500XL is one of a series of low profile computers. This is an AT class machine utilizing an 80286 microprocessor, Headland G2 support LSIs, an FDC controller, a 16 bit VGA controller, an AT-style IDE hard drive interface, a mouse port, a serial port, and a parallel port, all on the main logic board. This unit, though similar to the Tandy 3000 line, has MSDOS 3.3 and Deskmate in ROM like the current Tandy 1000 family. The unit stands only 4.5 inches high. Standard equipment includes:

- \* 10 MHz 80286 CPU.
- \* Full Speed Bus option (10MHz) makes the unit faster than a 12MHz 3000 (6MHz Bus).
- \* Socket for an optional 80287 coprocessor.
- \* 1 Meg. of RAM (four 256Kx9 100nS SIMMs).
- \* Capable of up to 4 Meg. of RAM on board total
- \* Three 16 bit AT compatible expansion slots.
- \* 16 bit VGA graphics adapter built in.
- \* One 1.44 Meg. 3.5 inch diskette drive.
- \* Expansion slots for one more 3.5" drive and one half height 5.25" drive.
- \* On board dual speed floppy controller supports 3 drives.
- \* On board AT-style IDE hard drive interface.
- \* On board serial port.
- \* On board parallel printer port.
- \* Enhanced PS/2 style 101-key keyboard.
- \* PS/2 style mouse interface.
- \* 70 watt power supply.
- \* Full music and sound capability.
- \* Carriage style chassis for easy subassembly access.

**Main Logic Board**

The main logic board contains all the circuitry necessary for system operation. All system memory is installed on the main logic board. There are four SIMM sockets for this purpose. Using 1 Meg SIMMs limits system memory to 4 Meg on board. The actual supported steps are: 1 Meg (4, 256Kx9), 2 Meg (2, 1Mx9), and 4 Meg (4, 1Mx9). Using 16 bit expansion boards the system could be brought up to a maximum of 15 Meg of RAM.

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Jumpers:

E1-E3	CMOS RAM clear	Shorting these pins clears the CMOS RAM contents for reprogramming.
E2,4,8	Expansion Bus Speed	E2-E4 Full speed bus. (default) The CPU and Bus speeds are locked together and change with the speed setting in SETUP.  E4-E8 Half speed bus. Only the CPU speed changes with SETUP. The bus is locked at low speed.
E5,6,7	Memory Parity Check	E6-E7 Enabled (default)** E5-E6 Disabled
E9,10,11	BIOS ROM Type	E9-E10 Two 32Kx8 EPROMS E10-E11 4 or 8Meg ROM (default)
E12,13	Video interrupt	No Jumper Installed (default) E12-E13 IRQ9*
E14,15,16	On Board Video Enable	E15-E16 enabled (default) E14-E15 disabled
E17,18,19	Audio Input Source (from MIC jack)	E18-E19 Microphone (default) E17-E18 Line audio

\* NOTE: IRQ9 is software mapped to IRQ2 per the AT standard.

\*\* NOTE: The early version of the user's manual is wrong with respect to the memory parity check jumpers. This document and the schematic are correct.

FLOPPY DRIVE (figure 141):

The floppy drive is a new Sony MP-17W-72. It is a relative of the 1.44 Meg MP-17W-70D found in the 4016SX. Here are the drive's test points:

Differential read amps:	RFA, RFB
Direction:	CN101, pin 18
Step:	CN101, pin 20
Track 0:	TRK0
Index:	CN101, pin 8
Raw data:	CN101, pin 30
Ground:	AGND
Write protect:	WPRT
Motor on:	CN101, pin 16

The drive is internally terminated. There is a single drive select switch on the side. Drive A: should be set for DS0, a second drive (B:) DS1, etc.. If a 5.25" drive is added it should be terminated. This unit will support up to 3 floppy disk drives.

#### Hard drives:

Use AT style IDE drives with the 2500XL. Hard cards are NOT supported. The physical size of the hard drive can be a limitation. Two sizes of hard drives can be mounted. The 5.25" drive bay or the 3.5" bays can be used. When using the 5.25" mount, a standard half height hard drive is allowed. When using a 3.5" drive in the 3.5" bays, use a 1" tall hard drive. Remember, IDE drives are already low level formatted. Do not run HSECT on IDE drives.

#### The SETUP utility:

The SETUPXL.COM utility is located on the DOS diskette and is very similar to those used in the Tandy 1000TLs. A setup screen appears listing the various options.

**Service Notes:** The expansion backplane can be removed by removing two screws holding the backplane bracket to the chassis. One of these screws is at the rear, just above the keyboard connector. The other screw is at the front of the chassis.

There is no -5 Volts circuit on the main logic board. The -5 Volts is derived from the -12 Volts with the help of a -5 Volt regulator mounted on the expansion backplane. This means that a 2400 Baud modem plugged directly into the main logic board would not work (no -5V). The modem would have to be inserted into the expansion backplane (which has -5V).

When reassembling the unit, watch your cable dress! The carriage could easily crimp cables or trap unused connectors against the main logic (warping it).

When closing the carriage KEEP YOUR FINGERS OUT OF THE WAY. As the drive carriage moves into its resting place, the end closest to the expansion backplane passes by the front grill with a shearing action. The edges are SHARP! Later models will have dulled edges but still be careful.