

TDU-850 / TDU-1200 Thermal Display Units

SPECIFICATIONS

DISPLAY	TDU-850	TDU-1200	
Paper type	Direct thermal	Direct thermal	
Effective printing width	8.5 in. (21.6 cm)	11.84 in. (30.07 cm)	
Paper width	8.7 in. (22.2 cm)	12.09 in. (30.7 cm)	
Paper length*	200 ft. (61 m)	200 ft. (61 m)	
Dot density	203 dots/in. (8 dots/mm)	300 dots/in. (8 dots/mm)	
Total number of dots/line	1728	3552	
Dot heater size	105 x 175 μ m (.004in x .007 in)	69 x 110 μ m (0.0027in x 0.004 in.)	
<i>*Length for plastic medium is 165 ft. (50.3 m)</i>			
Electronic Design	Microprocessor	Microprocessor	
Input Signals (Data control)	TTL compatible with 4.7K Ω pull-up TTL compatible with 2.2K Ω pull-up	TTL compatible with 4.7K Ω pull-up TTL compatible with 2.2K Ω pull-up	
Output Signals	TTL compatible	TTL compatible	
Power	103.5 to 126.5 VAC,47-63Hz, single phase	103.5 to 126.5 VAC,47-63Hz, single phase	
Power Requirements	200W nominal	200W nominal	
Physical / Environmental			
Weight	25 lbs (kg)	30 lbs. (kg)	
Dimensions	7.58 in. (19.25 cm) H x 14.2 in (36 cm) W x 17.5 in (45 cm) D	7.78 in. (19.76 cm) H x 18.2 in (46.2 cm) W x 17.5 in (45 cm) D	
Operating Temperature	0 C to 50 C	0 C to 50 C	
Storage Temperature	-40°C to 80°C	-40°C to 80°C	
Shock	50g 11 msec, MIL-STD-202F, method 213B, test condition G	50g 11 msec, MIL-STD-202F, method 213B, test condition G	
Vibration	MIL-STD-167, type 1, exploratory 4-50 Hz	MIL-STD-167, type 1, exploratory 4-50 Hz	
Humidity	95% non-condensing (excluding paper)	95% non-condensing (excluding paper)	
Sweep Speed (ms/line)	200 LPI	100 LPI	300 LPI
B/W	5	5	5
8 shades	10	10	12
16 shades	20	20	20
32 shades	25	25	36
64 shades	40	40	70
128 shades	25	25	36
256 shades	40	40	70

TDU-850

TDU-1200

Thermal Display Units



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All specifications subject to change without notice.

TDU-850 / TDU-1200

Thermal Display Units

Hardcopy recording at its best

True grey shade printing utilizing thermal technology is now available from Ocean Data Equipment Corporation.

The *TDU-850 / TDU-1200* are part of a family of hard copy recorders from Ocean Data Equipment Corporation. TDU-Series recorders display true grey shades at high speeds and with high resolution, producing recordings of near photographic quality.

The "freefall" recorders are available in two separate models -- the TDU-850 with an 8.5 inch printing width and the TDU-1200 with an 11.84 inch printing width. They produce full tonal images, or can display digital data either in graphic or alphanumeric form. They are capable of performing 80 column, ASCII printing with the use of an IEEE interface.

Applications

The recorder finds applications in many fields, including hydrographic survey, CRT hard copy, spectrum analysis, surveillance, facsimile transmission, medical electronics, radar and sonar. It is ideal for making permanent hardcopy recordings of computer-generated digital images.

These printers come with a 32-bit Windows 95/NT® application that provides the ability to manipulate, view, and edit image files of nearly any type and print them to the TDU high speed thermal printers.

Benefits associated with thermal technology include a substantial reduction in lifecycle costs, greater dynamic printing range, digital input, printing that is fast and jitter-free, and the elimination of odor, carbon dust, and record smearing.

True grey shade printing is the ideal way to create hard copy images. The TDU-850 has a resolution of 203 dots per inch and 256 grey levels available, while the TDU-1200 has 300 dots per inch and 256 grey levels. This combination of high resolution and multi-grey levels produces quality images.

Fast, Clean, and Quiet

Printing is extremely fast, with the *TDU-850* operating at 40 ms/line for 256 levels of grey and only 5 ms/line for black and white. Operation is quiet, clean and maintenance-free.

Resolution

The full dots/inch resolution is preserved over the whole grey scale. The TDU Thermal Display Unit always prints the full compliment of dots, with each dot's grey shade appropriately modulated by the image data.

The recorders jitter-free operation, precise paper feed mechanism, and exact dot positioning combine to produce images with clearly defined edges and shade purity.

Operational Flexibility

Because its design is microprocessor-based, the TDU Thermal Display Unit is convenient to operate and has many desirable features.

Power On Self Test

An internal test routine automatically checks for proper processor operation when power is turned on. A self-generated test pattern may be generated any time from the touch of a button.

Selectable Printing Medium

The recorder prints on paper based stock for normal applications and on plastic-based stock and transparencies for applications requiring higher fidelity.

Mode Select Switches

- 11 Paper Type _____
- 10 G4 _____
- 9 G3 Select _____
- 8 G2 Number _____
- 7 G1 of Grey _____
- 6 Master Mode 2 _____
- 5 Master Mode 1 _____
- 4 Master/Slave _____
- 3 Left/Right _____
- 2 LPI _____
- 1 Cal _____

Due to proprietary printing techniques, no loss is experienced in resolution with the selection of multi-grey levels. High printing speeds are also maintained when multi-grey levels are selected.

Uniform Picture Quality

Grey shade thermal printing requires compensation for changes in ambient temperature, thermal head temperature, print rates, and thermal paper type. The TDU microprocessor notes changes in these parameters and adjusts its operation to make the proper corrections. The shades printed by the recorder are

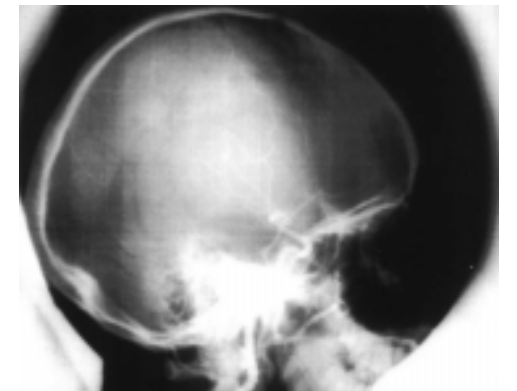
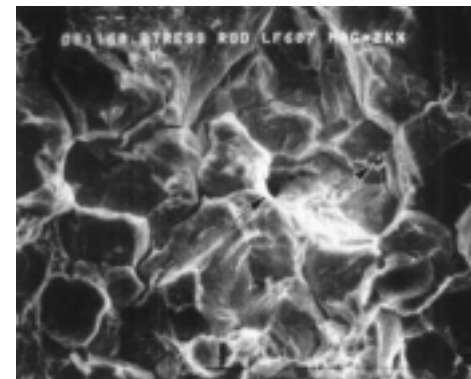
thus held constant over the whole operating range of the recorder.

Standard Parallel Interface

The TDU series of recorders is supplied with an integral interface suitable for high speed data transfer from computers. Utilizing a parallel configuration, it relies on synchronization of clock and data signals to transfer image data in a raster scan format. The integral parallel data interface utilizes an eight bit data bus and data transfer timing signals. The units may be operated as either a timing master or completely slaved as a peripheral device.

Optional IEEE Interface

The standard interface can be augmented with an IEEE-488 interface. The optional PWB plugs into a spare card slot and provides a direct connection. The GPIB (IEEE STD 488-1978) interface PWB provides a standard parallel interface for the interconnection of the TDU to computers or test equipment. It implements the electrical and transaction conventions of the GPIB and controls the flow of data from the GPIB to the TDU.



Left: Electron Micrograph
Right: Arteriogram
Below: High altitude surveillance

