

## KVT-04

### COPIER, SCANNER, LASER PRINTER TRAINER



**LPT-02** trainer is a very versatile training system, has been designed to explain 3 in 1 Laser Printer hardware and its trouble shooting. Various test points have been provided so that one can check inputs and outputs of each block contained. Being different from a conventional block diagram internal structure of blocks is also shown. Test points allow the analysis and monitoring of the signals in different sections.

#### Specifications

- ARM-11 Processor 433 MHZ
- Memory 64 MB
- Interface Hi-Speed USB 2.0
- Engine Speed Simplex Up to 20 ppm in A4 (21 ppm in Letter) Duplex Manual Duplex
- Warm-up time From Sleep Less than 30 seconds
- FPOT From Ready Less than 8.5 seconds
- From Sleep Less than 15.5 seconds
- Resolution Up to 1,200 x 1,200 dpi effective output

#### Copier Specification:

- Copy Speed Simplex to Simplex Up to 20 ppm in A4 (21 ppm in Letter)
- FCOT (B&W) From Ready Less than 14 seconds (from platen)
- Copy Resolution Text
  - Scan: 300 x 300 dpi , Printing : 600 x 600 dpi @ADF

- Scan: 600 x 300 dpi , Printing : 600 x 600 dpi @ Platen  
Text/Photo
- Scan: 300 x 300 dpi , Printing : 600 x 600 dpi @ADF
- Scan : 600 x 300 dpi , Printing : 600 x 600 dpi @ Platen  
Photo
- Scan: 600 x 300 dpi , Printing : 600 x 600 dpi @ADF
- Scan: 600 x 600 dpi , Printing : 600 x 600 dpi @ Platen
- Original Type Factory Default Text/Photo
- Max. Original Platen A4
- Size ADF Legal (8.5" x 14")
- Multi Copy 1~99

#### Scan Specification:

- Scan Method Color CIS
- Compatibility TWAIN, WIA
- Scan Speed:
  - Linearity, Halftone 15 sec on Platen, 15 sec on ADF @ 300dpi
  - Gray 23 sec on Platen, 26 sec on ADF @ 300dpi
- Color
  - 256 Color 300 dpi : 65 sec on Platen, 70 sec on ADF
  - True Color 300 dpi : 70 sec on Platen, 70 sec on ADF
- Resolution:
  - Optical 1,200 x 1,200 dpi
  - Enhanced 4,800 x 4,800 dpi
  - Halftone 256 levels
- Scan Size:
  - Max. Document Width Max. 216 mm (8.5")
  - Effective Scan Width Max. 208 mm (8.2")
- Max. Document Length
  - ADF : 356 mm (14") P
  - Platen : 297 mm (11.7")
- Effective Scan Length
  - ADF : 348 mm (13.7")
  - Platen : 289 mm (11.4")

Note : Specifications can be altered without notice in our constant efforts for improvement.

- Scan Depth:
  - Color Internal: 16 bit x 3, External : 8 bit x 3 Mono
  - 1 bit for Lineart & Halftone
  - 8 bits for Gray scale
- ADF Capacity 40 sheets @ 75 gsm
- Document Size
  - Width : 142 ~ 216 mm
  - Length : 148 ~ 356 mm
- Standard Capacity 150-sheet Multi Purpose Tray @ 80 g/m<sup>2</sup>
- Max. Capacity 150-sheet @ 80 g/m<sup>2</sup>
- Printing:
  - Max. Size 216 x 356mm (8.5" x 14.02")
  - Min. Size 76 x 183 mm (3.0" x 7.2")
- Multi-purpose Tray (Bin type) Capacity
  - Plain Paper : 150 sheets @ 80 g/m<sup>2</sup>
  - Envelop : 1 sheet @ 80 g/m<sup>2</sup>
- Media sizes A4, A5, Letter, Legal, Executive, Folio, Oficio, ISO B5, JIS B5, Envelope(Monarch, No.10, DL, C5), Custom Media type Plain ,Thin, Cotton, Recycled, Archive, Colored, Pre-Printed, Label, Bond, Thick, Envelopes, Cardstock
- Media weight 16~43 lb (60 to 163 g/m<sup>2</sup>)
- Output Stacking Capacity
  - Face-Down : 100 sheets @ 80 g/m<sup>2</sup>
- Average Cartridge Yield 1500 standard pages
- Fault creating facilities for CRUM, Thermistor, Stepper Motor, Pickup Clutch, Feed Sensor, Width Sensor, Scanner Stepper Motor, Scanner Sensor, Printer Door.
- 21 Fault Switch with 25 Test Points provided on-board.
- Led indicators provided for sensing Power, Error, Ready, Toner and Power On, Print Switch.
- Laser Printer block diagram is provided on LPT-02 glass epoxy PCB for understanding the logic.
- LPT-02 Enclosed in ABS Plastic enclosure.
- Power rating AC 220 - 240 V

- Power Consumption Average operating mode Less than 230 W
- User Manual.

**Experiments**

- Study of Laser Printer based on ARM-11 Processor
- To understand the overall functioning of Copy, Scan, Laser Printer
- Study the section of Copy, Scan, Laser Printer
- To identify different faults CRUM, Thermistor, Stepper Motor, Pickup Clutch, Feed Sensor, Width Sensor, Scanner Stepper Motor, Scanner Sensor and to study the troubleshooting in Laser Printer

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