

# 11. Reference Information

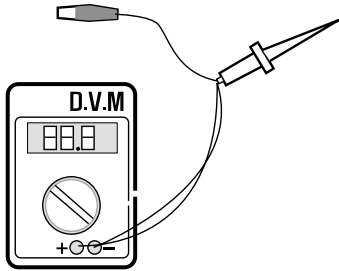
This chapter describes the reference information for applying this training manual, and it is consisted of the tool list, the abbreviation table, the outline of model, and so on.

## 11.1 Troubleshooting Tool

The following tools are recommended safe and easy troubleshooting as described in this service manual.

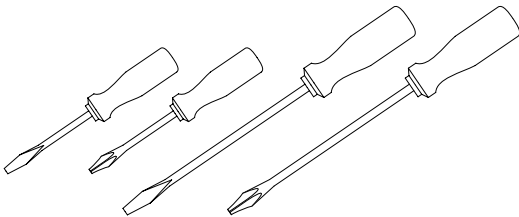
### • DVM(Digital Volt Meter)

Standard : Indicates more than 3 digits.



### • Driver

Standard : "-" type, "+" type (M3 long, M3 short, M2 long, M2 short).



### • Tweezers

Standard : For general home use, small type.



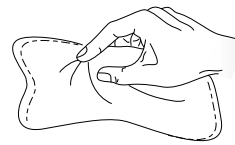
### • Cotton Swab

Standard : For general home use, for medical service.

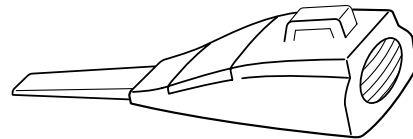


### • Cleaning Equipments

Standard : An IPA(Isopropyl Alcohol)dry wipe tissue or a gentle neutral detergent and lint-free cloth.



### • Vacuum Cleaner

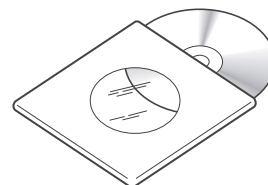


### • Spring Hook

Standard : For general use



### • Software (Driver) installation CD ROM



## 11.2 Acronyms and Abbreviations(1)

The table below explains the abbreviations and acronyms used in this service manual. Where abbreviations or acronyms are used in the text please refer to this table.

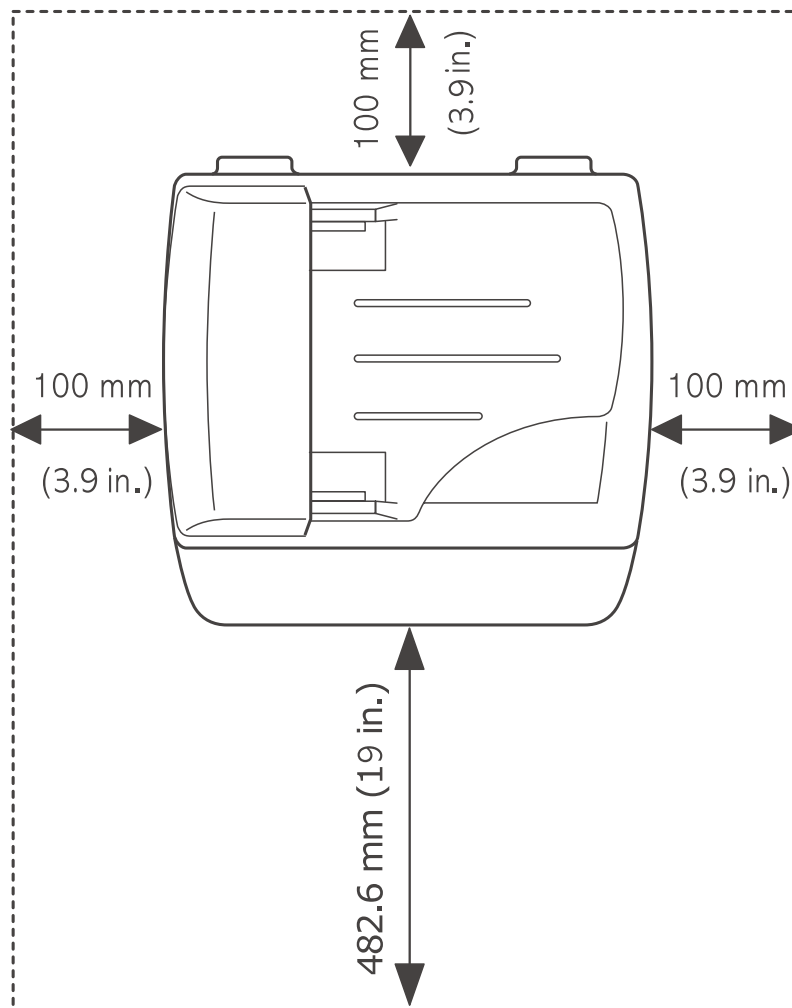
Abbreviations	Explanation
AP	Access Point
AC	Alternating Current
APC	Auto Power Control
ASIC	Application Specific Integrated Circuit
ASSY	assembly
BIOS	Basic Input Output System
BLDC	Brush-less Direct Current
CMOS	Complementary Metal Oxide Semiconductor
CN	connector
CON	connector
CPU	Central Processing Unit
dB	decibel
dbA	decibel A
dBm	decibel milliwatt
DC	direct current
DCU	Diagnostic Control Unit
DPI	Dot Per Inch
DRAM	Dynamic Random Access Memory
DVM	Digital Voltmeter
ECP	Enhanced Capability Port
EDC	Embedded Diagnostic control
EEPROM	Electrically Erasable Programmable Read Only Memory
EMI	Electro Magnetic Interference
EP	electrophotographic
EPP	Enhanced Parallel Port
FPOT	First Printout Time
F/W	firmware
GDI	graphics device interface
GND	ground
HBP	Host Based Printing
HDD	Hard Disk Drive
H/H	High temperature and high marshy place
HV	high voltage
HVPS	High Voltage Power Supply
I/F	interface
I/O	Input and Output
IC	integrated circuit
IDE	Intelligent Drive electronics or Imbedded Drive Electronics

## Acronyms and Abbreviations(2)

Abbreviations	Explanation
IEEE	Institute of Electrical and Electronics Engineers. Inc
IPA	Isopropyl Alcohol
IPM	Images Per Minute
LAN	local area network
lb	pound(s)
LBP	Laser Beam Printer
LCD	Liquid Crystal Display
LED	Light Emitting Diode
L/L	Low temperature and low marshy place
LSU	Laser Scanning Unit
MB	megabyte
MHz	megahertz
MPF	Multi Purpose Feeder
NIC	Network Interface Card
N/N	Normal temperature and normal marshy place
NVRAM	nonvolatile random access memory
OPC	Organic Photo Conductor
OPE	Operate Panel Equipment
PBA	Printed Board Assembly
PCL	Printer Command Language , Printer Control Language
PDL	Page Discription Language
PPM	Page Per Minute
PPS	Pulse Per Second
PS	Post Script
PTL	Pre-Transfer Lamp
PWM	Pulse Width Modulation
Q-PID	Quick Printer Initiating Device
Q'ty	quantity
RAM	Random Access Memory
ROM	Read Only Memory
SCF	Second Cassette Feeder
SMPS	Switching Mode Power Supply
SPGP	Samsung Printer Graphic Processor
SPL	Samsung Printer Language
Spool	Simultaneous Peripheral Operation Online
SW	switch
sync	synchronous or synchronization
USB	Universal Serial Bus
WECA	Wireless Ethernet Compatibility Alliance

## 11.3 Selecting printer locations

- Leave enough room to open the printer trays, covers, and allow for proper ventilation. (see diagram below)
- Provide the proper environment :
  - A firm, level surface
  - Away from the direct airflow of air conditioners, heaters, or ventilators
  - Free of extreme fluctuations of temperature, sunlight, or humidity
  - Clean, dry, and free of dust



## 11.4 Sample Tests Patterns

The sample patterns shown below are the standard test patterns used in the factory.

The life of the toner cartridge, developer cartridge and printing speed are measured with the pattern shown below (5%). The A4 ISO 19752 standard pattern samples are reproduced reduced to 70% of the actual A4 size.

### A4 ISO 19752 Standard Patterns

