

TOSHIBA

Toshiba 1400 Series Operation Manual

Toshiba 1400 series; 1400 plus series ups

1

2

3

4

Table Of Contents

5

6

7

8

9

10

11

12

13

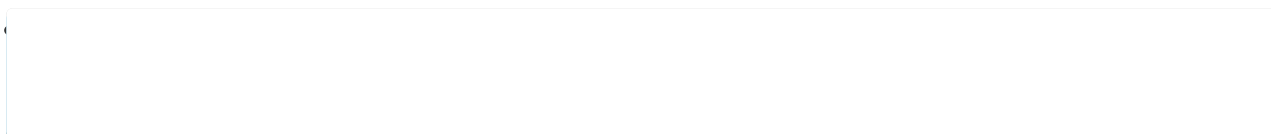
14

15

16

17

18
19
20
21
22
23
24
25
26
27
28
29
30
31



•

Table of Contents

-

Troubleshooting

•

Bookmarks

Quick Links

[1 Front Panel Indicator Led Functions](#)

[2 Audible Alarm Functions](#)

[3 Fault Indicator Led Lights](#)

[4 Parts Replacement](#)

[Download this manual](#)



UNINTERRUPTIBLE POWER SYSTEM
SINGLE PHASE - .6/.8/1.0/1.2/1.5/2 KVA
SINGLE PHASE - 5/ 7.5/1.0/1.5 KVA PLUS

and

TOSHIBA

MANUFACTURED IN THE U.S.A.

OPERATION MANUAL

February, 1993

Part #37725

Table of Contents

[Next Page](#)

1
2
3
4
5

Related Manuals for Toshiba 1400 Series

[UPS Toshiba 1400XL Plus Series Operation Manual](#)

Uninterruptible power system single phase - 2.4/3.6/6.0/8.0 kva plus (37 pages)

[UPS Toshiba 1400SE Series Operation Manual](#)

Single phase - .6/.8/1.0/1.2/1.5/2.0/2.4 kva, single phase - .6/.8/1.0/1.5 kva plus (41 pages)

[UPS Toshiba 1400 XL PLUS Series Operation Manual](#)

Battery cabinet system single phase - 2.4/3.6/6.0/8.0 kva plus (18 pages)

[UPS Toshiba 1600EP SERIES Instruction Manual](#)

(58 pages)

[UPS Toshiba 1600EP Series Operation Manual](#)

Battery cabinet system single phase- 8/10/14/18 kva (16 pages)

[UPS Toshiba 1600EP Series Operation Manual](#)

Battery cabinet system single phase - 3.6/6.0 kva (22 pages)

[UPS Toshiba 1500 Plus Series Operation Manual](#)

6/.8/1.0 kva 220v uninterruptible power system (31 pages)

[UPS Toshiba 1500 Series Operation Manual](#)

(32 pages)

[UPS Toshiba UT1A1A010C6 User Manual](#)

User guide (51 pages)

[UPS Toshiba 1000 SERIES User Manual](#)

(64 pages)

[UPS Toshiba 1000 Series User Manual](#)

Reliability in motion single phase 1000/1200 va (60 pages)

[UPS Toshiba 1600 Series Instruction Manual](#)

Single phase - 2.4/3.6/6/8 kva plus (49 pages)

[UPS Toshiba 1600XP Specifications](#)

Single phase uninterruptible power systems (9 pages)

[UPS Toshiba 1600XP SERIES Installation And Operation Manual](#)

1600xp series single phase - 3.6/6/8/10/14/18/22 kva (100 pages)

[UPS Toshiba 1600XP SERIES Installation And Operation Manual](#)

(140 pages)

[UPS Toshiba 1600XPi Series Installation And Operation Manual](#)

8-22kva battery cabinet (23 pages)

Summary of Contents for Toshiba 1400 Series

[Page 1](#) UNINTERRUPTIBLE POWER SYSTEM SINGLE PHASE - .6/.8/1.0/1.2/1.5/2 KVA SINGLE PHASE - .5/.75/1.0/1.5 KVA PLUS MANUFACTURED IN THE U.S.A. OPERATION MANUAL February, 1993 Part #37725...

[Page 2](#) WARRENTY CARD INSERT...

[Page 3](#) WARRENTY CARD INSERT...

[Page 4](#) Section 9 shows the control interface pin configurations. And finally, we hope that you find this manual informative and easy to understand, and once again thank you for the purchase of this product. TOSHIBA INTERNATIONAL CORPORATION © Copyright 1993/February...

[Page 5: Table Of Contents](#)

TOSHIBA CONTENTS SECTION PAGE Warranty Cardiii-iv Introduction.....v
Contentsvi-vii Important Safety Instructionsviii Inspection/Storage
..... 1-1 Inspection of the new UPS equipment1-1 Storage of UPS equipment
..... 1-1 Precautions2-1 Installation Precautions2-1 Prestart
Precautions

[Page 6: Contents](#)

TOSHIBA CONTENTS (Cont'd) SECTION PAGE Troubleshooting Procedures6-1 AC Line
Indicator LED Not Lighting6-1 Inverter Indicator LED Not Lighting6-2 Fault
Indicator LED Lights.....6-3 AC Output Voltage Not Available 6-4 Preventive
Maintenance/Parts Replacement7-1 Preventive Maintenance.....7-1 Parts
Replacement

[Page 7: Important Safety Instructions](#)

- The nominal battery voltage range is indicated in Section 5.6 on page 5-7. - Servicing of the batteries should only be performed by a qualified Toshiba Representative who is knowledgeable of batteries and the required precautions. Keep unauthorized personnel away from batteries.

[Page 8: Inspection/Storage](#)

TOSHIBA Inspection/Storage Inspection of the new UPS equipment Upon receipt of the UPS, a careful inspection for shipping damage should be made. After Uncrating: Check the unit for loose, broken, bent or otherwise damaged parts. If damage has occurred during shipment, keep all original crating and packing materials for return to shipping agent.

[Page 9: Precautions](#)

TOSHIBA Precautions Installation Precautions Install the unit in a well ventilated location; allow at least 10 cm (4 inches) on all sides for air ventilation and for maintenance. Install the unit in a stable, level, and upright position which is free of vibration.

[Page 10: Product Description](#)

Application and Use Toshiba's 1400 Series of on-line uninterruptible power supply (UPS) systems provide continuous computer-grade ac power in a compact, high performance, and energy efficient unit. The UPS unit assures safe and reliable operation of critical office equipment.

[Page 11: Specifications](#)

Signals:(1)ac input present (NC) [jumper selectable to (NO)] (2)low battery (NO) Options
Software for unattended computer shutdown Contact Toshiba for details on this option RS232
ASCII interface board Contact Toshiba for details on this option External battery pack Contact
Toshiba for details on this option (*) Battery backup time may vary depending on the operating
conditions and ambient temperature at the installation site.

[Page 12](#) (2)low battery (NO) (4)bypass active (NO) Options Software for unattended
computer shutdown Contact Toshiba for details on this option RS232 ASCII interface board
Contact Toshiba for details on this option External battery pack Contact Toshiba for details on
this option (*) Battery backup time may vary depending on the operating conditions and
ambient temperature at the installation site.

[Page 13: Plus Series Specifications \(W/Output Isolation Transformer\)](#)

Signals:(1)ac input present (NC) [jumper selectable to (NO)] (2)low battery (NO) Options
Software for unattended computer shutdown Contact Toshiba for details on this option RS232
ASCII interface board Contact Toshiba for details on this option External battery pack Contact
Toshiba for details on this option (*) Battery backup time may vary depending on the operating
conditions and ambient temperature at the installation site.

[Page 14](#) (2)low battery (NO) (4)bypass active (NO) Options Software for unattended computer shutdown Contact Toshiba for details on this option RS232 ASCII interface board Contact Toshiba for details on this option External battery pack Contact Toshiba for details on this option (*) Battery backup time may vary depending on the operating conditions and ambient temperature at the installation site.

[Page 15: Operating The Ups](#)

TOSHIBA Operating the UPS Operation Modes 5.1.1 AC Input Mode (normal operation) Bypass circuit Power receptacles input (rear panel) plug Fuse main circuit Output Xfmr 5-15P 5-15R (Plus Series) UPS batteries = power flow Power flow in AC input mode for 500, 600, 750, 800, 1000, and 1200...

[Page 16: Battery Backup Mode](#)

TOSHIBA Operating the UPS Operation Modes (Cont'd) 5.1.2 Battery Backup Mode Bypass circuit Power receptacles input (rear panel) plug Fuse main circuit 5-15P Output Xfmr (Plus Series) 5-15R UPS batteries = power flow Power flow in battery backup mode for 500, 600, 750, 800, 1000, and 1200...

[Page 17: Circuit Bypass Mode](#)

TOSHIBA Operating the UPS Operation Modes (Cont'd) 5.1.3 Circuit-bypass Mode Bypass circuit receptacles Power input (rear panel) plug Fuse main circuit 5-15P Output Xfmr (Plus Series) 5-15R UPS batteries = power flow Power flow in circuit-bypass mode for 500, 600, 750, 800, 1000, and 1200 VA...

[Page 18: System Protection Features](#)

TOSHIBA Operating the UPS System Protection Features The schematic shown below depicts the electrical locations of the protection devices on the 500, 600, 750, 800, 1000, and 1200 VA UPS models. Bypass Power Input receptacles input abnormal (rear panel) Current limit...

[Page 19: Front Panel Indicator Led Functions](#)

TOSHIBA Operating the UPS System Protection Features (Cont'd) The following table lists explanations for the protection features for the 500, 600, 750, 800, 1000, 1200, 1500, and 2000 VA UPS units. UPS Protection Features Item Overcurrent Over- Under- Overload Overheat...

[Page 20: Battery Recharging](#)

TOSHIBA Operating the UPS (Cont'd) Battery Recharging The graph below shows the typical voltage requirements for recharging the UPS unit's batteries. Current Voltage Charging Battery current charge 0.4 amp (A) voltage Vmax. Discharge Vmin. shut-off point Fully charged Time Period 2...

[Page 21: Battery Low Voltage Tolerances](#)

TOSHIBA Operating the UPS Battery Low Voltage Tolerances Excessive discharge will cause the UPS unit's battery voltage to drop. The chart shown below lists the voltage level at which each UPS unit's low-voltage alarm will sound and also at what level the low-voltage condition will cause the unit to automatically shut down.

[Page 22: Troubleshooting Procedures](#)

Is the AC Line LED lit? Contact your Toshiba service representative. Continue normal operations. Caution: All UPS units contain hazardous voltages that have the potential to burn and shock. These voltages exist even if main power is disconnected.

[Page 23: Inverter Indicator Led Not Lighting](#)

Go to LED indicator lit? Is the On/Off Move the On/Off switch switch in the ON to the ON position position? Is the inverter Contact your Toshiba Go to LED indicator service representative. lit? Continue normal operations. 6 - 2...

[Page 24: Fault Indicator Led Lights](#)

Go to Is the INVERTER LED lit? 1. Try the start-up procedure again Is the FAULT after connecting the equipment load. LED lit? 2. Reduce the load if an overload has occurred. Contact your

Toshiba service representative. 6 - 3...

[Page 25](#) Go to LED indicator lit? Is the UPS unit Replace the output fuses. a 1500 or 2000 VA (See note 2 page 5-4) model? Is AC output voltage present? Contact your Toshiba Continue normal operations. service representative. 6 - 4...

[Page 26: Preventive Maintenance/Parts Replacement](#)

Preventive Maintenance/Parts Replacement Preventive Maintenance Toshiba's 1400 Series of uninterruptible power systems have been designed to provide years of trouble-free operation requiring a minimum of preventive maintenance. The best preventive measure that the UPS user can take is to keep the area around the unit, particularly the air inlet vents, clean and free of moisture and dust accumulations.

[Page 27: External Dimensions/Shipping Weights/Panel Layout](#)

TOSHIBA External Dimensions/Shipping Weights/Panel Layout External Dimensions for 500 through 1200 VA Models 7.06 On/Off switch Air vents RS-232 C (optional) 14.63 DB-9 connector Fuse Output receptacles Input power cable Air vents Front View Rear View 20.44 Side View Dimensions are in inches...

[Page 28](#) TOSHIBA External Dimensions/Shipping Weights/Panel Layout External Dimensions for 1500 and 2000 VA Model 7.06 On/Off switch Air vents RS-232 C (optional) Fuse 14.63 DB-9 connector Breaker Fuse Output receptacles Input power cable Air vents Front View Rear View 23.16 Side View...

[Page 29: Panel Layout](#)

TOSHIBA External Dimensions/Panel Layout/Shipping Weights Panel Layout Shipping Weights Shipping Weight Model Pounds Kilograms 600 VA 27.2 800 VA 29.9 1000 VA 31.8 1200 VA 34.5 1500 VA 43.6 2000 VA 48.2 500 VA Plus 36.4 750 VA Plus 38.6 1000 VA Plus 41.8...

[Page 30: Control Interface](#)

TOSHIBA Control Interface Interface for 500 through 1200 VA Models DB9 FEMALE CONNECTOR NOVELL TYPE INTERFACE UTILITY FAIL (NC) -Jumper Selectable to (NO) LOW BATTERY (NO) Interface for 1500 and 2000 VA Models DB9 MALE CONNECTOR AS/400 TYPE INTERFACE...

[Page 31](#) TOSHIBA INTERNATIONAL CORPORATION INDUSTRIAL DIVISION 13131 West Little York Rd., Houston Texas 77041 Tel: [800] 231-1412 Fax: [713] 466-8773 Telex: 762078 World Wide Web <http://www.tic.toshiba.com> Printed in U.S.A.

This manual is also suitable for:

[1400 plus series](#)