

USER MANUAL & WARRANTY CARD

EXIDE
integra

PURE SINE WAVE
LI-ION BATTERY
BASED INVERTER

Exide Industries Ltd.
59E, Chowringhee Road, Kolkata – 700 020

For any Service related issue call :

 **1800-103-5454**
www.exideindustries.com

Dear Valued Customer,

We congratulate you for your excellent choice for **EXIDE INTEGRA**. EXIDE Integra Pure Sine Wave Inverter will provide you complete comfort during the absence of utility power and provide your appliances the exact replication of mains supply because of the latest Technology.

Salient Feature of EXIDE INTEGRA Pure Sine Wave Inverter:

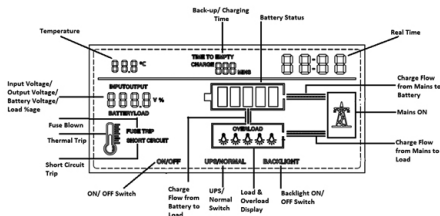
- Pure Sine Wave Output Wave Shape
- Automatic Battery Charge Management
- In-Built Lithium Ion Battery Pack
- Higher Efficiency Equipment
- Graphical LCD Display for Better User's Interface with Soft Touch Switches
- Display Real Time Clock
- Display Ambient Temperature
- Back-up Time Display in Minutes as Time To Empty
- Charging Time Display in Minutes as Time to Charge
- Automatic Protection Control e.g. Overload, Battery Low, Heat-up & Short Circuit
- Elegant Wall Hanging Design
- Healthy Charging at Low Mains Voltage Input
- Mains Overload Protection Through Resettable Switch
- Plug & Play Equipment
- Great Power Saving
- Easy to Service
- No Humming Noise
- ECO Friendly

This manual provides you through understanding of your EXIDE INTEGRA and its optimum use. Please read installation and operating instructions in the manual carefully before installing and using EXIDE INTEGRA Inverter. Pay special attention to the **CAUTION** and **WARNING** statements in this manual.

About EXIDE INTEGRA

EXIDE INTEGRA Inverter will transform Direct Current (DC) to Alternating Current (AC). The battery acts as a reservoir ensuring continuous supply when utility power is not available.

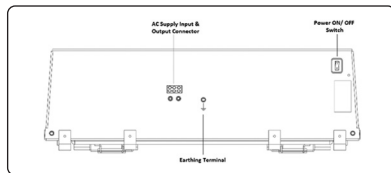
LCD DISPLAY OF EXIDE INTEGRA:



CONNECTION PANEL:

EXIDE INTEGRA Pure Sine Wave Inverter has a 3-Way Terminal Block, Power Supply ON/ OFF Switch, Thermal Circuit Breaker, and Earthing Connection point.

CAUTION: Mains Input & Output Wiring should be connected in suggested manner. Inverter should be connected with Earth. Do not switch ON the Power Switch before Connecting the Mains Input & Output Wires.



Some Safety Measures

Important Precautions:

The Output Side of the AC supply wiring of EXIDE INTEGRA should never be connected to utility Power or DG Set. This condition is far worse than Short Circuit. If the unit survives this condition, it will shut down until connections are made. During Installation should ensure that the AC supply Output of EXIDE INTEGRA should not be connected to Mains Input.

CAUTION: Power Switch Should be in OFF Condition while making AC Input/ Output Connections.

WARNINGS:

- DO NOT ATTEMPT to open or repair the battery pack
- DO NOT EXPOSE to fire
- DO NOT SHORT - CIRCUIT the positive and negative terminals of the battery with wire or other conductive objects
- DO NOT EXPOSE to temperatures above 50°C and keep out of direct sunlight
- DO NOT IMMERSE the battery / module in water, saltwater, or any other liquid
- DO NOT REVERSE polarity or connect the battery in series
- DO NOT REMOVE and Transport the battery / module with metal objects that may short the +Ve and -Ve power terminals (tools, necklace, rings etc.)
- DO NOT PIERCE the battery / module / cells with sharp objects like nails or screw drivers
- DO NOT OPERATE without the earth / GND connected
- DO NOT CONTINUE using the battery / module / pack during critical alarm conditions
- DO NOT USE liquids for cleaning, specifically Alcohol or Ammonia extracts
- DO NOT DISASSEMBLE or open, crush, bend or deform, puncture, or shred without manufacturer's permission
- DO NOT STORE batteries more than over 6 months without recharge maintenance. Battery safety may be compromised when recharging batteries which have rested for a longer time
- DO NOT ALLOW battery maintenance or usage by children
- DO NOT REMOVE Batteries for using in other Applications. It is Hazardous.

General Precautions:

Before installing, connecting any wiring or using the EXIDE INTEGRA, read all instructions of this instruction manual.

CAUTION: Do not install unit unless instructed to do so. Failure to comply with this instruction can cause damage or complete failure of the unit.

CAUTION:

- To reduce risk of injury, make connection properly
- Do not expose the system to rain, snow or liquids of any type. Do not disassemble the system.
- Call EXIDE authorised service centre when service or repair is required.
- Incorrect reassembly may result in a risk of electric shock or fire.
- To reduce risk of electric shock, disconnect all the wiring & Switch OFF the Power Switch from (or of) system before attempting any maintenance cleaning. Turning off the system will not reduce this risk

WARNING: WORKING IN VICINITY OF A LITHIUM ION BATTERY IS DANGEROUS.

- Be extra cautious when working with metal tools on, or around batteries. The potential exists to drop a tool and short-circuit the batteries or other electrical parts resulting in sparks that could cause an explosion
- Do not leave batteries in discharge state for more than one or two days. Battery will self-discharge over a period of 2 – 3 Months, so they should periodically recharge even if they are not being used.
- EXIDE INTEGRA should be stored at 0 – 45 °C ambient temperature range

GROUNDING INSTRUCTIONS: The EXIDE INTEGRA Pure Sine Wave Inverter should be connected to a grounded with permanent wiring connection.

INCASE OF FOULING SMELL / SMOKE / FIRE

1. Immediately switch-off the Power Switch on Inverter
2. Disconnect the Input AC power to Inverter
3. Do not use water to prevent Smoke / Fire
4. Use Class D (Dry Powder type) Fire Extinguisher
5. Stay away from Inverter
6. Immediately seek nearest assistance
7. Inform Exide Customer care (Exide can review and update these points)

Personal Precautions

- Someone should be in your audible range to come to your aid when you working on Inverter.
- Class D Type (Dry Powder Type) Fire extinguisher should be available nearby the EXIDE INTEGRA Inverter
- Never attempt to charge a frozen battery.
- Never applied any kind of liquid or fire on EXIDE INTEGRA Inverter
- Before touching any wire makes sure the EXIDE INTEGRA Inverter should be switched OFF
- NEVER smoke or allow spark or flame in vicinity of the batteries.
- Remove personal metal items such as rings, bracelets, necklaces and watches when working electrical circuit. These items can cause a short circuit current high enough to weld a ring and may cause severe burns
- If it is necessary to replace the battery, call to EXIDE authorized service centre
- Do not connect the external source to charge the Battery

CATUION: The EXIDE INTEGRA Pure Sine Wave Inverter should be connected to ground with permanent wire system.

SPECIAL NOTICES:

1. No AC or DC disconnects are provided as an integral part of this system.
2. No over current protection for the battery supply is proved as an integral part of this system.
3. Both AC & DC disconnects must be provide as part of the system installation.
4. No over current protection for the AC output wiring is provided as an integral part of the system.
5. Over current protection of the AC output wiring is provided as part of the system installation.

TECHNICAL SPECIFICATIONS & LOAD CHART

PARAMETERS	MODEL	
	INTEGRA 700	INTEGRA 1000
Rated Capacity	563VA/450W	900VA/720W
Max. Charging Current	5Amp $\pm$ 0.5Amp	8Amp $\pm$ 0.5Amp
Battery Boost Voltage	56.4V $\pm$ 0.4V	
Charging Technique	Automatic Sense Battery Management System	
Change Over Time (in UPS Mode)	$\leq$ 10msec	
No Load Output Voltage	225V $\pm$ 5V	
Output Frequency	50Hz $\pm$ 1Hz	
Output Wave Form	Pure Sine Wave	
Nominal Battery Voltage	51.2V (In-Built Lithium Ion Battery)	
Battery Low Cut Off	48V $\pm$ 0.4V	
Mains Voltage Range (in Normal Mode)	90V – 290VAC $\pm$ 10V	
Mains Voltage Range (in UPS Mode)	180V – 270VAC $\pm$ 10V	

LOAD CHART EXIDE INTEGRA*

Model	INTEGRA 700				INTEGRA 1000			
	A	B	C	D	A	B	C	D
Options								
Computers (TFT)	0	0	0	1	0	0	0	1
Printer (Laser) (300W)	0	0	0	0	0	0	0	1
TV (LCD 26")	0	0	1	0	0	0	1	0
Tube light (40W)	1	0	1	0	4	0	3	1
Fan (80W)	3	0	2	1	4	0	3	1
CFL (15W)	4	27	5	1	4	37	5	3

*Depending on actual VA rating/ technical specifications of the appliance. Specifications are subject to change without prior notice due to constant R&D effort. Appliances mentioned in above table are not the standard part of the product.

APPLICATION CHART*

Back-up Power of all electrical loads:

- Computer & Printers
- Fan, Tubelights, CFL, LED Lights
- T.V. Sets, DVD & Music System

*ideal of computer & printer

INSTALLATION

Where to install

The system should be installed in a location that meets the following requirements:

- Dry** – Do not allow to water to drip or splash on the EXIDE INTEGRA
- Cool** – The ambient air temperature around the system should be between 0°C to 45°C.
- Ventilation:** Allow at least two inches (5cm) of clearance around the system for air flow.
- Safe:** Keep Class D (Dry Powder Type) Fire Extinguisher nearby

EXIDE INTEGRA Inverter

CAUTIONS: This equipment contains components which are sensitive to heat and fire, and can result to fire or explosion if operated under unsafe conditions. Do not cover or obstruct ventilation openings. Do not install the system in a zero - clearance compartment.

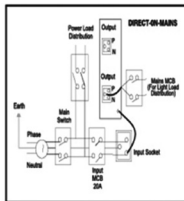
WARNING! To prevent fire or explosion do not install EXIDE INTEGRA Inverter nearby flammable materials or in locations which require ignition protected equipment.

NOTE: For better performance & battery life, it should be operated closed to 25°C.

How to Install

- To remove the lower part of Bezel of EXIDE INTEGRA Inverter and ensure the Power Switch should be Switched OFF
- To Hang the EXIDE INTEGRA Inverter on Wall by using provided brackets inside the Box.
- Ensure that Mains Input Switch is in OFF condition. Now connect Mains Input & Output wires with provided terminal block
- After making connections, switch ON the Power Switch at rear panel of Inverter and ensure the ON/ OFF touch LED should be in OFF position
- Now LCD Display will be in glowing condition and showing the Battery Voltage & other parameters
- Now touch the ON/ OFF Switch and ensure the LED of ON/OFF Switch is turned ON. After switch ON the ON/ OFF switch, check the Output Voltage that should be as specified range.
- After checking of output Voltage, apply the Mains input and ensure LCD display function is changed and Inverter start to charge the Battery.
- Again turn OFF the Mains Input & ON/ OFF Switch
- Re-fix the lower Bezel Part with the help of provided screws
- Now you may apply the Mains Input and turn ON the ON/ OFF Switch of Inverter

CAUTION: Do not connect the loose wires with Inverter



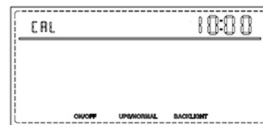
Start Operation

Once the wiring have been connected and Inverter hanged on wall, take a moment to go re-examine all the connections and make sure they are secured and in the proper terminals.

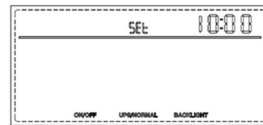
- Check to see that the EXIDE INTEGRA Inverter is turned ON by touching ON/ OFF touch and check the Output Voltage, it should be within range as defined.
- If the Voltage is in range, now apply the some load on it and check the performance.
- After check all functioning of Back-up side, now put switch ON the Mains Input supply and check Inverter shifted in charging mode & start to charge the Battery.
- The above steps will complete the functional test of the EXIDE INTEGRA Inverter. If all areas pass, the system is ready for use. If something fail figure out the reason before proceeding or contact the service centre

Time Setting:

Step 1: Touch the UPS/ Normal Switch until below display appear



Step 2: Touch once again the UPS/ Normal Switch until below display appear

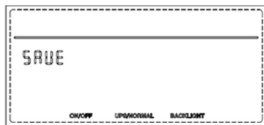


Step 2: Increase & Decrease the Hours by touching of ON/ OFF & Backlight Switch respectively

Step 3: After fixing of Hours, again touch the UPS/ Normal Switch to shift for setting of Minutes

Step 4: Increase & Decrease the Minutes by touching of ON/ OFF & Backlight Switch respectively

Step 5: After set-up of Hours & Minutes, do not touch any switch until below display appear



NOTE: EXIDE INTEGRA Inverter should be in UPS Mode while any IT/ PC equipment is connected with it.

Maintenance

Very little maintenance is required to keep your EXIDE INTEGRA Inverter operating properly. You should clean the exterior of the unit periodically with a damp cloth to prevent accumulation of dust and dirt.

Troubleshooting Guide

Problems and Symptoms	Possible Cause	Solution
No Output Voltage No Display	Power ON/ OFF Switch may be Switched OFF	Power ON/ OFF Switch should be in Switch ON Condition
No Output Voltage Overload Indication	Excess Load Applied	Reduce the excessive load & reset inverter by ON/OFF Switch
No Output Voltage LCD shows all trip	Thermal Shut Down	Call Service Support. There is Overheat Problem in this system
Fuse Trip	Thermal Circuit Breaker Trip	Reset Thermal Circuit Breaker
Mains ON but Not Charging	UPS/ Normal Selection switch may be in UPS mode	Check Mains Voltage at LCD Display & Selection of Normal / UPS Mode as per specified Voltage Range

Terms of Warranty

Integrated Li-Ion inverter, EXIDE INTEGRA is warranted for a Product Warranty of 5 (Five) Years against manufacturing defects arising out of a faulty or defective materials or workmanship from (a) the date of invoice or (b) from the date of manufacturing plus 3 months whichever occurs earlier. This covers both Li-Ion battery and the inverter as per the terms and conditions laid down below. LCD, Plastic and Rubber parts are not covered under this warranty. Warranty is also not acceptable in case of any breakage or tampering found in the integrated product.

Should a manufacturing defect develop in this product during the period of warranty, Exide undertakes to get the equipment repaired Free of Cost after inspecting the product and after satisfying itself that the defect is a manufacturing defect.

The backup performance of the Li-Ion battery largely depends on the usage of the battery which also depends on the prevailing power outage duration and frequency of outages where the integrated Li-Ion inverter has been installed. As a standard chemical property of Li-Ion batteries, the back-up decreases by 10% for every year of usage from the initial back-up obtained from a newly manufactured battery. Warranty acceptance or rejection based on battery back-up available after a particular period of usage will therefore depend on this basic principle.

If, the purchaser has to shift his residence to another town for any reason whatsoever, the warranty benefit will be available at the nearest Exide authorised distributor/ service centre only. Exide or its authorised distributor/Service centre reserves the right to retain any part or component replaced at its discretion in the event of defect noticed in the equipment during the warranty period.

This Warranty is directly related to overall warranty of product against manufacturing defects, defective material and workmanship except the Active Power Charge and Discharge Capacity and Energy Discharge Specifications of the Li-Ion battery which is governed by the standard performance of the Li-Ion battery as per usage. As per standard performance, the in-built Li-Ion battery capacity of the inverter will be measured using the Energy Capacity Test at any time thereafter shall meet or exceed the Back-up time provided battery meets the storage and refresh charging norms provided in General Precautions Warning in the warranty Manual.

This warranty is not valid in case of the following events:

- The product is not used according to the instruction given in the user's manual.
- The warranty will not apply to defects arising in company's opinion by reasons of accidents, abuse, misuse, neglect, improper installation (if not undertaken by the company or its representative), fire, flood, earthquake or other act of God or any other natural calamities and for no fault of the company. In case the product is handed over to any third party (any person other than Exide's authorized dealer) for inspection will be out of the warranty claim and repairs done or carried out will have to be borne by the purchaser. The problem of Thermal Circuit Breaker blown will not be included in the warranty of the product. The services given for the same will be a paid service.
- The warranty will not apply if the original seals are found broken or tempered with.
- The duly stamped warranty card and invoice/purchase document in original should accompany the Exide Integra if service under warranty period is required to be carried out by Exide or it's authorized dealer or authorized service center.
- Any unauthorized accessories connected to the system will not be covered under warranty and in case any damage is caused in the product due to such unauthorized accessory the product will be out of warranty.
- If the system is purchased from un-authorized source/ dealer, the warranty will be null and void for lodging any claim. Customers have to produce the warranty card and invoice in original.
- The warranty terms and conditions shall be governed by the Laws of India and all disputes are subject to the exclusive jurisdiction of the Courts of Kolkata only.
- The company in no way will be held liable for any loss or injury or damage caused to any form of life for any reason whatsoever.
- Installation in an outdoor location.
- Installation in an indoor location that does not provide the conditioned environment of 0 °C to 45 °C.
- Application other than Home/commercial UPS, Inverter.
- Damage due to insufficient ventilation of the product.
- Damage or corrosion resulting from environmental pollution such as chemical vapor, acid rain, direct contact with salt water, rust, scratches, aging.
- Damage caused by abused, accident, mishandling, animals or insects and impact of force or shock than set in the specification.
- External influences including unusual physical or electrical stress (e.g. power failure surges, lightning, flood, fire, accidental breakage, etc.)
- Out of warranty period;

MODEL :	☐ INTEGRA 700	☐ INTEGRA 1000
Serial No. :		
Warranty is void if the above serial number differs from the serial number on the Exide Integra		
Customer's Name :		Customer's Signature
Address :		
Dealer's Name :		
Date of Purchase :		
Sr. No.		
		Dealer's Signature or Stamp

General Warranty Terms and Condition.

Warranty services subject to the following **Exclusion of Warranties** condition.

- Product sold and/or installed/used outside India are not covered by the warranties
- Product not manufactured by Exide Industries Limited.
- Battery Packs, if connected in Parallel or series.
- Any product repair/inspection by anyone other than Exide authorized service center
- Cosmetic Variation, stains or scratches that do not affect energy retention.
- Marine, Vehicle or Mobile installation of any kind.
- Expiration of warranty, no evidence of purchase, or no proof installed by the qualified licensed contractor.
- Damage or failure caused by non-compliance with national, state or local electric or electric safety code.
- Noncompliance with Exide installation or maintenance procedures; Incorrect use, inappropriate operation, or environment.
- Failure to adhere to safety warning or instruction.
- Force majeure events such as fire, flood, earthquake, pandemic, epidemic, natural disaster, act of government, act of war (declared or undeclared), mutiny, unrest, storm, cyclone, terrorism, riot, act of government, act of nature or any act which is beyond the reasonable control of Exide Industries Limited.
- The decision whether to repair or replace the battery shall be taken by Exide Industries Limited. In the event of any particular battery model being phased out, the company as per its sole discretion reserves the right to provide another model of the same capacity suited for the purpose, as settlement of Warranty.
- Any settlement of the claim will take reasonable time (which will be communicated to the customer) as the battery has to be tested for the reported failure. However, the time may vary in view of Force Majeure conditions.
- Any local tax which becomes leviable on the battery under repair or replacement shall be borne by the customer.
- Customers are deemed to have read, understood, acquiesced, and agreed to these conditions at the time of purchase

Limitation of Warranty Scope

Exide's liability under this Limited Warranty shall be limited to the terms and conditions set forth above. Replaced or repaired Products shall be warranted for the remainder of the original warranty period. In any event, the replacement shall not justify the renewal or new beginning of the warranty period.

TOLL FREE NO.: 1800-103-5454