

# Liebert® GXT MT+

## Operation & Troubleshooting Guideline

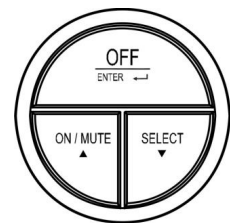
Quick guide



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### 1. Operation

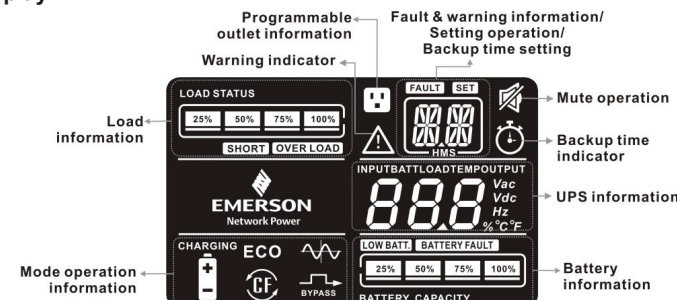
#### 1-1. Button operation



Button View

Button	Function
ON/MUTE Button	<ul style="list-style-type: none"> <li>Turn on the UPS: Press and hold ON/MUTE button for at least 2 seconds to turn on the UPS.</li> <li>Mute the alarm: When the UPS is on battery mode, press and hold this button for at least 5 seconds to disable or enable the alarm system. But it's not applied to the situations when warnings or errors occur.</li> <li>Up key: Press this button to display previous selection in UPS setting mode.</li> <li>Switch to UPS self-test mode: Press ON/MUTE buttons simultaneously for 5 seconds to enter UPS self-testing while in AC mode, ECO mode, or converter mode.</li> </ul>
OFF/ENTER Button	<ul style="list-style-type: none"> <li>Turn off the UPS: Press and hold this button at least 2 seconds to turn off the UPS in battery mode. UPS will be in standby mode under power normal or transfer to Bypass mode if the Bypass enable setting by pressing this button.</li> <li>Confirm selection key: Press this button to confirm selection in UPS setting mode.</li> </ul>
SELECT Button	<ul style="list-style-type: none"> <li>Switch LCD message: Press this button to change the LCD message for input voltage, input frequency, battery voltage, output voltage and output frequency. It will return back to default display when pausing for 10 seconds.</li> <li>Setting mode: Press and hold this button for 5 seconds to enter UPS setting mode when UPS is in standby mode or bypass mode.</li> <li>Down key: Press this button to display next selection in UPS setting mode.</li> </ul>
ON/MUTE + SELECT Button	<ul style="list-style-type: none"> <li>Switch to bypass mode: When the main power is normal, press ON/MUTE and SELECT buttons simultaneously for 5 seconds. Then UPS will enter to bypass mode. This action will be ineffective when the input voltage is out of acceptable range.</li> </ul>

#### 1-2. LCD Display



Display	Function
<b>Backup time setting and information</b>	
	Indicates the backup time in pie chart.
	Indicates the backup time in numbers. H: hours, M: minute, S: second
<b>Setting operation</b>	
	Indicates the setting operation.
<b>Fault &amp; warning information</b>	
	Indicates that the warning situation occurs.
	Indicates the warning and fault codes, and the codes are listed in details in 3-5 section.
<b>Mute operation</b>	
	Indicates that the UPS alarm is disabled.
<b>UPS information</b>	
	Indicates the input and output voltage, frequency, battery voltage, load information, and internal temperature. Vac: input/output voltage, Vdc: battery voltage, Hz: frequency, %: load level, C/F: temperature.
<b>Load information</b>	
	Indicates the load level by 0-25%, 26-50%, 51-75%, and 76-100%.
	Indicates overload.
	Indicates the load or the UPS output is short circuit.
<b>Programmable outlets information</b>	
	Indicates that programmable management outlets are working.
<b>Mode operation information</b>	
	Indicates the UPS is in online mode.
	Indicates the UPS is in battery mode.
	Indicates the UPS is bypass mode.
	Indicates the UPS is in ECO mode.
	Indicates the UPS is in converter mode.
	Indicates the UPS is charging battery.
<b>Battery information</b>	
	Indicates the Battery capacity by 0-25%, 26-50%, 51-75%, and 76-100%.
	Indicates the battery is fault.
	Indicates low battery level and low battery voltage.

#### 1-3. Audible Alarm

Battery Mode	Sounding every 4 seconds
Low Battery	Sounding every second
Overload	Sounding twice every second
Fault	Continuously sounding
Bypass Mode	Sounding every 10 seconds

#### 1-4. LCD display wordings index

LCD Area	Abbreviation	Display content	Meaning
	ENA	ENR	Enable
	DIS	di S	Disable
	ESC	ESC	Escape
	b.L	b.L	Low battery
	O.L	O.L	Overload
	N.C	N.C	Battery is not connected
	O.C	O.C	Overcharge
	S.F	S.F	Site fault
	C.H	C.H	Charger
	E.P	E.P	EPO
	b.F	b.F	Bypass fault
	b.V	b.V	Bypass voltage range
	T.P	T.P	Temperature

#### 1-5. UPS Setting

There are two parameters to set up the UPS.

Parameter 1: It's for program alternatives. There are 8 programs to set up. Refer to below table. Parameter 2 is the setting option or value for each program.

<b>01: Output voltage setting</b>	
<b>Interface</b>	<b>Setting</b>
	<b>Parameter 2: Output voltage setting</b> You may choose the following output voltage in parameter 2: 208: presents output voltage is 208Vac 220: presents output voltage is 220Vac 230: presents output voltage is 230Vac 240: presents output voltage is 240Vac
<b>02: Frequency Converter enable/disable</b>	
<b>Interface</b>	<b>Setting</b>
	<b>Parameter 2: Enable or disable converter mode.</b> You may choose the following two options: CF ENA: converter mode enable CF DIS: converter mode disable
<b>03: Output frequency setting</b>	
<b>Interface</b>	<b>Setting</b>
	<b>Parameter 2: Output frequency setting.</b> You may set the initial frequency on battery mode: BAT 50: presents output frequency is 50Hz BAT 60: presents output frequency is 60Hz If converter mode is enabled, you may choose the following output frequency: CF 50: presents output frequency is 50Hz CF 60: presents output frequency is 60Hz

	<b>04: ECO enable/disable</b>	<b>Setting</b> <b>Parameter 2: Enable or disable ECO function.</b> You may choose the following two options: ENA: ECO mode enable DIS: ECO mode disable
	<b>05: Bypass enable/disable when UPS is off</b>	<b>Setting</b> <b>Parameter 2: Enable or disable Bypass function when UPS is off.</b> You may choose the following two options: ENA: Bypass enable DIS: Bypass disable
	<b>06: Programmable outlets enable/disable</b>	<b>Setting</b> <b>Parameter 3: Enable or disable programmable outlets.</b> ENA: Programmable outlets enable DIS: Programmable outlets disable
	<b>07: Programmable outlets setting</b>	<b>Setting</b> <b>Parameter 3: Set up backup time limits for programmable outlets.</b> 0-999: setting the backup time limits in minutes from 0-999 for programmable outlets which connect to non-critical devices on battery mode.
	<b>08: Exit setting</b>	<b>Setting</b> ESC: Exit the setting menu.

#### 1-6. Operating Mode Description

Operating mode	Description	LCD display
Switch on	When pressing "ON/MUTE" button, if battery voltage is within acceptable range, "ON" will flash until the UPS is turned on.	
Online mode	When the input voltage is within acceptable range, UPS will provide pure and stable AC power to output. The UPS will also charge the battery at online mode.	
ECO mode	Energy saving mode: When the input voltage is within voltage regulation range, UPS will bypass voltage to output for energy saving.	
Frequency Converter mode	When input frequency is within 40 Hz to 70 Hz, the UPS can be set at a constant output frequency, 50 Hz or 60 Hz. The UPS will still charge battery under this mode.	
Battery mode	When the input voltage is beyond the acceptable range or power failure and alarm is sounding every 4 second, UPS will backup power from battery.	
Bypass mode	When input voltage is within acceptable range but UPS is overload, UPS will enter bypass mode or bypass mode can be set by front panel. Alarm is sounding every 10 second.	
Standby mode	UPS is powered off without output power, but the battery still can be charged.	
Fault mode	The UPS is in fault mode when no output power is supplied from the UPS and the fault icon flashes on the LCD display, although the information of UPS can be displayed in the screen.	

#### 1-7. Faults Reference Code

Fault event	Fault code	Icon	Fault event	Fault code	Icon
Bus start fail	01	x	Inverter voltage Low	13	x
Bus over	02	x	Inverter output short	14	SHORT
Bus under	03	x	Battery voltage too high	27	BATTERY FAULT
Bus unbalance	04	x	Battery voltage too low	28	BATTERY FAULT
Inverter soft start fail	11	x	Over temperature	41	x
Inverter voltage high	12	x	Over load	43	OVER LOAD

#### 1-8. Warning indicator

Warning	Word	Indicator		Alarm
		Icon (flashing)	Alarm	
Low battery	b.L		LOW BATT.	Sounding every second
Overload	O.L		OVER LOAD	Sounding twice every second
Battery is not connected	N.C			Sounding every second
Overcharge	O.C			Sounding every second
Site wiring fault	S.F			Sounding every second
EPO enable	E.P			Sounding every second
Over temperature	T.P			Sounding every second
Charger failure	C.H			Sounding every second
Out of bypass voltage range	b.V		BYPASS	Sounding every second

#### 2. Troubleshooting

If the UPS system does not operate correctly, please solve the problem by using the table below.

Symptom	Possible cause	Remedy
No indication and alarm even though the mains is normal.	The AC input power is not connected well. The AC input is connected to the UPS output.	Check if input power cord firmly connected to the mains. Plug AC input power cord to AC input correctly.
The icon  and the warning code  flashing on LCD display and alarm is sounding every second.	EPO function is activated.	Set the circuit in disabled EPO position to close EPO function.
The icon  and  flashing on LCD display and alarm is sounding every second.	Line and neutral conductors of UPS input are reversed.	Rotate mains power socket by 180° and then connect to UPS system.
The icon  and  flashing on LCD display and alarm is sounding every second.	The external or internal battery is incorrectly connected.	Check if all batteries are connected well.
Fault code is shown as 27 and the icon  is lighting on LCD display and alarm is continuously sounding.	Battery voltage is too high or the charger is fault.	Contact your dealer.
Fault code is shown as 28 and the icon  is lighting on LCD display and alarm is continuously sounding.	Battery voltage is too low or the charger is fault.	Contact your dealer.
The icon  and  is flashing on LCD display and alarm is sounding twice every second.	UPS is overload	Remove excess loads from UPS output.
UPS is overloaded. Devices connected to the UPS are fed directly by the electrical network via the Bypass.	UPS is overloaded. Devices connected to the UPS are fed directly by the electrical network via the Bypass.	Remove excess loads from UPS output. Then shut down the UPS and restart it.
Fault code is shown as 43 and the icon  is lighting on LCD display and alarm is continuously sounding.	The UPS shut down automatically because of overload at the UPS output.	Remove excess loads from UPS output and restart it.
Fault code is shown as 14 and the icon  is lighting on LCD display and alarm is continuously sounding.	The UPS shut down automatically because short circuit occurs on the UPS output.	Check output wiring and if connected devices are in short circuit status.
Fault code is shown as 1, 2, 3, 4, 11, 12, 13 and 41 on LCD display and alarm is continuously sounding.	A UPS internal fault has occurred. There are two possible results: 1. The load is still supplied, but directly from AC power via bypass. 2. The load is no longer supplied by power.	Contact your dealer
Battery backup time is shorter than nominal value	Batteries are not fully charged Batteries defect	Charge the batteries for at least 5 hours and then check capacity. If the problem still persists, consult your dealer. Contact your dealer to replace the battery.

Note :  
for technical support :  
• Visit [www.vertiv.com](http://www.vertiv.com)  
• send an email to [vertiv.indonesia@dksh.com](mailto:vertiv.indonesia@dksh.com)



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