



# LEAD / LITHIUM BATTERY CHARBES CHARGER manual (Single Phase)

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- SDG-Display Type series
- M-Display Type series



< Lithium-based exclusive >

< Lead exclusive >

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# User Manual

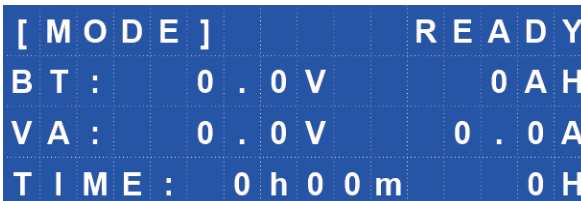
## Initial screen



VERSION  
Sep 6 2020  
12:59:59 Ver 1.00  
[DONGEUNCHARGER]

[Figure 1]

1. Figure 1 is the initial screen of the controller.
2. Version information is displayed in text.



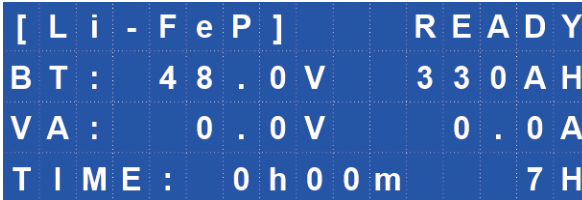
[MODE] READY  
BT: 0.0V 0AH  
VA: 0.0V 0.0A  
TIME: 0h00m 0H

[Figure 2]

1. Figure 2 is an example of a charging screen to explain.
2. When the power is turned on, the mode is set to factory default.
3. Each text displayed on the status window refers to as follows;
  - 3-1. "MODE" is the selected charging mode.
  - 3-2. "READY" means it is ready to charge.
  - 3-3. V of "BT" is the set voltage of the battery.
  - 3-4. AH of "BT" is the battery capacity.
  - 3-5. "VA" is the real-time voltage and current during battery charging.
  - 3-6. "TIME" is the charging time.
  - 3-7. "H" is the time the battery is fully charged.

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## Li-FeP screen



[	L	i	-	F	e	P	]			R	E	A	D	Y
B	T	:		4	8	.	0	V		3	3	0	A	H
V	A	:		0	.	0	V			0	.	0	A	
T	I	M	E	:		0	h	0	0	m			7	H

[Figure 3]

1. Figure 3 shows the Li-FeP charging screen.
2. When the battery is connected, charging starts with a melody sound.
3. To change the set value, go to the SET screen.
4. To go to the SET screen, press MODE for 2 seconds.
5. Press ENT and press MODE; the cursor blinks.



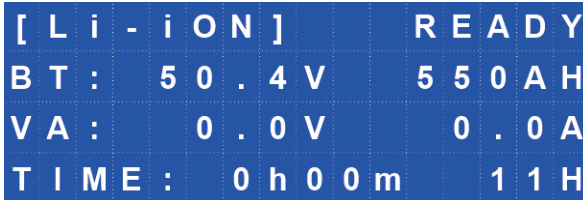
[	L	i	-	F	e	P	]			[	S	E	T	]
V	O	L	T	:		4	8	.	0	V				
	A	H	:			3	3	0	A	H				
C	E	L	L	:	1	5		T	:	7	H			

[Figure 4]

1. Figure 4 is the Li-FeP set screen.
2. Select an item from the list with the MODE button and adjust the set value with the UP or DOWN button.
3. If the AH value is changed, the CELL and TIME values are automatically calculated.
4. VOLT can be changed only by the manufacturer.
5. Press ENT to save the set value.

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## Li-iON screen



[	L	i	-	i	O	N	]			R	E	A	D	Y	
B	T	:		5	0	.	4	V		5	5	0	A	H	
V	A	:		0	.	0	V			0	.	0	A		
T	I	M	E	:		0	h	0	0	m			1	1	H

[Figure 5]

1. Figure 5 is the Li-iON charging screen.
2. When the battery is connected, charging starts with a melody sound.
3. To change the set value, go to the SET screen.
4. To go to the SET screen, press MODE for 2 seconds.
5. Press ENT and press MODE; the cursor blinks.



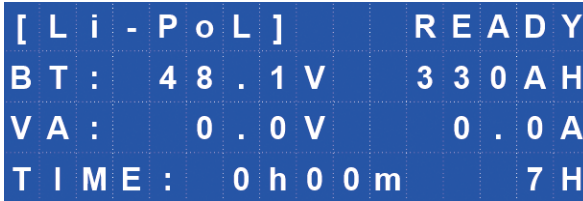
[	L	i	-	i	O	N	]			[	S	E	T	]
V	O	L	T	:		5	0	.	4	V				
A	H	:		5	5	0	A	H						
C	E	L	L	:	1	4	T	:	1	1	H			

[Figure 6]

1. Figure 6 is the Li-iON set screen.
2. Select an item from the list with the MODE button and adjust the set value with the UP or DOWN button.
3. If the AH value is changed, the CELL and TIME values are automatically calculated.
4. VOLT can be changed only by the manufacturer.
5. Press ENT to save the set value.

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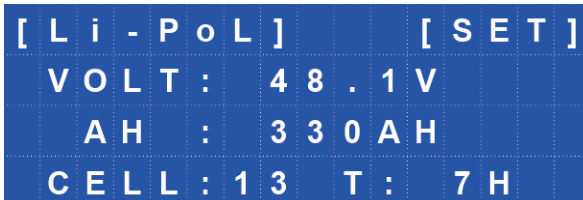
## Li- PoL screen



[	L	i	-	P	o	L	]			R	E	A	D	Y
B	T	:		4	8	.	1	V		3	3	0	A	H
V	A	:		0	.	0	V			0	.	0	A	
T	I	M	E	:		0	h	0	0	m			7	H

[Figure 7]

1. Figure 7 is the Li- PoL charging screen.
2. When the battery is connected, charging starts with a melody sound.
3. To change the set value, go to the SET screen.
4. To go to the SET screen, press MODE for 2 seconds.
5. Press ENT and press MODE; the cursor blinks.



[	L	i	-	P	o	L	]			[	S	E	T	]
V	O	L	T	:		4	8	.	1	V				
	A	H	:			3	3	0	A	H				
C	E	L	L	:	1	3		T	:	7	H			

[Figure 8]

1. Figure 8 is the Li- PoL set screen.
2. Select an item from the list with the MODE button and adjust the set value with the UP or DOWN button.
3. If the AH value is changed, the CELL and TIME values are automatically calculated.
4. VOLT can be changed only by the manufacturer.
5. Press ENT to save the set value.

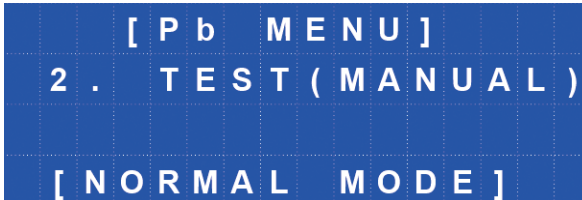
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## Pb menu selecting screen



[Figure 9]

1. Figure 9 shows the Pb charging mode.
2. Press MODE to choose a mode you want.
3. Press ENT to complete the selection and switch to the charging screen.

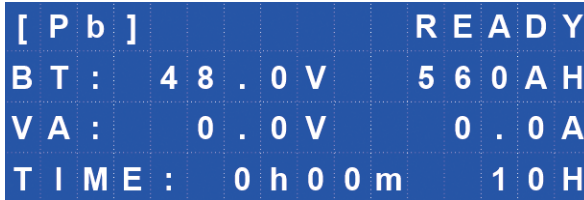


[Figure 10]

1. Figure 10 shows the TEST mode.
2. Press MODE to choose a mode you want.
3. Press ENT to complete the selection and switch to the charging screen.
4. Use the TEST mode for manual charging.

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## Pb screen



[ P b ]						R E A D Y
B T :	4	8	.	0	V	5 6 0 A H
V A :	0	.	0	V		0 . 0 A
T I M E :	0	h	0	0	m	1 0 H

[Figure 11]

1. Figure 7 is the Pb charging screen.
2. When the battery is connected, charging starts with a melody sound.
3. To change the set value, go to the SET screen.
4. Press MODE for 2 seconds to display the Pb menu.
5. Press ENT and press MODE; the cursor blinks.



[ P b ]						[ S E T ]
V O L T :	4	8	.	0	V	
A H :	5	6	0	A	H	
T I M E :	1	0	H	T 1 :	1	H

[Figure 12]

1. Figure 12 is the Pb set screen.
2. Select an item from the list with the MODE button and adjust the set value with the UP or DOWN button.
3. The user can change AH (capacity), and for TIME and T1, contact the retailer.
4. VOLT (voltage) can be changed only by the manufacturer.
5. Press ENT to save the set value.

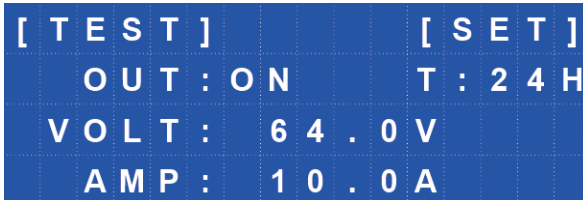
# User Manual

## Pb menu selecting screen



[Figure 13]

1. Figure 13 is the TEST set screen.
2. OUT, VOLT, AMP, and T can be changed.
3. Press ENT and press MODE; the cursor blinks.



[Figure 14]

1. Figure 14 is the TEST set screen.
2. Select an item from the list with the MODE button and adjust the set value with the UP or DOWN button.
3. Set OUT to ON to operate.
5. Press ENT to save the set value.



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## Alarm screen

<b>A L A R M</b>		<b>T e m p .</b>	
<b>B T :</b>	<b>4 8 . 0 V</b>	<b>5 0 0 A H</b>	
<b>V A :</b>	<b>4 8 . 2 V</b>	<b>5 9 . 0 A</b>	
<b>T I M E :</b>	<b>0 h 0 0 m</b>	<b>6 H</b>	

[Figure 17]

1. Fig. 17 shows the alarm screen.
2. It is the alarm for the temperature. Charging stops.
3. The temperature inside the charger is overheated.
4. The alarm sounds.

<b>A L A R M</b>		<b>F A N</b>	
<b>B T :</b>	<b>4 8 . 0 V</b>	<b>5 0 0 A H</b>	
<b>V A :</b>	<b>4 8 . 2 V</b>	<b>5 9 . 0 A</b>	
<b>T I M E :</b>	<b>0 h 0 0 m</b>	<b>6 H</b>	

[Figure 18]

1. Fig. 18 shows the alarm screen.
2. It is the alarm for the fan inside the charger. Charging stops.
3. The alarm sounds.

# User Manual

## Alarm screen

<b>A L A R M</b>		<b>P h a s e</b>	
<b>B T :</b>	<b>4 8 . 0 V</b>	<b>5 0 0 A H</b>	
<b>V A :</b>	<b>4 8 . 2 V</b>	<b>5 9 . 0 A</b>	
<b>T I M E :</b>	<b>0 h 0 0 m</b>	<b>6 H</b>	

[Figure 19]

1. Fig. 19 shows the alarm screen.
2. It is the alarm for the phase. Charging stops.
3. There is a problem inside the charger.
4. The alarm sounds.

<b>A L A R M</b>		<b>M i s m a t c h</b>	
<b>B T :</b>	<b>4 8 . 0 V</b>	<b>5 0 0 A H</b>	
<b>V A :</b>	<b>4 8 . 2 V</b>	<b>5 9 . 0 A</b>	
<b>T I M E :</b>	<b>0 h 0 0 m</b>	<b>6 H</b>	

[Figure 20]

1. Fig. 20 shows the alarm screen.
2. It occurs when the detected battery voltage is different from the set voltage 1.5 times or more. Charging stops.
3. The alarm sounds.

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## Alarm screen

<b>A</b>	<b>L</b>	<b>A</b>	<b>R</b>	<b>M</b>		<b>L</b>	<b>o</b>	<b>w</b>	<b>V</b>		
<b>B</b>	<b>T</b>	<b>:</b>	<b>4</b>	<b>8</b>	<b>.</b>	<b>0</b>	<b>V</b>		<b>5</b>	<b>0</b>	<b>0</b>
<b>V</b>	<b>A</b>	<b>:</b>	<b>4</b>	<b>8</b>	<b>.</b>	<b>2</b>	<b>V</b>		<b>5</b>	<b>9</b>	<b>.</b>
<b>T</b>	<b>I</b>	<b>M</b>	<b>E</b>	<b>:</b>	<b>0</b>	<b>h</b>	<b>0</b>	<b>0</b>	<b>m</b>		<b>6</b>
											<b>H</b>

[Figure 21]

1. Fig. 21 shows the alarm screen.
2. It occurs when the detected battery voltage is low at the start of charging.
3. Charging stops. Charge manually. The alarm sounds.

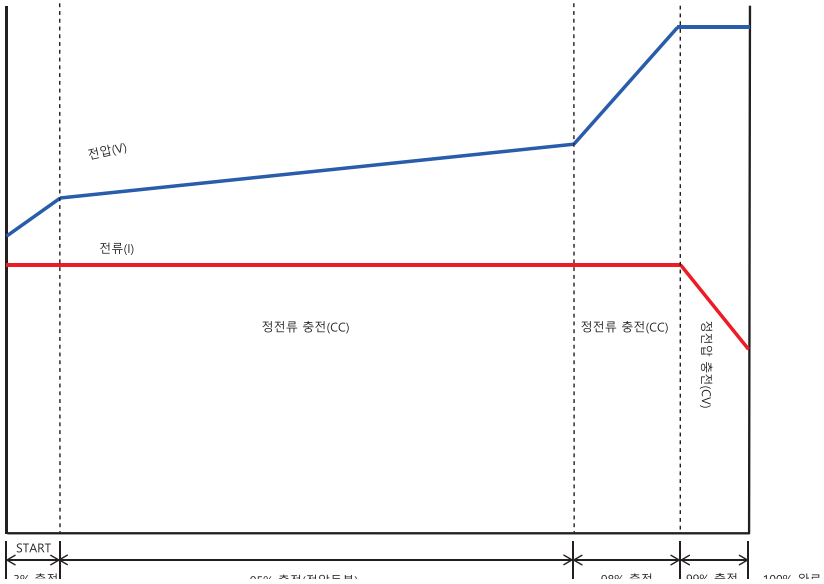
<b>A</b>	<b>L</b>	<b>A</b>	<b>R</b>	<b>M</b>		<b>L</b>	<b>o</b>	<b>w</b>	<b>A</b>		
<b>B</b>	<b>T</b>	<b>:</b>	<b>4</b>	<b>8</b>	<b>.</b>	<b>0</b>	<b>V</b>		<b>5</b>	<b>0</b>	<b>0</b>
<b>V</b>	<b>A</b>	<b>:</b>	<b>4</b>	<b>8</b>	<b>.</b>	<b>2</b>	<b>V</b>		<b>5</b>	<b>9</b>	<b>.</b>
<b>T</b>	<b>I</b>	<b>M</b>	<b>E</b>	<b>:</b>	<b>0</b>	<b>h</b>	<b>0</b>	<b>0</b>	<b>m</b>		<b>6</b>
											<b>H</b>

[Figure 22]

1. Fig. 22 shows the alarm screen.
2. It occurs when there is no current flowing at the start of charging.
3. Charge manually.
4. The alarm sounds

# User Manual

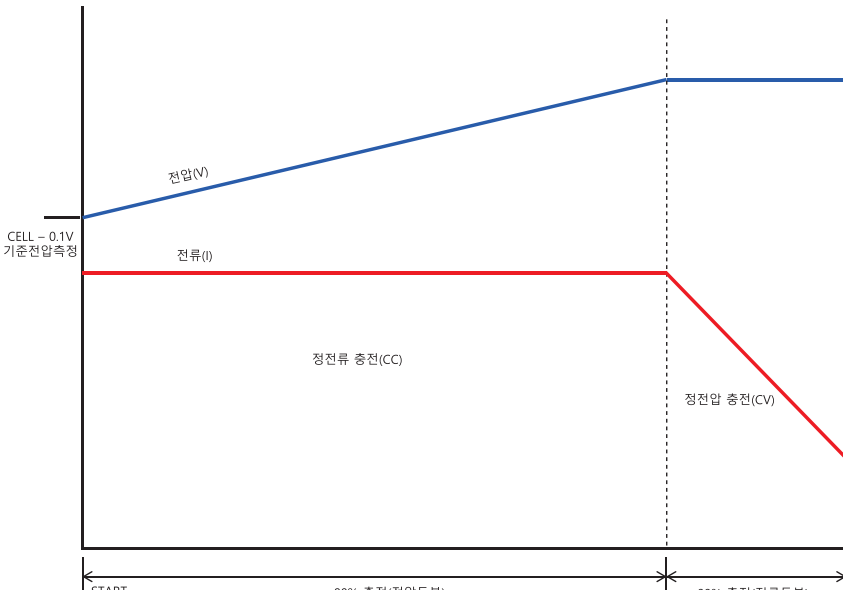
## Battery charging graph



[Li-FeP charging graph]

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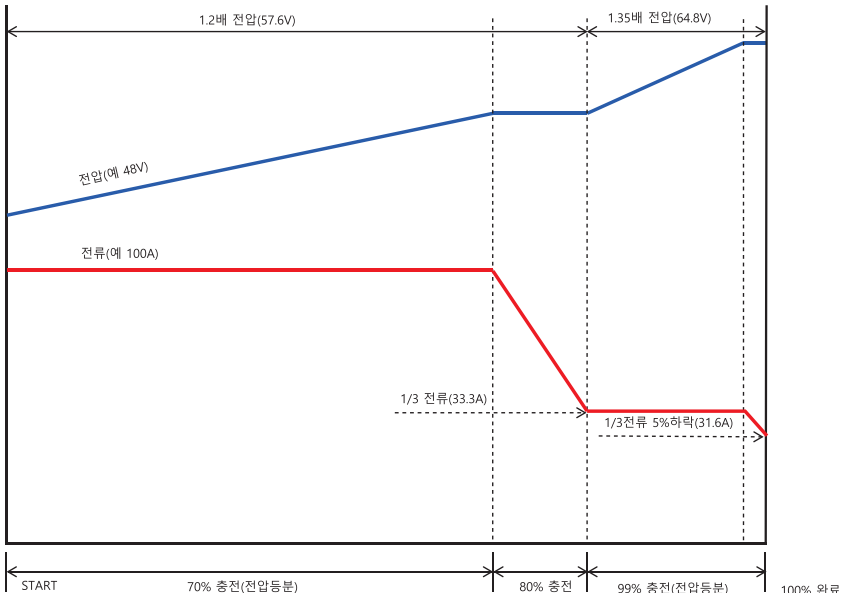
## Battery charging graph



[Li-iON and PoL charging graph]

# User Manual

## Battery charging graph



[Pb charging graph]

# User Manual

## Safety Regulations

- 1) When using the charger, be sure to use a separate circuit breaker with a power capacity of at least 16A.
- 2) Never use in places with high humidity.
- 3) Store in a cool and dry place.
- 4) During operation, try not to disconnect the input power cord from the main power source.
- 5) When stopping charging during operation, first disconnect the wire connected to the battery, then disconnect the input power cord.
- 6) Do not use in places with a lot of dust and debris.
- 7) Do not use in places with high heat, direct sunlight, or flammable materials.

## Precautions Before Use

- 1) Be sure to read the user manual before use.
- 2) Check the condition of the connector connected to the battery and the wiring connection status.
- 3) Check the connection status of the input power cord.
- 4) Do not use with defective batteries.
- 5) Use single-phase 220V input power voltage.

## Common User Guidelines

- 1) Caution: This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- 2) If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- 3) The charger requires cleaning with compressed air as part of weekly and monthly inspections.  
(Absolutely no cleaning with water)



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