HEBS2 Logger

User Guide

HiTRONIC™

Hanwha

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Wireless Blaster

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Logger Component

① **Logger**

② **Charging adapter**

II. Logger Specification

Logger Component

Appearance	
Dimension	186mm x 79mm x 39mm
Maximum Detonator Capacity	500ea
Maximum Lead in Wire	1,000m
Frequency Band	Bluetooth LE : 2400 ~ 2483.5MHz
Output Power	Bluetooth : Typical 4dBm
Display	1.54 inch Display
Battery	Li-ion Rechargeable
Water Resistance	IP65 (Splash proof)
Weight	Max 0.4kg
Operating Temperature	-20 to +60℃
Storage/Transport Temperature	-30 to +70℃

Usage Instructions

HiTRONIC^{TM} Wireless Blasting System can only be used with *HiTRONIC*^{TM} Electronic Detonator.

HiTRONIC^{TM} Wireless Blasting System equipment can be safely operated at temperature ranging from -20℃ ~ +60℃. However, when to charge equipment, it is recommended to charge at temperature ranging from 0℃ ~ +45℃

HiTRONIC^{TM} Wireless Blasting System equipment should be installed where Line of Sight between remote control area and blast area is secured. If Line of Sight is not secured due to obstacles, it is recommended to use repeater.

The communication performance of wireless antenna can be degraded if contacted with hand/body or covered with metallic substances. Check that the wireless antenna is securely attached to equipment before operating. Be aware of damage of wireless antenna when excessive force is applied.

Safety

HiTRONIC^{TM} Wireless Blasting System equipment is designed to provide high level of safety against static electricity, stray electrical currents and radio wave transmission. *HiTRONIC*^{TM} Wireless Blasting System equipment must be kept safe from submersion in water and excessive impact.

Storage

HiTRONIC^{TM} Wireless Blasting System equipment is recommended to store in cool and dry atmosphere. In order to store for longer term, charge battery of equipment at level ranging from 50~80 and store at cool atmosphere.

III. Equipment Instructions (Interface)

Interface

1) Binding Post : Connect detonators

2) Tagging connector : Connect detonators

3) Power LED : Power status LED

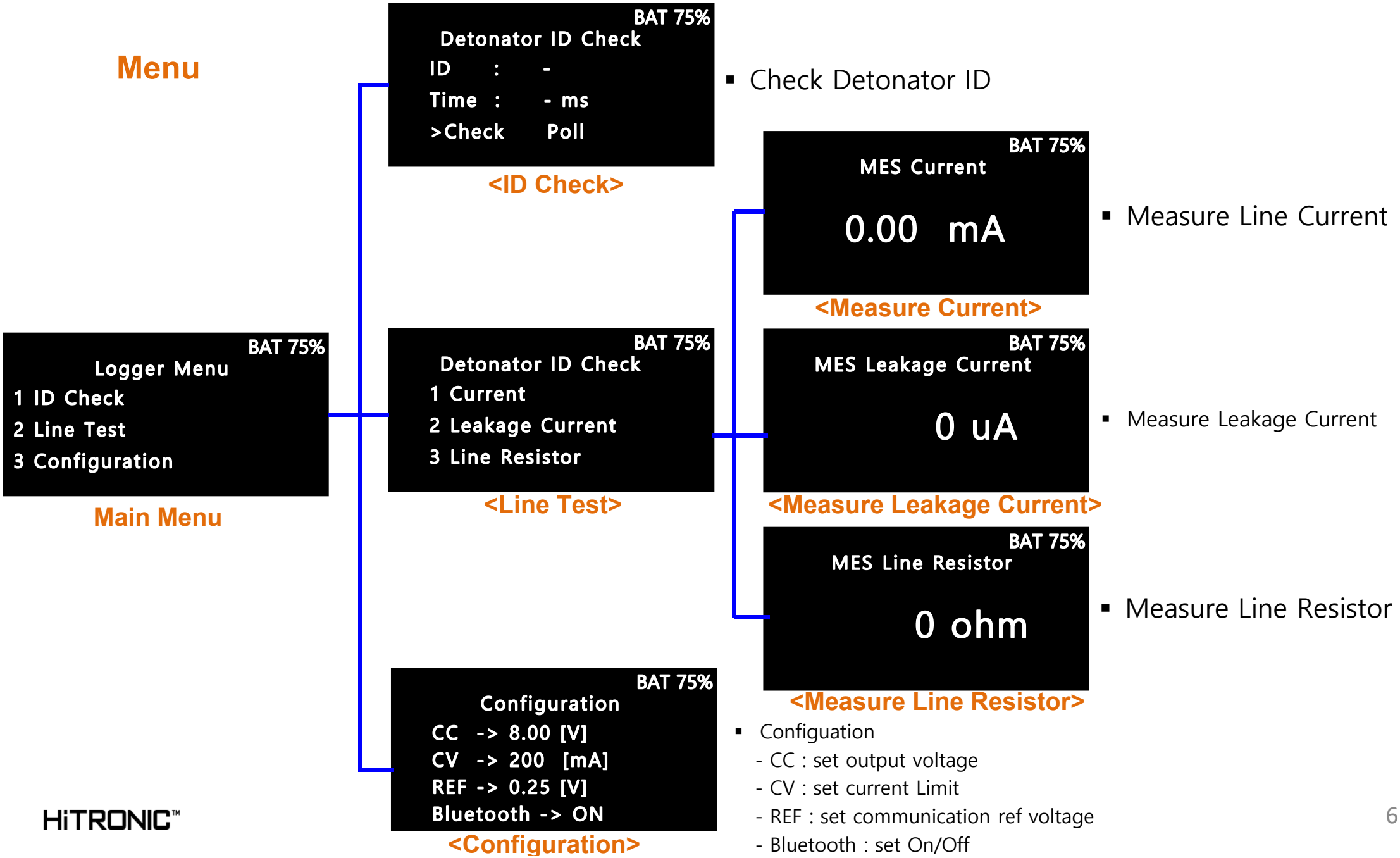
4) BT status LED : Bluetooth status LED

5) Display : Menu display

6) Button : UP/DOWN/BACK/OK key

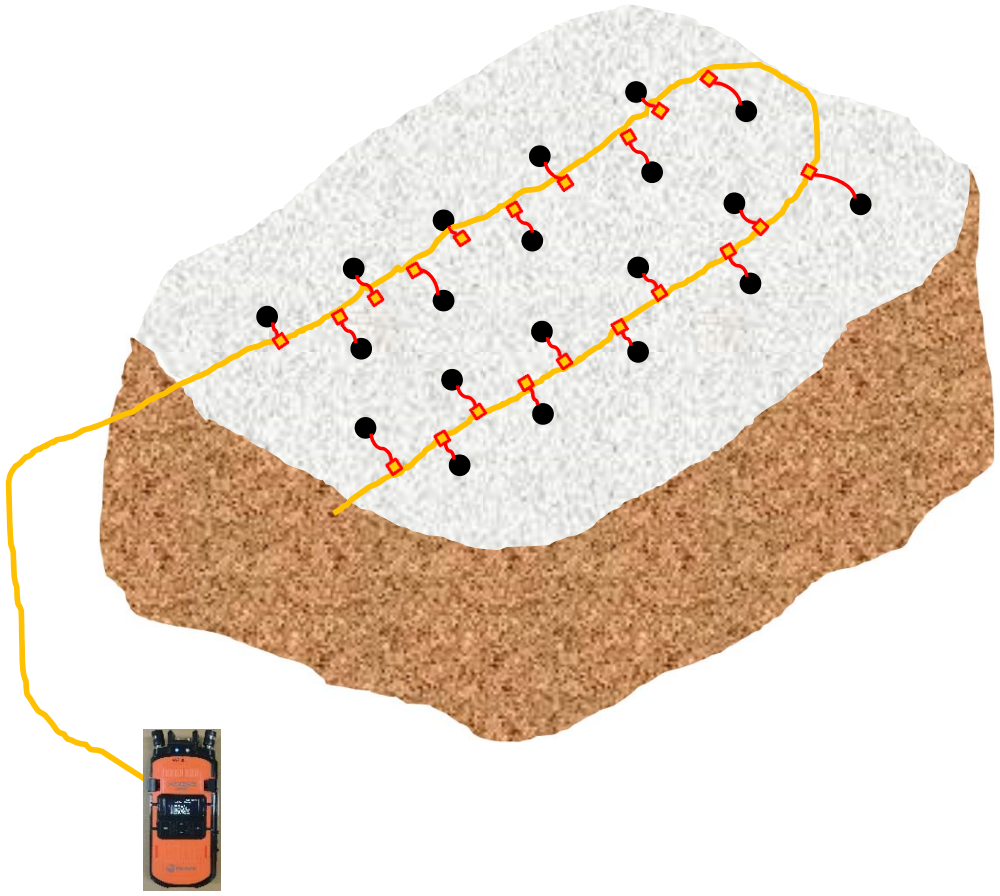
7) USB-C : Charging Only

III. Equipment Instructions (MENU)



VI. Operation Method

How to Connect (Open pit mine)



① Loading holes (No delay time yet)

② Hook-up based on the detonating order

③ Conduct of circuit test using Network Tester

④ Firing the shot if protective work is not necessary or already completed

VI. Operation Method

Number of Detonators and Connecting Wire Resistance

- **When :** If Connecting Wire resistance is too high, communication may not work or misfire could occur.
- **Solution :** Adhere to the below table of Connecting Wire resistance per number of detonators.

Number of Detonators (EA)	Harness Wire Resistance (Ω)
100	**203**
200	**101**
300	**68**
400	**51**
500	**41**
600	**34**
700	**29**
800	**25**
900	**23**
1000	**20**

※ Contact the maintenance if it is difficult to determine the possibility of detonation.

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION:

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC NOTE:

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment