

HEBS2 Blaster

User Guide

HiTRONIC™

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HEBS2 Blaster

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I. Blaster Component

Blaster Component



① Blaster

② Charging adapter



II. Blaster Specification

Blaster Component

Appearance	
Dimension	240mm x 187mm x 52mm
Maximum Detonator Capacity	3000ea
Maximum Lead in Wire	1,000m
Frequency Band	RF: 902~930MHz (Country specific regulation applies) Bluetooth EDR: 2402 ~ 2480MHz RFID/NFC : 13.56MHz
Output Power	RF : Typical 11.50dBm Bluetooth : Typical 4.00dBm
Display	7 inch Display
Battery	Li-ion Rechargeable
Water Resistance	IP65 (Splash proof)
Weight	Max 1.4kg
Operating Temperature	-20 to +60°C
Storage/Transport Temperature	-30 to +70°C

Usage Instructions

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

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

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

Storage

HiTRONIC™ 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.

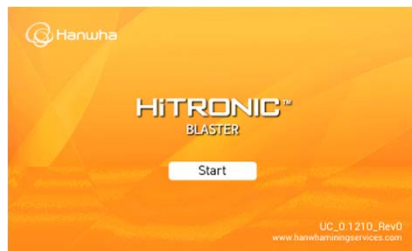
III. Equipment Instructions (Interface)

Interface



- | | |
|------------------------|--|
| 1) Binding Post | : Connect detonators |
| 2) RF Antenna | :
: Unfold when longer radio range required. |
| 3) Power LED | : Power status LED |
| 4) L,R Button | :
: Left, Right buttons are used in blasting sequence, with LED indicator. |
| 5) Power Button | : Turn on/off the device. |
| 6) Screen | :
: Displays various information, offers touch interface for user control. |
| 7) USB-C | :
: Charging port. Does not offer USB communication. Use USB-PD charger which is offered with the device. |
| 8) RFID/NFC | :
: User can use RFID/NFC tagging for additional security authorizing method of Blasting sequence. |

III. Equipment Instructions (MENU)



Intro

- Tap 'Start' button

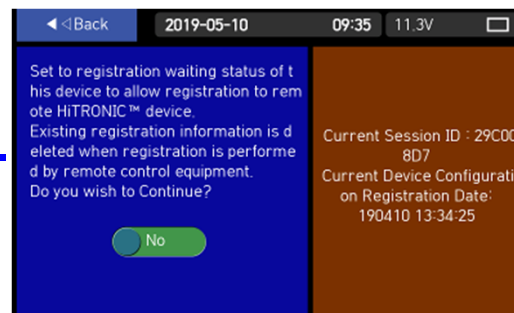


General Settings

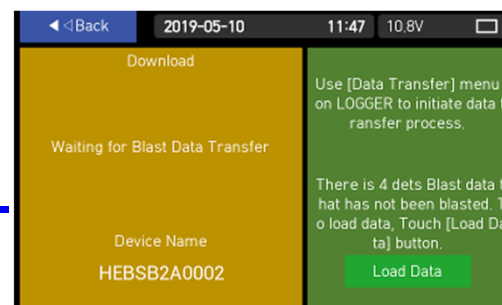


Main Menu

- Select desired function



Blast Configuration

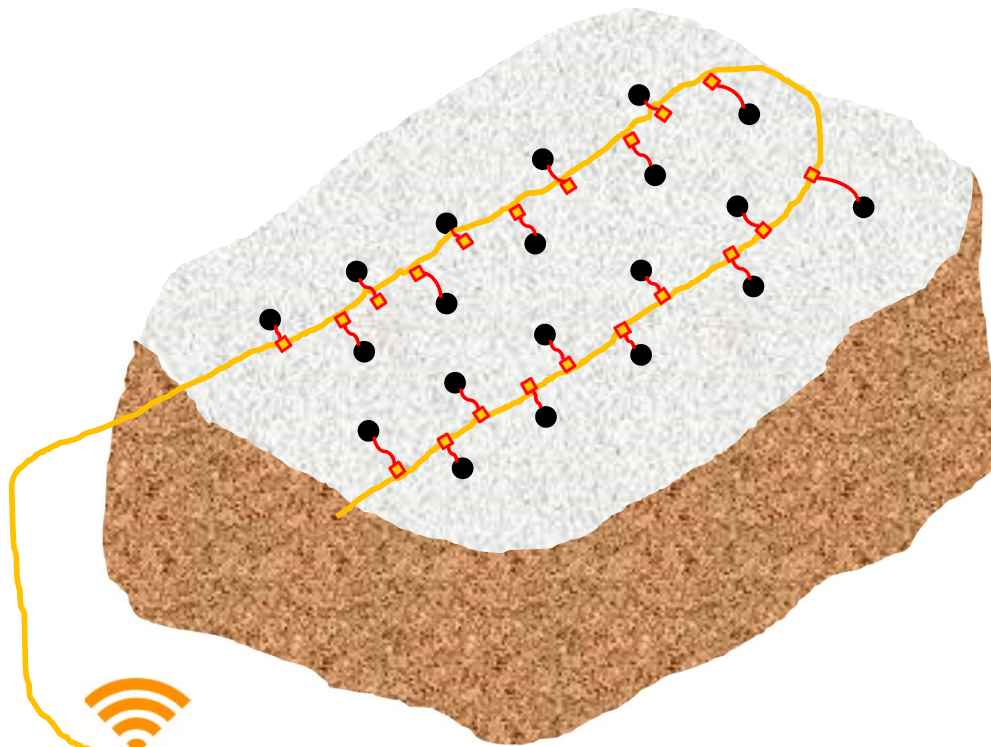


Start Blast

- Screen Saving Time : Set screen dimming
- Language : Select UI language
- System Time Setting : Adjust system time
- Change Password : Change system password
- Blaster & Repeater Mode : In this mode, the device waits for pairing request signal from Remote device.
- Remote Mode : Perform scanning for search nearby Blasters and Repeaters to pair.
 - Found devices will be listed, tap each device list to pair it.
 - Passkey will be required.
The key is showed on other side device.
- Blaster Mode : Downloading Blast plan, and choose mode between Wireless and Direct blast.
- Repeater Mode : Waits for signals.
- Remote Mode : Start Wireless blasting sequence.

IV. Operation Method

Connecting (Open pit mine)



Blaster

- ① Loading holes (No delay time yet)
- ② Hook-up detonators on harness wire (trunk wire) by the detonating order.
- ③ Connect the harness wire to Logger, run circuit test on the Logger.
- ④ Transfer Blast plan from HiPlanner to Blaster
- ⑤ When blasting site is secured and ready for blast, progress blast sequence on blaster or remote via wireless.
- ⑥ Fire when ready.
- ⑦ Waiting for at least 5 minutes for safety.



Repeater (optional)



**Remote
(Wireless Blasting)**

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

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

IMPORTANT NOTE: FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.