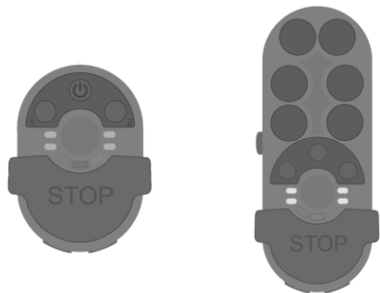


SAFETY INFORMATION SHEET

TRANSMITTERS

GENERAL INFORMATION

Transmitters - E-CH-FUL , E-BH-FUL



About ComHAND | BabHAND | SecurHAND systems

The product range is composed of transmitters and receivers intended for use together as a system in complex lifting applications such as cranes, OHT cranes and electric hoists or mobile applications.

ABOUT E-CH-FUL/E-BH-FUL TRANSMITTERS

T9/T11 transmitters are compatible with all R-BP-FUL and R-BS-FUL receivers within the same frequency range.

OVERVIEW OF THE AVAILABLE MODELS

Model	Step buttons transmitters Number of buttons		Frequency
	4 + 1 connect	10 + 1 connect	2.4 Ghz
E-CH-FUL	●		●
E-BH-FUL		●	●

● Standard

About this document

Every care has been taken in the preparation of this document. Please inform SPARKFLOW of any inaccuracies or omissions. This document covers general safety issues, main technical specifications, guarantee, service and maintenance, battery and regulatory information. For more information, please refer to the Technical instructions for installation and use. Images shown in this document are for illustrative purposes only.

Warnings & restrictions



Carefully read through the following safety instructions before proceeding with the installation, configuration, operation, or maintenance of the product. Failure to follow these warnings could result in death or serious injury.

This product must not be operated without having read and understood the Safety information sheet and having received the appropriate training. The purchaser of this product has been instructed how to handle the system safely. The following information is intended for use as a complement to applicable local regulations and standards.

IMPORTANT! The remote controls are often built into wider applications. These systems should be equipped with:

- a wired emergency stop where necessary
- a brake
- an audible or visual warning signal

INSTALLATION AND COMMISSIONING

IMPORTANT! Only licensed or qualified personnel should be permitted to install the product.



This radio system must not be used in areas where there is a risk of explosion.



Always switch off all electrical power from the equipment before installation procedure.



To utilize the safety features of the system, use the stop relays in the safety circuitry of the object/ equipment to be controlled.



When the equipment controlled by the receiver's standard relays is connected via the stop relays, make sure that the maximum current through the stop relays is still within the specifications. Contact your representative for assistance.



RISK OF UNINTENDED EQUIPMENT OPERATION

Only transmitters that are intended for use should be registered in the receiver.
Failure to follow these instructions could result in death, serious injury, or equipment damage.

OPERATION



This equipment is not suitable for use in locations where children are likely to be present.



Only qualified personnel should be permitted to access the transmitter and operate the equipment.



- Make sure that the user satisfies the age requirements in your country for operating the equipment.
- Make sure that the user is not under the influence of drugs, alcohol and medications.
- Make sure that the user knows and follows operating and maintenance instructions as well as all applicable safety procedures and requirements.

The user should:



- Always test the transmitter stop button before operating it. This test should be done on each shift, without a load.
- Never use a transmitter if the stop button is mechanically damaged. Contact your supervisor or representative for service immediately.
- Never leave the transmitter unattended.
- Always switch the transmitter off when not in use. Store in a safe place.
- Keep a clear view of the work area at all times.

MAINTENANCE



Before maintenance intervention on any remote controlled equipments:

- always remove all electrical power from the equipment.
- always follow lockout procedures.

- Keep the safety information for future reference.
- If error messages are shown, it is very important to find out what caused them. Contact your representative for help.
- The functionality of the stop button should be tested at least after every 200 hours' use.
- If the stop button is mechanically damaged, do not use the transmitter. Contact your supervisor or representative for service immediately.
- Keep the product in a clean, dry place.
- Keep contacts and antennas clean.
- Wipe off dust using a clean, slightly damp cloth.
- Never use cleaning solutions.
- Check the encapsulation, foils and cable for damages. If the encapsulation or foil is damaged, moisture can cause serious damage to the electronics.

SAFETY INFORMATION SHEET

TRANSMITTERS

Regulatory information

NOTE: Models including additional naming conventions:

Model	Article names	Additional naming conventions
ComHAND	E-CH-FUL, E-SH	SecurHAND
BabHAND	E-BH-FUL	

EUROPE

Applies to: ComHAND, BabHAND

CE MARKING



Hereby, Sparkflow, declares that the product(s) listed above is/are in compliance with the Radio Equipment Directive 2014/53/EU.

The latest version of the complete EU Declaration of Conformity is available at Technical instructions for installation and use

WEEE DIRECTIVE



This symbol means that inoperative electrical and electronic products must not be mixed with household waste. The European Union has implemented a collection and recycling system for which producers are responsible. For proper treatment, recovery and recycling, please take this product to a designated collection point.

NORTH AMERICA

Applies to: ComHAND, BabHAND

FCC AND IC STATEMENTS

FCC: This product is in compliance 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

IC: This product is in compliance with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of device.

FCC/IC LABEL PLACEMENT

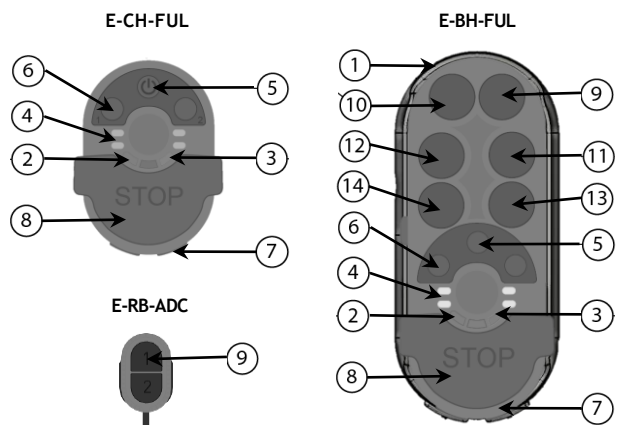
The FCC/IC label is placed on the radio module. The radio module is mounted inside the transmitter.

"Contains FCC ID: X8WBT840F"

"Contains IC: 4166A-TR2400MCX"

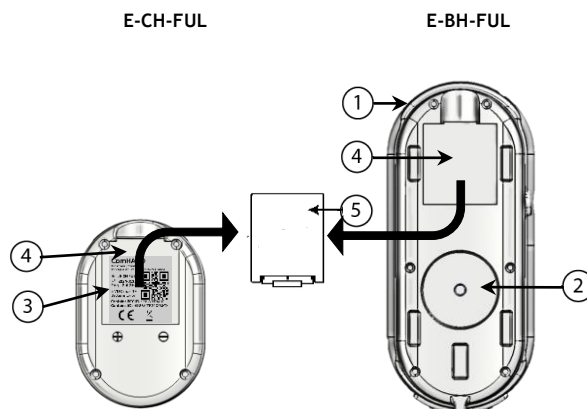
PRODUCT DESCRIPTION

Transmitter front



- | | | |
|------------------------|---------------------|---------------------|
| 1. Rubber cover | 6. Button 1 & 2 | 11. 2-step Button 3 |
| 2. Battery Red LED | 7. Button 3 & 4 | 12. 2-step Button 4 |
| 3. Connection Blue LED | 8. Stop button | 13. 2-step Button 5 |
| 4. Buttons LEDs | 9. 2-step button 1 | 14. 2-step Button 6 |
| 5. Start button | 10. 2-step button 2 | |

Transmitter back

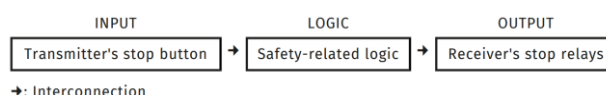


- | | |
|------------------|------------------------|
| 1. Rubber cover | 4. Battery compartment |
| 2. Magnet | 5. Replaceable battery |
| 3. Product label | |

Functionnal Safety

The safety-related stop function in the radio system complies with EN 61508 SIL 2 (equivalent to EN 13849-1:2015 PLd category 3). The stop relays on the receiver unit are controlled by the stop button on the transmitter unit. When the stop button is pressed, the stop relays interrupt the power to the safety-related application. The complete end-user system, including the radio system, enters a safe state. The maximum response time for the safety-related stop function is 500 ms.

The radio system comprises one SRP/CS, including the stop button (input), the stop relays (output) and the safety-related logic maintaining the stop function (logic). The interfaces to the SRP/CS are the stop button (as controlled by the operator) and the stop relays.



SAFETY INFORMATION SHEET

TRANSMITTERS

TECHNICAL DATA

Transmitter specifications

	E-CH-FUL	E-BH-FUL
Number of buttons	5 x buttons 2 x 2-step buttons (E-RB-ADC)	5 x buttons 6 x 2-step buttons
Power supply	Internal, rechargeable lithium-ion Replaceable, rechargeable lithium-ion	
Radio communication	Simplex (default), support for duplex	
Radio frequency band (GHz)	2.4	
Frequency management	Direct Sequence Spread Spectrum (DSSS)	
Number of channels	36 using automatic frequency selection	
Radio frequency output power	7 mW in 2.4 GHz band	
Operating time (with continuous usage)	Approximately 24 h	
IP code	IP66	
Operating temperature	-20...+50 °C / -4...+130 °F	
Charging temperature	+10...+35 °C / +50...+95 °F	
Safety levels	EN 61508, SIL 2 (equivalent EN ISO 13849-1, CAT3 PLd)	
Dimensions (LxWxH)	160 x 76 x 37 mm / 6.3 x 3 x 1.4 in	210 x 76 x 37 mm / 8.2 x 3 x 1.4 in
Weight	150 g / 0.3 lbs	300 g / 0.6 lbs

BATTERY PRECAUTIONS

IMPORTANT! Carefully read through the following safety instructions and warnings before using, charging or disposing of the batteries.



Batteries contain flammable substances such as lithium or other organic solvents, which may result in overheating, rupture or combustion. Failure to read and follow the below instructions may result in fire, personal injury and damage to property if charged or used improperly.

Handling and storage

- Risk of explosion if battery is replaced with a battery of an incorrect type.
- Do not short circuit, disassemble, deform or heat batteries.
- Never attempt to charge a visibly damaged or frozen battery.
- Do not use or charge the battery if it appears to be leaking, deformed or damaged in any way.
- Do not solder directly onto batteries.
- Do not leave the battery in the charger once it is fully charged.
- Store in a cool location. Keep batteries away from direct sunlight, high temperature, and high humidity.
- Immediately discontinue use of the battery if, while using, charging, or storing the battery, the battery emits an unusual smell, feels hot, changes color, changes shape, or appears abnormal in any other way.
- Keep batteries out of reach of small children. Should a child swallow a battery, consult a physician immediately.



Disposal

When discarding batteries, insulate the + and - terminals of batteries with insulating/ masking tape.



- Do not place multiple batteries in the same plastic bag.
- Do not incinerate or dispose of batteries in fire.
- Do not place used batteries in the household waste. Dispose of used batteries in accordance with the applicable regulations and legal requirements.
- Batteries that have been disposed of incorrectly may short circuit, causing them to become hot, burst or ignite.

Battery information

NOTE: Only batteries approved by Sparkflow should be used in E-CH-FUL & E-BH-FUL transmitters.

NOTE: When the battery capacity reaches approximately 10 %, the top LED lights red. Battery level is indicated with the 4 leds (Point 4 on p2)

	E-CH-FUL	E-BH-FUL
Type of battery	Internal, rechargeable lithium-ion battery - Replaceable, rechargeable lithium-ion battery	
Article number	E-XX-BAT	
Operating time	~ 24 h with continuous usage	
Charge	Charger unit with the external battery	
Article number	E-XX-CHG	
Charging time	Approximately 4 hours with an empty battery	
Charging temperature	+10...+35 °C / +50...+95 °F	
Storage temperature	-20...+55 °C / -4...+130 °F	

WARRANTY, SERVICE, REPAIRS, AND MAINTENANCE

Products are covered by a warranty against material, construction and manufacturing faults. During the warranty period, we may replace the product or faulty parts. Work under warranty must be performed by Sparkflow or by an authorized service center specified by Sparkflow.

The following are not covered by the warranty:

- Faults resulting from normal wear and tear
- Parts of a consumable nature
- Products that have been subject to unauthorized modifications
- Faults resulting from incorrect installation and use
- Damp and water damage

Maintenance

- Repairs and maintenance must be performed by qualified personnel
- Only use spare parts from Sparkflow
- Contact your representative for service or any other assistance
- Keep the product in a clean, dry place
- Keep contacts and antennas clean
- Wipe off dust using a slightly damp, clean cloth

NOTE: Never use cleaning solutions or high-pressure washer.



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¹Must be purchased separately.