

Chronelec
Timing Systems



ETERNY TIME



USER MANUAL

www.ernitytime.com



made in France

Chronelec RF DECODER

Version 08.2018



Thank you for purchasing the Chronelec RF Timing system. For the best performance, we recommend that you read the manual carefully.

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The documentation provided will allow you to fully enjoy all the features this unit has to offer. Please save this manual for future reference

1. Description

a) The Decoder

The Decoder is an IP68 Waterproof box. The Data and power supply cable is protected with an IP68 cable gland. The decoder can work on 868MHz and 915MHz (factory setting only) and use 4 secured channels to receive the datas. Another one to send acknowledge to the RF or RF-S transponder. Each RF transponder sends out a unique signal to the wireless Chronelec RF decoder with the loop ID up to 40m.

8 active and programmable track loops can be linked to a single decoder. Activation of the transponder up to 3m (10 feet) and 220km/h (137 mph) with a precision of 1/1000 of a second! Transponder number and frequency range (868MHz or 915MHz) can be reprogrammed by wireless (devices need to be sent back to factory for reprogramming)

Front view

Several transmitting and receiving antenna are built in. Do not cover the casing with metallic, carbon or wave reflecting components or structure (gantry etc.)

Do not clean the casing with Alcohol such as Isopropanol or others as they are extremely damaging to the plastic

4 secured RX channels to get the data directly from the transponder

1 secured TX channel to return acknowledgement to transponder



Bottom view



- 1) RJ45 Socket** IP68 (waterproof) socket
Direct connection to the connection box (see 1.b)
ONLY USE PATCH CABLE eg. straight-through Ethernet wire
- 2) MAN**
Manual Input 2.5mm Mono Jack socket
Potential free contact / Dry contact normally open
- 3) AUDIO**
2.5mm Mono Speaker Jack socket
- 4) Led status lights**
Power ON / Detection signal
- 5) BNC Female socket**
Active loop socket with power (no data)

a) The connection box

This connection box includes the PoE (power over ethernet) to power the decoder.

ONLY USE PATCH CABLE eg. straight-through wiring
ONLY USE OEM CHRONELEC or ETERNYTIME Power supply



- 1) RJ45 Socket** IP68 (waterproof) socket with cable gland
Direct connection to the Decoder (see bottom view of the decoder)
ONLY USE PATCH CABLE eg. straight-through wiring

2) MAN

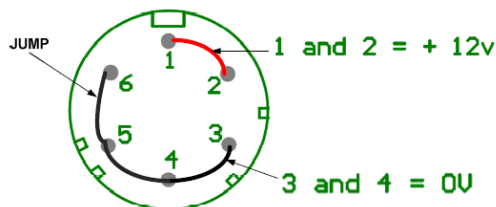
Manual Input 2.5mm Mono Jack socket
Potential free contact / Dry contact normally open

3) AUDIO

2.5mm Mono Speaker Jack socket

4) Power supply connector

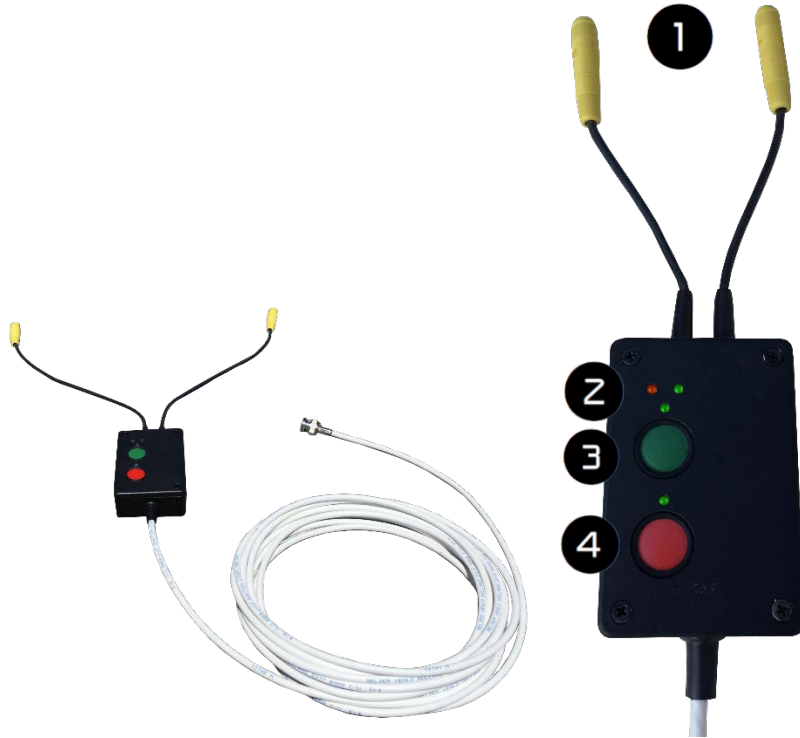
Direct Power ON / Immediately ready to use



5) PC Connection

RJ45 Ethernet connection (**Default IP: 192.168.0.10**)

b) The Activating loop (Active loop, Art. Nr. CBACRF)




1) Laboratory style 4mm Banana sockets

Connection to loop/ground antenna

Recommended section 0.5 to 0.75mm²
Max length: 35m

2) Led status

Programming mode active →  → Power ON led
→ Loop ID status

3) LOOP ID

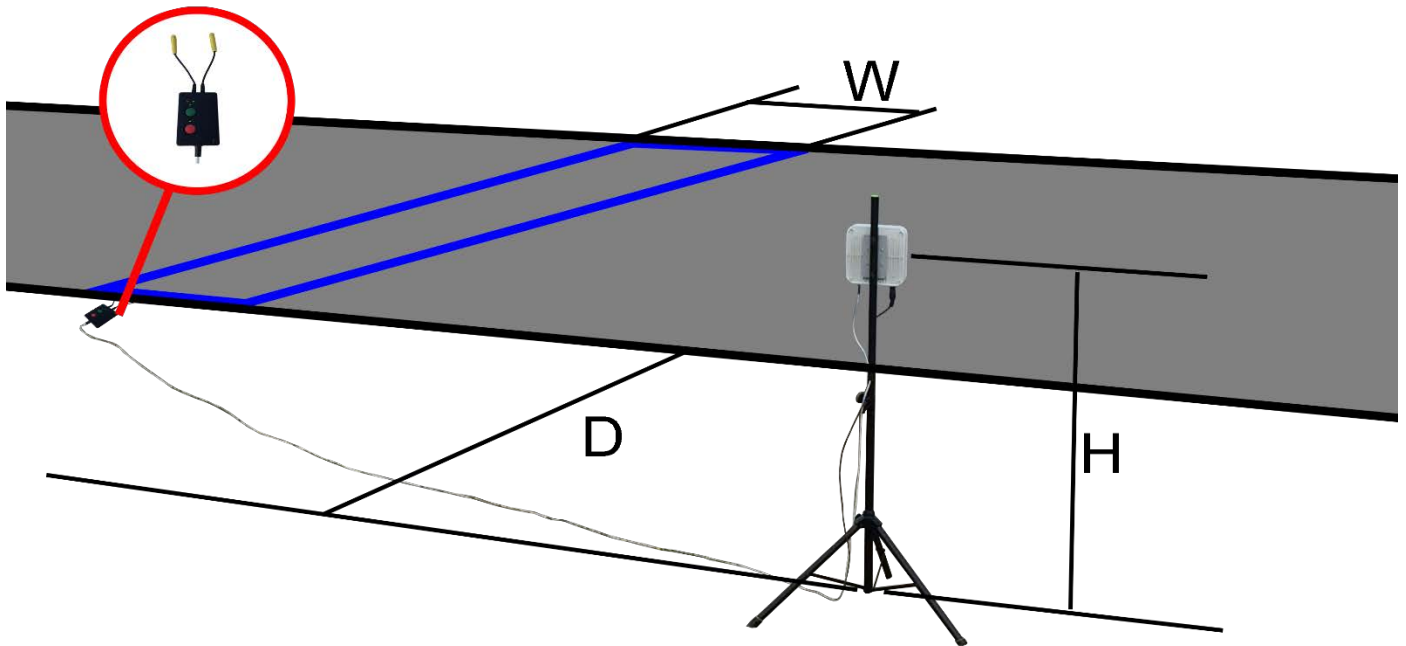
The loop can be programmed into 8 different ID to identify the passing location in the software (STA, BOX, B01 etc.)

In order to set or check loop ID, see point 3. b)

4) LOOP POWER

The loop can be set into 5 different power modes to change activating power or improve accuracy. To set or check loop power mode, see point 3. b)

1. Installation



D (Track distance)

We recommend placing the antenna at least 1 meter off the track.
The maximum distance between antenna and loop is 40 meters.
Up to 8 loops can be linked to a single decoder (see loop ID setting)

H (Antenna height)

Never place the antenna below the transponder mounting height.
The antenna can be mounted at same height or higher (for example wall mounted on a building in case of a permanent installation)

W (Loop width)

Recommended loop width is between 60cm and 100cm. If you need a higher activation field, you can extend the distance between 2 wires (but you will lose accuracy). Some application could use the activating loop side mounted (wood frame etc.), in this case respect the minimum antenna wire length of 12 meters.

Antenna wire (Loop) -----

Recommended wire section: 0.5mm² to 0.75mm² (max 1mm²)

No termination resistor

If an existing termination resistor is existing on the antenna, you will need to replace wire or short/jump the resistor.

2. Setup

a) Waterproof cable gland assembly

- 1) Decoder / Cable Gland base Joint
- 2) inner gland (half)
- 3) outer gland (half)
- 4) split sealing grommet



STEP 1

Slide the Ethernet cable through the outer gland half and place the split sealing grommet on the cable



STEP 2

Slide the split sealing grommet into the inner gland half and place the joint before connecting the ethernet cable on the decoder



FINAL STEP



Screw the first inner gland onto the decoder by hand (don't use tools) and then screw the second part in order to have a waterproof connection.

b) The Activating loop (Active loop Art. Nr. CBACRF)

The loop should be powered in order to change settings



Green button – Loop ID: Press and maintain until the red led lights on.
Programming mode is active.

The loop ID led will blink 8 times, one for each ID number ex:

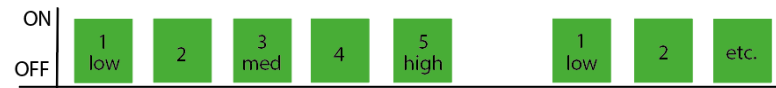


Release the button after the selected ID blinks.

Setting is stored even after power off

Red button – Loop power: Press and maintain until the red led lights on.
Programming mode is active.

The power setting ID led will blink 5 times, one for low, 5 for high ex:



Release the button after the selected power setting.

Setting is stored even after power off

The status led lights will blink continuously and indicate the actual settings of the loop.



For a remote loop installation (up to 40m) the Loop power box (Art. Nr. XXXX) can be used.

3. Warranty

- a. Subject to Eternitytime Terms of Service, Eternitytime warrants all hardware products and accessories contained in the original packaging with a Eternitytime or Chronelec trademark or logo (for the sole purpose of the Warranty Terms, each a " Eternitytime" or "Chronelec" product) against defects in materials and workmanship when used in accordance with Eternitytime's user manuals, technical specifications and other Eternitytime Product guidelines for a period of TWO (2) YEARS from the date of original retail purchase by the end-user purchaser as shown by an invoice or sales receipt for the Eternitytime/Chronelec Product (the "Warranty Period"). You will be able to receive the remedies available under the Two-Year Limited Warranty for your Eternitytime product via local Eternitytime service facilities.

1. WHAT IS NOT COVERED BY THIS WARRANTY?

- a. Eternitytime does not warrant that the operation of any Product will be uninterrupted or error-free. Eternitytime is not responsible for damage arising from failure to follow instructions relating to the Product's use.
- b. All warranties, conditions and other terms not set out in this warranty document are excluded from the Eternitytime Two-Years Limited Warranty. When contacting Eternitytime via telephone, call charges may apply depending on your location. Please contact your network operator for details.
- c. THIS WARRANTY DOES NOT APPLY TO ANY NON-ETERNYTIME BRANDED HARDWARE PRODUCTS OR ANY SOFTWARE, EVEN IF PACKAGED OR SOLD TOGETHER WITH ETERNYTIME PRODUCTS.
- d. Non- Eternitytime or Non-Chronelec branded products may enjoy the benefit of a manufacturer's warranty - please check your product box and literature for details.
- e. This warranty does not apply: (a) to consumable parts, such as batteries or protective coatings that are designed to diminish over time, unless failure has occurred due to a defect in materials or workmanship; (b) to cosmetic damage, including but not limited to scratches, dents and broken plastic on ports; (c) to damage caused by use with another product; (d) to damage caused by accident, abuse, misuse, liquid contact, fire, earthquake or other external cause; (e) to damage caused by operating the Eternitytime Product not in conformance with the user manual, the technical specifications or other Eternitytime Product published guidelines; (f) to damage caused by using of incorrect voltage lines, fuses, circuit breakers, or incompatible load types as set forth in the user manual; (g) to damage caused by service (including upgrades and expansions) performed by anyone who is not a representative of Eternitytime; (h) to an Eternitytime Product the functionality or capability of which has been modified or altered without the written permission of Eternitytime; (i) to defects caused by normal wear and tear or otherwise due to the normal aging of the Eternitytime Product; (j) if any serial number has been removed or defaced from the Eternitytime Product, or (k) if the product is stolen or Eternitytime reasonably believes that the product is stolen based on information provided by law enforcement authorities.
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2. YOUR RESPONSIBILITIES

- a.** If your Eternitytime product is capable of storing software programs, data and other information. You should make periodic backup of the information contained on your Eternitytime product to protect the contents and as a precaution against possible operational failure.
- b.** Before submitting your Eternitytime Product for warranty service you should make separate backup of the contents of its storage media, remove all personal information and disable all security passwords. The contents of your Eternitytime Product's storage media may be erased, replaced and/or reformatted in the course of service.
- c.** Following warranty service, your Eternitytime Product or a replacement product will be returned to you. Eternitytime may install system software updates as part of warranty service that will prevent the Eternitytime Product from reverting to an earlier version of the system software. Third party applications installed on the Eternitytime Product may not be compatible or work with the Eternitytime Product as a result of the system software update. You will be responsible for reinstalling all other software programs, data and information. Recovery and reinstallation of other software programs, data and information are not covered under this warranty.
- d.** You may seek service in a country that is not the country of your purchase, and in such a case you will comply with all applicable import and export laws and regulations and be responsible for all custom duties, V.A.T. and other associated taxes and charges.

- e. IMPORTANT: DO NOT OPEN THE ETERNYTIME PRODUCT UNLESS YOUR USER MANUAL FOR THE PRODUCT DESCRIBES HOW IT IS DESIGNED FOR OPENING. OPENING YOUR ETERNYTIME/CHRONELEC PRODUCT IN VIOLATION OF THIS PARAGRAPH WILL FORFEIT YOUR RIGHT TO CLAIM WARRANTY SERVICE FROM ETERNYTIME.

3. WHAT WILL ETERNYTIME DO IN THE EVENT OF A WARRANTY CLAIM?

- a. If you submit a valid claim under this warranty, Eternytime will, at its option:
- b. (i) repair the Eternytime Product using new or previously used parts that are equivalent to new parts in performance and reliability, or
- c. (ii) replace the Eternytime Product with a product that is functionally equivalent to the Eternytime Product and is formed from new and/or previously used parts that are equivalent to new parts in performance and reliability.
- d. When a product or part thereof is replaced, any replacement item becomes your property and the replaced or refunded item becomes Eternytime's property.
- e. A replacement part or product or a repaired Eternytime Product assumes the remaining warranty of the original Eternytime Product or one (1) year from the date of replacement or repair, whichever provides longer coverage for you.

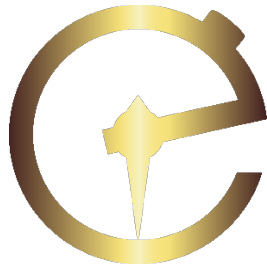
4. HOW TO OBTAIN WARRANTY SERVICE?

Please access and review the online support .

<https://eternitytime.com/after-sales>

5. GENERAL

No Eternytime reseller, agent, or employee is authorized to make any modification, extension, or addition to this warranty.



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