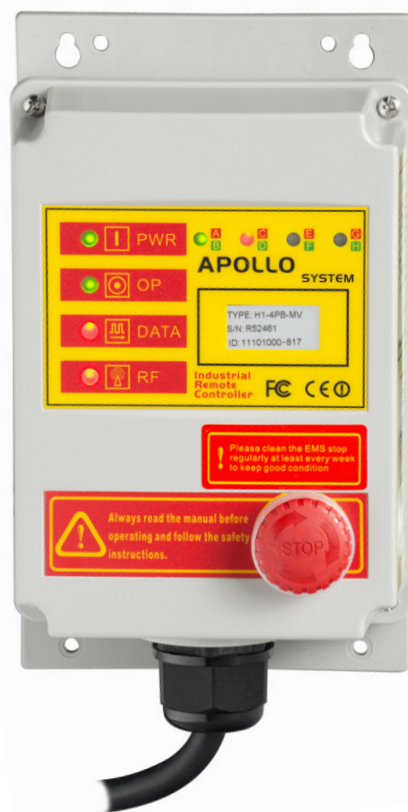


# APOLLO SYSTEM MEMO



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## INTRODUCTION

The APOLLO is a high quality, industrial grade remote control system, available in model formats from 4 to 12 functions. Featuring a dust, water and oil resistant casing the APOLLO transmitter will also resist most impacts and extreme weather conditions. Receiver box components have been placed into a tough control box with IP65 protection for your piece of mind.

## MODEL OPTIONS

Model No.	Description
H1-4PB	4 push buttons, w/ EMS stop button
H1-6PB	6 push buttons, w/ EMS stop button
H1-8PB	8 push buttons, w/ EMS stop button
H1-10PB	10 push buttons, w/ EMS stop button
H1-12PB	12 push buttons, w/ EMS stop button

## TECHNICAL SPECIFICATIONS

### Transmitter

**Frequency range:** 868 or 433MHz ( 20 channels )  
**Channel spacing:** 50KHz , 60KHz  
**Transmitting power:** < 10mW ( 10dBm )  
**Antenna:** Internal type, impedance as 50Ω  
**Security codes:** 256 sets  
**Operation temperature:** -10°C ~ +70°C  
**Enclosure:** IP65  
**Source voltage:** 4xAA ( 1.5V )alkaline batteries  
or nickel rechargeable batteries  
**Consumption:** < 7mA  
**Size:** 217×70×49 mm (C1-6PB )  
**Weight:** 515g (C1-6PB )

### Receiver

**Frequency range:** 868 or 433MHz ( 20 channels )  
**Channel spacing:** 50KHz , 60KHz  
**Antenna:** Internal type, impedance as 50Ω  
**Operation temperature:** -10°C ~ +70°C  
**Enclosure:** IP65  
**Source voltage:** 9-30 volt **Consumption:** < 12W  
**Size:** 250×120×75 mm ( C1-6PB )  
**Weight:** 1080g ( C1-6PB )

## INSTALLATION INSTRUCTIONS

**Note 1:** As the end use and positioning of the receiver unit can not necessarily be foreseen and the receiver may be exposed to pressurised moisture in the form of waterblasting, road spray or similar the receiver should be mounted inside a IP65 rated PDL style electrical enclosure or similar. Failure to mount the receiver unit in this manner may void warranty of the system.

**Note 2 :** The power supply to the Apollo receiver unit must be fitted with an isolating switch for safety

APOLLO system installation should be a relatively straight forward procedure requiring a minimum of the following tools. Long nose pliers, Side cutters, Philips head screwdriver, Multimeter and electric drill.

### Steps:

- Ensure your existing machinery wiring is correct and fully operational prior to proceeding with a wireless system install.
- Ensure the receiver enclosure is mounted away from motors, relays, cables and high voltage wiring.  
Preferably ensure the receiver mounting location is free of metal shielding / boxes or metal shielding protruding between your receiver and the intended work area.
- Do not install an APOLLO system with the same channel transmitter within 50 meters of an existing system.

## WIRING (NOTE OUTPUT RELAYS ARE RATED TO A MAXIMUM OF 3 AMPS PER FUNCTION)

- **All APOLLO receivers include a wiring diagram on the side of the receiver enclosure –your system may have spare wires in the loom that are not used**
- Wires in the receiver wiring loom will either be colour coded or numbered (larger systems) for ease of recognition.
- Output voltage will match the power source supplied to the receiver EG: if you power the receiver with a 12vdc power source the output from the function wires will be 12vdc positive.
- Function outputs shown on the wiring diagram are labeled with letters which correspond to the letters / functions shown on the transmitter schematic in this manual.
- All APOLLO receivers will have a master output labeled on the wiring diagram as “ID1” you can read further about his output under APOLLO programming on page four of this manual

### Input Voltage

All APOLLO receivers are “multivolt” and will accept a DC supply voltage of between 9 – 30 VDC

### CAUTION

**Ensure none of the APOLLO outputs are connected to a switch, solenoid or similar that exceeds a draw of 3 amps per function**

## OPERATING INSTRUCTIONS

### How to turn on your APOLLO

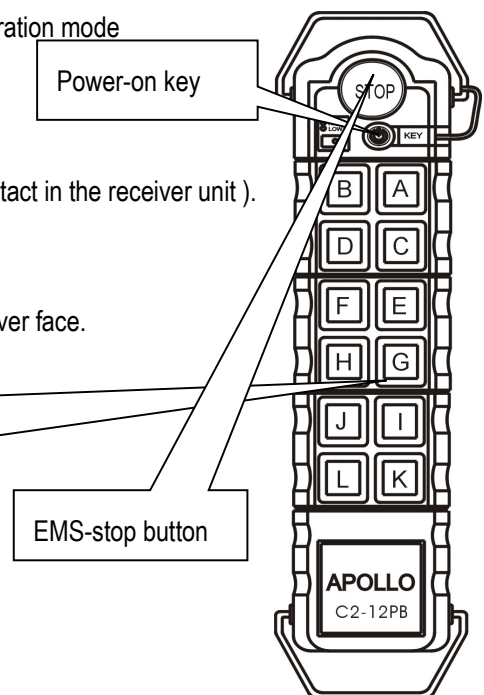
To power up the system the following procedure applies.

1. Insert the transmitter power-on key under the green button and rotate the transmitter “EMS stop button” in a clockwise direction until it pops up. . The LED will flash red briefly and then start flashing green.
2. Rotate the “EMS stop button” located on the receiver face in a clockwise direction until it pops up. The PWR LED should light up
4. Press and release any transmitter function button to start-up the APOLLO system  
The “OP” LED should come on and remain on, indicating the system is in operation mode

### How to turn off your APOLLO

1. Press the transmitter EMS-stop button” inwards (This will shut down the main contact in the receiver unit ).
2. Remove the transmitter power-on key from under the green button
3. Shut down the receiver by depressing the “EMS stop button” located on the receiver face.

Push any function button once to start up the APOLLO system once the EMS buttons on the transmitter and receiver are in the on position and the power on key is inserted



## APOLLO PROGRAMMING

The APOLLO systems in standard format come with all functions as momentary

EG: When a function button is depressed on the transmitter the corresponding function will output on the receiver only for as long as the transmitter button remains depressed.

Latching functions and key interlocks can be programmed upon request, please contact your distributor for further information.

### Master Output Functionality

The APOLLO systems also feature a master output, this output can be configured to provide an output when one or more of the transmitter function buttons are active to your requirements. Factory set to provide master output cross all functions when active. Master Output wire is identified as "ID1" on the side of your receiver. To change factory setting please contact your distributor.

### Auto Shut down

In standard format the APOLLO receiver and transmitter are not set to shutdown automatically.

## TRANSMITTER AND RECEIVER LED STATUS INDICATORS

### Transmitter LED indicator

1. The APOLLO transmitter features a dual colour LED indicator. When first powered up the LED will flash once /second, it'll do this 7 times and then stop. When transmitting the LED will blink rapidly, stop transmission and the LED will flash 7 times and then stop. The transmitter has no "Auto Off" function and will remain on until the red mushroom switch is depressed.

2. When the LED is green the transmitter battery power is sufficient, if the LED turns to red this indicates low power and batteries must be replaced. Please replace the batteries with 4pcs of AA/UM-3 ( 1.5V ) alkaline batteries, or nickel rechargeable batteries immediately, or the transmitter will automatically shut down after 10 sec.

### Receiver LED indicators (Status)

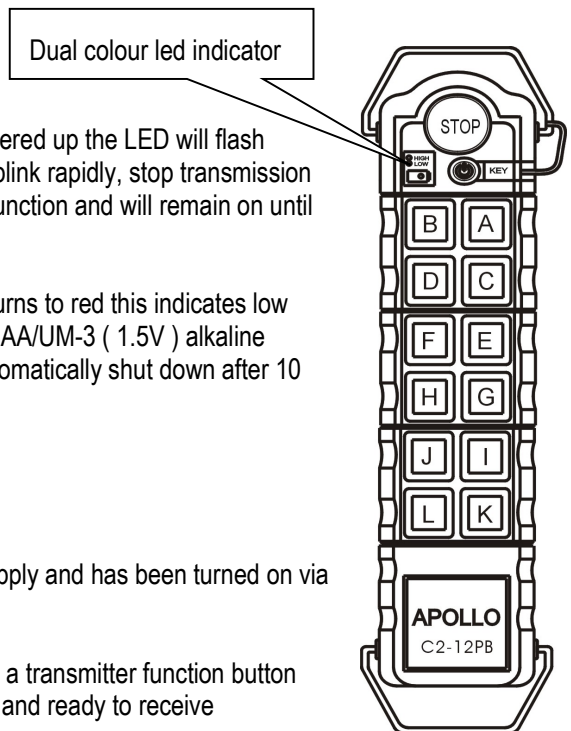
**PWR** = LED indicator is green when the receiver is connected to a power supply and has been turned on via clockwise rotation of the receiver " EMS " button into an outward position

**OP\*** = LED indicator is green when the Transmitter has been turned on and a transmitter function button pressed to start the system – confirmation that the receiver is in operation mode and ready to receive transmission

**DATA** = LED indicator generally glows solid when an authorized transmission is being received.

**RF** = LED blinks rapidly and randomly, showing that radio signals of any frequency are present

\* OP LED, this is the most important indicator, it confirms the both the transmitter and receiver are on, communicating and ready for operation



### Receiver OUTPUT indicators

The APOLLO receiver also contains on the face panel, running horizontally across the top, four dual colour LEDs. These LEDs illuminate in parallel with an individual function. They provide a clear indication of which functions are active and that a positive voltage output is present on the corresponding wire.

(Note Functions 1 to 8 only (A to H) have LED indicators)

**A/B** indicator =            Red if A function activated            Green if B function activated

**C/D** indicator =            Red if C function activated            Green if D function activated

**E/F** indicator =            Red if E function activated            Green if F function activated

**G/H** indicator =            Red if G function activated            Green if H function activated

### Precautions

- ✓ Please read thoroughly the operation manual before using your APOLLO system.
- ✓ Before operating the transmitter please check that the LED status indicator on the transmitter is indicating sufficient battery power is available. If you are intending to not use the APOLLO transmitter for any length of time is recommended that the batteries be removed.

### TROUBLE SHOOTING

If a malfunction occurs, please check your APOLLO system step by step as below, if the malfunction persists contact your distributor for further assistance.

#### Transmitter

IF: There is no confirmation flash from the transmitter LED status indicator when a function button is depressed

*Check if the power-key has been inserted.*

IF: The power-key has been inserted, but still has no confirmation flash from the Transmitter LED status indicator when a function button is depressed

*Check if the EMS-stop push button has been depressed, if so, turn clockwise to upright /on position*

IF: The EMS-stop push button has been turned clockwise to the on position, the power-key is inserted, but there is still no confirmation flash from the Transmitter LED status indicator

*Check if the batteries have been inserted correctly*

#### Receiver

IF: The EMS-stop push button has been turned clockwise to the upright/on position but the "PWR " led indicator on the receiver will not light indicating the system is operational

*Check your power supply to the receiver*

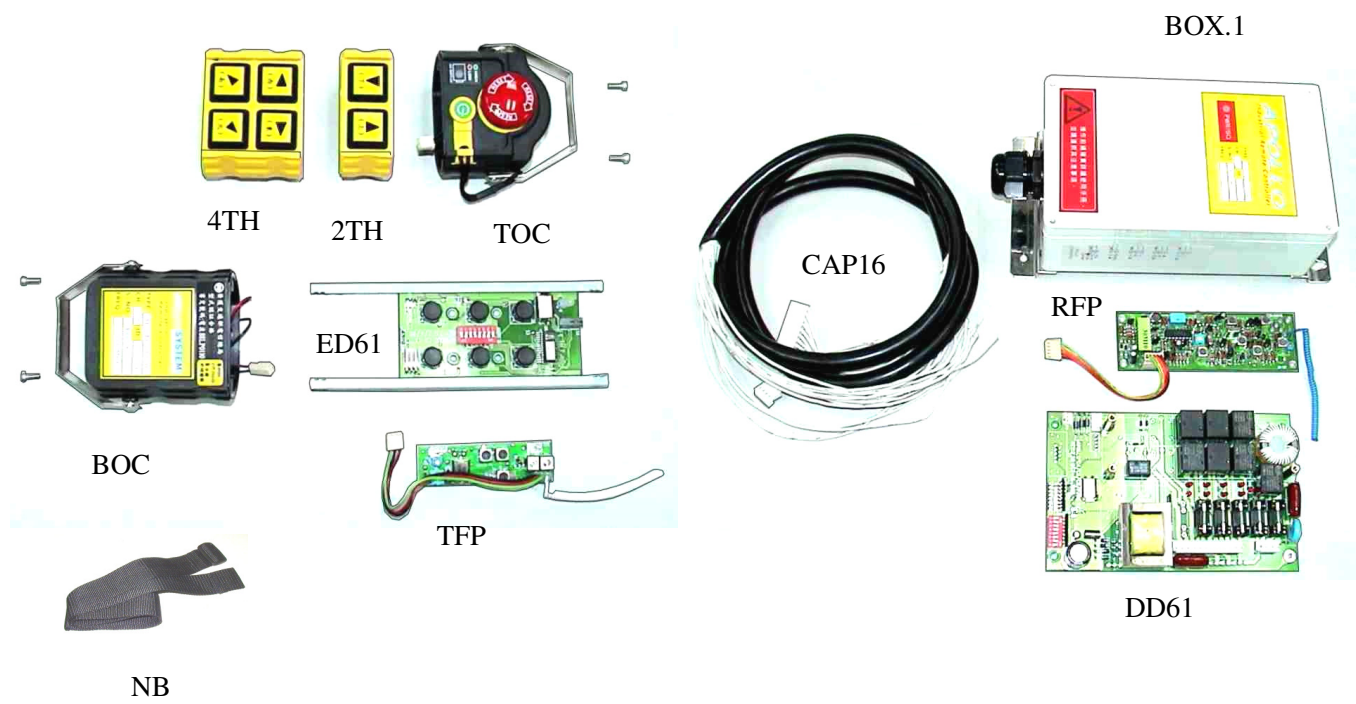
IF : The power supply to your receiver is live and the "PWR" indicators still does not light

*Check if the internal receiver fuse has failed and renew with a fuse of the same rating (the internal fuse is located inside the receiver enclosure, you will need to loosen the wiring gland on the enclosure and then loosen the four enclosure screws to remove the front cover) The fuse is an automotive blade type fuse and is located in plain view on the corner of the main printed circuit board*

IF: You have replaced the internal fuse, but the receiver continues to blow fuses.

*There may be a problem with the receiver's internal circuitry - Please contact your distributor.*

SPARE PARTS



Note: The parts pictured above are from a 6 function APOLLO system and are for reference only.

SPARE PARTS LIST

APOLLO Transmitter		APOLLO Receiver	
Spare Part	Part number	Spare Part	Part number
Top casing (incl. EMS-stop button, Power-key, stainless steel hook)	TOC	Box.1 receiver casing – for C1-4PB, C1-6PB,C1-8PB,C1-10PB,C2-4PB used ( incl. Nylon cable gland. Rubber shock-proof nut )	BOX.1
2 button casing	2TH	Receiver High Frequency board	RFP
4 button casing	4TH	Receiver High Frequency board	RFP
Bottom casing (incl. battery case, Stainless steel hook)	BOC	C1-4PB decoder & relay board	DD41
Transmitter High frequency board	TFP	C1-6PB decoder & relay board	DD61

C1-4PB encoder board	ED41	C1-8PB decoder & relay board	DD81
C1-6PB encoder board	ED61	C1-10PB decoder & relay board	DD101
C1-8PB encoder board	ED81	C1-12PB decoder & relay board	DD121
C1-10PB encoder board	ED101	C2-4PB decoder & relay board	DD42
C1-12PB encoder board	ED121	C2-6PB decoder & relay board	DD62
C2-4PB encoder board	ED42	C2-8PB decoder & relay board	DD82
C2-6PB encoder board	ED62	C2-10PB decoder & relay board	DD102
C2-8PB encoder board	ED82	C2-12PB decoder & relay board	DD122
C2-10PB encoder board	ED102	C211 decoder & relay board	DD211
C2-12PB encoder board	ED122	Transformer DC24V	ADP24
P700 encoder board	ED71	Cable 0.75mm²X16	CAP16
C211 encoder board	ED211	Cable 0.5 mm²X26	CAP26
Nylon Belt for Transmitter	NB	External ANT. 1.5M	ANT

## WARRANTY

Your APOLLO system is covered by warranty against defects in materials and workmanship for the period of 12 months from date of purchase.

This warranty does not cover equipment that has been abused or damaged due to careless handling.

This warranty extends to the repair or replacement of APOLLO system components only at Traxion Distributions discretion.

## APOLLO WIRING DIAGRAMS

Note: wire / function number is printed on each wire in the loom coloured or not

Note: each function maximum 3 amps – each output positive switch 12 or 24 volt dependent upon supply voltage to the Apollo receiver

Wire number	Wire colour	Transmitter designation
1	yellow	Button A
2	yellow	Button B
3	orange	Button C
4	green	Button D
5	green	Button E
6	orange	Button F
7	blue	Button G
8	blue	Button H
9	orange	Button I
10	brown	Button J
11	brown	Button K
12	orange	Button L
13	Grey	Master output wire all systems
14	Grey	Spare wire all systems
15	red	Main positive all systems
16	black	Main negative all systems

