

# **CARGO FLOOR®**

# Manual Intelligent Remote Control Module (IRCM)

Cargo Floor B.V.

World's leading manufacturer and supplier of horizontal loading- and unloading transport conveyor systems.



With the help of these instructions, we want to provide directions for the correct use of the Cargo Floor Intelligent Remote Control Module (IRCM) and, in case of any malfunctions, help you with the steps you can take for quick resolution of your problem.

Please read - and follow - these instructions carefully. Please also read the maintenance instructions carefully so that the Remote Control will provide you with many years of trouble-free service.

If, after following the instructions, the Remote Control does not work, or does not work properly, please contact your supplier, who will undoubtedly assist you in solving the problem.

Be sure to read the "IMPORTANT ADVICE AND GUIDELINES" and "IMPORTANT INSTRUCTIONS" sections.

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#### **IMPORTANT RECOMMENDATIONS AND GUIDELINES**

Before putting the Cargo Floor loading and unloading system into operation, follow the recommendations provided below and check the specified checkpoints to avoid damage to the Cargo Floor system and the vehicle.

Please review the important instructions before operating the Cargo Floor system and loading cargo into the vehicle. Likewise, before loading cargo, check the operation of the various control switches/valves to familiarise yourself with how the system works. We strongly recommend that you perform these checks when picking up the vehicle from the dealer so that your skilled supplier can answer your questions and provide you with any necessary advice or guidance you may require.

#### **Important:**

- Always check that the selected loading or unloading direction is actually activated and occurring!!
- If the system fails to start, turn off the Cargo Floor system and the hydraulic pump and follow the recommendations and guidelines provided below. Do not repeatedly try to start the system as this may result in damage to your Cargo Floor system and/or vehicle.
- After use, turn off the Cargo Floor system and hydraulic pump. Set switches to the "0" position and the lever in neutral.

In case of doubt or uncertainty about these recommendations and guidelines, always contact your dealer or an official workshop.

The Cargo Floor system comes standard with an operating manual, but is this has not been supplied, please contact your dealer or download it from the official Cargo Floor website: <a href="www.cargofloor.com">www.cargofloor.com</a>, <a href="download">download</a>.

- A) Always open the vehicle's doors <u>before</u> turning on the hydraulic pump. Note! Build-up of pressure against the doors can open them with force. Also some of the cargo can fall out of the vehicle by itself after opening the doors, therefore KEEP CLEAR AT ALL TIMES, product could fall on top of you! Both could result in damages and/or injuries! It is always advisable to use the pneumatic door lock, if provided.
- B) 1. Check that the vehicle's (quick-detachable) couplings are properly connected to the P (Pressure line) and the T (tank/return line). Also check that the couplings are fully tightened or slid completely into each other
  - IMPORTANT: the pressure and return line connectors may not be reversed or exchanged to prevent dirt or water from entering the lines when connecting them!
  - 2. Before connecting, check that the non-return valves can open easily (check: the non-return valves should open easily when pressed with the finger, if not, potential pressure build-up in the hydraulic lines may be preventing the system from starting).
  - NOTE: Incorrectly connected or unopened hydraulic couplings will cause serious damage to the Cargo Floor system and the vehicle.
- C) The vehicle (pump) must be fitted with a pressure relief valve that is set at the maximum pressure according to the system, see the technical specs. If fitted, check that the dual-function lever (function: tipper/Cargo Floor) is in the Cargo Floor position. Pressure may not exceed the maximum adjusted and allowable operating pressure of the Cargo Floor system. An incorrectly adjusted pressure relief valve can cause damage to the Cargo Floor system and the vehicle.
- D) During operation, the (hand)brake of the vehicle must always be applied. You must, however, move the vehicle forward on time to unload it quickly in order to prevent unnecessary strain and wear to the floor and the vehicle.
- E) Use of a wireless remote control is permitted only if it is fully tested before the start of each loading or unloading operation. Always check if the function you have selected is actually activated and taking place. If, for example, you have accidentally pressed the load function when you actually meant to press the unload function, irreversible damage may occur to the Cargo Floor system and the vehicle.
- F) During operation of the Cargo Floor system, all existing STOP and control knobs/levers must be freely accessible.



- G) The pressure filter element needs to be replaced at least once a year. If the couplings between the vehicle and the Cargo Floor system are regularly removed, it is advisable to check the pressure filter for dirt build-up and replace the pressure filter element more often, if necessary. If provided, also check the return filter (not supplied with the Cargo Floor). Failure to replace a filter element on time may cause damage to or malfunctions in the Cargo Floor system and the vehicle.
- H) Moving parts must be shielded. Always maintain at least 10 meter [30'] distance from the Cargo Floor system when it is in operation.
- I) In the event of malfunctions/maintenance work, you may approach the Cargo Floor system only if all equipment, including the hydraulic pump, have been shut off, and the Cargo Floor system and the electro-hydraulic aggregate have been disconnected from the power supply and pump.
- J) Regularly check and, if necessary, tighten any loose bolts that secure the aluminium floor profiles to the Cargo Floor system. All such checks can simply be performed inside the vehicle itself by qualified personnel. The Cargo Floor system must, however, be turned on in unloaded condition and the person performing the check must place his finger half on the floor profile and half on the bolt. There should be no appreciable movement/space between the floor profile and bolt. Failure to check these bolts may lead to damage to the Cargo Floor system. During this check, a second person must also be present to switch off the Cargo Floor system.
- K) Check that the minimum required amount of oil is present 150 liter [40 US gallon]. Too little oil in the hydraulic tank will cause damage to both the pump and the Cargo Floor system.
- L) Do not allow the number of strokes to exceed the maximum allowable 16 power strokes per minute. Only a CF500 SLC Power Speed Cargo Floor system may deliver up to 23 beats per minute. A higher number of power strokes can cause damage to the Cargo Floor system and the vehicle.
- M) Hydraulic lines, couplings and hoses with very small diameters will cause damage.
- N) If the Cargo Floor system fails to start or operates incorrectly, the Cargo Floor system and the hydraulic pump must be shut down immediately. Subsequently, check all the checkpoints before switching the pump and the Cargo Floor system back on. To prevent the oil from overheating, regularly check the oil temperature by CAREFULLY and CAUTIOUSLY touching the line and or oil tank. If either is too hot to the touch, stop touching them right away. WARNING: TOUCHING OVERHEATED OIL AND COMPONENTS CAN CAUSE BURNS!
- O) The cause of failure or malfunctioning of the Cargo Floor system may also be due to other hydraulic components that may or may not be connected to the same hydraulic circuit of the Cargo Floor system.
- P) Jamming of the floor profiles caused by the transport of abnormal loads and or the freezing of the floor or of the product to the floor may result in damage to the Cargo Floor system and the vehicle. Recommendation: in the event of freezing, stop the system and try to find a hall (heated area) to allow the product to thaw.
- Q) Because the electrical power supply of the Cargo Floor system is often connected to the lighting circuit of the vehicle, it is advisable to turn on the lighting throughout the operation of the system.
- R) Maintenance and repairs to the Cargo Floor system may be only performed by qualified personnel. Use only original Cargo Floor components to ensure maximum reliability and long service life.
- S) Maximum cargo weight is subject to the limits set by law and applicable regulations. Even if the system can transport heavier loads, the law determines the maximum limit. Excessively heavy cargo can cause damage to the Cargo Floor system and the vehicle.
- T) Check that the correct type and quality of hydraulic oil is used. The use of incorrect oil type may cause damage to the Cargo Floor system and the pump.
- U) Check the vehicle for correct voltage. Make sure there are no open electrical connections. A faulty electrical system can cause damage to the Cargo Floor system and the vehicle.
- V) Check that the bulkhead, if present, is functioning smoothly and properly. A properly functioning bulkhead ensures that the product is unloaded in a clean and quick fashion. A malfunctioning bulkhead may extend the unloading time and cause damage to the vehicle.
- W) Use of the Cargo Floor system by unqualified personnel can cause damage to the Cargo Floor system and the vehicle.
- X) Excessively high oil temperatures will cause damage to the Cargo Floor system and other hydraulic components, such as the pump.



- Y) It is at all times advisable to stop the Cargo Floor system when all the piston rods are retracted. This is usually the case when the floor profiles are positioned towards the unloading end (vehicle doors). Unretracted piston rods may cause damage to the Cargo Floor system.
- Z) To prevent damage to the floor profiles, exercise caution and limit the dump height as much as possible. The transport of unauthorised goods, such as aggressive, corrosive, hot, hard, sharp and viscous materials may cause damage to the Cargo Floor system and the vehicle. Avoid loading and unloading sharp objects. Loads that are softer than the hardness of the floor profiles will extend the service life of your system; if in doubt, use a protective cloth or consult your dealer.
- AA) Forklift trafficable. In principle, the floors are completely trafficable and can be driven over by forklifts, but always consult your dealer for advice on the maximum loads allowed on your vehicle.

  Overloading will cause damage to the Cargo Floor system and the vehicle.
- BB) Always return emergency control(s) to their original non-activated position after use.
- CC) During the operation of the system, test the temperature of the oil by touching the side of the tank. If the oil is so hot that you cannot continue to touch the tank, switch off the pump to allow the oil to cool off and determine what is causing the overheating. Stop loading or unloading if the oil is too hot, as this will irreversibly cause damage to the Cargo Floor system and the other hydraulic components.
  - WARNING: TOUCHING OVERHEATED OIL AND COMPONENTS CAN CAUSE BURNS AND INJURIES!
  - Option: your Cargo Floor system could be equipped with an oil temperature safety switch which will switch off the system automatically when it starts to overheat.
- DD) During loading and unloading operations, the load should be spread to give an even weight distribution over the floor area, otherwise the load may stall. Tip: when transporting pallets, place softwood boards of 300 x 18 x 2350 mm. [12" x 0.75" x 92.5"] to distribute the pressure more evenly.
- EE) The constant pressing of the load against the head board or the doors can lead to extra wear of the complete system. Also the construction can be damaged. Please consult your supplier about the optimizing possibilities or in order to prevent problems occurring.
- FF) The user/operator/driver that is operating the Cargo Floor system is compelled to remain a safe distance from the Cargo Floor system at all times, from the time of switching on the hydraulic pump until turning it off. He should ensure that no dangerous situations can occur. When the process malfunctions or if other people are present he should shut down the Cargo Floor system, or hydraulic pump, immediately.
- GG) No unauthorized alterations/modifications/changes/adjustments may be made to any part of the Cargo Floor drive unit and system.

#### **WARRANTY**

Warranty is subject to <u>prior</u> approval by Cargo Floor B.V.! To request warranty coverage, visit www.cargofloor.com to fill out and submit the warranty application form provided there; do not forget to include your Cargo Floor system number on the form.

#### **EMERGENCY STOP**

In the event of an EMERGENCY, operation of the Cargo Floor system can be halted as follows:

- By pressing the red stop button on one of the control switches;
- By turning all switches to position "0";
- By putting the handle of the control valve in the middle "0" position (only B and A control);
- Turning off the PTO pump/engine;
- Turning off the main switch of the power supply;
- Turning off the motor of the electro-hydraulic aggregate.



## **INTELLIGENT REMOTE CONTROL MODULE (IRCM)**

#### **CHECK BEFOREHAND!**

# BE CAREFUL: When the pump/PTO is switched on, the system may start moving immediately!

On certain versions, the functions may differ from the standard situation, which is described below. It is therefore important to always test your version without a load first.

#### **SCOPE OF SUPPLY**

A: 6104051 Set: 10 functions IRCM

B: 5154037 Mounting bracket control valve for receiver

C: 6401099 Cable set for mounting bracket control valve for controlling solenoid valves

D: 6401046 Power supply cable 7 mtr for base receiver
E: 5154038 Mounting bracket for extension module
F: 6401098 Connection cable Deutsch 4-pin (1m)

H: 6026008 Deutsch DT 2-pin connector











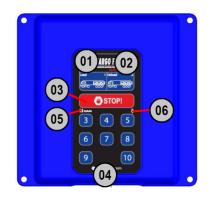


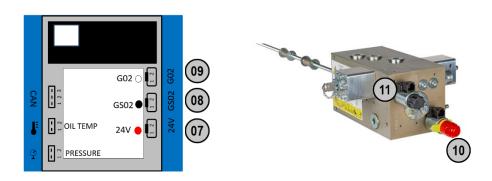






#### **IRCM RECEIVER**





01) Button load

**02**) Button unload

Button stop

(04) Keys 3 to 10

LED power supply

LED Bluetooth connection

Power supply connection

8) Connection GS02 (solenoid with red cap)

Connection G02 (solenoid with black cap)

Solenoid GS02

Solenoid G02

On the back of the receiver, there are a number of connection points.

The power supply [07] 24V (red dot) is the supply voltage. The connection is connector Deutsch 2-pole. The connection GS02 [08] (black dot) will have to be connected to solenoid GS02 [10], the connection is a cable fitted with 2x connector Deutsch 2-pole.

Connection G02 [09] (white dot) must be connected to solenoid G02 [11], the connection is a cable with 2x connector Deutsch 2-pole. If you have a B-operated control valve, do connect near the receiver for water tightness reasons and put it near the control valve in the blue cover.

The receiver is equipped with a keypad with load [01], unload [02], stop [03] and number keys 3 to 10 [04].

Green LED: power supply [05]. Lit if power supply is present.

Blue Led: Bluetooth connection [06]

- slow blinking, the receiver is standby, no connection with Remote Control or phone
- lit continuously, the receiver is connected to Remote Control or phone
- blinking, the receiver is in pairing mode

#### Attention!!

Plug at all 3 positions [07, 08, 09] a connector Deutsch for a watertight seal.

#### **Technical data**

The power supply of the IRCM receiver is fully protected against:

- incorrect connection of the power supply
- voltage too low
- voltage too high
- over amperage
- IRCM receiver operates at a voltage of 9 to 33.5 volts
- the output voltage is relative to the power supply.



#### MOUNTING IRCM RECEIVER WITH MOUNTING BRACKET ON CONTROL VALVE

The IRCM receiver has its own control to load/unload and can take over the function of the control box with the CF8. As a result, the control box is no longer necessary.



- Control valve
- Control valve mounting bracket (part no. 5154038)
- (03) IRCM receiver
- 2x bolt M8x16
- Power supply cable 7 mtr (part no 6401046)

- Cable set mounting bracket control valve IRCM (part no. 6401099)
- Power supply
- (on/off) Connector black GS02 (on/off)
- Connector grey G02 (loading/unloading)

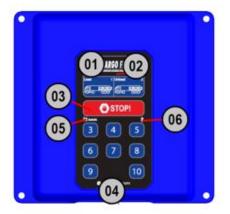
#### Mounting IRCM receiver to the control valve:

- Mount the mounting bracket control valve to the control valve with 2x bolt M8x16 with spring washer.
- Screw the IRCM receiver to the mounting bracket with the stainless steel screw M4x10 with locknut.
- The cable set mounting bracket control valve has connector Deutsch on both sides and one side with long wiring and short wiring.
  - Mount the black connector Deutsch with the short cable length in the IRCM at position GS02
  - Mount the grey connector Deutsch with the short cable length in the IRCM at position G02
  - Mount the black connector Deutsch with the long cable length in the solenoid coil GS02 (valve with red cap) at the back of the control valve
  - Mount the grey connector Deutsch with the long cable length in the solenoid coil G02 (valve with the black cap) at the back of the control valve
- Connect the connector Deutsch to the IRCM position 24V
- Connect the power cable 7 metres into the junction box on the lighting group of the trailer.
  - Brown is the +24V connection
  - Blue is the -0V connection.

If the control valve has a B control, the grey connector does not need to be connected at the control valve. However, do lay the wiring in the blue cover of the control valve.



#### **OPERATION IRCM RECEIVER WITHOUT REMOTE CONTROL**



Button loading

Button unload

Button unload

03) Button stop

04 Keys 3 to 10

05) LED power supply

(06) LED Bluetooth connection

The IRCM receiver can be operated if the power supply LED [05] is lit green. When operating the load, unload and or stop buttons, a vibration will be felt.

#### Loading and unloading with the IRCM receiver

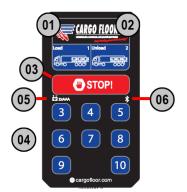
Button LOAD By pressing the button load [01] the system will start loading, by releasing it the system will stop. The LED in the button simulates the loading function.

**Button UNLOAD** Pressing the unload button [02] the system will start unloading. The LED in the button simulates the unloading function. Pressing this button again will stop the system (or you press button STOP!).

**STOP button!** Pressing the Stop button [03] stops the system.



#### **IRCM REMOTE CONTROL**



Button loading

Discharge key

03 Button stop

(04) Keys 3 to 10

**05)** LED battery voltage low

LED Bluetooth connection

The remote control features Bluetooth technology and has two AAA batteries. The remote control is equipped with key illumination at the load/unload buttons if activated. When operating the buttons, a vibration will be felt. Do not put the remote control in your pocket to prevent unwanted operation and fast battery discharge.

#### Switching the IRCM Remote Control on/off

Pressing any key will bring the remote control out of sleep mode. With the first actuation of any key, a vibration will be felt. If there is no Bluetooth connection, the blue Led will light up occasionally. The Remote Control returns to sleep mode after a few minutes if no function is operated.

If the Remote Control is switched on and has a connection to the receiver, the Bluetooth LED lights up continuously and a vibration can be felt every time a button is pressed.

#### Loading and unloading with the wireless Remote Control

Button LOAD By pressing the button load [01] the system will start loading, by releasing it the system will stop. The LED in the button simulates the loading function.

**Button UNLOAD** Pressing the unload button [02] the system will start unloading. The LED in the button simulates the unloading function. Pressing this button again will stop the system (or you press button STOP!).

**STOP button!** Pressing the Stop button [03] stops the system.

#### Remote Control battery

At low battery voltage, power supply led will light up.

If the batteries need replacing, open the battery compartment on the back of the Remote Control with a flat or cross-head screwdriver and remove the cover. Replace the 2x 1.5V AAA batteries. Insert the batteries correctly into the remote control. For optimum performance, use alkaline batteries. Put the cover back in place and carefully screw it back on.

### Pairing the Remote Control to the IRCM receiver

If a Remote Control has not been paired with an IRCM receiver, the following procedure should be followed:

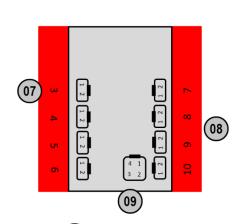
- A. Power IRCM receiver, hold the Remote Control within a range of 5 metres and turn it on by pressing a button
- B. IRCM receiver and Remote Control will then flash the bluetooth LED to indicate that the teach-on procedure has started
- C. Press button **Stop**, **9**, **10**, **Stop** on the IRCM receiver, now the bluetooth LED will blink rapidly
- D. Press button Stop, 9, 10, Stop on the Remote Control, now the bluetooth led will blink rapidly
- E. When both the Remote Control and the IRCM receiver have finished pairing, the bluetooth LED will no longer flash, but will be on continuously.



#### **EXTENSION MODULE**

The extension module is an extension set if multiple functions need to be controlled with the remote control.









- 01) Button load
- (02) Button unload
- Button stop
- (04) LED power supply
- 05) Power supply

- **06)** LED Bluetooth connection
- Output 3 (hold function lighting)
- Outputs 4 t/10 pulse function
- Power cable 4-pin deutsch connector.
- Connector Deutsch

#### **Power supply**

The extension module has its own power supply [09], which consists of a 4-wire cable connected to the Deutsch plug 4-pole (part no. 6401098).

- All 4 contacts of the power supply must be connected.
- The maximum current of 25 amps must not be exceeded.
- Connect the extension module to an equivalent power circuit as the base receiver so that both start up at the same time when the power supply is switched on.
- Provide the power supply with the appropriate fuse(s).

Deutsch 4-pole	Pin	Cable colour	Voltage
	1 + 2	Blue + green/yellow	-0 Volt
	3 + 4	Black + brown	+24 Volt

#### **Outputs**

The outputs are equipped with Deutsch DT plug 2-pole and correspond to the buttons on the control panel 3 to 10.

- Provide unused outputs with a blind Deutsch plug (to ensure watertightness)
- Output 3 has a hold function and can be used, for example, for lighting
- Outputs; 4 to 10 have a standard pulse function, but can be adjusted if required
- Outputs; Pin 1 = +24Volt, pin 2 is -0Volt
- Maximum current per output does not exceed 11 Amps
- Maximum current of all outputs simultaneously must not exceed the maximum current supply of 25 Amps

#### Attention!!

Provide unused outputs with a blind Deutsch plug, paying attention that the cable passages have sealing pins.



#### Attention!!

Use the correct mounting method for the Deutsch plug to ensure watertightness.



#### PAIRING THE EXTENSION MODULE WITH A IRCM RECEIVER





**01** 

**Button load** 

<u>02</u>

Button unload



**Button stop** 



Buttons 3 t/m 10



LED power supply



LED Bluetooth connection

The connection between the basic receiver and the extension module is wireless via Bluetooth. If the 10-fold set is purchased, the receiver and extension module are already paired.

Should a separate extension module be purchased, it will have to be paired with the basic receiver.

To pair, follow the following procedure:

- a. Turn on base receiver and extension module
- b. Both will then flash the bluetooth LED slowly as an indication that the learning procedure has started
- c. Press Stop, 9, 10, Stop on the Basic receiver, now the bluetooth led will blink rapidly
- d. Key Stop, 9, 10, Stop on the extension module, now the bluetooth led starts blinking fast.
- e. When both the extension module and the base receiver have finished learning, the bluetooth led will stop blinking, but will light continuously.

If the connection between the extension module and the base receiver is established, pressing the buttons will allow access to both the extension module and base receiver.

#### Loading and unloading with the wireless remote control

**Button LOAD** Pressing this button will cause the system to start loading, releasing it will stop the

system.

Button UNLOAD Pressing this button will cause the system to unload. Pressing this key again will stop

the system (or you press STOP!).

**Button STOP!** Stops the system.

**Button 3 - 10** Operation of additional functions



#### **IMPORTANT INSTRUCTIONS**

- When de- and assembling the plugs of the receiver, prevent dirt and water from entering the plug.
- Do not drop the Remote Control.
- Preferably wear the Remote Control on a key cord. If the Remote Control is carried in the pocket, the buttons of the functions can be pressed unnoticed and the Cargo Floor system can be operated unnoticed.
- Never spray the electrical components with a high-pressure cleaner. Not even on the Cargo Floor Remote Control.
- For optimum reception of the IRCM receiver, mounting is recommended as far out as possible. Mounting the IRCM receiver in a steel housing is strongly discouraged.
- Make sure that at all times during loading or unloading you are in reception range of the IRCM receiver with your Remote Control.
- Regularly check the following aspects carefully:
  - Damage to the housing;
  - Damage to wiring or plugs.

 Flashing codes LED lighting and vibrator with respect to receiver, handheld transmitter and extension module.

•	DESCRIPTION OF	
	01 (ARGO FL 02	
	Land   United 2	
03	STOP	
<b>W</b>	3 4 5	04
	9 10	
	<b>⊕</b> cargafoor.com	

[01] load	3 consecutive	Transport direction
[02] unload	3 consecutive	Transport direction
[01], [02] load, unload	1x load, 1x un-	Service message, perform service and reset
	load flashing	
[01], [02] load, unload, trilmotor	All flashing	Critical error, temperature too high
10 sec.	_	·
[01], [02], [03], [04], trilmotor	On/Off	Power supply switched on for the first time
[03] Power supply	Off	No power supply available
[03] Power supply	On	Power supply on hand
[04] Bleutooth	1.5 Hz	No connection to another remote control compo-
		nent
[04] Bleutooth	1 Hz	Connection procedure in progress
[04] Bleutooth	continuous	Connection to another remote control compo-
		nent is established
Trilmotor	short	When keys are operated



#### **CONTACT DATA**

#### Postal and visiting address:

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E-mail : info@cargofloor.com
Website : www.cargofloor.com
Whatsapp : +31 524 593 900

Order spare parts:

E-mail address : sales2@cargofloor.com
Phone number : +31 524 593 944

After Sales (technical questions and malfunctions)

E-mail address : <u>as@cargofloor.com</u>
Phone number : +31 524 593 977
Whatsapp : +31 524 593 977

Coevorden, The Netherlands

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