

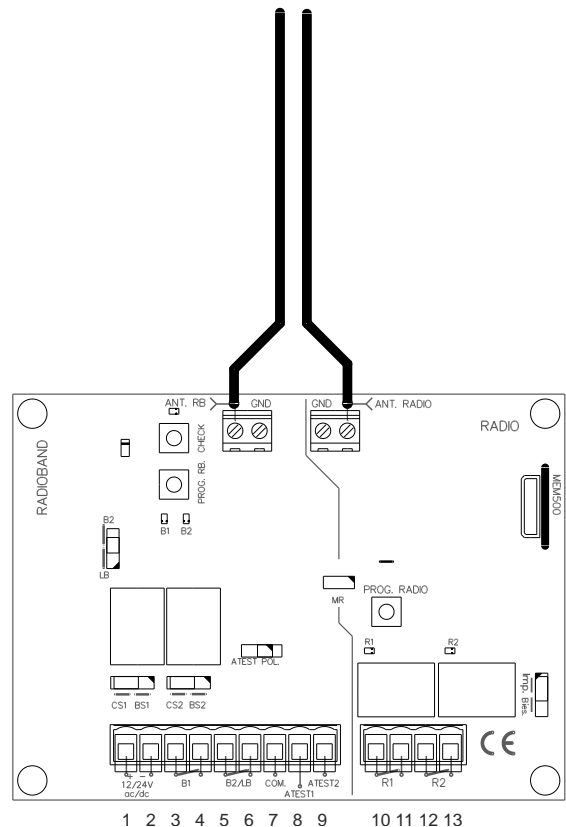
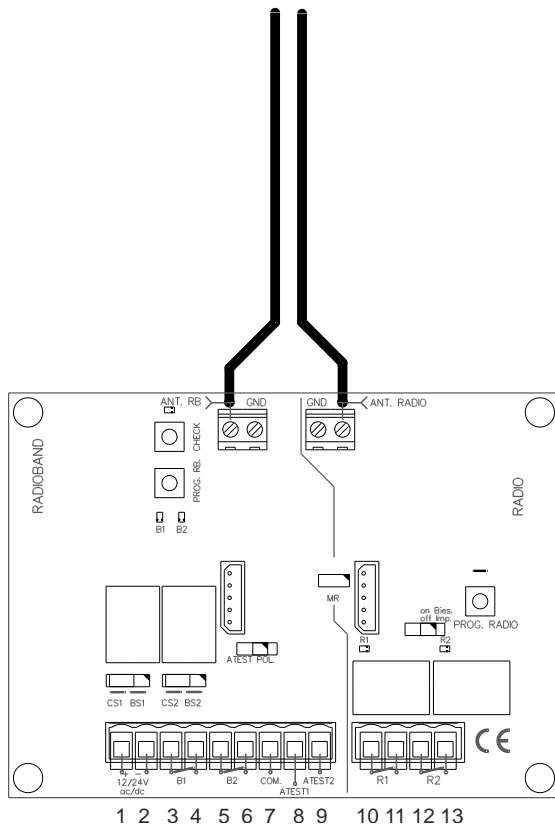
RBMOT30 / RBMOT500

GENERAL DESCRIPTION

This equipment consists of 30 or 500 codes MOTION receiver and receiver to RADIOBAND 1G system.

TECHNICAL CHARACTERISTICS

Frequency	MOTION: 868,35MHz RADIOBAND1G: 868,90MHz
Coding	High security rolling code
Memory	RBMOT30: 30 codes / RBMOT500: 500 codes RADIOBAND1G: Ex. 6 RADIOBAND/TBX (3 on relay 1, 3 on relay 2)
Supply	12/24V ac/dc
Power supply range	9-24 / 21-35V dc 8-16 / 15-28V ac
Number of relays	MOTION: 2 relays (R1 and R2) RADIOBAND1G: 2 relays (B1 and B2)
Relay contacts	1A
Standby/Op. consumption	RBMOT30: 18mA / 115mA / RBMOT500: 22mA/244mA
Self-test input	2 0/12/24V AC/DC inputs with selectable polarity
Radiated power	< 25mW
Op. temperature	-20°C to +70°C
Watertightness	IP54 (with glands IP65)
Size	63x55x15mm
Box dimensions	140x220x55mm
Range (guaranteed)	MOTION: 100m RADIOBAND1G: 10m

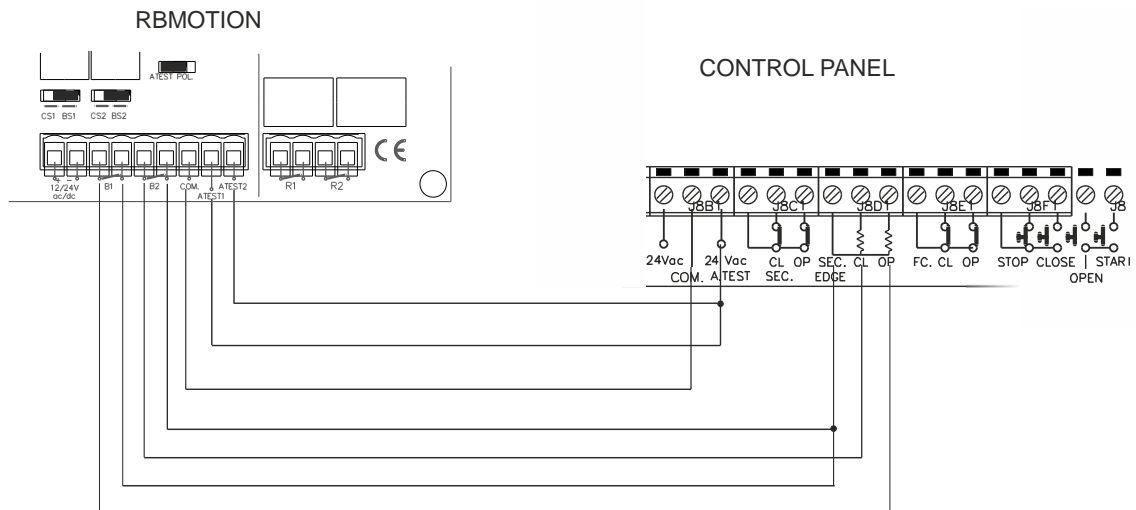


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INSTALLATION AND CONNECTIONS

Attach the rear part of the housing to the wall using the plugs and screws supplied. Pass the cables through the bottom of the receiver. Connect the power cables to the terminals marked in the mother board, as indicated. **Install the receiver, close to the door and avoid metal surfaces between the receiver and the transmitter RADIOBAND.** Pass the cables through the bottom of the receiver. Program transmitters and transmitters RADIOBAND as programming section. Fix the front of the receiver to the back with the screws supplied for the purpose.

- 1- Power supply 12/24V AC/DC: (+)
- 2- Power supply 12/24V AC/DC: (-)
- 3,4- R1: Connection to the safety band input of the control panel (resistive contact 8.2kΩ) with jumper in position BS1. Or to the control panel safety contact input (NC) with jumper in position CS1.
- 5,6- R2: Connection to a second safety band input of the control panel (resistive contact 8.2kΩ) with jumper in position BS2. Or to the control panel safety contact input (NC) with jumper in position CS2.
- 7- AUTOTEST: Common connection safety self-test (-). See Figure and table POLARIZED SELF-TEST.
- 8- AUTOTEST: Self-test connection for R1. See Figure and table POLARIZED AUTO-TEST.
- 9- AUTOTEST: Self-test connection for R2. See Figure and table POLARIZED AUTO-TEST.
- 10, 11- R1: Relay 1 output RADIO receiver
- 12, 13- R2: Relay 2 output RADIO receiver



TWO SAFETY EDGES CONNECTION WITH
NEGATIVE POLARIZATION AUTOTEST

LIGHT INDICATORS

Led	ON	OFF	Flashing
R1	Relay R1 Activation	R1 deactivated, state by default	Every 5 seconds, correct supply of the equipment
R2/LB	Relay R2 Activation/ Indicates if the transmitter has low battery	R2 deactivated, state by default/ Indicates if the transmitter's battery is working properly	Every 5 seconds, correct supply of the equipment
B1	Relay B1 Activation or band not connected	B1 deactivated, correct safety edge state	
B2	Relay B2 Activation or band not connected	B2 deactivated, correct safety edge state	
CHECK			Coverage (See CHECK function)

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OPERATING

The pilot lights are activated every 5 seconds to indicate the correct supply of power to the equipment.

Upon receiving a code, the receiver checks whether it is in its memory, activating the corresponding relay R1 and/or R2. The relay activation mode is selected in either impulse or ON/OFF using the Imp/Bies jumper (only with the relay 2). For adjustment of relay 1, see manual of the programming tool.

The receiver checks that all the programmed bands are working properly. If a band is activated or if there is an error in its operation, the receiver activates the appropriated B1 or B2 output relay and the appropriated B1 or B2 light indicator turns on.

PROGRAMMING

MANUAL PROGRAMMING OF MOTION TRANSMITTERS

Press the receiver programming button for 1 sec. and an acoustic signal will be heard. The receiver will enter standard programming (see table). If the receiver programming button is held pressed down, the receiver will enter special programming, cyclically passing from one configuration to the next. Once the programming configuration for the transmitter to be registered has been chosen, send the code to be programmed by pressing the transmitter. Every time a transmitter is programmed, the receiver will issue an acoustic signal for 0.5 sec.

Configuration of transmitter programming in the receiver.	Led R1	Led R2
Standard Programming (default option, the receiver is always configured on pluri-channel)		
The relays are activated 1st relay by channel 1 and 2nd relay by channel 2 (3rd relay by channel 1 and 4th relay by channel 2)	Flashing	Flashing
Special programming		
By pressing any transmitter channel, relay 1 on the receiver will be activated	ON	OFF
By pressing any transmitter channel, relay 2 on the receiver will be activated	OFF	ON
By pressing any transmitter channel, the two relays will be activated at the same time*	ON	ON

**If working in ON/OFF activation mode, relay 1 will act as impulse and relay 2 as ON/OFF. Therefore, on the first press relay 1 will close and open the contact and relay 2 will only close. On the second, relay 1 will close and open the contact and relay 2 will open.*

N.B.: Each transmitter can be configured independently on the receiver.

MANUAL PROGRAMMING OF RADIOBAND TRANSMITTERS

Makes it possible to store 6 RADIOBAND transmitters (3 Relay B1 and 3 on Relay B2).

Press the receiver programming PROG button for 1s; a sound signal will be heard. The receiver will enter safety band closing programming mode (BSC). If the programming button is kept pressed, the receiver will enter safety band opening programming mode (BSO), moving cyclically from one relay to another. Once the programming relay has been chosen for the transmitter you want to start using, send the programming code by pressing the RADIOBAND transmitter. Every time a transmitter is programmed, the receiver will emit a sound signal for 0.5s.

	In programming
Relay B1 Led	Turned on. It indicates the channel to program.
Relay B2 Led	Turned on. It indicates the channel to program.

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Note: For proper operation of the system, the transmitter must be programmed into one receiver only.

In both programming modes, after 10 seconds without programming, the receiver will exit programming mode, issuing two acoustic signals of 1 sec. If upon programming a transmitter the receiver memory is full, it will issue 7 acoustic signals of 0.5 sec. and exit programming.

RADIOBAND transmitter replacement

In case you need to replace a RADIOBAND transmitter, it is necessary to reset the system (see TOTAL RESET on next page) and reprogram all RADIOBAND transmitters used in the installation.

TOTAL RESET

In programming mode (PROG RADIO or PROG RBAND, depending the memory which wants to be erased), the programming button is held down and the “MR” reset jumper is bridged for 3 secs. The receiver will issue 10 short acoustic warning signals followed by others at a faster pace to indicate that the operation has been successful. The receiver is now in programming mode.

After 10 seconds without programming or quickly pressing the programming button, the receiver will exit programming mode, issuing two acoustic signals of 1 sec.

OTHER RADIOBAND1G FUNCTIONS

POLARIZED AUTO-TEST

Check the auto-test output on the control panel, in standby, to see whether the voltage is 0V (inverted test input) or 12/24V AC/DC (positive polarity). The auto-test signal of the panel must remain at its maximum for 2 seconds.

	Autotest output in standby	Autotest output activated	Polarity type	Jumper ATEST POL	ATEST1	ATEST2
Connection to an equipment with autotest	0V	12/24V	Positive	OFF	Connected*	Connected*
	12/24V	0V	inverted	ON	Connected*	Connected*
Connection to an equipment without autotest**	---	---	---	OFF	No connected	No connected

* *N.B.: Only connect the auto-test output to be used.*

** *Where the auto-test is not used, the system is not checked at the start of the operation, which means that security normative EN 12453 regarding the use of motorised garage doors is, in some cases, not complied with.*

SYSTEM CHECK

This function has to be used to check the operation and range of all the devices once the installation has been carried out.

Press the receiver’s CHECK button for at least 1 second to enter check mode. The indicator light will come on and four beeps will be heard.

Perform a complete door opening and closing manoeuvre. During the system check a beep will be heard every 1,5 seconds.

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CORRECT OPERATION OF THE SYSTEM

If no other acoustic signal is heard on completing the manoeuvre, the system is operating correctly. Either press the CHECK button again or wait 5 minutes and the RADIOBAND receiver will exit checking automatically, indicating with two beeps that the check has been correct. The check indicator light will go out.

DETECTION OF BAND FAILURE

If the communication with a RADIOBAND transmitter fails during checking, or the communication is deficient (for instance, too many communication retries or poor coverage), the RADIOBAND receiver emits three consecutive beeps, indicating that an error has occurred. Halt the door manoeuvre and press the safety bands installed to detect what has failed.

If a single beep is heard on pressing a band, this means that the band is correct.

If three consecutive beeps are heard on pressing the band, this means that the band has failed.

In this event, it is recommended changing the orientation of the transmitting-receiving aerials to ensure the desired range.

On exiting check mode, seven consecutive beeps will be heard and the indicator light will flash continuously.

Perform another system check until the result is correct.

SIGNAL COVERAGE

After pressing one of the installed bands, continuous flashes, ranging from 1 to 5, indicate the signal coverage for this band at the time it was pressed.

Number of check LED flashes	Coverage	Result of check
1	Very weak	Band failure
2	Weak	OK
3	Normal	OK
4	Good	OK
5	Very good	OK

TRANSMITTER BATTERY LOW INDICATOR

If the battery of a RADIOBAND transmitter programmed into the receiver becomes low, the receiver will beep 4 times every 20 seconds. If there is more than one transmitter programmed, each safety edge should be activated to identify, hearing the 4 beeps, which transmitter has a low battery. If the battery power is low, replace it immediately.

In RBMOT500, you can use the second relay on the receiver as an indicator for low battery, the output will activate when a transmitter with low battery is detected. Jumper B2/LB must be ON for this operation.

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OTHER MOTION FUNCTIONS

MOTION GROUPS

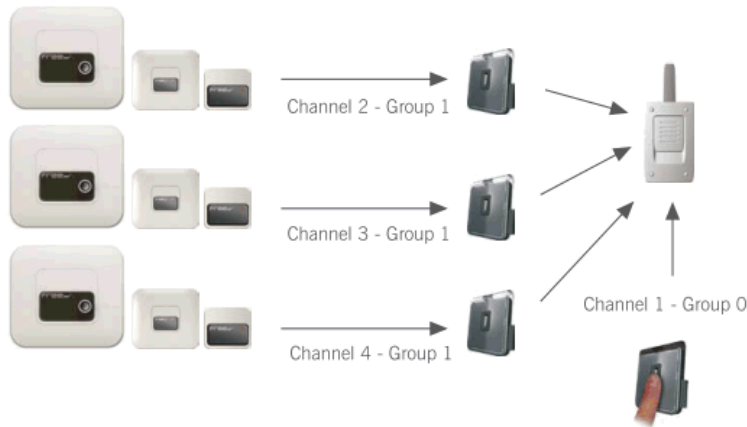
This equipment can work with the group identification of the system FREE. Receivers can be configured with a group (from 0 to 7) that allows management of up to 28 doors independently.

C=channel

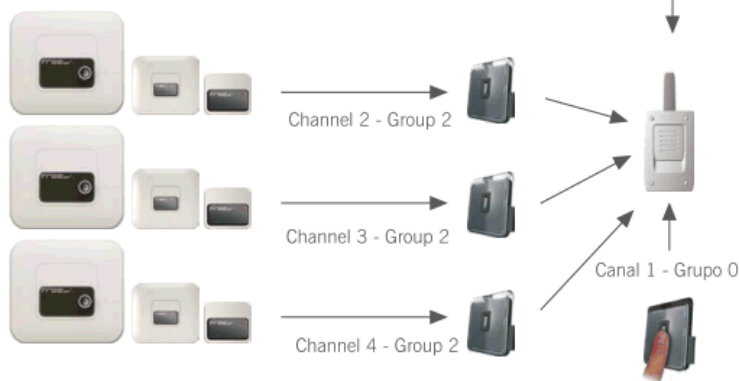
G=group

N.B. Group 0 enables all groups.

Group 1



Group 2



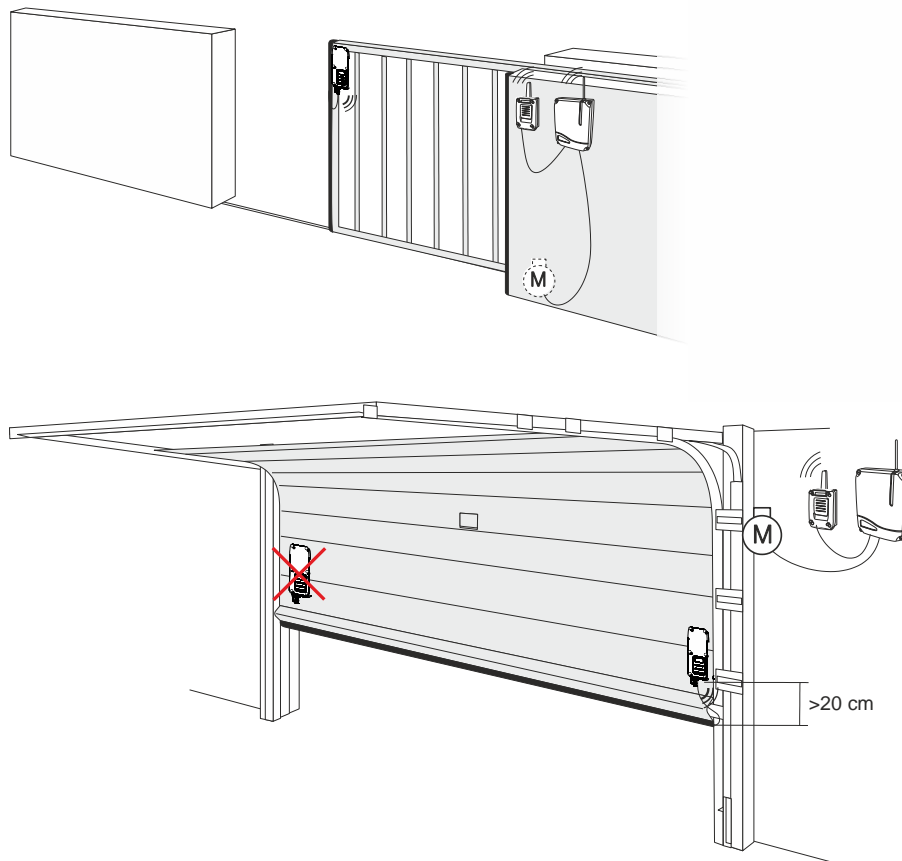
GROUP CONFIGURATION

After the receiver has been totally reset, it will be configured with the group of the first radio-programmed transmitter by enabling the hands free mode.

On powering the receiver, the led R1 will flash the same number of times as the group number with which it is configured.

INSTALLATION ADVISES

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USE OF THE EQUIPMENT

This equipment is intended to be used for remote control and be installed with a safety edge in automatic doors installations. Their use is not guaranteed for directly activating any other equipment different to that specified.

The manufacturer reserves the right to modify equipment specifications without prior notice.

IMPORTANT ANNEX

Disconnect the power supply before handing the unit.

In compliance with the European Directive low-voltage electrical equipment, we hereby inform users of the following requirements:

- For units which are permanently connected, an easily accessible circuit-breaker device must be built into the wiring system.
- This unit must always be installed in a vertical position and firmly fixed to the structure of the building.
- This unit must only be handled by a specialised installer, by his maintenance staff or by a duly trained operator.
- The instruction manual for this unit must always remain in the possession of the user.
- Terminals of maximum section 3,8mm² must be used for the power supply connections.
- Use time delayed fuses.
- The two working frequencies does not interfere each other.

Hereby, **JCM TECHNOLOGIES, S.A.**, declares that this RBMOT30, RBMOT500 is in compliance with the essential requirements and other relevant provisions of 2004/108/CEE Directive, insofar as the product is used correctly and 2006/95/CE low voltage directive, only if the usage is the appropriate.

CE DECLARATION OF CONFORMITY

See web www.motion-line.com