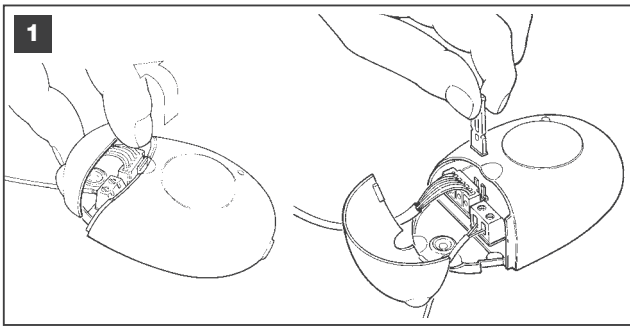
Mhouse R2

Photocells

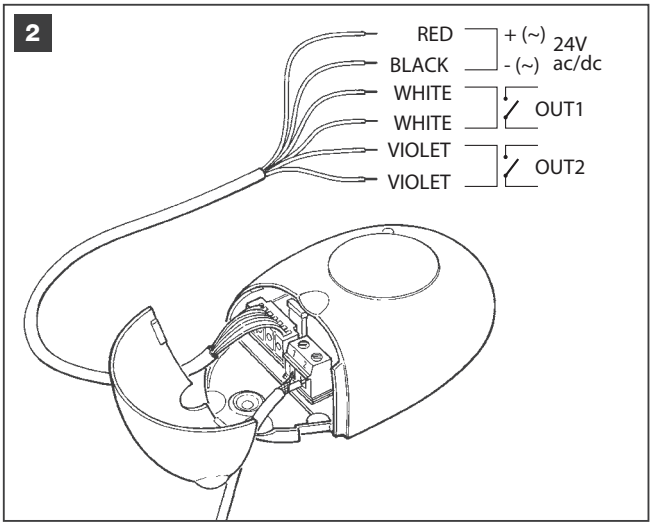
CE

IS0033A00MM
23-02-2011

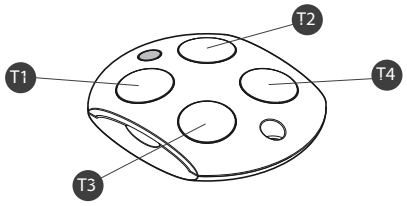
1



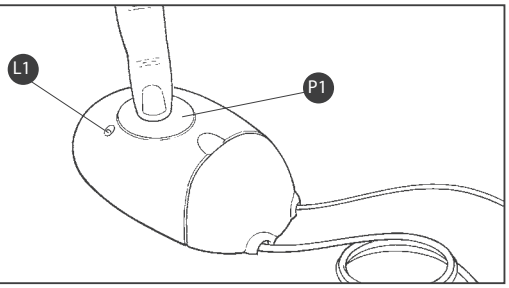
2



3



4



mhouse

Mhouse is a commercial trademark owned by Nice S.p.a.

Nice S.p.a.
Via Pezza Alta, 13 - Z.I. Rustignè - 31046
Oderzo (TV), Italia - Tel. +39 0422 85 38 38
Fax +39 0422 85 35 85

CE declaration of conformity

Declaration in accordance with Directive 1999/5/EC
R2 is produced by Nice S.p.a. (TV) I; MHOUSE S.r.l. is a commercial trademark owned by Nice S.p.a.

Note - The contents of this declaration correspond to declarations in the official document deposited at the registered offices of Nice S.p.a. and in particular to the last revision available before printing this manual. The text herein has been re-edited for editorial purposes. A copy of the original declaration can be requested from Nice S.p.a. (TV) I.

Number of declaration : 274/R2 Revision : 3
Language : IT

The undersigned, Luigi Paro, in the role of Managing Director, declares under his sole responsibility, that the product:
Manufacturer's Name: NICE S.p.A. - Address: Via Pezza Alta n°13, 31046 Rustignè di Oderzo (TV) Italy - Product type: Receiver 433MHz - Model / Type: R2 - Accessories: -

Conforms to the essential requirements stated in article 3 of the following EC directive, for the intended use of products:

• Directive 1999/5/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of 9 March 1999 regarding radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity according to the following harmonised standards:
- Health protection (art. 3(1)(a)): EN 50371:2002
- Electrical safety (art. 3(1)(a)): EN 60950-1:2006+A11:2009
- Electromagnetic compatibility (art. 3(1)(b)): EN 301 489-1 V1.8.1:2008, EN 301 489-3 V1.4.1:2002
- Radio spectrum (art. 3(2)): EN 300 220-2 V2.1.2:2007

Oderzo, 11 February 2011

Ing. Luigi Paro (Managing Director)

Warnings

- Before you start installing the receiver, make sure it is suitable for its intended purpose; pay special attention for the data provided in the "Technical Characteristics" chapter. MHOUSE disclaims responsibility for any damage resulting from improper use of the product; the only use authorized by the manufacturer is the one described in this manual.
- Protect the receiver from water and other liquids and do not place it near heat sources or expose it to open flames;if this should occur, stop using it immediately and call MHOUSE customer service;
- All the installation operations must be performed while the devices are disconnected from the power supply.

Description and Intended Use

The R2 receiver, used in combination with the GTX4 transmitters, is suitable for the remote control of electrical equipment such as gate control units and similar automations; The receiver has two outputs with normally open (NO) relay contact. When the transmitter sends a signal that is recognized as valid, the receiver causes the activation of the corresponding output relay (the contact closes). The relay will deactivate as soon as the transmitter stops sending the radio signal. This product is compatible with transmitter models TX3 and TX4.

Installation

Receiver
The R2 receiver enables universal use. The casing provides essential and efficient protection to the circuit. It can be secured with the adhesive on the bottom.

Selecting the power supply
The receiver's power supply is 24V (both direct and alternate current). However, R2 can also be connected to a 12V power source. To do this, just insert the jumper shown in Fig.1.

TABLE 1

Jumper not inserted	24 Vac/dc	Voltage limits: 18÷35Vdc, 15÷28Vac
Jumper inserted	12 Vac/dc	Voltage limits: 10÷18Vdc, 9÷15 Vac

Electrical connections
The receiver is connected through colour-coded conductors (Fig.2).

TABLE 2

Red/Black	POWER SUPPLY	Red = Positive, Black = Negative (with alternate current it makes no difference)
White/White	1st RELAY OUTPUT	Clean contact of a normally open relay
Violet/Violet	2nd RELAY OUTPUT	Clean contact of a normally open relay
Terminals 1, 2	AERIAL input	Aerial (terminal 1=braid, terminal 2= core)

Aerial

The R2 receiver is equipped with an internal aerial (the length of wire just connected to terminal 2). However, in order to obtain a better performance it can be connected to an external aerial (for example, the one found on the FL100 flashing light by Mhouse).
The aerial should be installed as high as possible, never under but eventually over metal or concrete structures which could blind it. Use coaxial cable (RG58, for example) with a maximum length of 5m. Connect the centre part of the cable to terminal 2, and the braid to terminal 1.

Memorizing the transmitter

To enable the transmitter to command a receiver, a memorization procedure must be carried out.

Two methods can be followed to memorize the new transmitter:
- Mode 1: in this "mode" the radio transmitter is used to its fullest extent, i.e. all the buttons carry out the command associated to the corresponding output.

In "mode 1", the commands associated to the 4 buttons (Fig. 3) are the following:

TABLE

Transmitter	Radio receiver
Button T1	Activation of output relay No.1
Button T2	Activation of output relay No.2
Button T3	Not used
Button T4	Not used

- Mode 2: in this "mode", each transmitter button can be associated to one of the two receiver outputs. If this mode is used properly, it will be possible to command 2 or more different receivers using the same GTX4 transmitter; for example: Button T1 activates output No. 1 on receiver A; button T2 activates output No. 1 on reciver B; button T3 activates output No. 2 on reciver A; button T4 activates output No. 1 on reciver C.
  Each transmitter is, of course, a separate unit, and while some are memorized in "mode 1" others can be memorized in "mode 2" on the same receiver.

Warning: since the memorization procedures are timed (max. 10 seconds for each stage), you need to read the instructions in the following paragraph before you proceed to carry them out.

Memorizing the transmitter in "mode 1"

1. Press button P1 Fig.4 on the receiver for at least 3s; when the P1 LED lights up, release the button.
2. Within 10s, press any button on the transmitter to be memorized for at least 2s. If the memorization procedure is successful, the P1 LED will flash 3 times.
3. If there are other remote controls to be memorized, repeat step 2 within the next 10s, otherwise the memorization stage will terminate automatically.

Memorizing the transmitter in "mode 2"

Delete the remote control system by following procedure
1. Press and hold down button P1 on the control unit.
2. Wait until the P1 LED lights up, then, within three seconds:
3. Press and hold down for at least three seconds the button of the radio transmitter to be deleted.If the radio transmitter has been deleted, the P1 LED will flash quickly five times. If the LED flashes slowly just once, it means that the deletion has not taken place because the transmitter is not memorized
4. If there are more transmitters to be deleted, repeat step 3 within ten seconds while pressing button P1 , otherwise the deletion stage will terminate automatically.

With the memorization of the transmitter in "mode 2", each button can be associated to any of the two radio receiver outputs (see table 4).
In "mode 2", each button requires a separate memorization stage.
1. Press button P1 Fig.4 on the receiver as many times as the number corresponding to the desired command, according to the following table (e.g. 2 times for "Activation of output N. 2"):

TABLE 4

Button P1	Radio receiver
1 time	Activation of output No.1
2 times	Activation of output No.2
3 times	Not used
4 times	Not used

2. Make sure that the P1 LED Fig.4 flashes as many times as the number of the selected output.
3. Within 10 s, press the desired button on the transmitter to be memorized, and hold it down for at least 2s. If the memorization procedure is successful, the P1 LED will flash 3 times.
4. If there are other remote controls to be memorized for the same type of command, repeat step 3 within the next 10s, otherwise the memorization stage will terminate automatically.

Remote memorisation

It is possible to memorize a new transmitter without directly operating the buttons on the radio receiver, provided you have an " OLD " pre-memorized operational transmitter.

The NEW transmitter to be memorized will inherit the characteristics of the OLD one, i.e. if the OLD transmitter was memorized in "mode 1", the NEW one will also be memorized in "mode 1". In this case, during the memorization stage you can press any key on the two transmitters.
If, on the other hand, the OLD transmitter was memorized in "mode 2" you must press the button on the OLD transmitter which corresponds to the desired command, and the button on the NEW transmitter to which you wish to associate that command.

Holding the two transmitters, position yourself near the control unit or receiver and perform the following operations:

1. Press the button on the NEW transmitter and hold it down for at least 5s, then release it.
2. Press the button on the OLD transmitter 3 times slowly.
3. Press the button on the NEW transmitter once slowly.

At this point the NEW transmitter will be recognized by the control unit or receiver and will assume the characteristics of the OLD one.
If there are other transmitters to be memorized, repeat all the steps above for each new transmitter.

Maintenance and Disposal

The system does not require any special maintenance.
This product is constructed of various types of materials, some of which can be recycled while others must be disposed of. Make sure you recycle or dispose of the product in compliance with the laws and regulations locally in force.

Warning: Some electric components may contain polluting substances; do not pollute the environment.

Technical characteristics

R2 is produced by NICE S.p.a. (TV) I, MHOUSE S.r.l. is an affiliate of the Nice S.p.a. group.
Nice S.p.a., in order to improve its products, reserves the right to modify their technical characteristics at any time without prior notice. In any case, the manufacturer guarantees their functionality and fitness for the intended purposes.
Note: all the technical characteristics refer to a temperature of 20°C. This product is compatible with transmitter models TX3 and TX4.

■ Type: Radio receiver for control of automatic gates, garage doors and similar automations ■ Technology adopted: Reception and decoding of the radio signals emitted by the transmitters. Activation of the output relays only in case of correspondence with a previously memorized code, correctly synchronized with the variability sequence ■ Possibility of remote control: With GTX4 transmitter ■ Coding: 64 bit rolling code (18 billion billion combinations) ■ GTX4 transmitter memorization capacity: Up to 256, if memorized in mode 1 ■ Reception frequency: 433.92 Mhz ■ Radio aerial input: 52 ohm for RG58 or similar type of cable ■ Maximum length of aerial cable: up to 5 m ■ Receiver sensitivity: Better than 0.5µV ■ Range of GTX4 transmitters: Estimated at 50-100m: (this distance may vary in the presence of obstacles or electromagnetic disturbances and depends on the position of the receiving aerial) ■ Power supply: Without jumper: 24V typical (18÷35Vdc, 15÷28Vac), With jumper: 12V typical (10÷18Vdc, 9÷15 Vac) ■ Absorption when idle: 10mA (typical at 24Vac) ■ Absorption with 1 relay active: 50mA (maximum at 24Vac) ■ Output relay: No. 2 with normally open relay contact ■ Relay contact characteristics: Maximum 50V and 0.3A ■ Activation time: Approx. 200ms ■ Deactivation time: Approx. 300ms ■ Operating ambient temperature: -10 ÷ 55°C ■ Use in acid, saline or potentially explosive atmosphere: No ■ Protection class: IP30D (use in protected environments) ■ Dimensions / weight: 86x57xh22mm, weight 55g