

REC-20 Wireless Wiegand Receiver Controller

English



Technical Specifications

Version:
v1.1-0408



MicroLatch™

MICROLATCH™ REC-20 RF WIEGAND CONTROLLER

1. Overview

This product is designed to provide a convenient high security RF interface to an access control system which recognises the Wiegand 26 bit protocol. The REC-20 may operate in one of two modes;

Mode 1:

The received signal is decoded into a 26 bit Wiegand number and the output corresponding to the button pressed on the fob (1,2,3,4) presents this information for input to the access control system. In this mode up to 4 entry/exit points may be controlled from the one receiver.

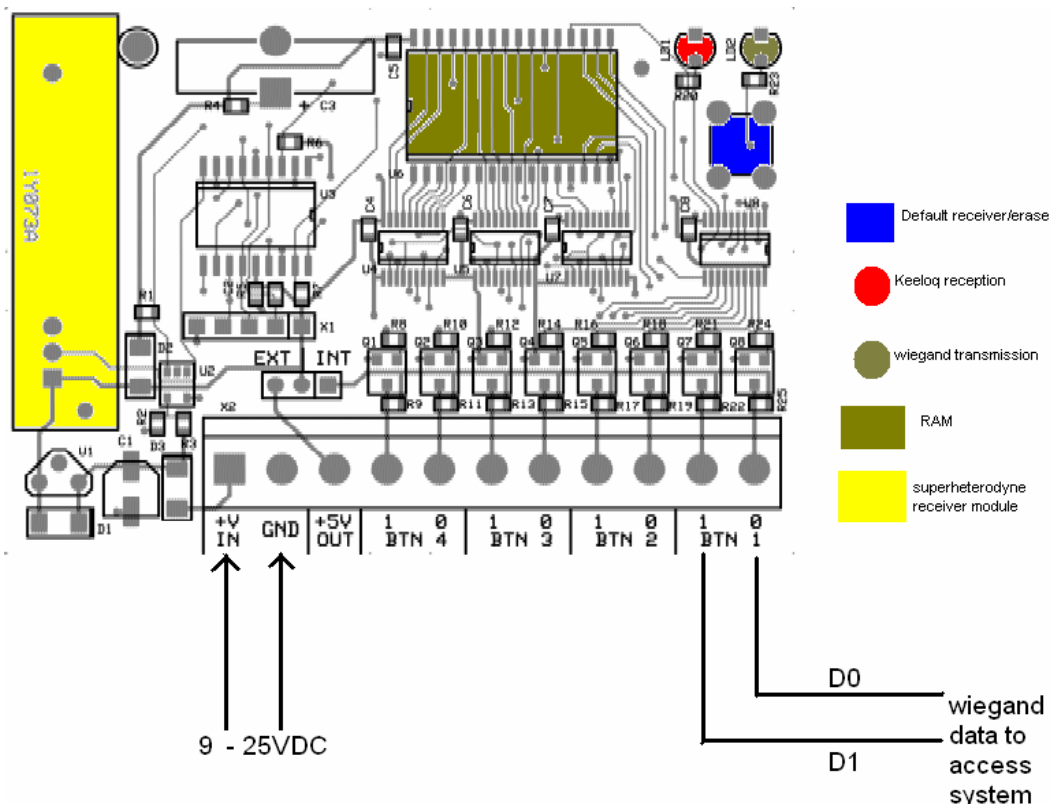
Mode 2:

The received signal is decoded into a 26 bit Wiegand number and output on "BTN 1". Each button increments the user number by one (1). Eg: Fob is programmed as Site 123 with Button 1 on the fob outputting user 456. Button two (2) will then be user 457, button three (3) user 458 and button four (4) user 459.

Note: The above modes of operation are determined by the fob programming in the factory. The REC-20 can manage up to 32,000 fobs in an active users database. Inactive users are automatically deleted. The REC-20 will only function with Microlatch Wiegand fobs.

The REC-20 has an onboard 4Mb super capacitor backed RAM which manages all fobs. The super capacitor backup will provide a minimum 24 hours backup in hostile (high temperature) environments. In normal operating conditions (~ 25deg C) backup in excess of 7 days can be expected.

2. Connection Diagram



INSTALLATION AND SETUP

The REC-20 can be set up and initialised by carrying out the following procedures:

1. Select a site for the receiver which allows connection to the Wiegand input of the access system. This site should be clear of metallic objects as much as possible. Keep the small GREY aerial wire as vertical as possible.

Note: An external 434mhz aerial may be connected to the small terminal block adjacent to the on board super capacitor. Microlatch's ANT-01 is ideal. Connect the centre conductor from a coaxial cable to the "A" terminal and the shield to "G".

2. Connect receiver to a 12VDC power source and connect Wiegand output/s of the receiver to the access system.
3. The REC-20 has 3 pins just above the terminal block. This set of pins allows different configuration of the Wiegand outputs to suit different access systems. With the jumper in the "EXT" position (default) the D0/D1 lines are not connected to a voltage source and the internal 5 volt supply is routed through to the terminal marked "+5V OUT". This will suit most applications where the access system provides the voltage source. With the jumper in the "INT" position, the D0/D1 lines are connected to the internal +5V through 10K Ohm resistors. If the REC-20 is not reporting the correct site/user to the access system then the INT jumper position should remedy this. If the REC-20 is required to source +5V, but the internal 10K Ohm resistors are insufficient, then, with the jumper in the "EXT" position resistors may be wired externally from each of the D0/D1 terminals to the +5V OUT terminal.
4. Power up the receiver and then press the REC-20 on board switch three (3) times, holding down on the third press. After 4 seconds the RED and GREEN LEDs will flash together for approximately 15 seconds. This function is clearing the RAM memory. After the flashing stops the GREEN LED will be lit. Press the switch once and the LEDs will extinguish.
5. The REC-20 is now ready to "learn" the fobs. Simply press a button on the fob and observe the LEDs on the receiver. On the first press the RED LED will light indicating RF reception of a valid signal. Press the same button again and the RED LED will light as before followed by the GREEN LED indicating successful Wiegand transmission.
6. Repeat step 4 for all required fobs. Note that at no time is it necessary to press the button on the receiver. Learning requires simply two (2) button presses from a compatible fob.
7. Test operation.

ADDITIONAL INFORMATION

- The four outputs on the REC-20 provide identical Wiegand data this allows a very flexible configuration.
- Each button may be assigned to different functions as required. For example should there be two entry gates side by side, one receiver can control both with different buttons, say A & B. button C may control a boom gate and button D an entry door all within the range of one receiver.

PRODUCT SPECIFICATIONS

Microlatch™ REC-20 RF Wiegand Controller V1.0

Operating Voltage	9 - 25VDC regulated 300mA minimum battery backed supply recommended.
Indicators	On Keeloq™ Reception – Red LED On Wiegand Transmission – Green LED
Current consumption @12VDC	10mA maximum
Physical Dimensions Case material	85mm (L) x 65mm (W) x 32mm (H) ABS plastic
Output Channels	4
Output Options	Shunt selectable
INT	10K pull-ups to 5 volt DC
REMOVED	Open collector
EXT	+5 volt out terminal active for user selectable external pull-ups
RF Operating Frequency	433.92MHz
RF Signal Type	Code Hopping (Keeloq™) AM ASK superheterodyne
Wiegand outputs	conform to Wiegand standard
Country of Manufacture	Australia
Safety	EMC Tested and Approved. CE and C-Tick Compliance Complies with AS/NZS 4268:2003, AS/NZS 4251.1:1999

* All specifications subject to change without notice in the interest of ongoing product development

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