

IDTeck **RF70**

Long Range Proximity Reader



USER'S MANUAL



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1. Introduction

The NESS - IDTECK RF70 is a Long Range Proximity Reader for outdoor use and the read range of RF70 is a maximum 2.1 metres distance with IDA200 active cards. RF70 can be used for various applications such as Hands Free Access Control, Parking Control and Factory Automations.

The RF70 supports various output formats, 26bit Wiegand output, ABA Track II Magstripe output and RS232 serial output and there is an optional mounting bracket to install the RF70 to a mounting pole. The RF70 has built-in tuning circuitry for the exact tuning for maximum read range wherever RF70 is mounted to different materials. The two-colour LED of green and red and the inside beeper sound will guarantee you accurate and reliable system operations.

2. Identifying supplied parts

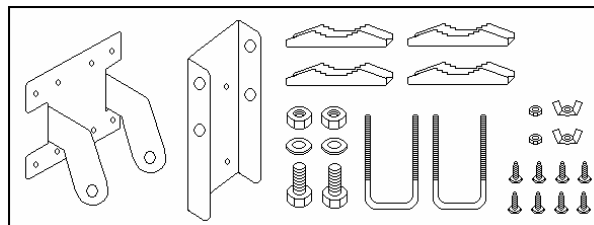
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RF70



User's Manual



Mounting Bracket (Optional purchase)

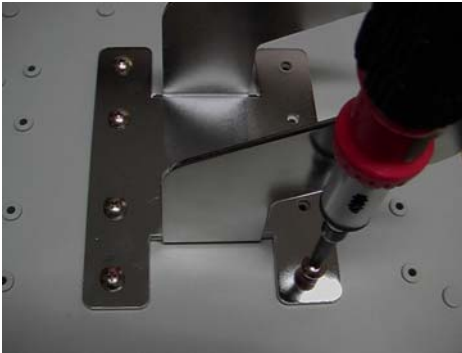
3. Specification

Read Range	45 ~ 50cm with IDC170 cards Up to 1.5m (5 feet) with IDA150 cards Up to 2.1m (7 feet) with IDA200 cards
Output Format	26 bit Wiegand, ABA Track II Magstripe, and RS232
External Beeper Control Input	Low Active, DC 0 ~ 12V, maximum 50 mA
External LED Control Input	Low Active, DC 0 ~ 12V, maximum 50 mA
LED/Beeper	2-Colour LED (Red and Green) / Piezo Buzzer
Colour	Light Grey, Black
Power	DC12V, maximum 500mA
Operating Environment	-35°C ~ +65°C (-31°F ~ 149°F), 0~90% Humidity
Overall Size (WxHxD)	290x290x60mm (11.4"x 11.4"x2.4")
Weight	3.2kg (7.0 lbs)

4. Installation

4-1. Pole Mount using Mounting Bracket (Optional purchase)

Install the RF70 to the mounting plate and install the mounting bracket to the pole as shown in the photos below, and then adjust the angle of the reader toward the tags.



**(1) Install mounting plate to RF70
by using 8 screws**



(2) Assemble “U” bolt to bracket



**(3) Assemble bracket to mounting
plate by using 2 hex bolts/nuts**

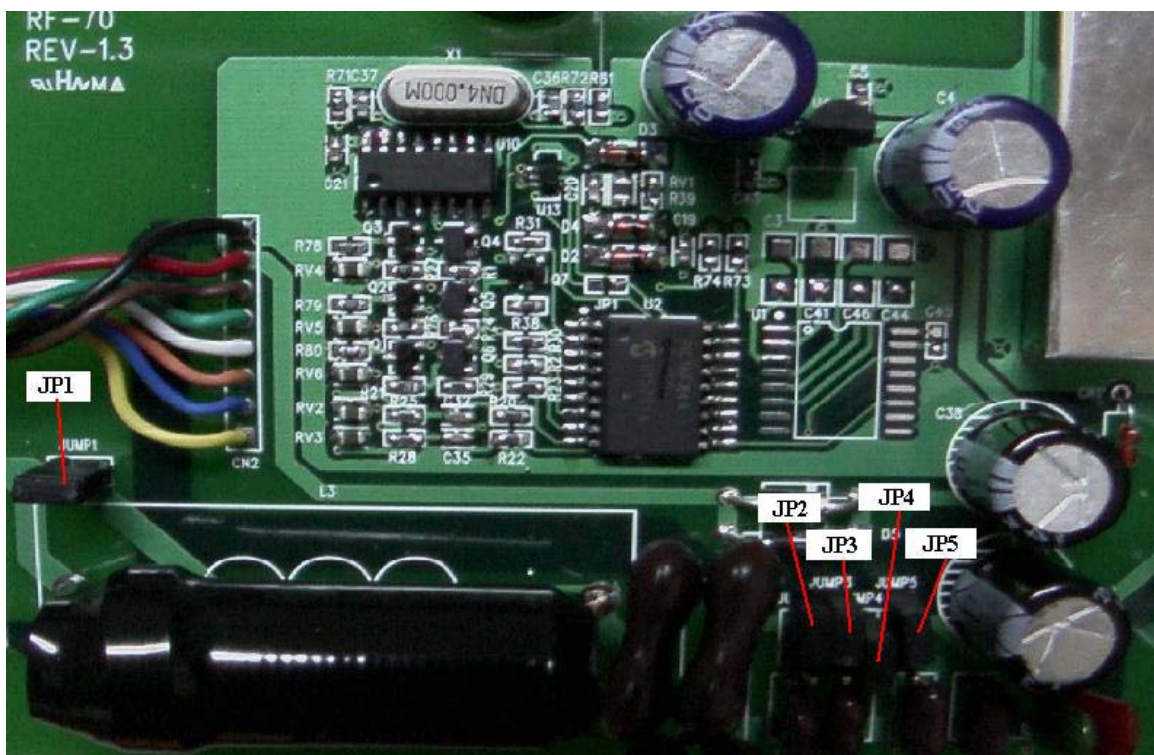


**(4) Install mounting bracket to the pole
then adjust the angle of the reader**

5. RF Power Tuning

5-1. Jumper location

Open the top cabinet and there are 5 jumpers in the unit for RF power settings and the location of jumpers are shown in the photo below.



5-2. RF Power Tuning

The RF70 reader has 5 jumpers to tune the RF power for maximum read range and we recommend the jumper settings as follows according to the mounting material of reader.

<u>Reader mounted to</u>	JP1	JP2	JP3	JP4	JP5
Glass or wood wall (default)	On	Off	Off	Off	Off
Pole with mounting bracket	On	Off	On	Off	Off
Concrete wall	On	On	Off	Off	Off
Metal surface	Off	On	On	On	On
Note: You may change jumper setting to get maximum read range.					

6. Wire Colour Table of RF70

POWER

Power (DC +12V)	DC (+)	Red wire
Power (DC Ground)	DC (-)(GND)	Black wire

INPUT

Beeper control input	BEEP	Blue wire
LED control input	LED	Yellow wire

OUTPUT (Wiegand Format)

Wiegand Data-0	Data-0	Green wire
Wiegand Data-1	Data-1	White wire

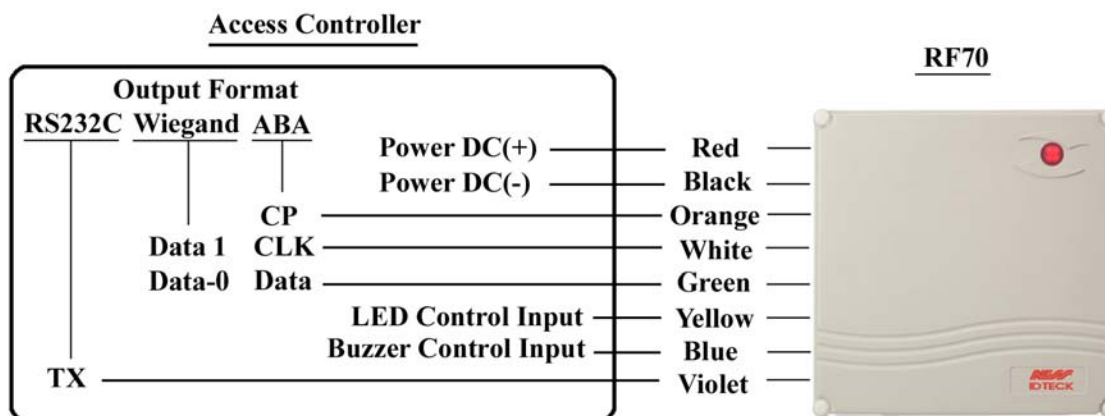
OUTPUT (ABA Track II Format)

ABA (Card Present)	CP	Orange wire
ABA (Clock)	CLK	White wire
ABA (Data)	Data	Green wire

OUTPUT (RS232C Format)

RS232C (TX)	TX	Violet wire
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7. Wire Connection to controller



Wire Connection to Controller

8. Operation

- 8-1. Once power is applied, you should hear three beeps and the LED changes colour to red-green-red indicating that the reader is in standby mode after a successful initialisation and diagnosis.
- 8-2. Present a proximity card to the reader until you hear the beeping sound and see the LED changes colour to green. The reader will send the proximity card data to the controller then the LED will change colour to red again for the next reading.
- 8-3. **LED Control:**
To change the LED colours, you may connect the LED Control Input (Yellow wire) to ground and the green LED will turn on indicating that the reader is in standby mode. Present a proximity card and the LED will change colour to red then green again for the next reading.
- 8-4. **Beeper Control:**
In normal operation, the reader generates one beep when it reads a proximity card, however additional beeps can be generated to improve indication for access status (granted or denied) by forcing the beeper control input (Blue wire) to system ground level. The beeper will remain on as long as the Blue wire is connected to system ground.

9. FCC REGISTRATION INFORMATION

FCC REQUIREMENTS PART 15

Caution: Any changes or modifications in construction of this device, which are not expressly approved by the responsible for compliance, could void the user's authority to operate the equipment.

NOTE: This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions;

1. This device may not cause harmful interface, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to this equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the radio or television off and on, the user is encouraged to try to correct interference by one or more of the following measures.

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on another circuit.
4. Consult the dealer or an experienced radio/TV technician for help.

10. Contacts

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