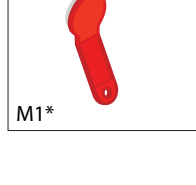


## 1. Introduction

Circuito-Tec thanks you for purchasing this Access Control – iButton

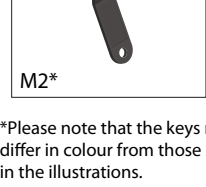
The system is designed to operate 12V electromagnetic locks, ensuring authentication and security via iButton keys (DS1990A / 1-Wire).



The model supports:

- **1 Master Key (M1)** - for system administration
- **1 Secondary Key (M2)** - for group management
- **Up to 26 user keys**, - each user key is linked to the master that registered it
  - M1 Users
  - M2 Users

Each masters can only administer their respective users.



\*Please note that the keys may differ in colour from those shown in the illustrations.

## 2. System Components and Visual Indicators

### LED Indicators:

- **Green** = System OK / Access Permitted
- **Red** = System Error / Access Refused

### Components:

- **Button:** Functions for system programming and manual door release.
- **Reader:** The contact point for iButton keys.
- **“Sound:** Provides an audible ‘beep’ to acknowledge and confirm operations.



### Initial Setup (to be carried out once only).

## 3. Reset to Factory Defaults – Complete System Reset

**Caution:** This procedure will delete all data, including master and user keys.

1. Disconnect the power supply
2. Press and hold the button
3. Reconnect the power supply (while keeping the button pressed)
4. Continue holding for approximately 10 seconds
5. The red LED will begin to flash rapidly
6. Release the button once long beeps are heard



**“System reset complete.** The unit is now cleared and ready for operation.

## 4. Creating the Master Key (M1)

**M1 is the primary key**, functioning as the system administrator.

1. Once the system has been reset (or if brand new), **present any key** to the reader
2. This key will automatically be assigned as the **Primary Master Key (M1)**.
3. The green LED will illuminate and an audible beep will confirm the action.



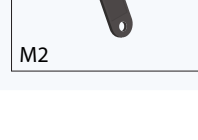
**Important:** Store this key securely. It is the sole key with full system control.

### 4.1 Creating and Managing the Secondary Master Key (M2).

M2 is an optional master key, designed to provide a secondary administrator with restricted authority or to assign keys to tenants, employees, and similar roles within their designated user group.

#### The M2 Master Key can be used to delegate limited management rights

- Appointing a second administrator
- Granting control to a shift supervisor
- Managing users assigned to a specific area



### 4.2 Procedure for Creating the Secondary Master Key (M2)

**Important:** The Primary Master Key (M1) is the only key authorised to create or remove the Secondary Master Key (M2).

#### 1. Access programming mode using the Primary Master Key (M1):

- o Present M1 to the reader
- o Green LED flashes once accompanied by a beep



#### 2. Press and hold the button (keep it pressed)

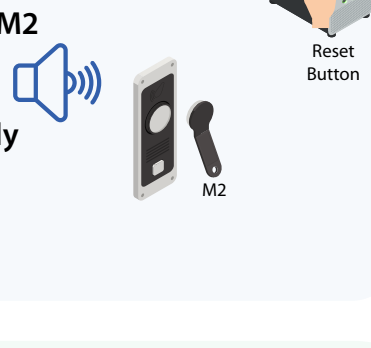
#### 3. While holding the button, present the key to be assigned as M2

#### 4. The green LED will flash repeatedly with audible beeps

#### 5. The Secondary Master Key (M2) is now created successfully

#### 6. Release the button

#### 7. Exit programming mode by presenting M1 once more



**System configuration complete.** Two master keys are now available:

- **M1 (Primary Master Key):** Full administrative rights, including management of M2
- **M2 (Secondary Master Key):** Restricted rights, limited to adding or removing users within its own group.

## 5. Everyday Operation

### To unlock the door using a key

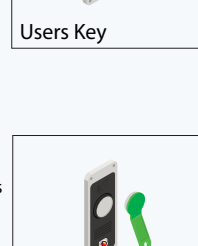
#### 1. Present the key to the reader

#### 2. If the key is authorised:

- o Green LED illuminates
- o Audible confirmation beep
- o Door unlocks for approximately 2 seconds



\*Please note that the keys may differ in colour from those shown in the illustrations.



#### 3. If the key is unauthorised:

- o Red LED flashes
- o Two short beeps sound
- o Door remains locked



### 5.1 To unlock the door using the button (no key required)

#### To exit from the inside

#### 1. Press the button

2. The door will unlock and open automatically
3. Release the button to complete the operation



## 6. Procedure for Adding New User Keys

User keys can only be added by the Master Keys (M1 or M2)

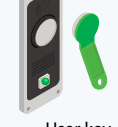
#### 1. Access programming mode by presenting the Master Key (M1 or M2):

- o Present your Master Key (M1 or M2)
- o Green LED flashes once with a beep



#### 2. Register a new user key

- o Present the person's key you want to add
- o Green LED flashes three times with one beep
- o Key successfully added



#### 3. Repeat step 2 for each additional user key

#### 4. Exit programming mode by:

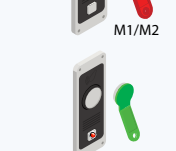
- o **Presenting the Master Key again**
- o Green LED flashes twice with two beeps
- o Programming complete.



### 6.1 Procedure for Removing User Keys

#### Procedure for Removing a Specific User Key

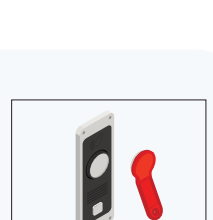
1. Access programming mode by presenting the Master Key (M1 or M2)
2. Present the specific user key to be deleted.
3. The green LED will illuminate, followed by the red LED, accompanied by a long beep
4. The user key is successfully removed.
5. Exit programming mode by presenting the Master Key once more



### 6.2 Procedure for Removing All User Keys

This function is useful whenever modifications are necessary

1. Access programming mode by presenting the Master Key (M1)
2. Press and hold the button
3. While keeping the button pressed, present the same Master Key again
4. Continue holding for approximately 10 seconds
5. The red LED will flash rapidly
6. Release the button when long beeps are heard
7. All user keys associated with that group are now deleted.



**Important:** Deleting with Master Key M1 will erase only the users associated with M1. Deleting with Master Key M2 will erase only the users associated with M2.

### 6.3 Daily use of the M2 Master Key

Master Key M2 operates in the same way as Master Key M1 for adding and removing user keys. However, M2 exclusively manages the users within its own group.

- Access programming mode with M2
- Any users added will be linked exclusively to M2
- Only users associated with M2 can be removed
- Users managed by M1 remain invisible and inaccessible to M2



### 6.4 Access programming mode using Master Key M1

1. Enter programming mode with M1
2. Press the button briefly
3. Present the M2 Master Key to the reader
4. The system will confirm the removal
5. The M2 Master Key is now erased
6. Exit programming mode by presenting M1 once more



**Important:** Deleting Master Key M2 does not erase the user keys it created. These user keys remain in the system but are no longer associated with any Master Key. They will only be fully cleared after a complete system reset.

## 7. Visual and Audible Signals

### LEDs

Green LED	Red LED	Action / Event
Steady light (2s)	Off	Authorised user
Off	Flashes twice	Unauthorised user
Flashes once	Off	Enter programming mode
Flashes twice	Off	Exit programming mode
Off	Off	System in standby

### Buzzer

Sound Signal	Meaning
1 long beep* / 1 short beep#	*Authorised user / #Key successfully added
2 short beep* / 1 long beep#	*Unauthorised user / #User key removed
1 short beep	Enter programming mode
2 short beep	Exit programming mode
3 long beep	Total Memory Reset Procedure

## 8. Important Tips

- **Keep M1 safe** – it is the most important key in the system
- **Use M2 when you want to grant management powers to another person, but without full control.**
- **Always test new keys after adding them**
- **Before selling or relocating the equipment, perform a total reset**
- **Be careful when performing batch removals or a reset – these actions cannot be undone!**

## 9. Common Problems

### Key not working

- Check if the key is registered
- Try adding it again

### Accidental Programming Entry:

- Present the Master Key again to exit

### Lost M1 Key:

- You will need to perform a total reset and start from scratch
- Therefore, always keep M1 safe and secure!

### LED flashes red constantly:

- It may be in error mode
- Try switching the system off and on again

System: iButton M1/M2

Capacity: 2 Master Keys + 26 User Keys - PiBF28u/PiB28u

### User Manual – Version 1.0.

This document provides instructions for operating and managing the iButton M1/M2 system, including Master Key and User Key functions, programming procedures, troubleshooting, and safety guidelines.