Application Notes

MDM v7.4.3f and above

Contents **Page**

Features 2

Installation 2

Before you begin 2

Adjusting anti-jam 3

Coordinating two splitting MDMs 4

Referencing 6

When to reference 6

How to reference 6

Factory Reset 6

Controlling the Mechanism 7

Standard Commands 7

Coordinating 2 splitting mechanisms 7

future automation

Features

1) Customizable fast speed for coordinating two splitting mechanisms
2) Adjustable jam detection sensitivity to allow for

Installation

In most cases the MDM will work smoothly without needing software adjustment. However, if you encounter any problems with smoothness of stopping or interrupted travel consider the following

Before you begin

1) Use the Future Automation IR remote if you need to make any of the adjustments below
2) Please note all multi-button commands beginning with [STORE] must be entered sequentially with no more than 2 seconds between each press.

Adjusting anti-jam

MDMs have an anti-jam feature which stops and backs off the doors or panels if the motor slows down unexpectedly.

The default setting will work correctly in most cases but with some heavier payloads jam-detection may trigger due to the effort required to move the load.

If this happens, the following commands can be used to adjust the anti-jam sensitivity (in order of decreasing sensitivity).

- [STORE] [A] - most sensitive, anti-jam will trip very easily
- [STORE] [B] - default sensitivity (suitable for most installations)
- [STORE] [C]
- [STORE] [D]
- [STORE] [E]
- [STORE] [F] – least sensitive, anti-jam

Warning: Do not adjust the anti-jam sensitivity unnecessarily. Doing so will increase the initial clamp when encountering an obstruction

Coordinating two splitting MDMs

If coordinating two splitting MDMs it may be necessary to adjust the speed of one side to achieve coordinated opening and closing.

Two types of IR lead are supplied to do this

a) A splitting lead with one IR head and two jacks. This should be used to control the pair of doors simultaneously.

b) A standard lead with only one jack. This is labelled “Setup”. When performing steps 5 and 6 the splitting lead should be disconnected from both control boxes and the Setup lead fitted to box belonging to the MDM to be adjusted

c) The instructions below will explain when to fit the appropriate leads

1) Fit the splitting IR lead to both boxes

2) Ensure both MDMs are fully referenced by doing the following for each MDM

    a. Press [IN] to fully close the door.

    b. Press [OUT] to fully open the door.

    c. A fully referenced mechanism should accelerate at the start of travel, run at full speed before decelerating at the end of travel

3) Once both doors have been fully referenced, identify which door takes the shortest time to open and which door takes shortest time to close.

4) If adjustments need to be made, remove the splitting IR lead

5) The door which takes the shortest time to open needs to be slowed down to match the opening time of the other door.

    a. Fit the “Setup” IR lead to the control box which needs to be adjusted,

    b. [STORE] [<] will slow the door down fractionally when opening

    c. [STORE] [>] will speed it up fractionally when opening

    d. Multiple presses of the above keys may be needed if there is a significant difference in the opening times of the two doors

6) The door which takes the shortest time to close needs to be slowed down to match the closing time of the other door.

    a. Fit the “Setup” IR lead to the control box which needs to be adjusted,

    b. [STORE] [IN] will slow the door down fractionally when opening

    c. [STORE] [OUT] will speed it up fractionally when opening

    d. Multiple presses of the above keys may be needed if there is a significant difference in the closing times of the two doors

7) Refit the splitting IR lead and test the doors. Repeat from step 1) if any further adjustments need to be made.

Referencing

A newly supplied mechanism will not need referencing as this has already been done prior to dispatch.

Referencing is a process which must be performed whenever the mechanism needs to "learn" the limits of its own travel. Some service/maintenance procedures may require the unit to be re-referenced.

An unreferenced unit will run at the slow docking speed until fully referenced.

When to reference

1) When installing a replacement control box or software chip
2) If the mechanism becomes unreferenced due to a power cut whilst moving

How to reference

1) Press [STORE] [STORE] [HOME] to perform a factory reset
2) Press [IN] to fully close the mechanism
3) Press [OUT] to fully open
4) The mechanism is now referenced

Factory Reset

Completely restores the mechanism to all default settings. NOTE: the mechanism must be fully referenced again after a factory reset.

Press [STORE] [STORE] [HOME] to perform a factory reset

Controlling the Mechanism

- RS232 commands are all terminated with carriage return but no line feed. In Crestron this is represented by \r
- IR sequences involving multiple key-presses require each successive key to be pressed within 2 seconds

Standard Commands

IR Sequence	RS232	CC Pin	Action	Comments
IN	fa_in	Pin 8 Or Pin 5 short removed	System fully in	
OUT	fa_out	Pin 7 or Pin 5	System fully out	
STOP	fa_stop	Pin 6	Stop Mechanism	
STORE A			Set Anti-Jam sensitivity	Most sensitive anti-jam setting (not recommended)
STORE B			Set Anti-Jam sensitivity	Default anti-jam setting
STORE C			Set Anti-Jam sensitivity	3rd stiffest ant-jam setting (use with caution)
STORE D			Set Anti-Jam sensitivity	4th stiffest anti-jam setting (use with caution)
STORE E			Set Anti-Jam sensitivity	5th stiffest ant-jam setting (use with caution)
STORE F			Set Anti-Jam sensitivity	Stiffest anti-jam setting (use with caution)
STORE STORE HOME			Factory reset	Mechanism must be referenced and the viewing angles re programmed after a factory reset

Coordinating 2 splitting mechanisms

IR Sequence	RS232	CC Pin	Action	Comments
STORE <			Decrease opening speed	
STORE >			Increase opening speed	
STORE IN			Decrease closing speed	
STORE OUT			Increase closing speed	