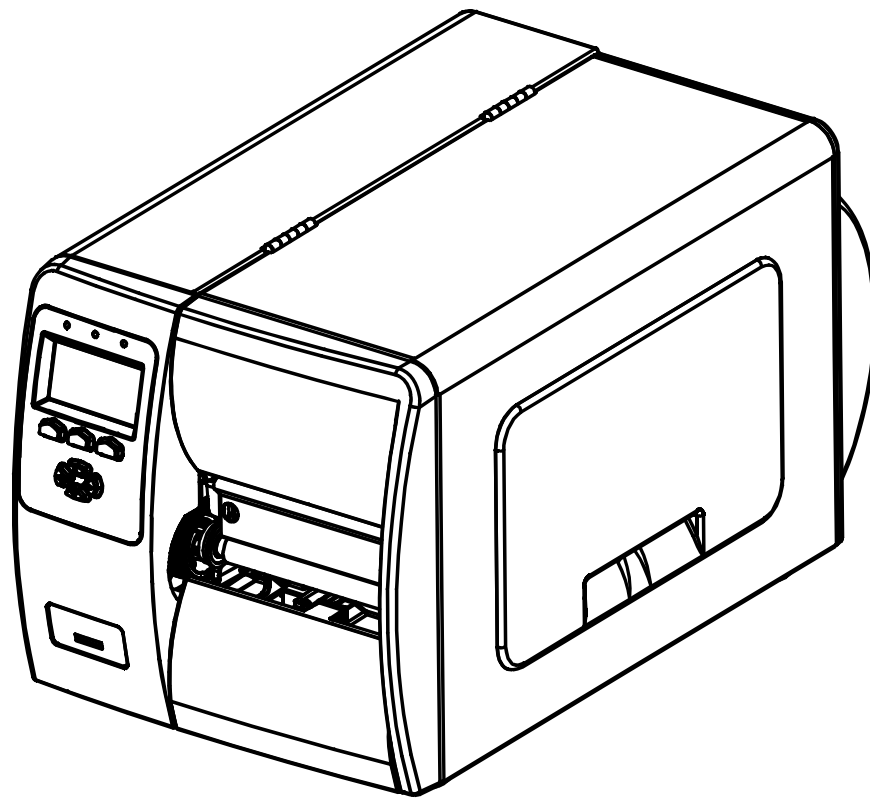


M-Class™ Mark II

RFID Option ■■■



right by our customers. ■■■



datamax·o'neil

This guide presents a systematic overview of important media requirements, setup options, and modes of use for Datamax-O'Neil M-Class RFID-equipped printers.



- This device complies with FCC Radio Frequency exposure limits for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. If 20cm distance cannot be maintained, end users are to be 20cm from printer extremity.
- Any changes or modifications to this RFID module not expressly approved by Datamax-O'Neil Corporation will void the user's authority to operate the equipment.
- Operation is subject to the following conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

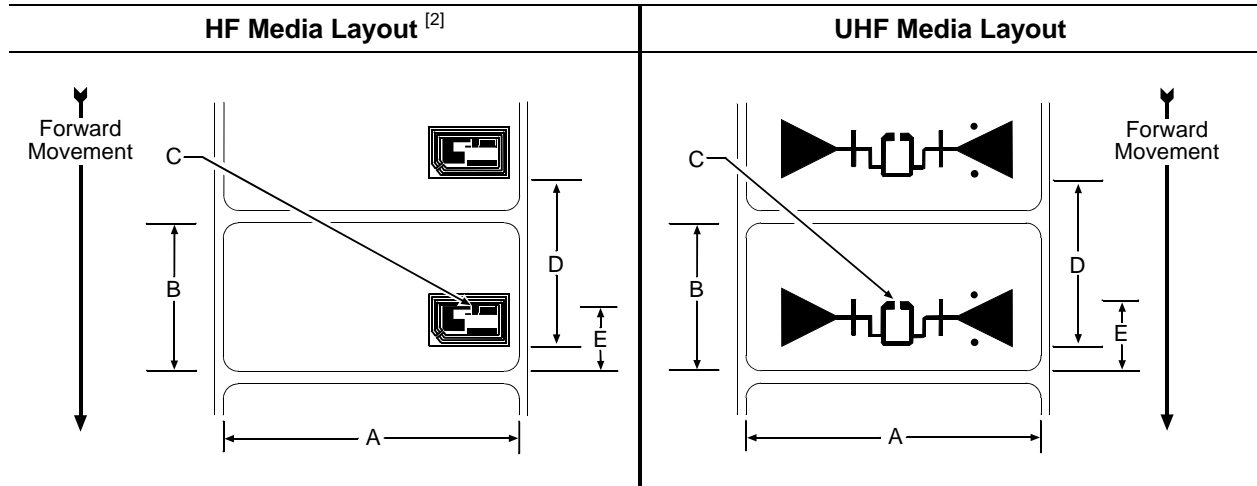
Note: *This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.*



Start with the Right Media

Use RFID media that meets the specifications required by the encoder type:

Smart Label and Tag Requirements ^[1]



Definitions ^[3]

Designator	Description	Dimension	
		Inches	Millimeters
A	Label Width	4.00	101.6
B	Label Lengths	2.00	50.8
C	Chip Location Tolerance	± 0.05	± 1.3
D	Label Pitch (minimum)	1.75	44.4
E	Chip Inlay Location	1.1	27.9

^[1] See the *Operator's Manual* for additional standard media requirements.

^[2] The HF RFID Chip Inlay Location can be left, right, or center justified.

^[3] Definitions referenced by looking down onto the labeling side of the media, and from the leading edge of the label (or tag) as it moves forward through the printer.

Note: If you have questions selection, contact a Media Representative at (407) 523-5650.



Set the Printer

RFID default settings (listed below by encoder [MODE] type) can be modified via the Control Panel:

- ▶ **HF RFID** Default Settings (MODE = HF):
 - RFID POSITION = 1.1
 - TAG TYPE = ISO 15693
 - RETRY ATTEMPTS = 3

- ▶ **UHF RFID** Default Settings (MODE = UHF):
 - RFID POSITION = 1.1
 - TAG TYPE = GEN 2
 - TAG DATA SIZE = 96-BIT
 - RETRY ATTEMPTS = 3

Change an RFID default by selecting, modifying, and saving the desired setting(s):

Step	Instruction	Display
1	Press MENU .	WED 12:45P 24OCT2006 READY
2	Using the DOWN Button , scroll to PRINTER OPTIONS and then press ENTER .	MENU MODE PRINTER OPTIONS
3	Scroll to RFID and then press ENTER .	PRINTER OPTIONS RFID
4	Scroll to the setting to be modified (for example, RETRY ATTEMPTS) and then press ENTER .	RFID RETRY ATTEMPTS
5	Enter the desired setting, and then press ENTER . <i>An asterisk will appear next to the setting.</i>	RETRY ATTEMPTS *2
6	Press ESC ; and, at the SAVE CHANGES prompt, press ENTER to complete the setup.	SAVE CHANGES? ENTER KEY = YES





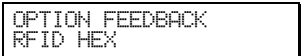
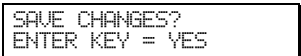
Notes: (1) If *NOT INSTALLED* is displayed after selecting RFID, the wrong device may be enabled; go to the *MODE* setting and ensure that the correct RFID device has been selected.

(2) To restore factory defaults, select *SET DEFAULTS* in the RFID options menu.

Encoded RFID data can also be exported to a host device by enabling OPTION FEEDBACK. This data is contained in the format <A;B;C;D;E;F>[CR] where:

A -	Is the device type: R = RFID; and, S = Linear Scanner.
B -	Is the resulting status: C = label complete; F = faulted (failed) label; and, U = unknown.
C -	Is the number of expected reads for bar codes or tags, given in two characters.
D -	Is the number of good reads for bar codes or tags, given in two characters.
E -	Is the printer's internal Job and Sub Job Identifier, given in four characters each.
F -	Is the data that was read, delimited with semicolons (;) on multiple reads.

Proceed as follows to capture RFID data:

Step	Instruction	Display
1	Press MENU .	
2	Scroll to COMMUNICATIONS and press ENTER .	
3	Scroll to HOST SETTINGS and press ENTER .	
4	Scroll to OPTION FEEDBACK and press ENTER .	
5	Select the output format (RFID HEX or RFID ASCII) and press ENTER .	
6	Press ESC ; and, at the SAVE CHANGES prompt, press ENTER to complete the setup.	

Notes: (1) For menu system details, see the Operator's Manual.

(2) Bidirectional communications must also be enabled, and an appropriate cable attached.



Calibrate the Media

RFID Calibration automatically establishes the critical tag to transducer distance and power setting for the media. Before calibrating, ensure that the following prerequisites have been met:

- RFID media is installed;
- The Media Sensor is adjusted and calibrated for the installed media; and,
- The RFID Option is enabled.

Note: *Reference the Operator's Manual for details..*

Calibrate the media as follows:

- 1) With the printer at READY simultaneously press **FEED** and **TEST**.
- 2) Answer the displayed PERFORM CALIBRATION? prompt by pressing **ENTER** to accept (or **ESC** to abort). If accepted, CALIBRATING RFID will be displayed as media is advanced to establish the tag location and power requirement. (*Wait briefly for both processes to complete.*)
- 3) When complete, a brief outcome message may appear as the database settings are updated and the media is retracted to the top of form position.



Begin Use (RFID Programming Modes)

The printer features two different operational modes for tag programming:

- **Direct Mode** allows user (Host) control of RFID reading and writing, where each tag is individually processed with status and data responses.
- **Label Formatting Mode** uses the printer configuration to process all RFID read, write, and exceptions as determined by a label format, and supports automatic increment and decrement commands for numeric, alphanumeric, or hexadecimal.

Notes: (1) *Both modes auto-position to the tag location.*

(2) *See the Class Series 2 Programmer's Manual for detailed programming information.*
