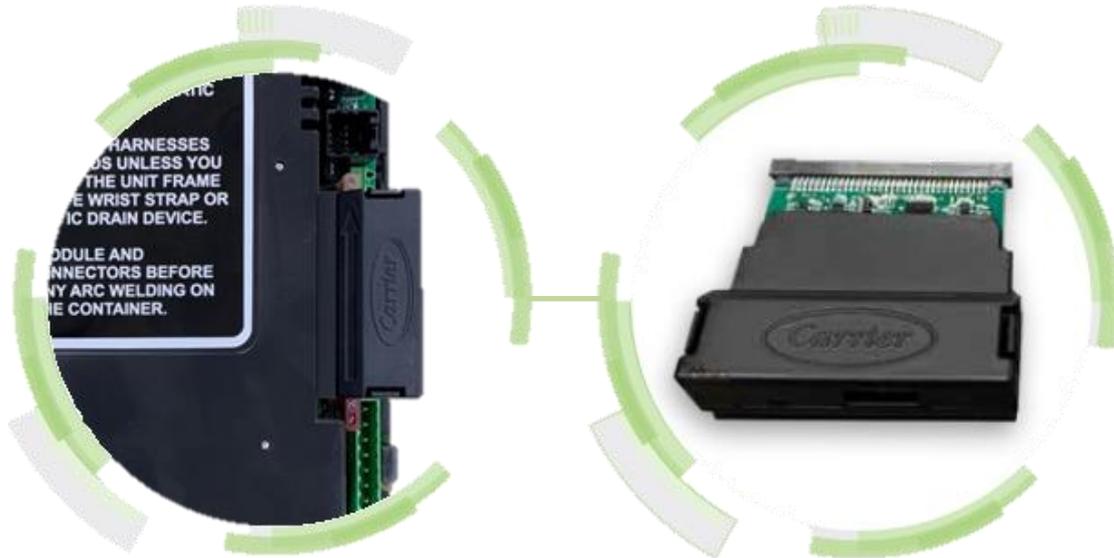


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Part Number : 07-00571-00
Part Name : Micro-Link® 3 USB Adapter “MUA”



It is important to read the instructions prior and perform each step:

- [Step 1 - Software Downloading to PC](#)
- [Step 2 - USB Stick Preparation](#)
- [Step 3 - Loading Software on USB stick from the PC](#)
- [Step 4 - USB Adapter Initialization and Updates](#)
- [Step 5 - Uploading operational software or Downloading data](#)

Step 1 - Software Downloading to PC

The following software needs to be downloaded to you PC from the Carrier Container TransCentral Information Center at <http://www.container.carrier.com>. Access to the site requires an ID / password. To access the latest version of software after signing into TransCentral, navigate to Service / View Container Info / Software.

1. scr153XX.ml3 (Software to be uploaded)
2. recp51XX.ml3 (Software to be uploaded)
3. co2_57XX.ml3 (Software to be uploaded)
4. cfXXXXXX.CF3 (latest model Configuration required)
5. menuXXXX.ml3 (latest Menu required)
6. read0513.ml3 or newer (latest Databank required)

Used On: PrimeLINE® Model Units	Prepared By:	Approved By:	Date: 01/2020
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Step 2 - USB Stick Preparation

To prepare the USB stick:

1. A USB 2.0 stick is required, for software upload and for data download.
Functionality of a 3.0 stick is not recommendable/guaranteed.
2. Plug the USB stick into computer USB port.
3. Open Windows Explorer
4. Right click on Removable Disk (USB stick) and then click on Properties
5. Verify File system is FAT or FAT32. (see Figure 1)

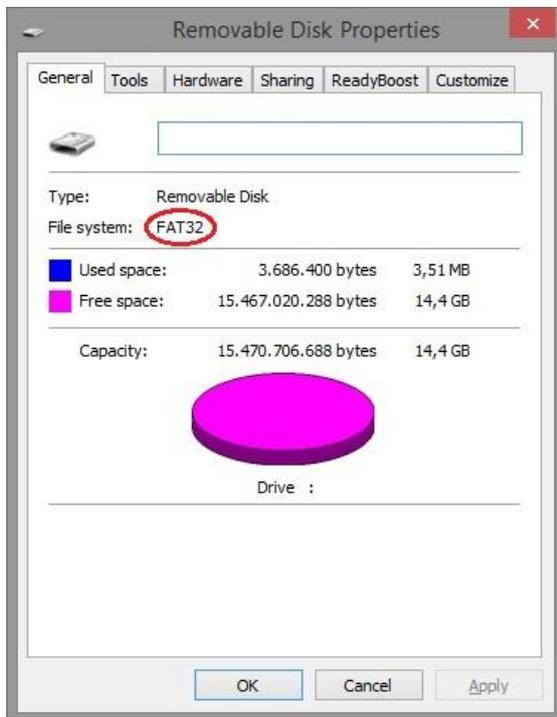


Figure 1 - File system

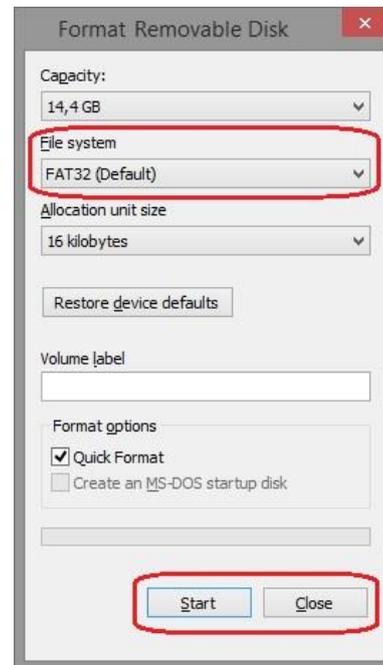


Figure 2 – Format the USB Stick to FAT

Note: If File system is not FAT or FAT32, reformat the USB stick to FAT or FAT32.

To format a USB Stick to a FAT or FAT32 File system:

- Open Windows Explorer;
- Right click on Removable Disk (USB stick), and then click on Format;
- Verify File system is FAT or FAT32 (Default);
- Click on Start (see Figure 2);
- After formatting the USB stick, close all windows.

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Step 3 - Loading Software on USB stick from the PC

To load the USB stick:

1. Create main folder named “CARRIER”. (Not case sensitive)
2. Create all subfolders under “CARRIER”. These subfolders are named “Upload”, “Read”, “Firmware”, and “Utility”. (Not case sensitive.) The “Download” subfolder is created automatically after downloading data.

Note: A dedicated download or upload adapter can be initialized by creating only one of the two subfolders (“Upload” or “Read”) on the USB stick.

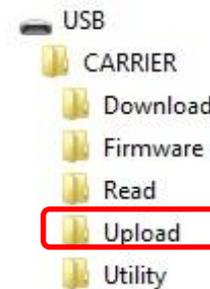
3. Load the following files from the PC to the USB stick under “Upload” for software upload:

Required Files:

- menuXXXX.ml3 (latest Menu required)
- cfXXXXXX.CF3 (latest Configuration required)

Selectable files:

- scr153XX.ml3 (Software to be uploaded)
- recp51XX.ml3 (Software to be uploaded)
- co2_57XX.ml3 (Software to be uploaded)



Note: The total size of stored files in the “Upload” subfolder cannot exceed 4MB.

4. Load the “read0513.ml3” or newer file from the PC to the USB stick under “Read” for data download.

Note: The “read0515.ml3” (or newer) is recommended when using the adapter.

5. Optional subfolders: “Firmware” (see step 4 “USB Adapter Initialization and Updates”).

Note: The utility functionality is only available on the Service Tool (07-00572-00).

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Step 4 - USB Adapter Initialization and Updates

To initialize the adapter:

1. Power unit OFF.
2. Inspect the PCMCIA pins of the programming port, using a flashlight, to verify if the pins are not bent.

Note: If there are bent pins do not insert the adapter.

3. Insert the adapter into the programming slot of the controller.
4. Insert a preloaded USB stick into the adapter (see Step 3 “Loading Software on USB”).

Note: The adapter will not function without a USB stick inserted.

5. Power the unit ON with the USB adapter installed.

Note: If there is newer firmware stored on the USB stick (in the “Firmware” subfolder), the adapter will automatically update to the newest firmware. During the firmware upload a percentage counter is shown on the right side of the display. Wait for the status LED to stop blinking. Do not turn off the unit.



6. At start-up “USb LOAd” is shown on the display. Wait until “dnLd dAtA” is shown. Scroll through the menu to select the desired action using the UP/DOWN keys on the keypad and confirm by pressing the ENTER key.

Note: At first start-up the adapter will ask to be paired. Press ENTER on the keypad to pair the adapter to the Micro-Link controller. The installed adapter can only be used on the controller with which it is paired.

Note: The adapter will automatically start the download or upload function, if only the “Read” or “Upload” subfolder is present on the USB stick (dedicated card).

Special Adapter Features

The adapter, while inserted into the programming slot, is designed not to interfere with the regular unit operations unless required. An on-board power management system ensures the adapter is powered-down while not in use during standard controller operations (no USB stick installed).

No software other than the adapter’s firmware is present on the adapter itself, all operational software is stored on the USB stick which will ensure that, after the USB stick is removed, no files other than the firmware remain on the adapter.

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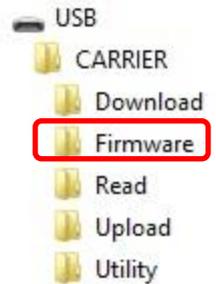
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To update the firmware of the adapter:

1. Prepare the USB stick by creating the subfolder named “Firmware” under “CARRIER”.

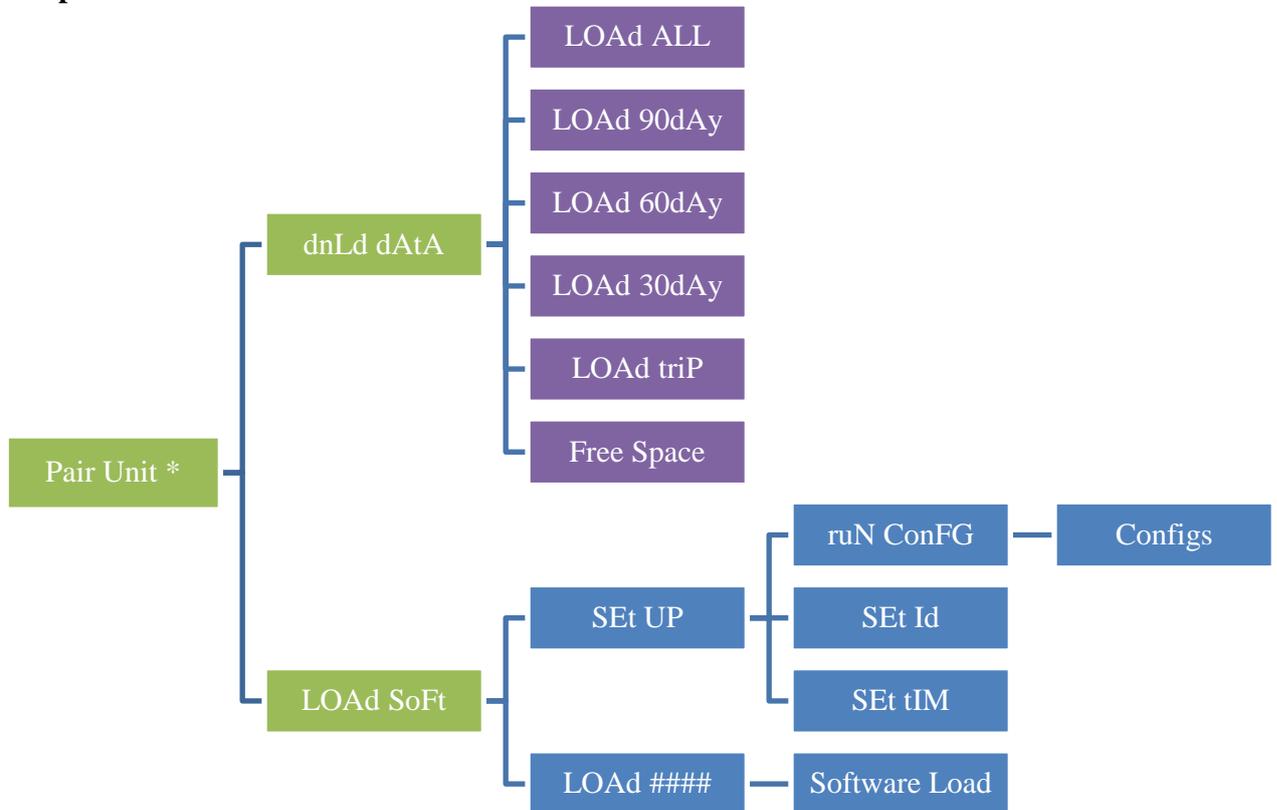
Note: The firmware-file needs to be downloaded to your PC from the Carrier Container TransCentral Information Center at <http://www.container.carrier.com>.

2. Load the newest firmware file in the subfolder “Firmware”.
3. Power unit OFF.
4. Insert the adapter into the programming slot of the controller.
5. Insert the preloaded USB stick (with firmware) into the adapter.
6. Power the unit ON with the adapter installed.
7. The new firmware will now be automatically loaded. A percentage counter is shown on the right side of the display to show the progress.
8. Wait for “LoAd done” to be shown on the display.
9. The adapter is finished upgrading when ”dnLd dAtA” is shown on the display.



Note: To check the current firmware version on the adapter in the main menu, press the “Alt. Mode” key on the keypad. The version number will be shown on the display as “YYYY-MM-DD” (year, month, day).

Adapter Menu Structure



* **Note:** Only present at first start-up / initialization of the adapter.

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Step 5 - Uploading operational software or Downloading data

With software loaded on the USB stick, and USB adapter initialized, a selection can be made between downloading data or uploading operational software. When having selected to download or to upload, the standard operation is the same as DataBANK for download and software uploads using an SRAM Card.

Uploading operational software:

1. Power unit OFF (the adapter is already installed into the programming slot of the controller).
2. Insert USB stick into the adapter.

Note: The adapter will not function without a USB stick inserted.

3. Power unit ON using the start/stop switch. Using the keypad, choose “LOAD SoFt” in the Pre-menu. “InIt” will be shown during initialization.

Note: Screen will go blank for a short period (few seconds) after initialization is done.
Do not turn off the unit.

4. “SEt UP” will be displayed on the display after initialization. Load software by selecting the correct software version using the keypad and press ENTER. Press ENTER again to confirm.
5. When the controller displays “Pro donE” **AND** the adapter status’s LED is solid blue, you can power unit OFF and remove the USB stick.

Downloading data:

1. Power unit OFF (the adapter is already installed into the programming slot of the controller).
2. Insert USB stick into the adapter.
3. Power unit ON using the start/stop switch. Using the keypad, choose “dnLd dAtA” in the Pre-menu. “InIt” will be shown during initialization.

Note: Screen will go blank for a short period (few seconds) after initialization is done.
Do not turn off the unit.

4. “dnLd ALL” will be displayed and confirm by pressing ENTER on the keypad. If another download type is preferred, select the preferred data download type using the keypad.
5. When the controller displays “dnLd donE” **AND** the adapter’s status LED is solid blue, power unit OFF and remove the USB stick.
6. Download can now be transferred from the USB stick to your PC for data evaluation using DataLINE.

Note: if “read0513.ml3” is used, please wait a few seconds after “dnLd donE” is shown on the display **AND** wait until the adapter’s status LED is solid blue.

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Status LED Reference Chart

USB status is visible through the on-board status LED patterns.

Status LED Patterns	Adapter Operations
Status LED flashing at the rate of 2 Hz	<i>When</i> Ready to perform operations
Status LED flashing at the rate of 10 Hz	<i>When</i> <ul style="list-style-type: none"> Adapter initialization in progress Data transfer in progress Do not remove until status LED is solid blue
Solid Blue Status LED	<i>When</i> <ul style="list-style-type: none"> Adapter finished with the data download Ready to upload software
Status LED flashing in a S.O.S. pattern (.....)	<i>When</i> <ul style="list-style-type: none"> Hardware or software fault <i>Recommendation</i> <ul style="list-style-type: none"> Re-initialize adapter Replace adapter

Keypad Features

Key	Function
ENTER	Confirm
UP/DOWN	Scroll through menu
CODE SELECT	Return to previous menu item
C/F	Full display test <i>(All LCD segments and LEDs ON)</i>
RETURN / SUPPLY	Blank display test <i>(All LDC segments and LEDs OFF)</i>
ALT. MODE	Firmware version “YYYY-“ “MM-DD”

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Troubleshooting

The adapter does not start.

Make sure the power of the unit/controller is OFF. Check if the adapter is fully inserted and locked correctly, and a USB stick is present. If the adapter is inserted, power up the unit/controller, and check the status LED for activity (see status LED reference chart).

The status LED of the adapter blinked a few times at start-up, but menu does not start.

A USB stick is not present or it is not recognized. Please try another USB 2.0 stick without security functionality.

“USb” ”LOAD” (alternating) message is shown on display.

USB is in use and/or the adapter is updating firmware (see Step 4 "USB Adapter Initialization and Updates").

“USb LOAD” (not alternating) message is shown on display.

The adapter is starting up for use. This can take up to a few seconds.

Note: If the “USb LOAD” message persists, replace the adapter.

“PAIr Err” / “#####” (alternating) message is shown on display.

The already paired adapter does not recognize the connected controller. Most likely the adapter is removed and inserted into a different controller. Please check OEM serial number shown on display (alternating message: “PAIr Err”/8-digit OEM serial number commonly starting with ‘04’) and insert the adapter into the correct controller.

“PAIr Err” / "bAd Sr nO" (alternating) message is shown on display.

The adapter is trying to pair with the connected controller, but does not recognize the controller serial number as a valid OEM serial number. Please check OEM serial number using DataLINE.

“InIt Err” message is shown on display.

Toggle the power of the unit/controller OFF > ON, and the adapter should recover.

“bAd CARD” message is shown on display.

Toggle the power of the unit/controller OFF > ON, and the adapter should recover.

Note: If the “bAd CARD” message persists, replace the adapter.

“Err2” message is shown on display.

Toggle the power of the unit/controller OFF > ON, and the adapter should recover.

Note: If the “Err2” message persists without the adapter installed, use the ERR2 correction software via a SRAM card or the Service Tool (07-00572-00).

If the “Err2” message persists with the adapter installed, replace the adapter.

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Frequently Asked Questions

Q: How do I position the adapter into the programming port?

A: The enclosure has an orientation arrow located on the sloped edge. This arrow should always be pointed up.

Q: Which Micro-Link controllers can be serviced using the adapter?

A: The adapter is designed to operate with both the yellow and green ML3 controllers.

Q: Is it required to always have the USB stick inserted?

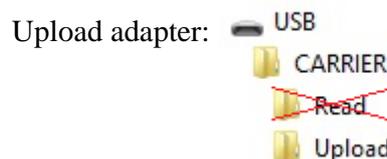
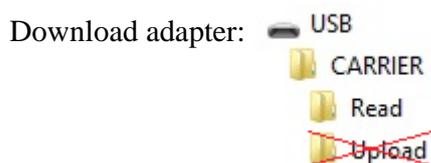
A: Yes, the adapter does not work without a USB stick inserted.

Q: What files are required on the USB stick for the adapter to operate?

A: Only the Carrier original software files are needed to operate (see Step 1 “Software Downloading to PC”).

Q: Is it possible to have an adapter dedicated to either only upload or download?

A: Yes. If the “Download” subfolder is removed, the adapter will function as a dedicated upload tool. If the “Upload” subfolder is removed, the adapter will function as a dedicated download tool.



Q: What is the maximum file size capacity of the adapter for (multiple) operational software files?

A: 4MB. (This is enough to store all current unit type operational software files).

Q: How many downloads can be made?

A: This depends on the storage capacity of the USB stick inserted.

Q: What USB stick types are preferred?

A: The adapter is designed to operate with a USB 2.0 interface.

Q: Where are the downloaded data files located on my USB stick?

A: This is stored within the “Download” subfolder located in the “CARRIER” folder. This subfolder will be automatically created when downloading is completed.

Q: Can the firmware of the adapter be upgraded?

A: Yes, see Step 4 “USB Adapter Initialization and Updates”.

Q: Can I check the current version of the adapter firmware?

A: This can be checked by pressing the “ALT. MODE” key on the keypad while in the menu. The version number will be shown on the display as “YYYY-” “MM-DD”.

Q: How many software files may be stored in the “Utility” subfolder?

A: None, the utility functionality is only available on the Service Tool (07-00572-00).

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