

# MagStor



## M2000 Manual

Updated August 5th 2020

### **WARNING:**

**Failure to remove the shipping lock before operation will damage library and void warranty.**

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# About This Manual

## Symbology



This is a useful tip.



This is not recommended or you should be aware of this.



Do not do this. It is dangerous and could damage the equipment.

## Other Resources

This is the Operation Manual for M2000 MagStor Library. Below are links to more resources if you have any further questions. Thank you for your purchase!

- [MagStor.com](#)
- Live Chat
- [MagStor Shop](#)
- Tape Drives                      -                      Tape Libraries                      -                      Tape Media/Cartridges
- [Technical support portal and FAQ](#)
- Submit support tickets                      -                      Read about common problems

## Special Thanks

Every purchase lets us continue providing easier, friendlier, and more affordable tape solutions.

**Thank you!**

# Library Quickstart guide (2U)



## REMOVE THE SHIPPING LOCK

Failing to do this **WILL** damage your unit and it **WILL** void your warranty.

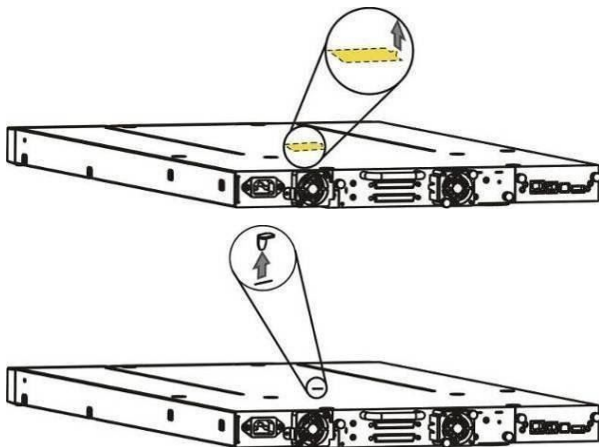
Store shipping lock in a safe place as it is required when shipping the unit to avoid damage to the robotics. Damage caused by improper shipping is not covered by the warranty.



To avoid injury, use at least two people to move the library.



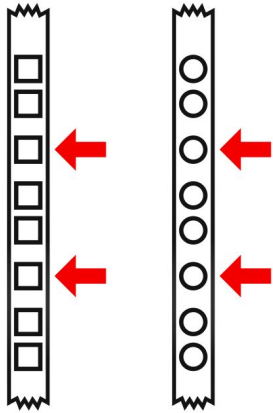
Before you install the library, if the library has recently gone through a 15+°C ( 30°F) temperature change, allow 12 hours for acclimation to a new environment.



## Step 1 \*Images are of 1U

### Shipping Lock

1. DO NOT THROW AWAY: Remove the **Blue** label that is securing the shipping lock on the top of the library.
2. Remove the shipping lock
3. Store the shipping lock where it will not be lost. There is a slot on the **right hand** side above the ethernet and usb ports for this purpose.
4. Place the blue label over the bottom of the lock to save the label and ensure the lock does not fall out.

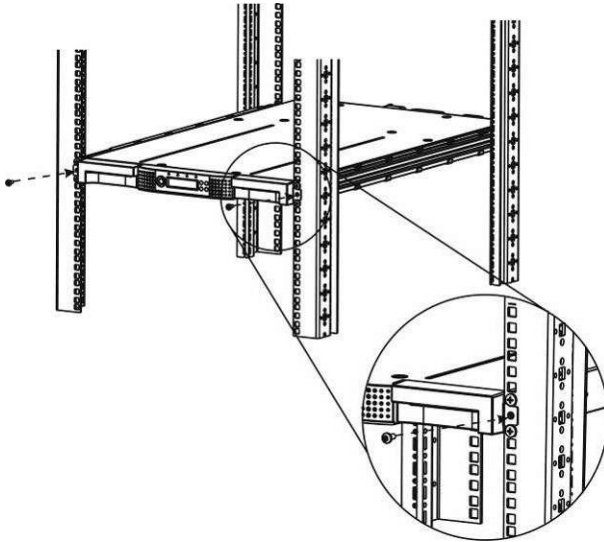


## Step 2

### Install Rails

Secure one rail to each side of the rack ensuring the rails are mounted at the same height on both sides.

In total this will require 8 M6 screws. Use the correct type (square / circle) that properly fits your rack holes. Place the screws in holes with wide gaps above and below them.

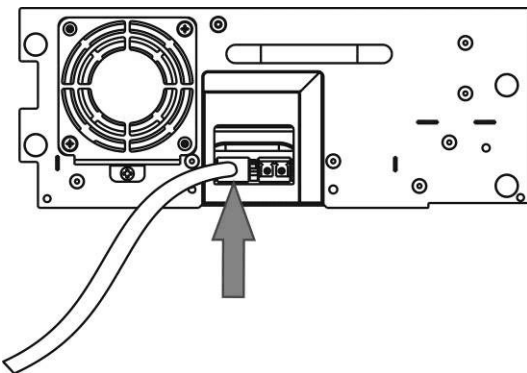


## Step 3

### Install Library

We require you to use at least two people for this step. A mechanical lifter is recommended.

Slide the rack onto the rails and secure the mounting brackets using M5 screws.



## Step 4

### Connect Library

1. Connect power cable
2. Connect SAS/FC cable(s)
3. Connect Network Cable

\*Required for RMI

# Step 5

## User Interface

Connect network cable for access to the RMI (remote management interface). The library can be controlled using the front panel OCP (Operator Control Panel) or remotely using the RMI. The front panel OCP allows someone located at the library to control the library, while the RMI allows the library to be controlled through a web interface.

To access the RMI once the library is connected to the network or a computer, open a web browser and enter the IP address of the library. The IP address can be found by navigating the networking menu on the OCP. Network settings can also be configured there.

The default Admin Password for the library is adm001.



If you change the password, keep a record in a safe location.

If you lose the password to the library there is no way to reset it without shipping a component to MagStor.

## Purchasing extra media

Additional LTO media / cartridges can be purchased in the [shop](#) at [www.MagStor.com](http://www.MagStor.com).



LTO drives are backwards compatible two generations for reading and one generation for writing.



LTO-8 Drives are the exception. They can read and write one generation back.



Write Once Read Many (WORM) tapes, as their name implies, cannot be overwritten or changed once written. This is useful when extra data security is needed, but many businesses do not require this extra protection. The tapes cost more, will be less versatile, and cannot use LTFS. Make sure you know what kind of tapes you are ordering, the use case for those tapes, and always purchase from verified and trusted sellers like MagStor to ensure you are getting the full tape life.

## Technical Support

If the [troubleshooting](#) section of the manual does not solve your problem, technical assistance can be found at the MagStor [support portal](#), or through our live chat system at [MagStor.com](http://MagStor.com). We appreciate your business and will do our best to resolve your issue in a timely manner.

## Requesting changes to the manual

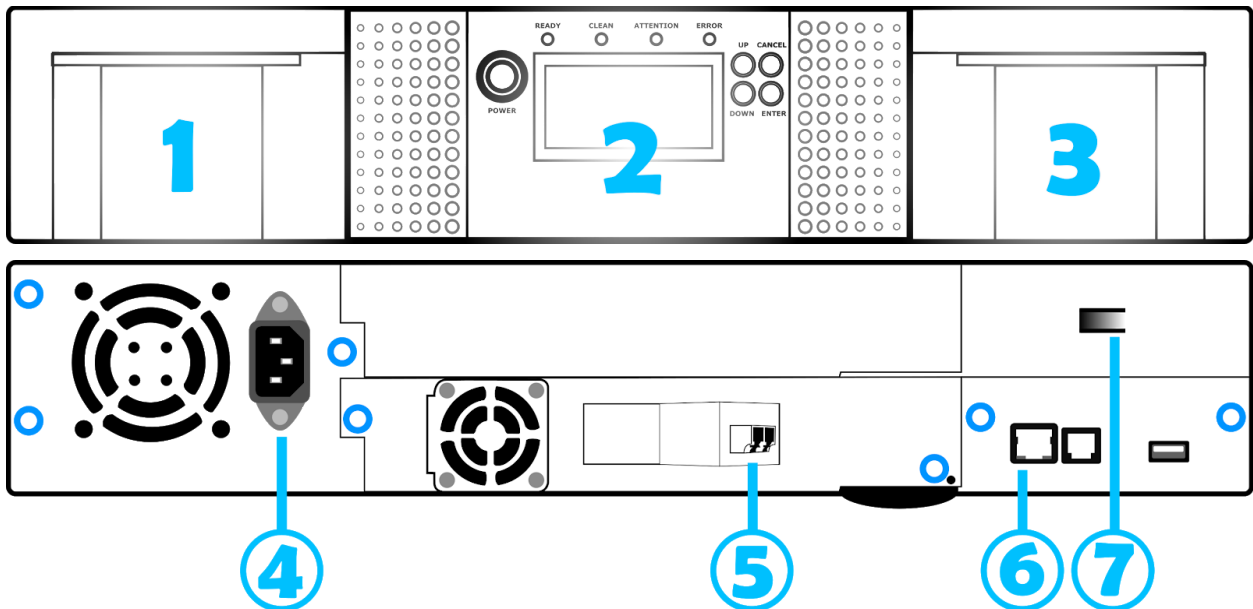
We strive to make MagStor the best product available. If you have any suggestions for improving this manual or our product please send an email to [info@MagStor.com](mailto:info@MagStor.com) with your request. We appreciate your feedback and will do our best to meet your expectations.

# Unboxing

## What's in the box?

Item	Description
MagStor M2000 Library	Library with 2 magazines and one drive
US power cable	6 Foot 10A 125V, VW-1 & FT2 Rated
Rack Mount Kit	Details on page 9
Manual and Quickstart Guide	You are reading it!

## MagStor M2000 Library



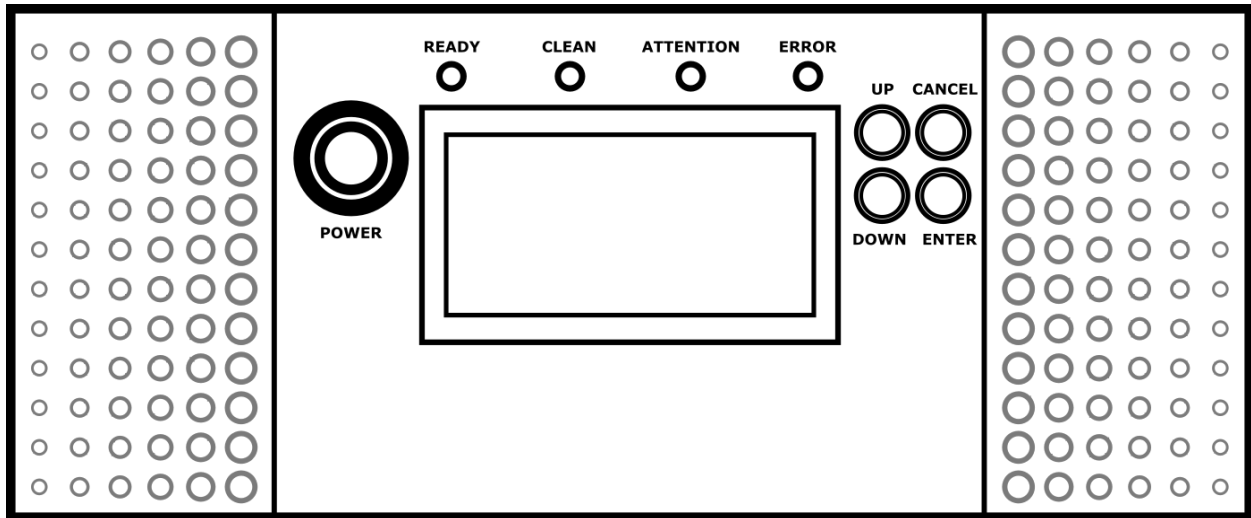
\*FC Port Shown

Number	M2000 MagStor (Front)
1	Left Magazine (Mail Slot)
2	Front Panel
3	Right Magazine

Number	M2000 MagStor (Back)
4	Power Cable Port
5	SAS/FC Port*
6	Network Port
7	Shipping Lock Store



## Front Panel



Item	Description
Power	For powering the library on and off
Ready Light	Lights up when fully initialized and ready
Clean Light	Displays when a drive requires cleaning
Attention Light	Displays when warnings are present in logs
Error Light	Displays when errors are present in logs
Up	Navigation controls
Down	---
Cancel	Cancel or go back
Enter	Select or go into menu
LCD Display	---

## Rack Mount Kit Contents

- 2 rack mount rails
- 1 bag of eight M6 screws for the rack mounting (9.5 mm square holes in the rack column)
- 1 bag of eight M6 screws for rack mounting (6.85 mm round holes in the rack column)
- M5 screws to secure the mounting brackets to the rack (amount depending on the unit form factor)

## Environmental Tolerance

Activity	Operating	Shipping & Storage
Temperature	10°C to 35°C	-30 °C to +60 °C
Max Temp Rise	10°C / hour	20°C / hour
Humidity	20-80% RH (Non Condensing)	10-90% RH (non-condensing)
Max Wet Bulb	26°C	N/A
Max Humidity Rise	10% / hour	N/A
Altitude	0 to 3000m at 25 °C ambient	-7 m to 10000 m



Do not use or store the library in dusty or wet areas. Running the library in this environment will damage the drive or media. Damage resulting from improper use, storage, or shipping will void the warranty.

# Library Operation

## Power On/Off

Press the power button on the front panel to power the unit on and off. Powering up takes a few minutes to complete as a power on self test (POST) occurs and is finished when the unit presents a solid green ready light.



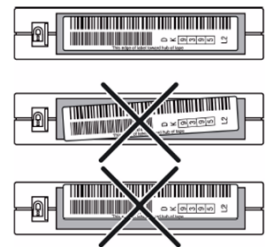
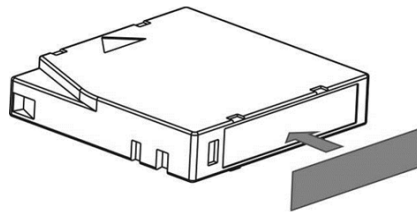
if you accidentally press the power button, you can press the cancel button within 3 seconds to abort a shutdown.



Do not power off the library while drives are in use. This can cause data loss.

## Labeling Tape Cartridges

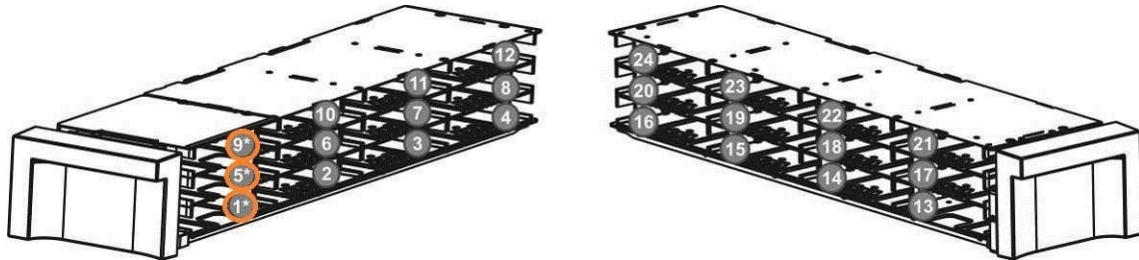
Tape libraries read barcode labels on tapes and store this information in memory. Having a barcode label on each tape allows the library to scan the tape, speeding up inventory times and day to day operations of your tape library. While this is not a requirement, we highly recommend that you label all tapes in your library to increase the efficiency of operation.



If you require more labels, they can be purchased by contacting us at [www.MagStor.com](http://www.MagStor.com).

# Magazines

Magazines store tapes for use within the library. Each slot has an ID number associated with it.



## Releasing and replacing magazines

Magazines can be released by commanding the robot to release them or through manual releases. This manual release should only be used when the unit is powered off. If you remove a magazine, the library will stop operating until the magazine is returned, and it will need to reinventory the library before it can resume. For this reason, it is recommended you use the mail slot when making small changes to the library tapes.

## Mail Slot(s)

The first slot on the left magazine is the mail slot. This slot is used for removing and adding tapes to the library during operation. You can open this slot by commanding the robot to eject it. This allows you to add and remove tapes from the library without interrupting normal operations. The mail slot can be enabled through the Operational Control Panel (OCP) or the RMI (Remote management Interface).



The robot may report it is busy and the command to open the mail slot will need to be repeated once that operation is finished.

## Cleaning library tape drives

Commanding the robot to move a cleaning tape to the tape drive will cause the drive to use the cleaning tape. You can also turn on autoclean, which will use a cleaning tape automatically, if available. A cleaning tape bar-code label (A label whose first 3 digits are CLN) is required on a cleaning tape to use autoclean.

# OCP (Operator Control Panel)

When the library says M1000 ready, hitting the ENTER or NEXT key will bring you to the menu. Below is a visual representation of that menu to help you find the options you are looking for. Within this menu tree is the option to set an ACCESS PIN for added security, but this feature is optional and is not on by default. Within this visualization, menu options in red (or underlined) may require an entered ACCESS PIN if one has been set.

1. Information
  - a. Library
    - i. Status
      1. Status
      2. Active Cartridge
      3. On Time
      4. Slots Empty
      5. Temperature
      6. Cycles
      7. Mailslot
      8. Date/Time
    - ii. Identity
      1. Serial No.
      2. Version
      3. Vendor ID
      4. Product ID
      5. Pv4 Addr
      6. Active Slots
      7. WWNN
      8. Library Mode
      9. Extended Mode
    - iii. Error Log
      1. List of errors
    - iv. Network general
      1. Mac Addr
      2. Link
      3. Host
      4. Domain
      5. IPv4 toggle
      6. IPv6 toggle
    - v. Net IPv4 Settings
      1. Net IPv4 Settings

- vi. Net IPv6 Settings
    - 1. Net IPv6 Settings
  - vii. Net IPv6 Auto Asgd Addr
  - viii. Net IPv6 Static Address
  - b. Drives
    - i. Status
      - 1. Drive selection
        - a. Status
        - b. Activity
        - c. Source
        - d. Temperature
        - e. Cooling
        - f. Speed(A)
        - g. Link(B)
        - h. Speed(B)
        - i. WWNN
    - ii. Identity
      - 1. Drive selection
      - 2. FW Rev
      - 3. Vendor ID
      - 4. Product ID
      - 5. Serial No
      - 6. SCSI ID
  - c. Inventory
    - i. Magazines
      - 1. Left
        - a. status
      - 2. Right
        - a. status
    - ii. Drives
      - 1. Drive status
  - d. View License Keys (no need, fully unlocked)
2. Commands
  - a. Open Mailslot
    - i. Mailslot unlocked if enabled
  - b. Unlock Magazines
    - i. Left
    - ii. Right
  - c. Move Medium
    - i. Source Type
    - ii. Source
    - iii. By Label
    - iv. Dest Type

- v. Dest
    - d. Reinventory
      - i. Command Response
- 3. Configuration
  - a. Logical Library
    - i. # of logical libraries
  - b. Library Settings
    - i. Mode
    - ii. Autoload
    - iii. Loop
    - iv. Active Slots
    - v. Auto Cleaning
    - vi. Lower Mailslot status
    - vii. Master drive #
    - viii. Language
    - ix. Extended Mode
  - c. Drive
    - i. Drive 1 (FC example)
      - 1. Port A Speed
      - 2. Port A type
    - ii. Drive 2 (SAS example)
      - 1. No config required
  - d. Network
    - i. IPv4
      - 1. IPv4 status
      - 2. DHCP status
      - 3. Address
      - 4. NetMask
      - 5. Gateway
    - ii. IPv6
      - 1. IPv6
      - 2. DHCPv6
      - 3. Stateless Addr
      - 4. Static Addr
      - 5. IPv6 Static Address
  - e. Set Access PIN
    - i. New Access PIN
    - ii. Access PIN status
  - f. Restore Defaults
    - i. Are you sure?
  - g. Set Date and Time
    - i. Date(MM/DD/YYYY)
    - ii. Time(HHMM 24Hr)

- h. Save Library Configuration
    - i. Filename
  - i. Restore Library Configuration
    - i. Used to restore above saved configuration
  - j. Add License Key (no need)
4. Service
- a. Service Library
    - i. Library verify
      - 1. Drive selection
    - ii. Run tests
      - 1. Test selection
      - 2. cycles
    - iii. Dump all to USB
      - 1. Filename
    - iv. Library FW Upgrade
      - 1. Need upgrade files
    - v. Display Contrast
      - 1. Display contrast setting
    - vi. Reboot
      - 1. Are you sure?
    - vii. Upload Skin File
      - 1. File selection
  - b. Service Drive
    - i. Clean Drive
      - 1. Drive 1 Status
      - 2. Drive 2 Status
    - ii. Drive Power
      - 1. Drive 1 Status
      - 2. Drive 2 Status
    - iii. Drive Tests
      - 1. Drive 1
        - a. Test selection
      - 2. Drive 2
        - a. Test selection
    - iv. Drive FW Upgrade by USB
      - 1. Drive 1 Firmware
      - 2. Drive 2 Firmware



# RMI (Remote Management Interface)

Many of the operations that can be performed through the front panel can be performed through the Remote Management Interface or RMI. The RMI operates like a website, enabling you to access your library from a computer on the network, or through the internet if you wish. To use the RMI you must first set the static IP address or DHCP on the front panel interface.



The RMI works similarly to the administrative page on a home router or modem. Typing in the IP address from a browser on the network will bring up an interactive site for controlling the library.



## Static vs DHCP

A static IP address will never change. Setting the Dynamic Host Configuration Protocol (DHCP) option to on will dynamically assign an IP on startup.



Some options within the RMI take the library offline. This mode can cause data loss if the library was in the middle of an operation. Make sure the library is not in use before performing any operation which takes the library offline.

## Access Levels

Access Level	Rights
Guest	View status and identity pages. No edits or commands.
Administrator	Everything except configuration page trace level and trace filter.

# RMI Pages

The RMI contains sections and pages. These sections are Identity, Status, Configuration, and Operations. Identity and Status give information about the library, while configuration and operations allow you to configure and command the library.

## Identity

View information about the library, drives, or network. No changes can be made from these pages.

## Status

View the status of the library, drives, or inventory.

## Configuration

Change the configuration of the library, drives, and network.

## Operations

Contains controls for moving media within the library, taking inventory of loaded tapes, and releasing the magazines.

## Service

The service page contains controls for servicing and testing the tape library. This section contains system testing, slot to slot testing, advanced diagnostics, drive dump saving, rebooting, log viewing, drive cleaning, and tape information.

## Library Default Settings

Setting	Default
Initial admin password	adm001
Host name	Test88
Domain name	TestXXX.de
IPv4	Enabled
IPv6	Disabled
DHCP	Disabled
Mail slot configuration	Disabled
Configure reserved slots	Reserved slots = 0
SCSI master drive	Lowest drive is initially the LUN master drive.
OCP contrast setting	10
Library Mode	Automatic
Auto load	Disabled
Loop	Disabled
Drive power <ON/OFF>	All drives are powered <ON>
Auto clean	Disabled
SNMP	Disabled
FC tape drives	Automatic speed, auto topology
Log Tracing Configuration	All selected
Email notification	No events
Partitioning	Partitioning is turned <OFF>

# Transportation and Shipping



It is best practice to save the packaging materials received for future use to ensure the library is not damaged during shipping. Though large, the library is sensitive equipment and should be treated as such.



Remove tape cartridges before moving library

If a tape cartridge or cartridges become dislodged from a bump during moving of a tape library, it could damage the robotics. It is best to remove cartridges before moving the library.



**Failure to use the shipping lock will result in damage to the robotics and void your libraries warranty. If a lock is not in place, robotics will move during shipping. If the lock is lost, a similar rigid object can be used in its place, but be sure the object is solid and secure.**