

Data Cartridge Media Care Guide

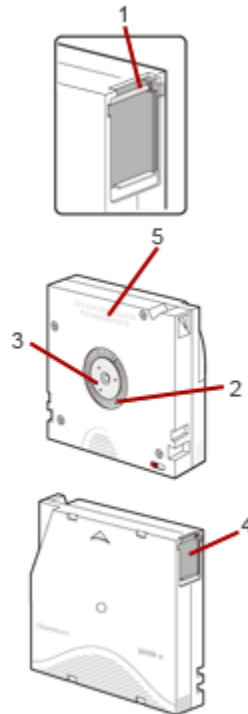
■ contents ■

■ Get To Know Your Cartridge	2
■ Media Care Overview	5
■ Quick Guide : Do's and Don'ts	7
■ Shipping Cartridges	8
■ Visual Inspection	10

<http://www.maxell.co.jp>

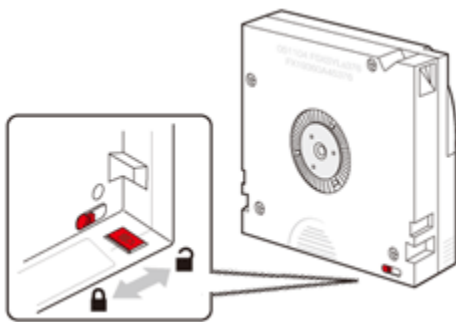
Get To Know Your Cartridge

LTO Ultrium Cartridge Features

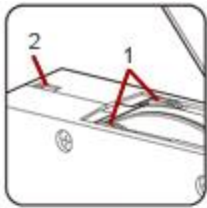
- 
- The diagram illustrates five key features of an LTO Ultrium cartridge. Feature 1, the Tape Leader Pin, is shown as a metal pin at the top of the cartridge. Feature 2, the Reel Lock, is a circular mechanism on the front face. Feature 3, the Cartridge Hub, is a central circular port. Feature 4, the Cartridge Door, is a small flap on the right side. Feature 5, the Serial Number, is a small rectangular area on the top edge.
- 1 Tape Leader Pin : Metal pin connects with grabber arm to pull media from cartridge.
 - 2 Reel Lock : Prevents media reel in the cartridge from spinning when the cartridge is not loaded in a drive. This ensures that proper media tension is maintained.
 - 3 Cartridge Hub : Mechanical interconnect between the cartridge and the drive reel motor.
 - 4 Cartridge Door : Provides access to the tape leader.
 - 5 Serial Number : May be needed for identification purposes if you call for service.

■ LTO Ultrium Cartridge Write Protect Switch

Prevents overwrite or erasure of data. You can change the position of the write protect switch at any time.



DLTtape and Super DLTtape Cartridge Features



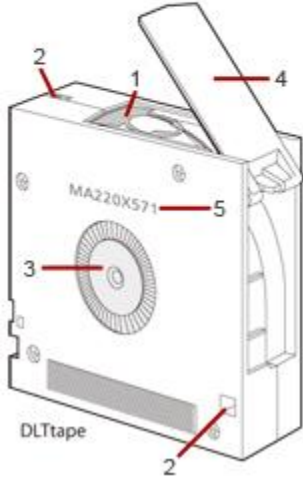
Super DLTtape

■ 1 Tape Leader Buckle

Buckles with drive leader to pull media from cartridge.

DLTtape cartridges (Mylar loop)

Super DLTtape cartridges (plastic buckle with metal pin)



DLTtape

■ 2 Reel Lock

Prevents media reel in the cartridge from spinning when the cartridge is not loaded in a drive. This ensures that proper media tension is maintained.

■ 3 Cartridge Hub

Mechanical interconnect between the cartridge and the drive reel motor.

■ 4 Cartridge Door

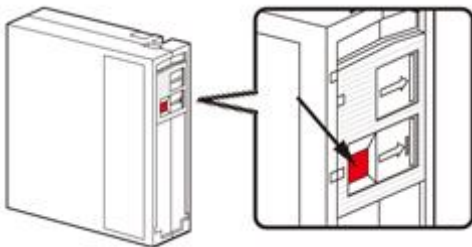
Provides access to the tape leader.

■ 5 Serial Number

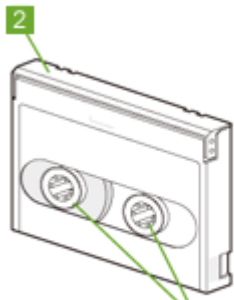
May be needed for identification purposes if you call for service.

■ DLTtape and Super DLTtape Cartridge Write Protect Switch

Prevents overwrite or erasure of data. You can change the position of the write protect switch at any time. DLTtape and Super DLTtape Write protected slide switch down toward label area. Orange indicator should be displayed.



DAT and DDS Cartridge Features

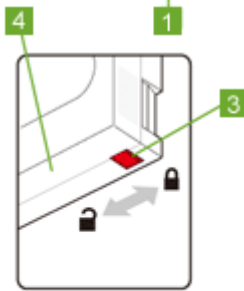


■ 1 Dual Reel Tape

Media goes back and forth between supply and take-up hubs within cartridge.

■ 2 Cartridge Door

Provides access to the tape leader. The door should be closed.



■ 3 Write Protect Tab

Prevents overwrite or erasure of data. You can change the position of the write protect switch at any time.

■ 4 Serial Number

May be needed for identification purposes if you call for service.

Slide indicator
right to close lock.

Media Care Overview

■ Protecting Your Cartridge



- Protect cartridges from shock, vibration, moisture and magnetic fields.
- Keep cartridges in protective cases and store vertically when not in use.
- Ensure that no loose labels in the storage container stick to the bottom of the cartridge, covering the hub.
- Never touch the tape or tape leader. Dust and oils from skin can contaminate the tape and affect performance.
- Avoid direct sunlight. It can deform cartridge and/or ruin media.
- Allow cartridge 24 hours to adjust to the present operating temperature and humidity before use.

■ If You Drop Your Cartridge

- Inspect case for any signs of cracks or protruding material.
- Open cartridge door to check damage. See Spotting Damaged Cartridge Section - Visual Inspection

■ If damage is present

- Do not insert cartridge in tape drive. Discard and/or contact the manufacturer.

■ If cartridge appears usable

- Transfer data to a new cartridge and discard the old one.

■ Media Usage/Durability

- The usage or durability of your media is influenced by its care and handling as described in this document.
- Many of the newer drives monitor the usage of the media and will alert you as to when to replace a cartridge. Refer to your drive documentation for available alerts or software utilities.
- The table below shows the usage specifications for each media type. The actual amount can vary depending on drive wear, environmental factors and media handling.

Media Type	Number of Usage (caution)
DLT	Max 200
Super DLT, DLT-S	Max 260
LTO Ultrium	Max 260
DAT/DDS	Max 100

■ Labeling Your Cartridge



- Never use non-standard adhesive labels or Post-it type notes.
- Use barcode labels designed specifically for your cartridge.
- To avoid drive/cartridge damage, make sure only one label is stuck to the designated label area of the cartridge. Multiple labels may cause jamming.
- Do not write directly on the cartridge.
- Write in pen, not pencil. Pencil can contaminate the tape path. Never use a grease pencil to write on the label.

Media Type	Label Location	
DLT tape & Super DLT tape	Slide label ONLY into molded track on the back of the cartridge	
LTO Ultrium	Stick label ONLY in the indented area on the back of the cartridge	
DAT/DDS	Stick one label in the indented area on the back and/or top of the cartridge	

Quick Guide: Do's and Don'ts

Media Care Do's

■ Storage

- Store cartridges in their protective cases.
- Align cartridges so grooves interlock.
- Store media vertically.

■ Handling

- Handle cartridges with great care.
- Use the right label for your cartridge.

■ Usage

- Inspect cartridges prior to each use.
- Unload cartridges prior to powering down the drive.
- Before using a new or stored cartridge, allow the cartridge 24 hours to adjust to the present operating temperature and humidity.

Media Care Don'ts

■ Storage and Shipping

- Don't store near magnetic fields.
- Don't ship cartridges in drive.
- Don't stack cartridges horizontally.

■ Handling

- Don't touch the media or leader with bare fingers.
- Don't use pens or pencils during cartridge inspection.
- Don't disassemble cartridges.

■ Usage

- Don't drop cartridge.
- Don't use a dropped cartridge.

Shipping Cartridges

■ How to Pack and Ship Cartridges

Note: This procedure assumes you DO NOT have the original packaging the cartridges were shipped in. If the original packaging is going to be used, ensure any empty space created by removed cartridges is filled with bubble wrap to prevent the shipped cartridges from shifting around inside the box.

■ Do Not Use the Following Shipping Materials:

Air pillows, peanut packaging, oversized boxes, standard flat boxes, (e.g. FedEx boxes)

■ Wrap Each Cartridge Properly

2' x 2' sheets of bubble wrap, 1" thick

■ Use the Correct Shipping Box

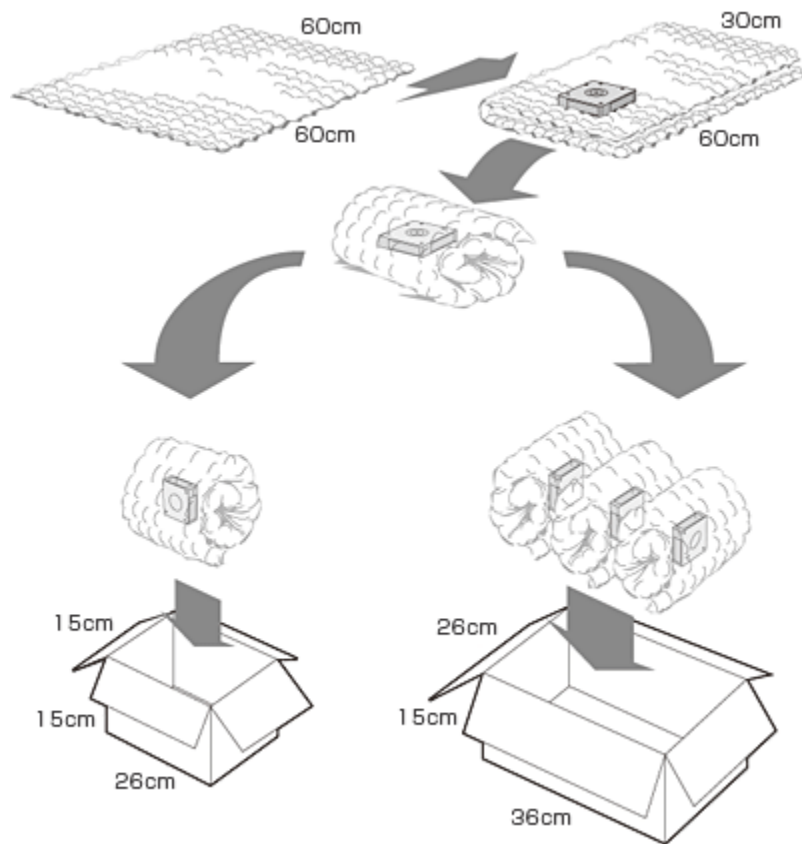
Small box: 10" x 6" x 6" (Holds one cartridge ONLY)

Large box: 14" x 10" x 6" / Multiple Cartridge Box

(Holds three cartridges ONLY)

Do not ship with fewer than three cartridges.

Packing Single or Multiple Cartridges		
# of Cartridges	Bubble Wrap	# of Boxes
1	1 sheets	1 small box
2	2 sheets	2 small boxes
3	3 sheets	1 large box
4	4 sheets	1 large box, 1 small box
5	5 sheets	1 large box, 2 small boxes
6+	Ship in multiple boxes in combination following the above guidelines.	



Orient tapes vertically in the shipping box
Fill in air space in large sized boxes

Visual Inspection

■ When To Perform a Visual Inspection

- Best practices: Each time a tape is loaded or changed.
- When a tape cartridge is dropped or subjected to a hard physical shock.
- When a shipment of tapes show any signs of shipping damage.
- If the drive becomes inoperable after loading a tape.
- If a drive error occurs, inspect the current and previous cartridge used in that drive.

■ Protective Case Inspection (All Media Types)

Inspect the protective case for cracks, chips, distortion, or other signs of damage.



■ LTO Ultrium Cartridge Inspection

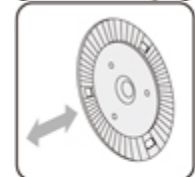
Cartridge

Inspect the exterior of the cartridge for chips, cracks, dents or missing screws. Gently shake the cartridge, listening for rattles or loose pieces.



Cartridge Hub/Reel Locks

Confirm that the spring-loaded hub on the bottom of the cartridge is centered. Press the hub. It should spring back if operating properly. Operation of the reel locks may release the hub and re-center. Check that the reel locks are visible and out. The hub should not turn.



Write Protection Switch

Move the switch. It should be able to snap into write-protected mode and write-enabled mode.



Cartridge Door

Ensure the door is moveable and springs closed.



■ DLT tape and Super DLT tape Cartridge Inspection

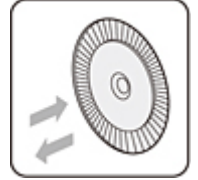
Cartridge

Inspect the exterior of the cartridge for chips, cracks, dents or missing screws.
Gently shake the cartridge, listening for rattles or loose pieces.



Cartridge Hub

Confirm that the spring-loaded hub on the bottom of the cartridge is centered.
Press the hub. It should spring back if operating properly. Operation of the reel locks may release the hub and re-center.



Write Protection Switch

Move the switch. It should be able to snap into write-protected mode and write-enabled mode.

Reel Locks

Check that both reel locks are visible. Verify operation using a small flat blade screwdriver. The reel locks should spring back when released.



■ DDS/DAT Cartridge Inspection

Cartridge

- Inspect the exterior of the cartridge for chips, cracks, dents or missing screws. Gently shake the cartridge, listening for loose pieces.



Write Protection Tab

- Move the tab. It should be able to snap into write-protected mode and write-enabled mode.



Cartridge Door

- Ensure the door is locked and closed.



■ DLT tape Leader Inspection

Normal

- Normal leader



Tape Leader Missing

- Swallowed cartridge leader or broken tape.



Broken Tape Leader

- Not always this obvious.



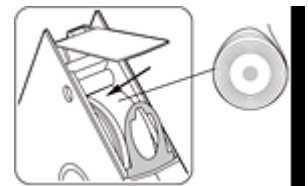
Excessive Debris

- Stuck to tape leader and to tape.



Media Wrapped too Loosely

- Excessive slack apparent.
- Note: OK to use cartridge if small amount of slack at the tape leader is present, but inspect cartridge again after use.



■ Super DLT tape Leader Inspection

Normal

- Normal leader



Toed-In Buckle

- Buckle ends clearly extend past edge of reel.



Buckle Missing

- No buckle present.



Buckle Bent

- One buckle end is bent and buckle is not symmetrical.



Gap from Tape Leader Slack

- Tape Leader is clearly visible.



Buckle Separated from Tape Leader

- Buckle has broken through tape leader on one side.

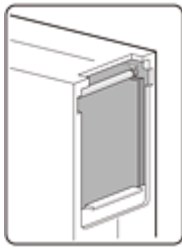


Excessive Debris

- Stuck to tape.

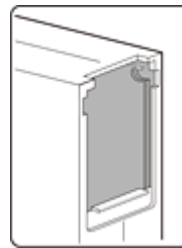


■ LTO Ultrium Leader Inspection



Normal

Normal leader pin position



Tape Leader Missing

Swallowed leader pin or broken tape



Hitachi Maxell, Ltd.

<http://www.maxell.co.jp>

Linear Tape-Open, LTO, the LTO Logo, Ultrium and the Ultrium Logo are registered trademarks of HP, IBM and Quantum in the US and other countries.

Super DLTtape, DLTtape and the DLTtape logo are trademarks or registered trademarks of Quantum Corporation in the USA and other countries.

All features and specifications are subject to change without notice.

2014 October