

**Mechanized Aids To Management
Engineering And Administration
Data Acquisition System (EADAS)
Position Practice
Maintain Magnetic Tape
for Downstream Processing**

CONTENTS	PAGE
1. GENERAL DESCRIPTION	1
2. POSITION FLOWCHART	2
3. POSITION DIAGRAM	3
4. POSITION PROCEDURES	4
5. CORRECTIVE PROCEDURES	10
6. INDEX	19

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1. GENERAL DESCRIPTION

1.01 This document contains the procedures necessary to produce the magnetic tapes used in downstream (outside EADAS' boundaries) processing.

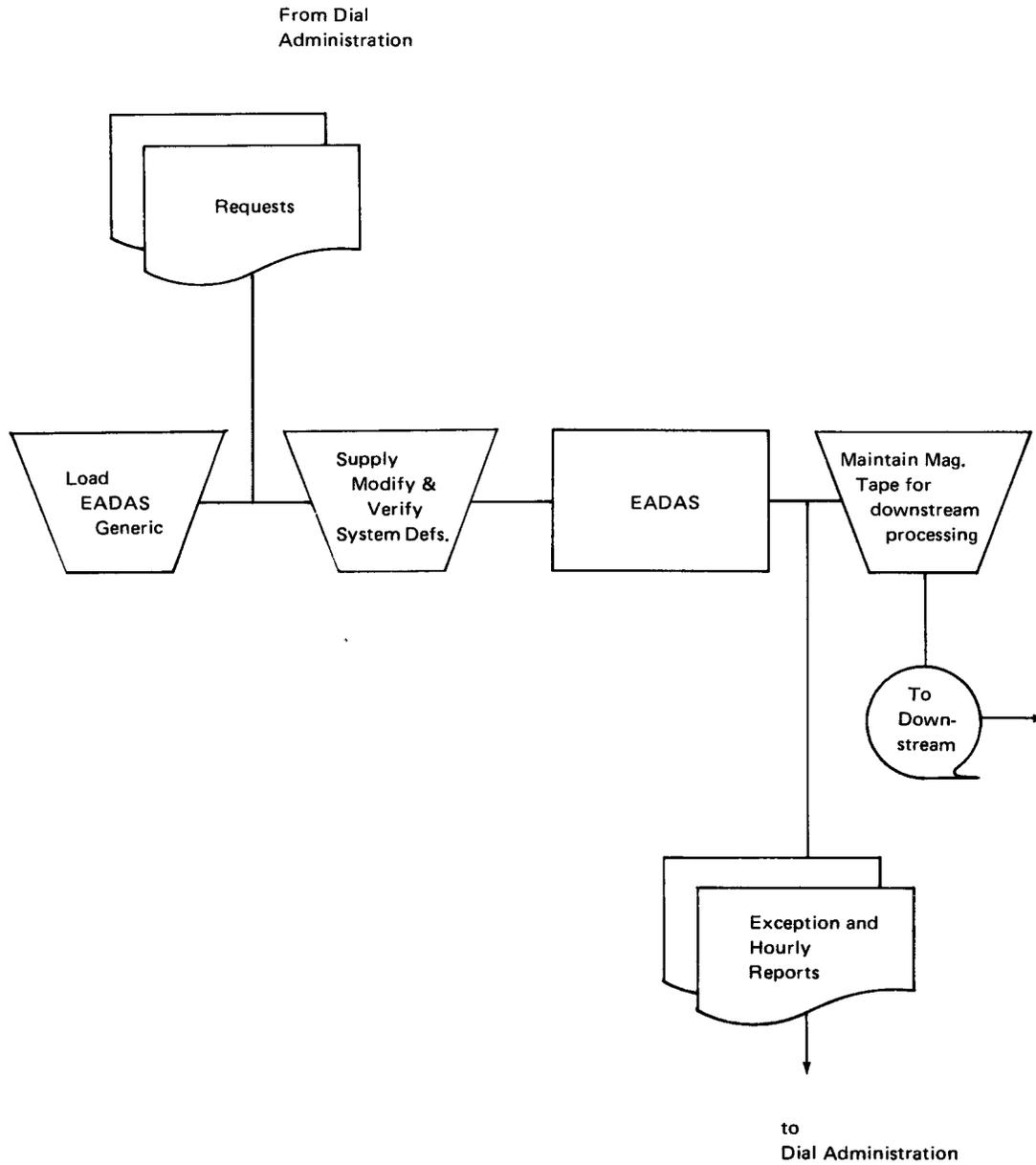
1.02 Use of these procedures is based on the following assumptions:

- (a) The CCU administrator will set up a *daily schedule* showing *when* to mount and dismount tapes.
- (b) A *tape log* showing *which* tape should be used and the appropriate *label* information will be available for CCU operator consultation.

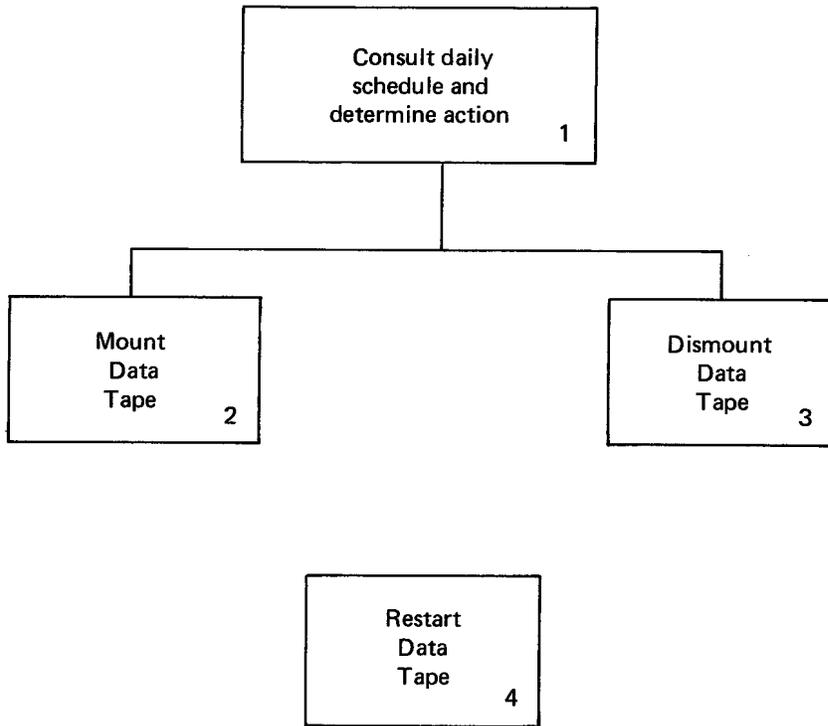
1.03 These procedures are divided into four tasks:

- (a) *Consult daily schedule and tape log* – mounting data tape (Task 2) and dismounting data tape (Task 3) are based on the daily schedule and tape log.
- (b) *Mount the data tape* – mounting data tapes for eventual downstream processing is a two step operation.
 - (1) The appropriate tape must be physically placed (mounted) on the tape drive.
 - (2) A mount command must be given via the CCU teletype to initialize the tape and allow tape writing to proceed.
- (c) *Dismount the data tape* – dismounting a data tape is also a two-step operation.
 - (1) A dismount command must be given to place the EADAS trailer label at the end of the tape.
 - (2) The tape must be physically removed from the tape drive.
- (d) *Restart magnetic tape* – If, for any reason, the tape drive loses power the magnetic tape must be repositioned. The steps to accomplish this are found in task 4.

2. POSITION FLOW CHART AND MEDIA LEGEND.



3. POSITION DIAGRAM



4. POSITION PROCEDURES

TASK 1: CONSULT DAILY SCHEDULE AND DETERMINE ACTION BASED ON THE STATEMENT TABLE BELOW.

If it is time for:	Go to
A tape to be mounted	Task 2
A tape to be dismounted	Task 3

Note: If, in the course of normal operation, the tape drive loses power, go to Task 4.

4. POSITION PROCEDURES (Continued)

TASK 2: MOUNT MAGNETIC TAPE

1. Choose the appropriate tape from the library and log it out according to local practices.
Make sure you obtain the 6 character tape label information.
2. Press PRW ON switch.
PWR and OFF-LINE lights will light.
3. Place LOAD/BR REL switch in center position.
Lower hub assembly will not move.
4. Ensure that the tape selected has a write enable ring inserted in the groove on the back of the reel.
5. Place the tape reel over the lower reel hub with the write ring facing the tape.
Tape should feed from bottom of reel.
6. Lock the reel in place by turning the large knob in the center of the hub in a clockwise direction.
7. Set the UNIT SELECT thumbwheel switch to zero (\emptyset).
8. Place the LOAD/BR REL switch in the BR REL position.
This allows the reel to be moved by hand.
9. Unwind about 3 feet of tape from reel.
Handle the tape as little as possible and try not to let it hit the floor.
10. Thread the tape (maintaining slack), then wind it onto the top reel taking up the slack (about 3 turns).
11. Press LOAD/BR REL button to LOAD.
The vacuum motors will come on. The tape will move slightly and the LOAD light will come on.
12. Press FWD/REW/REV button to FWD.

4. POSITION PROCEDURES (Continued)

13. Press the START switch.

The START switch should be rocked back to STOP position then forward to START. Tape will move forward and stop. LD PT light will come on.

** If tape continues to move forward for more than 10 seconds go to Corrective Procedure #7.

14. Press ON-LINE switch.

RDY light will come on.

** If the SEL light is not on:

1. Ensure that the unit select thumbwheel switch is set to 0.
2. Ensure that the unit select thumbwheel switch on the backup tape drive is set to a number other than 0.

15. Type the command "MO:MT:*a,b*!" where:

a is the number on the thumbwheel switch of the drive being used, and *b* is the 6 character tape volume serial number.

System Reponse: IP, the system is in the process of accepting the command and executing it. No action required.

**If the system response is:

?A, go to Corrective Procedure #1;

?I, go to Corrective Procedure #2;

? D, go to Corrective Procedure #3;

NG, go to Corrective Procedure #4;

RL, a mount command may not be given within three minutes on either side of a system period. Repeat command later.

End of Task 2

4. POSITION PROCEDURES (Continued)

TASK 3: DISMOUNT MAGNETIC TAPE

- | | |
|---|--|
| <p>1. Enter the command DM:MT:a! where <i>a</i> is the tape drive number.</p> | <p><i>System response:</i> IP, the system will dismount the tape, automatically rewind it, and place the drive OFF-LINE.</p> <p>**If the system response is:</p> <p>?A, go to Corrective Procedure #1;</p> <p>?I, go to Corrective Procedure #2;</p> <p>?D, go to Corrective Procedure #3;</p> <p>NG, go to Corrective Procedure #5;</p> <p>RL, the system will not allow a dismount command within three minutes of a system period. Repeat the command later.</p> |
| <p>2. Move ON LINE/OFF LINE switch to OFF LINE.</p> | <p>OFF LINE light will light; RDY and SEL lights will go out.</p> |
| <p>3. Move START/STOP switch to STOP.</p> | |
| <p>4. Set FWD/REW/REV switch to REW position.</p> | |
| <p>5. Move START/STOP switch to START.</p> | <p>Tape will rewind and then stop. LD PT light will come on.</p> |
| <p>6. Move LOAD/BR REL switch to BR REL.</p> | <p>Vacuum motors will power down. LD PT light will go off.</p> |
| <p>7. Unwind tape from the top reel as you are winding the tape onto the bottom reel.</p> | |
| <p>8. Move LOAD/BR REL switch to middle position.</p> | |
| <p>9. Release and remove the reel by turning the hub knob counterclockwise.</p> | |

4. POSITION PROCEDURES (Continued)

10. Enter the required information on the tape log according to local procedure.
11. Place the tape in the library location reserved for tapes to be sent downstream.

Return to Task 1

4. POSITION PROCEDURES (Continued)

TASK 4: RESTART THE MAGNETIC TAPE

1. Press the ON LINE/OFF LINE switch to OFF LINE.
OFF LINE light will light. RDY and SEL lights will be extinguished.
2. Press the LOAD/BR REL switch on the tape drive to BR REL.
3. Gently turn the bottom reel in a counter-clockwise direction until all slack has been taken up.
4. Press the LOAD/BR REL switch on the tape drive to LOAD.
The tape will be sucked into the vacuum columns. LOAD light will light.
5. Press the ON-LINE/OFF-LINE switch to ON-LINE.
ON LINE and SEL lights will come on.
6. Type "RS:MT:n!" where n is the number on the thumbwheel switch of the tape drive to be restarted.
System response: IP, the system is executing the restart command:

**If the system response is:

?A, go to Corrective Procedure #1;

?I, go to Corrective Procedure #2;

?D, go to Corrective Procedure #3;

NG, go to Corrective Procedure #6;

RL, the system will not execute an RS:MT command within three minutes of a system period. Reenter the command later.

End of Task 4

5. CORRECTIVE PROCEDURES

C.P.1: ?A-COMMAND IGNORED

A. The characters preceding the first delimiter (:) were incorrect or the delimiter was missing.

For example:

1. MO:MT:Ø, 123456! is correct command.
2. MA:MT:Ø, 123456! is incorrect (there is no MA command). The command will be ignored and a ?A printed.
3. MOMT:Ø, 123456! is incorrect. The system will interpret MOMT as the command, since the first delimiter is missing. The command will be ignored and a ?A will be printed.

Corrective Action

Retype the corrected command.

Return to Task where you started.

5. CORRECTIVE PROCEDURES (Continued)

C.P. 2: ?I-COMMAND IGNORED

A. The characters between the first and second delimiters (:) were incorrect or the second delimiter was missing.

For example:

1. DM:MT:Ø! is a correct command.
2. DM:MG:Ø! is incorrect (DM:MG is meaningless in combination). The command will be ignored and a ?I printed.
3. DM:MTØ! is incorrect (the ":" between MT and Ø is missing). The system will ignore the command and a ?I will be printed.

Corrective Action

Retype the corrected command.

Return to Task where you started.

5. CORRECTIVE PROCEDURES (Continued)

C.P.3: ?D-COMMAND IGNORED

A. This message could have one of several meanings:

1. An improper character was entered in the last part of the command.
2. Where several groupings of information are expected [e.g., MO:MT: a,b expects the data section (a and b) to be divided into two groupings]:
 - a) the commas separating two groups have been omitted.
 - b) extra groups have been added.
 - c) required groups have been dropped.

For example:

- 1) MO:MT:Ø, 123456! is correct command.
- 2) MO:MT:A, 123456! is incorrect (an alphabetic character was not expected). ?D will be printed.
- 3) MO:MT:Ø 123456! is incorrect (a comma between Ø and 123456 has been omitted). ?D will be printed.
- 4) MO:MT:Ø,123456, N! is incorrect (an extra field has been added). ?D will be printed.

Corrective Action

Find the error in the command, and re-enter the command correctly.

Return to Task where you started.

5. CORRECTIVE PROCEDURES (Continued)

C.P.4: N.G. (from MO:MT) - COMMAND IGNORED

A. N.G. means the message was not accepted.
This message will always be followed by one of four additional messages.

1. MT NOT DISMOUNTED

A magnetic tape is already mounted on the drive specified. Follow the procedures in Task 3 to dismount this tape, then return to Task 2, Step 2.

2. MT OFF-LINE

The magnetic tape was not placed on the drive properly.

- a) If the tape appears to have been properly placed, flip the ON-LINE/OFF-LINE switch to OFF-LINE then back to ON-LINE.
- b) If this does not solve the problem, remove the tape from the drive, and go through the procedure of placing it again.
- c) If the problem is still not solved, switch to the second drive (if you have one) and contact the person responsible for maintenance.

When the problem is solved, return to Task 2, Step 2.

3. MT FILE PROT ON

The tape reel was placed on the drive without a write ring on the back. Remove the tape from the drive, insert a write ring, and go to Task 2, Step 2.

5. CORRECTIVE PROCEDURES (Continued)

C.P. 4 (Continued)

4. MT NOT AT LD PT

The procedures for placing the tape on the drive were not followed correctly. Remove the tape and place it on the drive again. Return to Task 2, Step 2.

5. CORRECTIVE PROCEDURES (Continued)

C.P.5:NG (from DM:MT) - COMMAND IGNORED

- A. NG means the command was not accepted.
This message will always be followed by one of two other messages..

1. MT DISMOUNTED

A previous dismount command affecting this tape has been given. Go to Task 3, Step 3.

If the tape has not been dismounted, perform the restart procedures specified in Task 4. Attempt to dismount the tape using Task 3 procedures. If this is unsuccessful notify the EADAS administrator.

2. MT OFF-LINE

The magnetic tape drive is unavailable to the system.

Rewind the tape until it stops (LT PT light will light). Perform the restart procedures specified in Task 4. Dismount the tape using Task 3 procedures. If this is unsuccessful, notify the EADAS administrator.

5. CORRECTIVE PROCEDURES (Continued)

C.P.6: NG (from RS:MT) - COMMAND IGNORED

A. NG means the command was not accepted.

This message will always be followed by one of the following messages.

1. MT DISMOUNTED

There is no magnetic tape on this drive, and the command is therefore meaningless.

If the tape is there, and the drive has been brought to ready, notify the EADAS administrator of the condition.

Note: This message may be caused by the following set of conditions:

- a. In the course of going down, the system destroyed the contents of the core storage location known as the blockcount.
- b. When the system comes back up, the restart command is given.
- c. The system attempts to use the blockcount to reposition the tape and finds meaningless information.

In this case, the data contained on the tape are lost and cannot be recovered.

2. MT OFF-LINE

The magnetic tape unit specified is not available to the system. Press the OFF-LINE/ON-LINE switch to ON-LINE. Try the command again.

5. CORRECTIVE PROCEDURES (Continued)

C.P. 6 (Continued)

If the same message is repeated, remove the tape from the drive, then follow the procedures specified in Task 2 to place the tape on the drive again. Try the command again.

Return to Task 4, Step 5.

If you are still having trouble notify the EADAS administrator.

5. CORRECTIVE PROCEDURES (Continued)

C.P. 7: CORRECT DEFECTIVE TAPE OPERATION

1. Press START/STOP button to STOP.
2. Press FWD/REW/REV button to REV.
3. Press START/STOP button to START.

****Within 10 seconds the tape should stop and the LD PT light come on. If this does not happen, substitute a new tape. If it does not work properly, the drive may be defective. Notify the person responsible for maintenance.**

Return to Task 4A, Step 14.

6. INDEX

Contents	Page
Corrective Procedures	10-18
?A – Command ignored	10
?D – Command ignored	12
?I – Command ignored	11
N.G. (from DM:MT)–command ignored	15
N.G. (from MO:MT)–command ignored	13-14
N.G. (from RS:MT)–command ignored	16-17
Defective Tape Operation Correction	18
Dismount Magnetic Tape	7-8
Mount Magnetic Tape	5-6
Position Diagram	3
Position Flowchart and Media Legend	2
Procedures for Maintaining Magnetic Tape for Downstream Processing	1
Restart Magnetic Tape	9