OPERATORS GUIDE

HCC/MVS 3.0

HOST
COMMUNICATION
CONTROL

7th edition

IMPRINT

7th Edition

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1.1   LITERATURE

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System Reference Guide	600233-A	G
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Installation/Customization Reference	600228-A	G
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ISPF User Guide	600229-A	G
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G   This Manual is part of the standard HCC documentation. Copies of the respective Manual can be obtained from the publisher.

2   HCC START PROCEDURES

2.1   START COMMAND

A Started Task is activated on each HOST system involved.

The Started Task name must not match the subsystem names (IEFSSNxx) otherwise the subsystem will be started under MSTR (Master) instead of the primary subsystem (JES).

> Recommended: Started Task name: HCC
> SSI name: HAC0

Parameter SYS=PRI/SECn controls the selection of the primary or secondary systems, and therefore this parameter is already specified in the start procedure in the SYS1.PARMLIB for each system.

HCC can be started automatically after IPL by entering the following command in SYS1.PARMLIB(COMMNDxx):

```
    S HACC.A,HOT=N
```

START command parameter description :

SYS	=	PRI	Primary Started Task (HACC0), default value
		SECn	Secondary Started Task with n=1-9/A-Z (HACC1)
FMTU	=	Y	Format the UNIT Statistic and Recovery logs
	=	N	Default value
FEX	=	(n,...,n)	Format the Exchange log(s) n=1-9/A-Z
		(n-n)	FEX=() when no Exchange log is to be formatted
HOT	=	Y	Warm start, recovery from last HACC-Start
	=	N	Cold start, ignoring information from UNIT log and RCA.
SSI	=	Y	Recreate HACCVT, SSI matrix and SSI module
	=	N	Default value
HID	=	Hn	HACC0 identifier (n=1-9)
MID	=	M1	MAJOR name
A1ID	=	An	AML System 1 identifier (n=1)
A2ID	=	Am	AML System 2 identifier (m=2)
M1	=	Hn	Definition of **one** HACC as MAJOR

Defaults:

A1ID	=	A1
A2ID	=	A2

FEX=(n), FMTU=Y, only valid for a primary system start.

START command for single Host complex:

```
S HACC.A,SYS=PRI|SECn
        ,FMTU=Y|N
        ,FEX=(n,...,n,n-n)
        ,HOT=Y|N
        ,SSI=Y|N
        ,HID=Hn
        ,A1ID=An
        ,A2ID=Am
```

Entering FMTU=Y and / or FEX=(n,...,n,n-n) can lead to data losses in productive operation in certain circumstances.

START command for MULTI-HOST complex with **LU 6.2** inter-host-communication:

```
S HACC.A,SYS=PRI│SECn
        ,FMTU=Y│N
        ,FEX=(n,...,n,n-n)
        ,HOT=Y│N
        ,SSI=Y│N
        ,HID=Hn
        ,MID=M1
        ,M1=Hn
        ,A1ID=An
        ,A2ID=Am
```

2.2   JCL OF THE STARTED TASK FOR SINGLE HOST COMPLEX

The following JCL statements is an example of a HCC start procedure which must be stored in the SYS1.PROCLIB or an installation-specific PROCLIB.

This example is stored under HCCSTC1 in the hlq.ZHC....SAMP library.

```
//*-----------------------------------------------------------------------*
//*                HACC STARTED TASK HACC REL. 3.0.0                       *
//*                SINGLE HOST COMPLEX                                      *
//*                AR/AMU VIA EXCP/VTAM LU2/VTAM LU6.2                      *
//*-----------------------------------------------------------------------*
//HACC      PROC SYS=PRI,
//               FMTU=N,
//*              FEX=(1,...,9,A-Z), <--- ACTIVATE IF NEEDED
//               HOT=Y,
//               SSI=N,
//               SUP=N,
//               HID=H1,
//               A1ID=A1
//*              A2ID=A2            <--- ACTIVATE FOR SECOND ABBA SYSTEM
//HACCPROC EXEC PGM=ZHC00100,
//               TIME=1440,
//               DPRTY=(14,7),      <--- HIGHER THAN BATCH 1)
//               REGION=4000K,
//               PARM=('SYS=&SYS',
//               'FMTU=&FMTU',
//*              'FEX=&FEX',        <--- ACTIVATE IF NEEDED
//               'HOT=&HOT',
//               'SSI=&SSI',
//               'SUP=&SUP',
//               'HID=&HID',
//               'A1ID=&A1ID')
//*              'A2ID=&A2ID')      <--- ACTIVATE FOR SECOND ABBA SYSTEM
//STEPLIB  DD  DSN=hlq.ZHC300.LOAD,DISP=SHR
//HACCPARM DD  DSN=parmdsn(member),DISP=SHR
```

[1]   HCC is mainly in WAIT status at the subsystem interface and not using system resources, and therefore it should be given the highest possible priority. This ensures that HCC does not run into a timeout when, for example, a system loop occurs.

2.3   JCL OF THE STARTED TASK FOR MULTI-HOST COMPLEX (LU 6.2)

The following JCL statements is an example of a HCC start procedure which must be stored in the SYS1.PROCLIB or an installation-specific PROCLIB.

This example is stored under HCCSTC2 in the hlq.ZHC....SAMP library.

```
//*-----------------------------------------------------------------------*
//*              HACC STARTED TASK HACC RELEASE 3.0.0                      *
//*              MULTI HOST COMPLEX LU6.2                                  *
//*              AR/AMU VIA EXCP/VTAM LU2/VTAM LU6.2                       *
//*-----------------------------------------------------------------------*
//HACC      PROC SYS=PRI,
//               FMTU=N,
//*              FEX=(1,...,9,A-Z), <--- ACTIVATE IF NEEDED
//               HOT=Y,
//               SSI=N,
//               SUP=N,
//               HID=H1,
//               A1ID=A1,
//*              A2ID=A2,          <--- ACTIVATE FOR SECOND ABBA SYSTEM
//               MID=M1,
//               M1=H1
//HACCPROC EXEC PGM=ZHC00100,
//               TIME=1440,
//               DPRTY=(14,7),     <--- HIGHER THAN BATCH 1)
//               REGION=4000K,
//               PARM=('SYS=&SYS',
//               'FMTU=&FMTU',
//*              'FEX=&FEX',       <--- ACTIVATE IF NEEDED
//               'HOT=&HOT',
//               'SSI=&SSI',
//               'SUP=&SUP',
//               'HID=&HID',
//               'A1ID=&A1ID',
//*              'A2ID=&A2ID',     <--- ACTIVATE FOR SECOND ABBA SYSTEM
//               'MID=&MID',
//               'M1=&M1')
//STEPLIB  DD  DSN=hlq.ZHC300.LOAD,DISP=SHR
//HACCPARM DD  DSN=parmdsn(member),DISP=SHR
```

[1] HCC is mainly in WAIT status at the subsystem interface and not using system resources, and therefore it should be given the highest possible priority. This ensures that HCC does not run into a timeout when, for example, a system loop occurs.

2.4 OPERATOR START PROCEDURES

2.4.1 START AFTER INSTALLATION

Files such as UNIT-LOG (and EXCHANGE-LOGs when defined) and the subsystem interface must be formatted during the first primary HCC start. The MESSAGE-LOGs does not need to be formatted.

START command format:

```
S HACC.taskid,FMTU=Y,SSI=Y[,FEX=(n,...,n,n-n)]
```

The following operator message appears, together with other information, when HACC is initialized:

```
HAC000I =======================================================
HAC016I ===          HACC READY FOR COMMUNICATION          ===
HAC000I =======================================================
```

2.4.2 RESTART AFTER INTERRUPTION

SSI=Y and FMTU=Y must not be used for recovery reasons. Only the HCC Started Task procedure described on the following pages is started.

START command format:

```
S HACC.taskid
```

2.5   START AML COMMUNICATION

1.

```
    ACOM [s]
```

The **ACOM** command tests the communication path to AML System s.

HCC sends the following operator message when the test is successful:

```
 HAC210I SYS s: READY FOR COMMUNICATION
```

2.

```
    ROSA [s,r]
```

The **ROSA** commands activates robot r of system s.

HCC sends the following operator message after successful initialization:

```
    HAC211I SYS s,ROB r: READY
```

Automatic operation now starts immediately without further operator intervention.

The AML-PC is referred to as AR (Archive computer) on ABBA/1 and as AMU (Archive Management Unit) on AML/2, AML/E or AML/J.

Refer to the AML Manual for further information.

3 STOP PROCEDURES

3.1 HCC STOP

HCC can be stopped in three ways:

1. **Normal termination:**
   Refer to the **END** command or CY SHUTDOWN. Pending requests to the AML System are completed which can lead to a wait interval of 30-60 seconds.
   When the ERROR queue (**DRQ E**) still contains requests, HCC does not terminate until these requests are deleted (**DELQ**) or completed. HCC sends the message 'PENDING ERROR SITUATION' (refer to the **DRQ** command).

2. **Forced termination:**
   Refer to the **FORCE END** or the **P** command. Pending requests to the AML System may not be accepted in this case. Information on sent but not acknowledged requests can also be lost.
   A **DRQ** command should always be executed before forced termination.

3. **Abnormal termination:**
   CANCEL or MVS shutdown. Information can also be lost in this case as under 2 above.

Possible loss of information by:

- VOLUME INSERT executing: AML has loaded a cartridge but HCC could not be informed about this transaction. In this case, a **UPV** command must then be entered manually to correct the HCC Archive mirror.

- INVENTORY executing: similar to VOLUME INSERT
  Measure: repeat the **INV** command.

Normally, all pending processes are recreated. In some circumstances, an unnecessary KEEP may follow after the HCC restart but this does not hinder the functional flow.

3.2   AML STOP

The following command sequence is recommended to stop the AML unit:

1. ROSO command for each robot.

The robots move back to the HOME position, pivot the arm to the BASE position and lock the restarts (electrical).
The following message appears after operation completion:

```
HAC212I SYS s,ROB r: STOPPED
```

The Archive programs on the AR or AMU should be terminated correctly when all the installed robots have confirmed their STOP status with this message.

2. AOFF command for the AML PC (AR/AMU).

The AR or AMU closes the Archive mirror file and exits the Archive program. The following message appears after operation completion:

```
HAC302A ARCHIVE COMPUTER SYSx STOPPED !
```

POWER-OFF is NOT triggered automatically. The installation-specific POWER OFF procedure for the AML System(s) can be executed afterwards.

The AML-PC is referred to as AR (Archive computer) on ABBA/1 and as AMU (Archive Management Unit) on AML/2, AML/E or AML/J.

Refer to the AML Manual for further information.

3.3   LU 6.2 - COMMUNICATION END

The following command is available to stop the communication to another complex:

```
VARY INACT,HID=Hx
```

The following command serves to stop all connections:

```
VARY INACT,APPC
```

This terminates the APPC subtask. A normal HCC end (F HCC,END) also initiates the **VARY INACT** commands which ensures normal dialogs/subtask termination.

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4   RECOVERY PROCEDURES

This Section shows several examples for operator procedures to clear robot malfunctions.

4.1   COMMUNICATION PROBLEMS

4.1.1 EXCP or VTAM LU 2

Check the following points when the communication between HCC and the AMU or AR (Archive computer) is not functioning:

- Is the program active on the AMU or AR (Archive computer)?
- HOT keys: is the HCC-AML communication mask on the screen?
- Check the circuit with: **COM D,XSB**

After pressing the HOT-KEYs on the AMU or AR (Archive computer) e.g. enter

- **DA**   in the HCC command line
                                                     press the ENTER key.
                                                     The command must be repeated.

In the case of no reaction

- **COM INACT,[luname,cuu]**   and then enter
- **COM ACT,[luname,cuu]**   on the Master console.

HCC displays a Sense code for malfunctions on the HOST side.

4.1.2 VTAM LU 6.2

Use the command

- **VARY ACT, HID=[Hx or Ax]**

to re-establish an interrupted dialog.

Refer to the corresponding Sections in the COMMAND REFERENCE for HCC/MVS 3.0 for further information on syntax and parameters for the commands mentioned above.

4.2   ROBOT CRASH (N101)

After a CRASH message, HCC continues to send pending commands to the robot involved.

The following checks should still be made:

- Is the robot still operative?

- Which command was being executed when the crash occurred?

- Was this command completed or must the command be repeated? The medium may be in the Problem box; for example, It must be inserted again to repeat the command.

A **ROSA** command for this robot can follow when the robot is still operative. The last command should either be repeated (**REP**) or deleted (**DELQ**) from the HCC Send wait queue depending on whether it should be repeated or not.

Observe the robot closely during the following actions. Contact a technician when crashes are frequent.

4.3   MEDIUM LOST (N104)

After a N104 message, HCC stops sending commands to the robot involved. Determine whether a medium has actually been lost or whether it could not be gripped. In the latter case, the HCC **ROSA** command can be entered immediately and the last HCC command repeated with **REP**.

When the medium has been lost, determine whether it is located in the robot path. Providing the robot has not damaged the medium, stop the robot immediately after the HCC **ROSA** command (**ROSO**) to avoid having to reposition the robot manually to its start position. Repositioning the robot manually requires opening the door, which triggers an emergency stop and stops the robot.

Select the location for repositioning the medium according to the command executing when the error occurred:

For **KEEP** commands, reposition the medium in the drive the robot was going to access (do not close the flap for 3480).

For all other commands, the medium can be returned to the Archive per Insert (**VI**) as soon as the robot is restarted.

The last command can then be repeated (**REP**) from the Send wait queue.

4.4   UNIT STILL OCCUPIED (N202)

The AMU or AR (Archive computer) sends the MOUNT error N202 when a unit is marked as occupied in its Device directory.

Determine whether a medium is actually in the unit. If it is, remove the cartridge with the HCC **KEEP** (**K**) command.

If it is not, correct the AMU or AR (Archive computer) Archive mirror:

- The coordinate of unit 0000*dd*01 (*dd*=AML device number) must contain FREI00 as volser. The status must be 0L.

- The status in the Archive entry for the medium assigned to the unit coordinate must be corrected to MB.

The rejected **MOUNT** command can be repeated with **REP**.

4.5   UNIT EMPTY (N203)

The AMU or AR (Archive computer) sends the KEEP error N203 when a unit is marked as empty in its Device directory.

The error can be ignored when the station is not physically occupied. Otherwise the AMU or AR (Archive computer) Archive mirror must be corrected:

- The coordinate of unit 0000*dd*01 (*dd*=AML device number) must contain the correct volser. The status must be 0B.

- The status in the Archive entry for the medium assigned to the unit coordinate must be corrected to MM.

A manual KEEP can be activated on the HCC (K *cuu,volser*).

4.6   MEDIUM CANNOT BE REMOVED (N206)

This error message draws attention to mediums not removed or not removed in time. When HCC issues a MVS **KEEP** command, the interval specified in the HCC KEEPWT statement must first elapse to give the drive sufficient time to complete the rewind and removal process. An appropriate **KEEP** command is first sent to the AMU or AR (Archive computer) after this interval has elapsed. The robot now tries to remove the medium within 45 seconds, otherwise the command is rejected with error code N206.

The number of times the Keep process is repeated depends on the second and third KEEPWT parameters, and the process is marked as erroneous when this retry count reaches zero. A "permanent" N206 can only occur in the following cases when the parameters are filled correctly:

1. When the medium is jammed mechanically or is defective,

2. when the drive is defective,

3. when MVS did not issue a "REWIND - UNLOAD" so that the medium is still loaded in the drive.

Cases 1 and 2 can only be corrected by manual intervention on the drive itself. The erroneous **KEEP** command must be repeated with **REP** after correct manual removal.

Case 3 occurs more frequently. Normally, MVS has demanded a medium and HCC has initiated a mount. The job then ends during the mount without having used the medium. This means there is no job to issue a keep when the robot terminates the mount process, and the drive remains ONLINE, not allocated. This can be detected using a MVS "**DU,,,cuu,1**" command or visually checking the operating display on the unit. This usually only shows "**RDY**" without a volser.

Issuing the MVS "**U cuu**" command clears this type of error immediately. The appropriate HCC error message can also be inquired by an automatic tool such as NETVIEW or Netmaster, or similar programs, and an MVS Unload command automatically generated. When the unit involved does not have to be available immediately, HCC automatically substitutes a so-called "forced keep" when the next MVS Mount is issued for the respective unit..

Refer to the "Deferred Mounting" Section in the System Reference Guide for information on how to avoid this situation.

4.7   VOLSER NOT IN ARCHIVE (N302)

The **DRQ E** command display shows that the AR or AMU reported an error N302 for an EJECT. This error code states that the cartridge is ejected according to the AR/AMU.

```
DRQ E

HAC000I=======================================================
HAC221I COMMANDS TRANSMITTED BUT NOT ACKNOWLEDGED:
HAC036I 23/19.41.56 N302 <0052,EJ  ,N,N302,1,1,E01,001011,
HAC000I=======================================================
HAC036I SQNR CMD  S,R AUU VOLSER CUU JOBNAME  HH.MM FLAGS
HAC036I 0052 EJ   1,1 E01 001011    RZP2S    19.41 IS*
HAC000I=======================================================
```

A visual check in the AML library confirms that the medium is actually rejected. The pending EJECT request can be deleted with **DELQ**.

Example:
```
DELQ 0052
```

In this example, **UPV** should then be used to reset the medium 001011 status in the HCC Archive mirror to "ME", for example to status "ejected" (refer to the **UPV** command).

The error case described here can occur when the EJ task was already sent to AML and was successfully processed but HCC was inactive when the positive acknowledgment was sent.

Refer to the COMMAND REFERENCE for HCC/MVS 3.0 for further information.

4.8   SLOT EMPTY (N402)

Check whether the respective coordinate is really empty.

When the slot is occupied, this means that the robot could not grip the medium and must be re-teached. The open request can be repeated with the **REP** command.

When the slot is free, the Archive mirrors on HCC and the AMU or AR (Archive computer) do not reflect the real situation.

Use the HCC UPV volser, **ME** command to correct the Archive entry for this medium.

For unspecific mount requests MOUNT (M SCRTCH/PRIVAT), the MOUNT can be deleted from the Rob-Queue and another scratch cartridge requested via HCC (M cuu,SCRTCH). An inventory should be made as soon as possible.

4.9   MOUNT PENDING

Check the following when a MOUNT request is still open in MVS even though HCC does not have a request for this unit:

- Unknown volser ?
  When the HCC message HAC332A (unknown volser) appears on the console, it could be a foreign mount request. If this is the case, select an appropriate foreign mount slot and define the volser with the **FMA** command. HCC then automatically initiates a **MOUNT** command.

- Flap still open ?
  The flap has probably opened when the cartridge is already in the unit. In this case, close the flap manually or with the **CLU** command.

  Set the unit to OFFLINE for further processing and have the flap adjusted by a technician.

4.10 PROCEDURE AFTER ROBOT MALFUNCTIONS

Check the following before entering a HCC **ROSA** command:

- Last request
When the robot still had a medium in the gripper as the malfunction occurred, determine which request should have been serviced.

If it was a KEEP request, re-insert the medium in the unit (do not close the flap) so that this KEEP can be repeated correctly afterwards, otherwise an Archive mirror error can occur.

For other requests, the medium can be returned to the Archive with the HCC **VOLUME-INSERT** command so that the last request can be repeated with **REP** when required.

- Error wait queue
The **DRQ** command also shows the ERROR-HOLD Queue. Check each request with a negative acknowledgment as to whether repetition is necessary after **ROSA** (KEEPs normally have to be repeated whereas, MOUNTs depend on the interruption duration).

Delete any requests no longer required (**DELQ**) to retain clarity and to prevent HCC blocking volsers (ENQed).

- AML Send wait queue
Also check whether requests that have not yet been sent should still be executed. Particular attention must be paid to MOUNT requests that are no longer relevant. The wait queue must be cleaned with the **DELQ** command (with **FORCE** when necessary).

The **ROSA** command should first be entered after these actions.

The **REP** (repeat) command should be entered carefully, for example enter the commands with adequate pauses when several tasks must be repeated.

The best method is to wait to see whether each **REP** command is successful (or not) before entering the next **REP** command.

5   OPERATOR PROCEDURES

This Section shows several related examples for HCC special functions.

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5.1   HEADER CHECK

Wrong labels can disturb automatic operation, for example the internal and external labels do not match. LABEL CHECK serves to check the identity of both labels and for test purposes.

The following procedure can be started as a "weekend" task for AML:

F HCC,LOGSTART   Start HCC Message log

F HCC,ALLOC cuu1   Reserve unit 1
F HCC,ALLOC cuu2   Reserve unit 2
It is not practical to start more than two units per robot.

F HCC,LCK fromvol-tovol   Number range, specify count

F HCC,SLCK cuu1   Start label check on unit 1
F HCC,SLCK cuu2   Start label check on unit 2

The units can be released when the function has completed.

F HCC,FREE cuu1   Release unit 1
F HCC,FREE cuu2   Release unit 2

LABEL CHECK must be stopped before unit release (with **FORCE** when necessary) when malfunctions occur during execution using:

F HCC,PRT cuu1
F HCC,PRT cuu2

5.2   HEADER INITIALIZATION (automatic)

HCC can initialize cartridges automatically independent of the IBM Initialization utility IEHINIT. The advantage is that the automatic barcode read process more or less eliminates erroneous initialization.

The following procedure is practical:

F HCC,VI	Insert new cartridge
F HCC,ALLOC cuu	Reserve unit 1 or 2
F HCC,TLI fromvol-tovol	Define number range for new cartridges. Must not overlap existing cartridge ranges!
F HCC,TLIPW password	Enter password
F HCC,STLI cuu	Start label initialization on unit

Release the unit again when the procedure ends (refer to previous Label Check).

External cartridges can also be initialized. The cartridges must first be positioned in the foreign mount area. Example of a cartridge with volser 004711 located in foreign mount slot 2:

F HCC,FMA 2,004711,HACC	Enter in position 2 of the foreign mount area for jobname HCC
F HCC,ALLOC cuu	Reserve unit
F HCC,TLI *11002-*11002	Number range = one cartridge
F HCC,TLIPW password	Enter password
F HCC,STLI cuu	Start label initialization on unit. HCC substitutes the real volser defined with FMA or FMM (004711 in this case).

Release the unit after the procedure ends (refer to previous Label Check).

LOOP situations can occur when tape management systems such as CA1 are used to initialize cartridges when the volser of HEADER 1 is still marked as blocked by TMS. HCC rejects a MOUNT/KEEP-LOOP but initialization is not possible as long as the volser remains blocked. In such cases, use PTLI and FREE,FORCE to abort initialization and then define the respective volser in TMS as a SCRATCH tape.

5.3 HEADER DISPLAY

The independent utility 'Labelcheck' serves to display IBM standard label header information from HDR1 and HDR2.

The **START** command can have a different syntax depending on the name assigned during installation (contact System Programming).

5.3.1   START COMMAND

```
        S LCK,V=volser[,U=unit,FILENO=n]
```

volser   = Volume identification number
unit   = MVS unit address, esoteric name or unit name
                 (3420,3480,3490 ...)
n   = File sequence number of the tape dataset (n = 1-255)

Example:
```
s lck,v=004711
```

The following MOUNT message appears:

```
IEC501A M cuu,004711,BLP,,LCK,..,LABEL.DISPLAY.V004711
```

The following WTO messages appear under routing code 1,11 after the requested volser has been mounted:

```
LCK030I ======= CONTENTS OF HDR1/HDR2 LABEL RECORDS ========
LCK030I VOLSER=004711,DSN=AP23.ABC.G0023V00 (17 Bytes)
LCK030I CRDTE=91.020,EXPDT=91.355,VOL.SEQ=0001,FILE SEQ=0001
LCK030I BLKSI=12000,LRECL=00200,RECFM=FB ,JOB=W23P0002/ST020
```

The following WTOR message then appears:

```
Rxx LCK001A ENTER NEW VOLSER OR END
```

Header display can be continued with the next volser or terminated by entering "END".

The following messages appear when the mounted data carrier does not have a standard label:

```
LCK019I NO IBM STANDARD LABELS FOR volser
LCK099I display of up to 100 bytes of first block
```

5.4   HEADER INITIALIZATION (independent)

The independent utilities 'TLI' or 'TAPE LABEL INIT' serve to initialize tape headers for IBM standard labels.

The **START** command can have a different syntax depending on the names assigned during installation (contact System Programming).

5.4.1   START COMMAND

```
          S TLI[,U=unit]
```

unit   = MVS unit address, esoteric name or unit name
                  (3420,3480,3490 ...)

Example:
```
          S TLI
```

The following WTOR message then appears:

```
  Rxx LCK014A ENTER volser FOR TLI or END
```

The MOUNT message appears after the volser number to be initialized has been entered:

```
  IEC501A M cuu,volser,BLP,,TLI,..,HACC.INIT
```

The following message appears after the requested volser has been mounted:

```
  LCK012I VOLUME volser IS INITIALIZED
```

The TLI task can be continued for another volser or terminated with the appropriate reply to message LCK014A.

5.5   CHANGING HCC ACCESS TO NEXT CLEANING CARTRIDGE

Situation: Cleaning cartridge mounted on 1st drive (for example 0540). The cartridge jams or the drive is defective and the cartridge remains in this drive. A new cleaning request is generated for a different drive (for example 0541). HCC cannot process this request because the cleaning cartridge is not available.

Solution 1:

1.	`UPV CL....,CE`	Set status of defective cleaning cartridge to ejected. Cartridge must be removed manually.
2.	`SETUP CL`	Command to switch to next cleaning cartridge. DCL still shows previous cleaning cartridge.
3.	`SETUP 0540,CLEAR`	Clear drive
	`SETUP AR,0540,CLEAR`	HCC and AMU/AR
4.	`DRQ ALL`	Determine sequence number of cleaning mount N206
5.	`DELQ SQNR`	Delete cleaning mount with error number N206
6.		HCC cleans first drive (0540) with new cleaning cartridge and then the next drive (0541).

Solution 2:

1.	`UPV CL....,CE`	Set status of defective cleaning cartridge to ejected. Cartridge must be removed manually.
2.	`SETUP CL`	Command to switch to next cleaning cartridge. DCL still shows previous cleaning cartridge.
3.	`CC CL,0540`	Reset cleaning counter of defective drive
4.	`DRQ ALL`	Determine sequence number of cleaning mount N206
5.	`DELQ SQNR`	Delete cleaning mount with error number N206
6.		HCC cleans next drive (0541) with new cleaning cartridge.
7.	`CL 0540`	Start a manual cleaning process when defective drive available again.

Recommended: Use the second solution because this avoids a second mount on the defective drive and the operator can then determine when the defective drive can be used again.

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