



ISPF USER GUIDE

HCC/MVS 3.0

HOST

COMMUNICATION

CONTROL

4th edition



IMPRINT

4th Edition

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1 ISPF - USER GUIDE for HCC/MVS 3.0

1.1 LITERATURE

Manual	Order number	Reference
General Information Manual	600226-A	G
Installation/Customization Guide	600227-A	G
System Reference Guide	600233-A	G
Operators Guide	600231-A	G
Command Reference	600223-A	G
Conversion Notebook	600224-A	G
Installation/Customization Reference	600228-A	G
Messages and Codes	600230-A	G
ISPF User Guide	600229-A	G
Release Guide	600232-A	G

G This Manual is part of the standard HCC documentation. Further copies of the respective Manual can be obtained from the publisher.



ISPF Users Guide for HCC/MVS 3.0

2 INSTALLATION

2.1 ISPF Authorization

To use HCC/ISPF, the following entry is required in IKJTSOnn on the SYSn.PARMLIB:

```
AUTHTSF NAMES(..ZHC41000..)
```

Program **ZHC41000** from **HACC LOAD** must be copied into an APF-authorized LINKLIST library.

2.2 ISPF Libraries

The following ISPF libraries must be unloaded from the HCC installation tape:

OBISD.ZHC300.ISPLLIB	Load modules HACC/ISPF	File 3
OBISD.ZHC300.ISPCLIB	CLIST's and REXX procedures	File 5
OBISD.ZHC300.ISPMLIB	Error messages	File 6
OBISD.ZHC300.ISPPLIB	Screens	File 7
OBISD.ZHC300.ISPTLIB	Tables	File 8



Refer to the Installation/Customization Manual for further information.

2.3 HCC/ISPF Start Procedure

The HACPARM1 file and member names can be adapted to the naming conventions of the installation environment in the **ZHCM000C** procedure in the **ISPCLIB** library.

The HCC/ISPF environment itself is set up with LIBDEF statements requiring the allocation of a private file connected with DD-names ISPTABL by LOGON-procedure, for example, “Userid.TSO.ISPTABL”. ISPF normally uses the file “Userid.TSO.ISPPROF” as default output file for tables.

This file must then be linked in the ZHCM000C procedure with the LIBDEF statement for ISPTLIB so that the tables written can be read again (see ZHCM000C for LIBDEFs and ISPF literature for processing tables).

2.4 Primary Options Panel

The following statement must be entered in the **PRIMARY OPTIONS PANEL** to start HCC/ISPF from there:

```
H - HACC          Host ABBA Communication
.
.
.
H, 'CMD(ZHCM000C)  NEWAPPL(HACC)  NEWPOOL'
```



Installation

3 HCC/ISPF APPLICATIONS

3.1 HCC/ISPF Selection Screen

The first screen is **HACC Main Selection** which appears as follows:

```
-----  
ZHCM000P          EMASS/GRAU Software GmbH           96/02/12  
                  HACC/ABBA Define HACPARM1 Function Selection 10:43  
-----  
Option/Selection:  
  
1 - Create HACPARM1  
2 - HACC Archive Administration HAA  
3 - HACC Operator Command Interface  
  
Name Hacparm (Default HACPARM1) : HACPARM1  
:  
:  
:  
-----  
ENTER to process. Enter END command or END key to terminate.
```

The HCC applications to be selected are described in the following Sections

- Create HACPARM1
- HCC Archive Administration HAA
- HCC Operator Command Interface.

3.2 Create HACPARM1

Selecting **1** in **HACC Main Selection** displays the following screen:

```
-----  
ZHCH000P          EMASS/GRAU Software GmbH           96/02/15  
                  HACC/ABBA Define HACPARM1 Function Selection   09:52  
-----  
Option/Selection:  
  
1 - Create a HACPARM1 Table  
2 - Copy a HACPARM1 Table  
3 - Delete a HACPARM1 Table  
4 - Define HACPARM1  
  
Table Name:           Target Table Name:  
:  
:  
:  
-----  
Enter HELP Command or HELP key for help.  
ENTER to process. Enter END command or END key to terminate.
```

This screen is used to generate a HACPARM1 file or PDS member required to operate the HCC.

HACPARM1 statements can be entered here using help and display functions. The HACPARM1 statements entered are checked for validity and completeness. They are stored in ISPF tables from which a file or a PDS member must be created.

ISPF tables containing HACPARM1 statements are created, copied or deleted using selections **1, 2 or 3**.

The 'Table Name' field must be entered for all 4 functions and is used for all further functions with selection 4.

The 'Target Table Name' field is only required for copying tables. A new table with the name entered is created.

A table must first have been created before HACPARM1 statements can be defined with selection **4**.

Selecting **4** (Define HACPARM1) displays the following screen:

```
-----  
ZHCH005P          EMASS/GRAU Software GmbH           96/02/15  
                  HACC/ABBA Define HACPARM1 Selection      09:55  
-----  
Option/Selection:  
  
1 - ABBA Configuration  
2 - Define Parameters for HACPARM1  
3 - List all HACPARM1 Entries  
4 - Generate HACPARM1 Dataset or Member from Table  
5 - Transform HACPARM1 Dataset or Member to Table  
  
Table Name: HACPARM1  
:  
:  
:  
-----  
Enter HELP Command or HELP key for help.  
ENTER to process. Enter END command or END key to terminate.
```

1 defines the configuration of the systems (refer to 3.2.1).

2 defines HACPARM1 statements which are checked against the configuration for validity and completeness (see 3.2.2).

3 displays all entered HACPARM1 statements (see 3.2.3).

4 creates a file or a PDS member from the HACPARM1 statements which are stored in an ISPF table (see 3.2.4).

5 transforms an existing HACPARM1 file or PDS member into an ISPF table for modification (see 3.2.5).

3.2.1 AML Configuration

Selecting **1** (AML Configuration) displays the following screen:

ZHCH010P	EMASS/GRAU Software GmbH	96/02/15
HACPARM1	HACC/ABBA Define HACPARM1	09:57
<hr/>		
Option/Selection:		
Enter 1 for Number of Systems or 2 for Characteristics of System		
1. Number of ABBA Systems : 2		
2. Characteristic of System		
System Number	:	01 Type of ABBA System : 2 1/2/E
Number of Robots	:	02 Number of Towers : 03
Number of Racks	:	00
Eject Area	:	Y Y/N Insert Area : Y Y/N
Foreign Mount Area	:	Y Y/N Dynamic Area : N Y/N
FPMA	:	N Y/N HACC Work Area : N Y/N
HACC/ABBA Communication: LU62 EXCP/LU2/LU62		
<hr/>		
Enter HELP Command or HELP key for help.		
ENTER to process. Enter END command or END key to terminate.		

The number of systems and characteristics of the individual systems must be defined here. The configuration is mandatory because it is used to check different HACPARM1 statements.

Help is available by entering the **HELP** command or using the help PF key, for example, PF1 which is defined in the ISPF.

3.2.2 Defining Instructions for HACPARM1

Selecting 2 (Define Parameter for HACPARM1) displays the following screen:

ZHCH020P	EMASS/GRAU Software GmbH	96/02/15		
HACPARM1	HACC/ABBA Define HACPARM1	10:03		
<hr/>				
Option/Selection:				
Required: Optional:				
R01 JES	001 ABSWAIT	014 FPMAKEC	027 ODSCR	040 TMS
SYSDEFN	002 AUTOCMD	015 FPMALOAD	028 PRTY	041 TMSEXIT
R02 PDSN/REQ	003 AUTOFREEVOL	016 FPMAMVMAX	029 ROUTCD	042 UNITNUM
R03 PDSN/OPT	004 AUTOREPEAT	017 JOBGR	030 SMFRECORD	043 UCBATI
R04 LDEV	005 BUFNO	018 KEEPWT	031 SSINAME	044 VI
R05 UNIT	006 CLEAN	019 LANG	032 STAM	045 VIEEXIT
R06 VOLGR	007 DEVTYPE	020 LOCDESC	033 STATISTICS	
R07 TSOSEC	008 DSNGR	021 MAXCOOR	034 STIMER	
	009 EJDSN	022 MAXTSO	035 STORGRP	
C01 COMDEFN	010 EJEXIT	023 MAXVOL	036 SWAPLIM	
C02 HACNET	011 EJVOL	024 MOEXIT	037 TDSN/REQ	
	012 EXTSEC	025 MSG	038 TDSN/OPT	
	013 FPMADEF	026 MSGPREFIX	039 TLIPW	
<hr/>				
Enter HELP command or HELP key for help. ENTER to process. Enter END command or END key to terminate.				

The selection of the HACPARM1 statements is divided into 'mandatory' and 'optional' statements. They can be defined by entering the above selection.

The statements can be selected individually or processed sequentially by pressing ENTER. Sequential processing can be aborted with the RETURN command or a defined RETURN PF key.

The statements are checked against the AML configuration for validity and existence.

A HELP function is available for all statements on the individual screens. Scrolling forwards or backwards can be performed via the standard ISPF SCROLL command or the appropriately assigned PF keys (PF7/PF8). It is also possible to view already defined statements with a SHOW function.



Refer to the Installation/Customization Manual for exact explanations or **restrictions** of the individual parameters.

3.2.2.1 Defining JES and SYSDEFn Instructions

Selecting **R01** displays the following screen:

```
-----  
ZHCH030P          EMASS/GRAU Software GmbH      96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1      10:12  
-----  
Option/Selection:  
  
Enter 1 for Job Entry Subsystem JES or 2 for System Configuration  
SYSDEF.  
  
1. Job Entry Subsystem.  
  
Number           :      3  
Unload           :      Y  Y/N  
Delay for unload :      20  01-99  
  
2. System configuration.  
  
ABBA System Number   :      2  
Number of Robots     :      2  
ABBA System Type     :      2  
  
-----  
Enter Hn to get HELP about parameters or Sn to SHOW existing parameters.  
ENTER to process. Enter END command or END key to terminate.
```

The statements for JES2/JES3 and SYSDEFn are successively entered when **1** and **2** are selected. The statements are checked for validity and against the system configuration.

If this function is terminated without an input and these statements do not exist, a warning message is displayed. The function can then only be aborted by entering **X** in the command line.

HELP for the associated statements can be called by entering **H1** or **H2** in the command line. Already existing statements can be displayed by selecting **S1** or **S2**.

3.2.2.2 Defining P/TDSNTYPE Instructions

Selecting **R02** or **O37** displays the following screen:

```
-----  
ZHCH040P          EMASS/GRAU Software GmbH      96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1    10:13  
-----  
Option/Selection:  
  
Define HACC Datasets  
  
Unit Recovery Log   : OBISD.ZHC300.PDSNULOG  
Archive            : OBISD.ZHC300.PDSNARCH  
Scratch Tape Input : OBISD.TMC  
:  
:  
:  
-----  
Enter H to get HELP about HACC Datasets or S to SHOW existing HACC Datasets.  
ENTER to process. Enter END command or END key to terminate.
```

The 'required' HCC files are defined here.

Selecting **R03** or **O38** displays the following screen:

```
-----  
ZHCH045P          EMASS/GRAU Software GmbH      96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1      10:19  
-----  
Option/Selection:  
  
Enter 1 for Message Logs and 2 for Exchange Logs  
  
1. Define Message Log Datasets.  
  
Number of Message Logs   : 4       1-4  
Message Log Names       : OBISD.ZHC300.PDSNMLG  
  
2. Define Transfer Log Datasets.  
  
Number of Transfer Logs : 8       1-F Number of Records: 200  
Transfer Log Names     : OBISD.ZHC300.PDSNEXC  
Status ACT/INACT        : ACT      ACT/INACT  
  
-----  
Enter H to get HELP about HACC Datasets or S to SHOW existing HACC Datasets.  
ENTER to process. Enter END command or END key to terminate.
```

Selecting **1** or **2** in the command line defines the 'optional' files for the system environment. 1 to 4 or 1-F statements with the name entered and serially numbered suffixes are created here depending on the 'Number of Message Logs' or 'Number of Transfer Logs' specified.

If this function is terminated without an input and these statements do not exist, a warning message is displayed. The function can then only be aborted by entering **X** in the command line.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.3 Defining LDEV Instructions

Selecting **R04** displays the following screen:

```
-----  
ZHCH070P          EMASS/GRAU Software GmbH      96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1      10:25  
-----  
Option/Selection:  
  
Define ABBA Components LDEV.  
  
1 - ABBA Standard Components  
2 - ABBA Special Components (Insert, Eject, Foreign Mount,  
      Cartridge Pocket)  
3 - ABBA Component Redefinitions (DYN, FPMA, HWS)  
:  
:  
:  
-----  
Enter H to get HELP about LDEV parameter or S to SHOW existing LDEVs.  
ENTER to process. Enter END command or END key to terminate.
```

The LDEV statement is categorized by the type of components (towers and racks, output/input slots and logical re-definitions) which can be selected here.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.3.1 Defining Standard AML Components

Selecting **1** (AML Standard Components) displays the following screen:

```
-----  
ZHCH075P          EMASS/GRAU Software GmbH      96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1    10:26  
-----  
Option/Selection:  
  
Define ABBA Components.  
  
Component          : T   T/R  
Component Number   : 01  
Coordinate of Component : 01  
First Segment in Component: 01      Last Segment in Component: 32  
First Row in Segment   : 01      Last Row in Segment     : 18  
First Slot in Row     : 01      Last Slot in Row       : 10  
Number Slots in Row   : 10  
ABBA System Number    : 1   1/2  
Robot 1              : Y   Y/N      Robot 2             : Y  
Library Type         : C   C/O  
  
-----  
Enter H to get HELP about LDEV parameter or S to SHOW existing LDEVs.  
ENTER to process. Enter END command or END key to terminate.
```

The AML standard components, LDEV statements for towers and racks, can be defined here. The inputs are checked for validity and against the configuration.

If this function is terminated without an input and these statements do not exist, a warning message is displayed. The function can then only be aborted by entering **X** in the command line.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.3.2 Defining Special AML Components

Selecting **2** (AML Special Components) displays the following screen:

```

-----
ZHCH080P          EMASS/GRAU Software GmbH           96/02/15
HACPARM1          HACC/ABBA Define HACPARM1          10:29
-----
Option/Selection:

Define ABBA Special Components (Eject Area, Foreign Mount Area, Insert Area
and Cartridge Pocket).

Component       :   E   E/F/I/W
Component Number : 01
First Row        : 01      Last Row                 : 06
First Slot in Row : 01      Last Slot in Row       : 10
Number Slots in Row : 10
ABBA System Number : 1   1/2
Robot 1 (Y/N)    : Y   Y/N   Robot 2             : N
Library Type     : C   C/O

-----
Enter H to get Help for LDEV parameter or S to show existing LDEVs.
ENTER to process. Enter END command or END key to terminate.

```

The special AML components, LDEV statements for input/output slots, foreign mount slots and cartridge storage can be defined here. The inputs are checked for validity and against the configuration.

If this function is terminated without an input and these statements do not exist, a warning message is displayed. The function can then only be aborted by entering **X** in the command line.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.3.3 Defining Redefined (Logical) AML Components

Selecting **3** (AML Component Re-definition) displays the following screen:

```

-----
ZHCH085P          EMASS/GRAU Software GmbH           96/02/15
HACPARM1          HACC/ABBA Define HACPARM1        10:30
-----
Option/Selection:

Define ABBA Redefined Components (Dynamic Area, FMPA and HACC Work Area).

Component       :   T   T/R
Component Number :   01
Coordinate of Component :   01
First Segment in Component:   01      Last Segment in Component:   32
First Row in Segment :   01      Last Row in Segment :   18
First Slot in Row :   01      Last Slot in Row :   10
Number Slots in Row :   10
ABBA System Number :   1   1/2
Robot 1 (Y/N) :   Y   Y/N  Robot 2 :   N
Logical Area :   DYN      Type Dynamic Area :   N

-----
Enter H to get HELP about LDEV parameter or S to SHOW existing LDEVs.
ENTER to process. Enter END command or END key to terminate.
-----
```

The redefined (logical) AML components, LDEV statements, dynamic area, fixed preferred mount area and HCC work area can be defined here. The inputs are checked for validity and against the configuration.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.4 Defining UNIT Instructions

Selecting **R05** displays the following screen:

```

-----
ZHCH050P          EMASS/GRAU Software GmbH           96/02/15
HACPARM1          HACC/ABBA Define HACPARM1         10:32
-----
Option/Selection:

Define UNITS, the unit number must be in complete ascending order.

Unit Address/Name   :      0640      Alternate Unit Address:
Unit Number        :      01
ABBA System Number :      1
Robot Number       :      1
FPMA Start Coordinate: 05010101      FPMA End Coordinate   : 01031010
Unittype          :      CAR      IOS/OAD/CAR
Max. Capacity OD IOS :
Cleaning by HACC    :      Y= by HACC /N= by AMUB

-----
Enter H to get HELP about UNIT parameter or S to SHOW existing UNITS.
ENTER to process. Enter END command or END key to terminate.
-----
```

All cartridge drives to be used by the AML system can be defined here. The inputs are checked for validity.

If this function is terminated without an input and these statements do not exist, a warning message is displayed. The function can then only be aborted by entering **X** in the command line.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.5 Defining VOLGR Instructions

Defining **R06** displays the following screen:

```
-----  
ZHCH060P          EMASS/GRAU Software GmbH      96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1      10:35  
-----  
Option/Selection:  
  
Define VOLGR, Scratch Tape Access by Scratch Groups.  
  
Scratch Group ID      : SCRTCH  
Lowest VOLSER in Group : 010001  
Highest VOLSER in Group: 020000  
Scratch Warning Level : 050    001-999  
ABBA System Number   :       1    1/2  
Prefer              : DSN    DSN/JOB  
:  
:  
:  
-----  
Enter H to get HELP about VOLGR parameter or S to SHOW existing VOLGRs.  
ENTER to process. Enter END command or END key to terminate.
```

All tape number ranges to be used by HCC as 'scratch' tapes can be defined here. The inputs are checked for validity.

If this function is terminated without an input and these statements do not exist, a warning message is displayed. The function can then only be aborted by entering **X** in the command line.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.6 Defining TSOSEC Instructions

Selecting **R07** displays the following screen:

```
-----  
ZHCH120P          EMASS/GRAU Software GmbH      96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1      10:36  
-----  
Option/Selection:  
  
Define TSOSEC TSO Security for HACC Commands  
  
Userid           : OBIS10  
ABBASEND (Command Interface):   Y  Y/N  
HAA Archive Administration :   R  U/R/N  
HLQ Archive Save Datasets  :   Default (Userid)  
:  
:  
:  
-----  
Enter H to get HELP about TSOSEC parameter or S to SHOW existing TSOSEC.  
ENTER to process. Enter END command or END key to terminate.
```

At least one user must be authorized before ABBASEND or the HCC Archive Administration (HAA) can be used. These statements can be entered here. The inputs are checked for validity.

If this function is terminated without an input and these statements do not exist, a warning message is displayed. The function can then only be aborted by entering **X** in the command line.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.7 Defining COMDEFn Instructions

Selecting **C01** displays the following screen:

```
-----  
ZHCH090P          EMASS/GRAU Software GmbH           96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1          10:38  
-----  
Option/Selection:  
  
Define COMDEFn System Communication Device (EXCP, VTAM LU2).  
  
ABBA System      :      1  
Communication Method : EXCP      SMF CPU Identification:      SYS1  
Primary MVS Address : 0344      Alternate MVS Address :  
Primary LU Name   :  
Primary ACB Name  :  
Communication Type :  
:  
:  
:  
-----  
Enter H to get HELP about COMDEF parameters or S to SHOW existing COMDEFS.  
ENTER to process. Enter END command or END key to terminate.
```

These parameters are required for the communication between HCC and the AML system under EXCP or VTAM LU2. The HACNET statement must be defined instead of the COMDEFn statement for communication using VTAM LU 6.2. The inputs are checked for validity and against the AML configuration.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.8 Defining HACNET Instructions

Selecting **C02** displays the following screen:

```
-----  
ZHCH110P          EMASS/GRAU Software GmbH      96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1      10:40  
-----  
Option/Selection:  
  
Define HACNET System Communication (VTAM LU6.2).  
  
HACC Id/AMU Id      :      H1  
HACNET Type         :      PRI  
LU Name for HID     :  OBISLU01  
Modename for LU Session :  OBISACB1  
Second LU Name for HID :  
Receive Program Name of AMU:  
SMF-CPUID          :      SYS1  
:  
:  
:  
-----  
Enter H to get HELP about HACNET parameter or S to SHOW existing HACNETs.  
ENTER to process. Enter END command or END key to terminate.
```

HACNET statements required for communication between HCC and the AML system and within a HCC to HCC Major/Minor complex using VTAM LU 6.2 can be defined here. The inputs are checked for validity and against the AML configuration.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.2.9 Defining all Optional Instructions

Selecting **O01** to **O45** displays the screens for the 'optional' HACPARM1 statements. The following screen is an example:

```
-----  
ZHCH100P          EMASS/GRAU Software GmbH      96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1      10:42  
-----  
Option/Selection:  
  
Define Parameter below.  
  
Parameter: ABSWAIT  
  
YES/NO   : NO  
:  
:  
:  
-----  
Enter H to get HELP about Parameter or S to SHOW existing parameter.  
ENTER to process. Enter END command or END key to terminate.
```

All 'optional' HACPARM1 statements can be defined here as selected or sequentially. They are checked for validity and, if possible, against the AML configuration.

HELP can be called by entering **H** in the command line. Already existing statements can be displayed by selecting **S**.

3.2.3 Displaying all HACPARM1 Instructions

Selecting **3** (List all HACPARM1 entries) on the ZHCHP005 selection screen displays the following screen:

```

----- Row 1 of 15
ZHCH230P          EMASS/GRAU Software GmbH
HACPARM1          HACC/ABBA Define HACPARM1
----- 96/02/15
----- 10:43
----- Option/Selection:           Scroll: HALF
----- Display all HACPARM1 Parameters. D in front of entry to delete one entry.

D Parameter
-----
2
2 02 03 00 Y Y Y N N N LU62
1 1 11 0 N N N N N N EXCP
JES=JES3,UNLOAD=YES
PDSNEXC8=OBISD.ZHC300.PDSNEXC8,RECNO=200,STATUS=ACT
PDSNMLG1=OBISD.ZHC300.PDSNMLG1
PDSNMLG2=OBISD.ZHC300.PDSNMLG2
PDSNMLG3=OBISD.ZHC300.PDSNMLG3
PDSNMLG4=OBISD.ZHC300.PDSNMLG4
PDSNARCH=OBISD.ZHC300.PDSNARCH
PDSNSTMS=OBISD.TMC
PDSNULOG=OBISD.ZHC300.PDSNULOG
TSOSEC=OBIS10,ABS=Y,HAA=R
VOLGR=010001,020000,00050,S=1,SCRTCH,PREFER=DSN
HACNET HID=H1,TYPE=PRI,LU=OBISLU01,LM=OBISACB1,SYS=SYS1

```

All HACPARM1 statements are stored in an ISPF table and displayed with this tabular output screen. Entering **D** in front of one or several lines deletes these statements.

3.2.4 Generating a HACPARM1 File or PDS member

Selecting **4** (Generate HACPARM1 File or Member from Table) on the ZHCHP005 selection screen displays the following screen:

```
-----  
ZHCH250P          EMASS/GRAU Software GmbH           96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1         10:44  
-----  
Option/Selection:  
  
Generate HACPARM1 sequential Dataset or Member from Table.  
  
Dataset Name : SYS1.PARMLIB  
Member Name  : HACPARM1  
  
Check HACPARM1: Y   Y/N  
:  
:  
:  
-----  
Enter HELP command or HELP key for help.  
ENTER to process. Enter END command or END key to terminate.
```

HCC expects the HACPARM1 statements as file or PDS member and this must be created from the statements stored in the ISPF table.

This function unloads the table into a file or creates a PDS member depending on the organization form of the specified file. 'HACPARM1' is used as the default member name when the file is a PDS and 'Member Name' is not specified.

As a further function, the generated HACPARM1 can be checked by HCC by entering Y in field 'Check HACPARM1' before starting HCC.

3.2.5 Loading a HACPARM1 File or PDS Member into a Table

Selecting **5** (Transform HACPARM1 File or Member to Table) on the ZHCHP005 selection screen displays the following:

```
-----  
ZHCH260P          EMASS/GRAU Software GmbH           96/02/15  
HACPARM1          HACC/ABBA Define HACPARM1          10:45  
-----  
Option/Selection:  
  
Transform HACPARM1 sequential Dataset or Member to ISPF Table.  
  
Dataset Name : SYS1.PARMLIB  
Member Name  : HACPARMA  
:  
:  
:  
-----  
Enter HELP command or HELP key for help.  
ENTER to process. Enter END command or END key to terminate.
```

This function loads an existing HACPARM1 file or PDS member into an ISPF table, for example, to perform changes and then generate a new HACPARM1 as file or PDS member. Such tables can first be loaded after creation and definition within the AML configuration.

3.3 HCC Archive Administration HAA

The HCC Archive Administration is not an ISPF application. HAA is written in 3270 full screen support; it can, however, be called from the HCC Main Selection with selection **2**.

3.3.1 CREATING AN ARCHIVE

Several HAA functions must be performed to create the HCC archive mirror.

The following sequence illustrates the steps to create a HCC archive mirror.

The following parameter statements from the specified HACPARM1 are used as the basis:

```
LDEV / UNIT / PDSN.../ VOLGR
```

3.3.2 STEP 1 - GENERATING COORDINATES

HAA has already read the whole archive mirror, set up various tables and performed a consistency check before the main menu appears. A message is displayed in the main menu when inconsistencies are detected.

```
HAA 01/1      HACC ARCHIVE ADMINISTRATION (HAA 3.0.0/M00)          OBI1WD2
=====
PFK
-----
1   CARTRIDGE LIBRARY
2   OPTICAL LIBRARY
3
4   SAVE/RESTORE/COPY/EXPORT/IMPORT
5   STATISTICS
6   DISPLAY ALL DEVICES
7
8
9   GENERATE ARCHIVE FROM HACCPARM
10
11
12  EXIT

NO.COORDS=00000,NO.VOLUMES=00000-VOLSER=OBIS02,DSN=OBI1WD1.H301ARC
ARCHIVE CLUSTER IS EMPTY, APPLY "GENERATE ARCHIVE FROM HACCPARM"

=====
ENTER:    <-- SELECT BY NUMBER OR PFK
```

Select Menu item 9 - GENERATE ARCHIVE FROM HACCPARM with

- [PF 9] or
- [9] and [ENTER]

```
GENERATION OF ARCHIVE COORDINATES IN PROGRESS
ARCHIVE SAVED, RECORDS=0000001,SAVEDSN=OBIS.HACCARCH.SAVE.P.D93034.T144150
ARCHIVE RECORDS CREATED, NO.OF RECORDS=0031169,DSN=OBIS.HACCARCH.COORD
SORT COMPLETED. SORTOUT-DSN=OBIS.HACCARCH.COORD
FILES ARE MERGED. RECORD STATISTICS:
CREATED RECORDS FROM HACPARM1: 0031169
DUPLICATE ENTRIES (RECTYP 02): 0000804
ARCHIVE RECORDS OLD .....: 0000001
ARCHIVE RECORDS DELETED .....: 0000000
USED EXISTENT RECORDS .....: 0000001
INSERTED NEW HACPARM1 RECORDS: 0030364
TOTAL NO.OF MERGED RECORDS ..: 0030365
MERGE OF HACPARM1 AND ARCHIVES IS COMPLETED.
ARCHIVE LOADED,NO.OF RECORDS=0030366,DSN=OBIS.HACCARCH.MERGE
CREATE/MODIFY COMPLETED
<-- ANY CHAR TO CONFIRM
G
***
```

Input a character, for example [G] and [ENTER]

The following menu is displayed after successful generation of the coordinates:

```
HAA 01/1      HACC ARCHIVE ADMINISTRATION (HAA 3.0.0/M00)          OBI1WD2
=====
PFK
-----
1  CARTRIDGE LIBRARY
2  OPTICAL LIBRARY
3
4  SAVE/RESTORE/COPY/EXPORT/IMPORT
5  STATISTICS
6  DISPLAY ALL DEVICES
7
8
9  GENERATE ARCHIVE FROM HACCPARM
10
11
12  EXIT

NO.COORDS=00000,NO.VOLUMES=00000-VOLSER=OBIS02,DSN=OBI1WD1.H301ARC
ARCHIVE CLUSTER IS EMPTY, APPLY "GENERATE ARCHIVE FROM HACCPARM"
=====
ENTER:    <-- SELECT BY NUMBER OR PFK
```

Step 1 of the archive set-up ends here.

Display all generated devices - DISPLAY ALL DEVICES - with:

- [PF 6]or
- [1] and [ENTER]

DISPLAY ARCHIVE ALL LIBRARY DEVICES								OBI1WD2	
DEV	S	ROB	NO	SEG	ROW	POS	NO/ROW	SLOTS	TYPE
E01	1	1	00	02-02	01-03	01-10	10	30	CAR
E02	1	1	00	02-02	06-07	01-30	30	60	OPT
F01	1	1	00	03-03	10-11	01-10	10	20	CAR
I01	1	1	00	01-01	01-03	01-10	10	30	CAR
I02	1	1	00	01-01	04-05	01-30	30	60	OPT
T01	1	1	01	01-01	01-18	01-10	10	180	CAR
T01	1	1	01	01-01	01-18	01-10	10	180	CAR/DYNA
T01	1	1	01	03-32	01-18	01-10	10	5400	CAR
T01	1	1	01	02-02	01-13	01-30	30	390	OPT
W01	1	1	00	00-00	00-00	01-01	01	1	CAR

=====

ENTER: <-- ANY CHAR TO CONFIRM

This display also appears in the following cases:

- DISPLAY CARTRIDGE LIBRARY DEVICES
- DISPLAY OPTICAL LIBRARY DEVICES

3.3.3 STEP 2 - CARTRIDGE LIBRARY

If this Archive contains cartridges, their VOLSERs must now be defined.

```
HAA 01/1      HACC ARCHIVE ADMINISTRATION (HAA 3.0.0/M00)          OBI1WD2
=====
PFK
-----
1  CARTRIDGE LIBRARY
2  OPTICAL LIBRARY
3
4  SAVE/RESTORE/COPY/EXPORT/IMPORT
5  STATISTICS
6  DISPLAY ALL DEVICES
7
8
9  GENERATE ARCHIVE FROM HACCPARM
10
11
12  EXIT

NO.COORDS=00000,NO.VOLUMES=00000-VOLSER=OBIS02,DSN=OBI1WD1.H301ARC
    ARCHIVE CLUSTER IS EMPTY, APPLY "GENERATE ARCHIVE FROM HACCPARM"
=====
ENTER:      <-- SELECT BY NUMBER OR PFK
```

Select Menu item 1 - CARTRIDGE LIBRARY by entering:

- [PF 1] or
- [1] and [ENTER]

HAA 02/1	CARTRIDGE LIBRARY	UserID
=====		
PFK	FUNCTION	
---	-----	
1	DISPLAY COMPLETE VOLSER ENTRIES	
2	DISPLAY/MODIFY VOLSER ENTRIES	
3	DEFINE VOLSERs TO ABBA LIBRARY	
4	ASSIGN VOLSERs TO HOME-COORDINATES	
5	UNASSIGN VOLSERs FROM HOME-COORDINATES (IMMEDIATE)	
6	UNASSIGN AND ASSIGN TO "VIRTUAL" (AFTER CARTRIDGE IS EJECTED)	
7	ASSIGN VOLSERs TO "VIRTUAL"	
8	DISPLAY CARTRIDGE LIBRARY DEVICES	
9	DELETE VOLSERs	
10	PRINT VOLSER-COORDINATE ASSIGNMENTS	
11		
12	RETURN TO MAIN MENUE	

NO VOLSERs FOUND. APPLY "DEFINE VOLSERs"

=====

ENTER: <-- SELECT BY NUMBER OR PFK

Select Menu item 3 - DEFINE VOLSERs TO ABBA LIBRARY - by entering:

- [PF 3] or
- [3] and [ENTER]

```
HAA 02/3           DEFINE VOLSERs TO ABBA-SYSTEMS      UserID
=====
VOLSER START- END- PREFIX
NO PREFIX NUMBER NUMBER LENGTH
1
2
3
4
5
6
7
8
9
10
-----
VOLSER-PREFIX: 0-6 bytes, alphanumeric, JCL restrictions
START/END NO.: 0-6 digits,0-999999

With this function all VOLSERs are defined that should be handled by ABBA.
Assignments to HOME-CORDS: see PFK4, assignments to DYNAMIC AREA: see PFK7
Without assignment the defined volser remain "INITIAL".
=====
ENTER:
```

All VOLSER number ranges to be handled by HCC must be defined with this function.

Cleaning cartridges should be assigned their own number range.

The following number ranges are to be set up in our example:

000001 - 023030
100001 - 120000
CLN001 - CLN015

HAA 02/3	DEFINE VOLSERs TO ABBA-SYSTEMS	UserID
=====		
	VOLSER START- END- PREFIX	
NO	PREFIX NUMBER NUMBER LENGTH	
1	0 00001 23030	
2	1 00001 20000	
3	cln 001 015	
4		
5		
6		
7		
8		
9		
10		

VOLSER-PREFIX: 0-6 bytes, alphanumeric, JCL restrictions
START/END NO.: 0-6 digits, 0-999999

With this function all VOLSERs are defined that should be handled by ABBA.
Assignments to HOME-CORDS: see PFK4, assignments to DYNAMIC AREA: see PFK7
Without assignment the defined volser remain "INITIAL".

ENTER:

[ENTER]

```

HAA 02/3           DEFINE VOLSERs TO ABBA-SYSTEMS      UserID
=====
VOLSER START- END- PREFIX
NO PREFIX NUMBER NUMBER LENGTH
1 0      00001  23030   1
2 1      00001  20000   1
3 CLN    001    015     3
4
5
6
7
8
9
10
-----
VOLSER-PREFIX: 0-6 bytes, alphanumeric, JCL restrictions
START-END NO.: 0-6 digits, 0-999999

With this function all VOLSERs are defined that should be handled by ABBA.
Assignments to HOME-COORDs: see PFK4, assignments to DYNAMIC AREA: see PFK7
Without assignment the defined volser remain "INITIAL".

=====
ENTER: <-- "Y" TO CONFIRM INPUT OR ANY CHAR TO RESPECIFY

```

Enter [Y] for confirmation

The following message is displayed in the status line:

```
=====
ENTER: <-- "C"=CONTINUE SELECTION, "G"=GENERATE OR "I"=IGNORE REQUEST
```

The following inputs are possible:

- [C] Continued input of VOLSER number ranges.
- [G] Confirmation of input, request for generation of archive mirror records.
- [I] Terminate.

[G] is the confirmation in the example.

```
==== CREATION OF VOLSER-RECORDS IN PROGRESS ====
ARCHIVE SAVED, RECORDS=0030366,SAVEDSN=OBIS.HACCARCH.SAVE.P.D93034.T145120
NO.OF RECORDS COPIED=030366,OUPUT-DSN=OBIS.HACCARCH.SAVE.P.VOLSER
000001-023030 23030
100001-120000 20000
CLN001-CLN015 00015
TOTAL RECORDS=073406,OUPUT-DSN=OBIS.HACCARCH.SAVE.P.VOLSER
SORT COMPLETED. SORTOUT-DSN=OBIS.HACCARCH.SAVE.P.VOLSER
<== DECIDE RELOAD ARCHIVE WITH NEW DATA:
<== ENTER "YES" TO PROCEED OR ANY CHAR TO IGNORE RELOAD
```

Confirmation by the input of the character string [YES]

```
ARCHIVE LOADED,NO.OF
RECORDS=0061785,DSN=OBIS.HACCARCH.SAVE.P.VOLSER
SELECTED VOLSER-RECORDS ARE CREATED
<-- ANY CHAR TO CONFIRM
```

Confirmation by input of a character, for example [G] and [ENTER]

The menu HAA 02/1 CARTRIDGE LIBRARY is displayed

HAA 02/1	CARTRIDGE LIBRARY	User ID
<hr/>		
PFK	FUNCTION	
---	-----	
1	DISPLAY COMPLETE VOLSER ENTRIES	
2	DISPLAY/MODIFY VOLSER ENTRIES	
3	DEFINE VOLSERs TO ABBA LIBRARY	
4	ASSIGN VOLSERs TO HOME-COORDINATES	
5	UNASSIGN VOLSERs FROM HOME-COORDINATES (IMMEDIATE)	
6	UNASSIGN AND ASSIGN TO "VIRTUAL" (AFTER CARTRIDGE IS EJECTED)	
7	ASSIGN VOLSERs TO "VIRTUAL"	
8	DISPLAY CARTRIDGE LIBRARY DEVICES	
9	DELETE VOLSERs	
10	PRINT VOLSER-COORDINATE ASSIGNMENTS	
11		
12	RETURN TO MAIN MENUE	
<hr/>		
ENTER:	<-- SELECT BY NUMBER OR PFK	

Step 2 of the archive set-up ends here.

Enter

- [PF 12] to return to the main menu or
- [PF 7] or
- [7] and [ENTER] to continue with **step 3** or
- [PF 4] or
- [4] and [ENTER] to continue with **step 4**.

Enter

- [PF 1] or
- [1] and [ENTER] to display a single VOLSER in detail or
- [PF 2] or
- [2] and [ENTER] to display a summary of several VOLSERs.

The example continues as follows:

Select Menu item 7 - ASSIGN VOLSERs TO "VIRTUAL".

3.3.4 STEP 3 - ASSIGNMENT TO DYNAMIC AREA

Data cartridges (number range 1):

```
HAA 02/28          ASSIGN VOLSERs TO DYNAMIC AREA      UserID
=====
START VOLSER .....:
END VOLSER .....:
ABBA SYSTEM NO.....:
ACCESS BY ROBOT(S)....:
MAPS-MANPOOL.....: N    N=NO (Default) / Y=Yes

-----
The VOLSERs of specified range are assigned to the DYNAMIC AREA.
The VOLSERs are flagged as "VIRTUAL" tapes. During VOLUME INSERT
virtual tapes are stored chaotically into the DYNAMIC AREA.

The DYNAMIC AREA is any desired area in the ABBA library (See HACPARM1: LDEV).
The ABBA system number and the robots that can have access to
these volumes must be specified.

(ENTER PFK 12 TO TERMINATE FUNCTION)
=====
ENTER:
```

Input:

```
=====
START VOLSER .....: 100001
END VOLSER .....: 120000
ABBA SYSTEM NO....: 2
ACCESS BY ROBOT(S)....: 1
MAPS-MANPOOL.....: N    N=NO (Default) / Y=Yes
-----
```

[ENTER]

```
=====
ENTER: "Y" TO CONFIRM OR ANY CHAR TO CORRECT INPUT
-----
```

Confirm by entering [Y] and [ENTER]

```
ASSIGNMENT FOR DYNAMIC AREA SUCCESFULLY COMPLETED
=====
ENTER: "M" TO DEFINE MORE VOLSERs OR "EOB" TO TERMINATE
-----
```

Continue by entering [M] and [ENTER]

Cleaning cartridges:

```
HAA 02/28          ASSIGN VOLSERs TO DYNAMIC AREA      UserID
=====
START VOLSER .....:
END VOLSER .....:
ABBA SYSTEM NO.....:
ACCESS BY ROBOT(S)....:
MAPS-MANPOOL.....: N    N=NO (Default) / Y=Yes

-----
The VOLSERs of specified range are assigned to the DYNAMIC AREA.
The VOLSERs are flagged as "VIRTUAL" tapes. During VOLUME INSERT
virtual tapes are stored chaotically into the DYNAMIC AREA.

The DYNAMIC AREA is any desired area in the ABBA library (See HACPARM1: LDEV).
The ABBA system number and the robots that can have access to
these volumes must be specified.

(ENTER PFK 12 TO TERMINATE FUNCTION)
=====
ENTER:
```

Input:

```
=====
START VOLSER .....: cln011
END VOLSER .....: cln015
ABBA SYSTEM NO....: 2
ACCESS BY ROBOT(S)...: 1
MAPS-MANPOOL.....: N    N=NO (Default) / Y=Yes
```

[ENTER]

```
=====
ENTER: "Y" TO CONFIRM OR ANY CHAR TO CORRECT INPUT
```

Confirm by entering [Y] and [ENTER]

```
=====
ASSIGNMENT FOR DYNAMIC AREA SUCCESFULLY COMPLETED
=====
ENTER: "M" TO DEFINE MORE VOLSERs OR "EOB" TO TERMINATE
```

Terminate with [ENTER]

The menu HAA 02/1 CARTRIDGE LIBRARY is displayed

HAA 02/1	CARTRIDGE LIBRARY	User ID
PFK	FUNCTION	
1	DISPLAY COMPLETE VOLSER ENTRIES	
2	DISPLAY/MODIFY VOLSER ENTRIES	
3	DEFINE VOLSERs TO ABBA LIBRARY	
4	ASSIGN VOLSERs TO HOME-COORDINATES	
5	UNASSIGN VOLSERs FROM HOME-COORDINATES (IMMEDIATE)	
6	UNASSIGN AND ASSIGN TO "VIRTUAL" (AFTER CARTRIDGE IS EJECTED)	
7	ASSIGN VOLSERs TO "VIRTUAL"	
8	DISPLAY CARTRIDGE LIBRARY DEVICES	
9	DELETE VOLSERs	
10	PRINT VOLSER-COORDINATE ASSIGNMENTS	
11		
12	RETURN TO MAIN MENUE	

ENTER: <-- SELECT BY NUMBER OR PFK

Select Menu item 2 - DISPLAY/MODIFY VOLSER ENTRIES - by entering

- [PF 2] or
- [2] and [ENTER]

Explanation: The function HAA 02/28, ASSIGN VOLSERs TO DYNAMIC AREA automatically assigns status ME to the VOLSER entries. Cleaning cartridges must be subsequently identified as such in this exceptional case.

The assignment argument cannot be set. The LDEV statements for the dynamic area are decisive for the assignment of the home coordinate.

DISPLAY/MODIFY VOLSER ENTRIES											User ID		
<== VOLSER OR PFK (ENTER ?)													
VOLSER	!	ST	S	ROB	HOMECOOR	TEMPCOOR	MOVECOOR	!	TEMP	MOVE	COOPTR	!	COMMENTS
CLN001	!	CE	1	1	2	04321801		!		P	*	*	!
CLN002	!	CE	1	1	2	04321802		!		P	*	*	!
CLN003	!	CE	1	1	2	04321803		!		P	*	*	!
CLN004	!	CE	1	1	2	04321804		!		P	*	*	!
CLN005	!	CE	1	1	2	04321805		!		P	*	*	!
CLN006	!	CE	1	1	2	04321806		!		P	*	*	!
CLN007	!	CE	1	1	2	04321807		!		P	*	*	!
CLN008	!	CE	1	1	2	04321808		!		P	*	*	!
CLN009	!	CE	1	1	2	04321809		!		P	*	*	!
CLN010	!	CE	1	1	2	04321810		!		P	*	*	!
CLN011	!	ME	2	1				!		*	*	*	!
CLN012	!	ME	2	1				!		*	*	*	!
CLN013	!	ME	2	1				!		*	*	*	!
CLN014	!	ME	2	1				!		*	*	*	!
CLN015	!	ME	2	1				!		*	*	*	!
000001	!							!		*	*	*	!
000002	!							!		*	*	*	!
000003	!							!		*	*	*	!
000004	!							!		*	*	*	!
000005	!							!		*	*	*	!

Input

CLN011	!	cE	2	1				!		*	*	*	!
CLN012	!	cE	2	1				!		*	*	*	!
CLN013	!	cE	2	1				!		*	*	*	!
CLN014	!	cE	2	1				!		*	*	*	!
CLN015	!	cE	2	1				!		*	*	*	!

[ENTER]



When coordinates are deleted in this function, status, system and robot information are lost. They can only be restored again by another ASSIGN TO 'VIRTUAL' or ASSIGN TO HOME COORDINATE.

DISPLAY/MODIFY VOLSER ENTRIES											User ID		
<== VOLSER OR PFK (ENTER ?)													
VOLSER	!	ST	S	ROB	HOMECOOR	TEMPCOOR	MOVECOOR	!	TEMP	MOVE	COOPTR	!	COMMENTS
CLN001	!	CE	1	1	2	04321801		!		P	*	*	!
CLN002	!	CE	1	1	2	04321802		!		P	*	*	!
CLN003	!	CE	1	1	2	04321803		!		P	*	*	!
CLN004	!	CE	1	1	2	04321804		!		P	*	*	!
CLN005	!	CE	1	1	2	04321805		!		P	*	*	!
CLN006	!	CE	1	1	2	04321806		!		P	*	*	!
CLN007	!	CE	1	1	2	04321807		!		P	*	*	!
CLN008	!	CE	1	1	2	04321808		!		P	*	*	!
CLN009	!	CE	1	1	2	04321809		!		P	*	*	!
CLN010	!	CE	1	1	2	04321810		!		P	*	*	!
CLN011	!	CE	2	1				!		*	*	*	!UPDATE OK
CLN012	!	CE	2	1				!		*	*	*	!UPDATE OK
CLN013	!	CE	2	1				!		*	*	*	!UPDATE OK
CLN014	!	CE	2	1				!		*	*	*	!UPDATE OK
CLN015	!	CE	2	1				!		*	*	*	!UPDATE OK
000001	!							!		*	*	*	!
000002	!							!		*	*	*	!
000003	!							!		*	*	*	!
000004	!							!		*	*	*	!
000005	!							!		*	*	*	!

This ends step 3.

Enter [PF 12] to return to menu HAA 02/1, CARTRIDGE LIBRARY.

3.3.5 STEP 4 - ASSIGNMENT OF COORDINATES

HAA 02/1	CARTRIDGE LIBRARY	User ID
<hr/>		
PFK	FUNCTION	
---	-----	
1	DISPLAY COMPLETE VOLSER ENTRIES	
2	DISPLAY/MODIFY VOLSER ENTRIES	
3	DEFINE VOLSERs TO ABBA LIBRARY	
4	ASSIGN VOLSERs TO HOME-COORDINATES	
5	UNASSIGN VOLSERs FROM HOME-COORDINATES (IMMEDIATE)	
6	UNASSIGN AND ASSIGN TO "VIRTUAL" (AFTER CARTRIDGE IS EJECTED)	
7	ASSIGN VOLSERs TO "VIRTUAL"	
8	DISPLAY CARTRIDGE LIBRARY DEVICES	
9	DELETE VOLSERs	
10	PRINT VOLSER-COORDINATE ASSIGNMENTS	
11		
12	RETURN TO MAIN MENUE	
<hr/>		
ENTER:	<-- SELECT BY NUMBER OR PFK	

You can now enter

- [PF 12] to return to the main menu or
- [PF 4] or
- [4] and [ENTER] to continue with **step 4**.

The example continues as follows:

Select Menu item 4 - ASSIGN VOLSERs TO HOME COORDINATES

LIBRARY DEVICE SELECTION FOR VOLSER ASSIGNMENT											UserID		
NO.	DEV	S	ROB	T/R	SEG	ROW	POS	CAPACITY	ASSIGNED	FIRST	LAST		
01	T01	1	1,2	01	01-32	01-18	01-10	5760	0	--	--		
02	T02	1	1,2	02	01-32	01-18	01-10	5760	0	--	--		
03	T03	1	1,2	03	01-32	01-18	01-10	5760	0	--	--		
04	T04	1	1,2	04	01-32	01-18	01-10	5760	0	--	--		
05	T05	2	1	05	01-32	01-18	01-10	5760	0	--	--		
**	T05	2	1		05	01-32	01-18	01-10	D	5760	0	--	

=====

ENTER: <-- NO.FOR DEVICE OR ANY CHAR TO RETURN

Assignment for tower 01

-Input character string [01] and [ENTER]

```

HAA 02/6      ASSIGN VOLSERs TO HOME COORDINATES (Hierarchical Org.) UserID
=====
LIBRARY DEVICE .....: T01          ABBA SYSTEM NO. .....: 1
NO.OF SEGMENTS .....: 32          ACCESS BY ROBOT .....: 1,2
NO.OF ROWS .....: 18             CAPACITY OF DEVICE....: 5760
NO.OF POSITIONS .....: 10          NO.OF ASSIGNED SLOTS : 0
-----
COORDINATE RANGE     FROM-TO:
- TOWER/RACK .....: 01
- SEGMENTS .....: 01 32           If all FROM-TO ranges are identical
- ROWS .....: 01 18             only 1 record will be created.
- POSITIONS .....: 01 10
VOLSER ASSIGNMENT:
- START VOLSER .....:           CALCULATED END-VOLSER:
- ASSIGNMENT (H or V):v         H=horizontal,V=vertical
- DEFAULT STATUS .....:me       STATUS: see GENERAL INFORMATIONS
- MAPS-MANPOOL.....:N          N=NO (Default) / Y=Yes
-----
The specified START-VOLSER is assigned to the first coordinate, the next
VOLSER-numbers are created in ascending order and are assigned to the next
coordinates. the coordinates run in the sequence: HORIZONTAL or VERTICAL
-----
ENTER:

```

Enter the following values for the example:

```

VOLSER ASSIGNMENT:
- START VOLSER .....:000001           CALCULATED END-VOLSER:
- ASSIGNMENT (H or V):v               H=horizontal,V=vertical
- DEFAULT STATUS .....:me            STATUS: see GENERAL INFORMATIONS
- MAPS-MANPOOL.....:N              N=NO (Default) / Y=Yes
-----
```

[ENTER]

```

VOLSER ASSIGNMENT:
- START VOLSER .....: 000001           CALCULATED END-VOLSER: 005760
- ASSIGNMENT (H or V): v               H=horizontal,V=vertical
- DEFAULT STATUS .....: ME            STATUS: see GENERAL INFORMATIONS
- MAPS-MANPOOL.....: N              N=NO (Default) / Y=Yes
-----
The specified START-VOLSER is assigned to the first coordinate, the next
VOLSER-numbers are created in ascending order and are assigned to the next
coordinates. the coordinates run in the sequence: HORIZONTAL or VERTICAL
-----
ENTER:    <-- "S" FOR ASSIGN-SELECTION OR CHAR TO RESPECIFY

```

Calculated end-VOLSER correct ?

Enter [S] and [ENTER]

LIBRARY DEVICE SELECTION FOR VOLSER ASSIGNMENT											User ID	
NO.	DEV	S	ROB	T/R	SEG	ROW	POS	CAPACITY	ASSIGNED	FIRST	LAST	
01	T01	1	1,2	01	01-32	01-18	01-10	5760	5760	000001	005760	
02	T02	1	1,2	02	01-32	01-18	01-10	5760	0	--	--	
03	T03	1	1,2	03	01-32	01-18	01-10	5760	0	--	--	
04	T04	1	1,2	04	01-32	01-18	01-10	5760	0	--	--	
05	T05	2	1	05	01-32	01-18	01-10	5760	0	--	--	
**	T05	2	1		05	01-32	01-18	01-10	D	5760	0	--

ENTER:	<-- NO. FOR DEVICE OR ANY CHAR TO RETURN
--------	------------------------------------------

Tower 01 completely assigned.

Assignment of towers 02 to 03 as follows:

Tower	Start Volser	End Volser	Assignment	Status
02	005761	011520	v	me
03	011521	017280	v	me

If the tower assignment is made in one pass, the fields are set to the following values:

Fields	Values
NO.OF ASSIGNED SLOTS	Number of assigned coordinates
COORDINATE RANGE	Next free coordinate range
CALCULATED END-VOLSER:	End volser calculated last
ASSIGNMENT	Assignment selected last
DEFAULT STATUS	Status assigned last

Assignment of tower 04

HAA 02/5 LIBRARY DEVICE SELECTION FOR VOLSER ASSIGNMENT											User ID	
NO.	DEV S	ROB	T/R	SEG	ROW	POS	CAPACITY	ASSIGNED	FIRST	LAST		
01	T01	1	1,2	01	01-32	01-18	01-10	5760	5760	000001	005760	
02	T02	1	1,2	02	01-32	01-18	01-10	5760	5760	005761	011520	
03	T03	1	1,2	03	01-32	01-18	01-10	5760	5760	011521	017280	
04	T04	1	1,2	04	01-32	01-18	01-10	5760	0	--	--	
05	T05	2	1		05	01-32	01-18	01-10	5760	0	--	--
**	T05	2	1		05	01-32	01-18	01-10 D	5760	0	--	--

ENTER:	<-- NO. FOR DEVICE OR ANY CHAR TO RETURN
--------	------------------------------------------

Assignment of tower 04

-Input character string [04] and [ENTER]

```

HAA 02/6      ASSIGN VOLSERs TO HOME COORDINATES (Hierarchical Org.) UserID
=====
LIBRARY DEVICE .....: T04          ABBA SYSTEM NO. .....: 1
NO.OF SEGMENTS .....: 32           ACCESS BY ROBOT .....: 1,2
NO.OF ROWS .....: 18              CAPACITY OF DEVICE....: 5760
NO.OF POSITIONS .....: 10          NO.OF ASSIGNED SLOTS : 0
-----
COORDINATE RANGE     FROM-TO:
- TOWER/RACK .....: 04
- SEGMENTS .....: 01 32          If all FROM-TO ranges are identical
- ROWS .....: 01 18             only 1 record will be created.
- POSITIONS .....: 01 10
VOLSER ASSIGNMENT:
- START VOLSER .....:          CALCULATED END-VOLSER: 017280
- ASSIGNMENT (H or V): V        H=horizontal,V=vertical
- DEFAULT STATUS .....: ME      STATUS: see GENERAL INFORMATIONS
- MAPS-MANPOOL.....: N        N=NO (Default) / Y=Yes
-----
The specified START-VOLSER is assigned to the first coordinate, the next
VOLSER-numbers are created in ascending order and are assigned to the next
coordinates. the coordinates run in the sequence: HORIZONTAL or VERTICAL
=====
ENTER:

```

Input:

```

- SEGMENTS .....: 01 32          If all FROM-TO ranges are identical
- ROWS .....: 01 17             only 1 record will be created.
- POSITIONS .....: 01 10
VOLSER ASSIGNMENT:
- START VOLSER .....: 017281    CALCULATED END-VOLSER: 017280
- ASSIGNMENT (H or V): V        H=horizontal,V=vertical
- MAPS-MANPOOL.....: N        N=NO (Default) / Y=Yes

```

[ENTER]

```

VOLSER ASSIGNMENT:
- START VOLSER .....: 017281    CALCULATED END-VOLSER: 023030
- ASSIGNMENT (H or V): V        H=horizontal,V=vertical
- DEFAULT STATUS .....: ME      STATUS: see GENERAL INFORMATIONS
- MAPS-MANPOOL.....: N        N=NO (Default) / Y=Yes
-----
The specified START-VOLSER is assigned to the first coordinate, the next
VOLSER-numbers are created in ascending order and are assigned to the next
coordinates. the coordinates run in the sequence: HORIZONTAL or VERTICAL
=====
ENTER:   <-- "S" FOR ASSIGN-SELECTION OR CHAR TO RESPECIFY

```

Calculated end VOLSER correct ?

Enter [S] and [ENTER]

Assignment of cleaning cartridges in tower 04

LIBRARY DEVICE SELECTION FOR VOLSER ASSIGNMENT											User ID
NO.	DEV	S	ROB	T/R	SEG	ROW	POS	CAPACITY	ASSIGNED	FIRST	LAST
01	T01	1	1,2	01	01-32	01-18	01-10	5760	5760	000001	005760
02	T02	1	1,2	02	01-32	01-18	01-10	5760	5760	005761	011520
03	T03	1	1,2	03	01-32	01-18	01-10	5760	5760	011521	017280
04	T04	1	1,2	04	01-32	01-18	01-10	5760	5750	017281	--
05	T05	2	1		05	01-32	01-18	01-10	5760	0	--
**	T05	2	1		05	01-32	01-18	01-10	D	5760	0

ENTER:	<-- NO. FOR DEVICE OR ANY CHAR TO RETURN
--------	------------------------------------------

Remaining assignment of tower 04

- Input character string [04] and [ENTER]



The LAST field only receives a value after the assignment is complete.

```

HAA 02/6      ASSIGN VOLSERs TO HOME COORDINATES (Hierarchical Org.) UserID
=====
LIBRARY DEVICE .....: T04          ABBA SYSTEM NO. .....: 1
NO.OF SEGMENTS .....: 32           ACCESS BY ROBOT .....: 1,2
NO.OF ROWS .....: 18             CAPACITY OF DEVICE....: 5760
NO.OF POSITIONS .....: 10          NO.OF ASSIGNED SLOTS : 5750
-----
COORDINATE RANGE     FROM-TO:
- TOWER/RACK .....: 04
- SEGMENTS .....: 32 32          If all FROM-TO ranges are identical
- ROWS .....: 18 18             only 1 record will be created.
- POSITIONS .....: 01 10
VOLSER ASSIGNMENT:
- START VOLSER .....:          CALCULATED END-VOLSER: 023030
- ASSIGNMENT (H or V): V        H=horizontal,V=vertical
- DEFAULT STATUS .....: ME      STATUS: see GENERAL INFORMATIONS
- MAPS-MANPOOL.....: N        N=NO (Default) / Y=Yes
-----
The specified START-VOLSER is assigned to the first coordinate, the next
VOLSER-numbers are created in ascending order and are assigned to the next
coordinates. the coordinates run in the sequence: HORIZONTAL or VERTICAL
=====
ENTER:

```

Input:

```

- SEGMENTS .....: 32 32          If all FROM-TO ranges are identical
- ROWS .....: 18 18             only 1 record will be created.
- POSITIONS .....: 01 10
VOLSER ASSIGNMENT:
- START VOLSER .....: cln001    CALCULATED END-VOLSER: 017280
- ASSIGNMENT (H or V): V        H=horizontal,V=vertical
- DEFAULT STATUS .....: CE      STATUS: see GENERAL INFORMATIONS
- MAPS-MANPOOL.....: N        N=NO (Default) / Y=Yes
-----

```

[ENTER]

```

VOLSER ASSIGNMENT:
- START VOLSER .....: CLN001    CALCULATED END-VOLSER: CLN010
- ASSIGNMENT (H or V): V        H=horizontal,V=vertical
- DEFAULT STATUS .....: CE      STATUS: see GENERAL INFORMATIONS
- MAPS-MANPOOL.....: N        N=NO (Default) / Y=Yes
-----
The specified START-VOLSER is assigned to the first coordinate, the next
VOLSER-numbers are created in ascending order and are assigned to the next
coordinates. the coordinates run in the sequence: HORIZONTAL or VERTICAL
=====
ENTER:   <-- "S" FOR ASSIGN-SELECTION OR CHAR TO RESPECIFY

```

Calculated end VOLSER correct ?

Enter [S] and [ENTER]

LIBRARY DEVICE SELECTION FOR VOLSER ASSIGNMENT											User ID	
NO.	DEV	S	ROB	T/R	SEG	ROW	POS	CAPACITY	ASSIGNED	FIRST	LAST	
01	T01	1	1,2	01	01-32	01-18	01-10	5760	5760	000001	005760	
02	T02	1	1,2	02	01-32	01-18	01-10	5760	5760	005761	011520	
03	T03	1	1,2	03	01-32	01-18	01-10	5760	5760	011521	017280	
04	T04	1	1,2	04	01-32	01-18	01-10	5760	5760	017281	CLN010	
05	T05	2	1	05	01-32	01-18	01-10	5760	0	--	--	
**	T05	2	1	05	01-32	01-18	01-10 D	5760	0	--	--	

ENTER:	<-- NO. FOR DEVICE OR ANY CHAR TO RETURN
--------	------------------------------------------

The assignment of tower 05 has no effect because it was defined as a complete dynamic area. A VOLSER is assigned a home coordinate during insertion.

Step 4 and therefore the complete archive creation is now finished.

Enter [PF 12] [PF 12] to return to TSO/ISPF.

3.3.6 OPTICAL LIBRARY

When this Archive contains optical media, their volsers must now be defined.

```
HAA 01/1      HACC ARCHIVE ADMINISTRATION (HAA 3.0.0/M00)          OBI1WD2
=====
PFK
-----
1  CARTRIDGE LIBRARY
2  OPTICAL LIBRARY
3
4  SAVE/RESTORE/COPY/EXPORT/IMPORT
5  STATISTICS
6  DISPLAY ALL DEVICES
7
8
9  GENERATE ARCHIVE FROM HACCPARM
10
11
12  EXIT

NO.COORDS=00000,NO.VOLUMES=00000-VOLSER=OBIS02,DSN=OBI1WD1.H301ARC
    ARCHIVE CLUSTER IS EMPTY, APPLY "GENERATE ARCHIVE FROM HACCPARM"

=====
ENTER:      <-- SELECT BY NUMBER OR PFK
```

Select Menu item 2 - OPTICAL LIBRARY by entering

- [PF 2] or
- [2] and [ENTER]

3.3.6.1 DEFINE AND ASSIGN OPTICAL VOLSERs

```
HAA 03/0          OPTICAL LIBRARY MAIN MENU          OBI1WD2
=====
PFK   FUNCTION
-----
1    DEFINE AND ASSIGN VOLSERs
2    DISPLAY / MODIFY / DELETE VOLSERs
3
4    DISPLAY JUKEBOX(ES)
5    DISPLAY OPTICAL DEVICES
6
7
8
9
10
11
12   RETURN TO MAIN MENUE
=====
ENTER:    <-- SELECT BY NUMBER OR PFK
```

This example continues with volser definition or assignment.

Select Menu item 1 - DEFINE AND ASSIGN VOLSERs by entering

- [PF 1] or
- [1] and [ENTER]

```
HAA 31/0          OPTICAL LIBRARY DEFINE AND ASSIGN VOLSERs      OBI1WD2
=====
VOLSER VOLSER STAT COORD.    JB-NAME   VOLSER VOLSER STAT COORD.  JB-NAME
A-SIDE B-SIDE           A-SIDE       A-SIDE B-SIDE           A-SIDE
od033a od033b ob     01020101
```

Enter data or terminate
ENTER:

Press the [ENTER] key to display the following:

```
HAA 31/0          OPTICAL LIBRARY DEFINE AND ASSIGN VOLSERs      OBI1WD2
=====
VOLSER VOLSER STAT COORD.    JB-NAME   VOLSER VOLSER STAT COORD.  JB-NAME
A-SIDE B-SIDE           A-SIDE       A-SIDE B-SIDE           A-SIDE
OD033A OD033B OB     01020101
```

ENTER: Y Input correct ??? Enter Y or N

Enter [Y] - when the input is correct
 [N] - if changes must be made.

```
HAA 31/0          OPTICAL LIBRARY DEFINE AND ASSIGN VOLSERs      OBI1WD2
=====
VOLSER VOLSER STAT COORD.   JB-NAME   VOLSER VOLSER STAT COORD.   JB-NAME
A-SIDE B-SIDE       A-SIDE           A-SIDE B-SIDE       A-SIDE
```

ENTER: _ C to continue input, G to generate or PF12 to terminate

- Enter [C] - to make further inputs or
 [G] - to generate optical volser or
 [PF12] - to terminate.

Enter [G]to display the following:

```
Optical VOLSER Creation in progress
ARCHIVE SAVED, RECORDS=0006581,SAVEDSN=OBI1WD2.HACCARCH.SAVE.P.D...
NO.OF RECORDS COPIED=006581,OUPUT-DSN=OBI1WD2.HACCARCH.SAVE.P.V...
TOTAL RECORDS=006583,OUPUT-DSN=OBI1WD2.HACCARCH.SAVE.P.VOLSER
SORT COMPLETED. SORTOUT-DSN=OBI1WD2.HACCARCH.SAVE.P.VOLSER
<== DECIDE RELOAD ARCHIVE WITH NEW DATA:
<== ENTER "YES" TO PROCEED OR ANY CHAR TO IGNORE RELOAD
YES
ARCHIVE LOADED,NO.OF RECORDS=0006583,DSN=OBI1WD2.HACCARCH.SAVE.P.V..
Creation of optical volser completed
<-- ANY CHAR TO CONFIRM
```

Press any key to return to the OPTICAL LIBRARY MAIN MENU.

3.3.6.2 DISPLAY / MODIFY / DELETE VOLSERs

```
HAA 03/0          OPTICAL LIBRARY MAIN MENU          OBI1WD2
=====
PFK   FUNCTION
-----
1  DEFINE AND ASSIGN VOLSERs
2  DISPLAY / MODIFY / DELETE VOLSERs
3
4  DISPLAY JUKEBOX(ES)
5  DISPLAY OPTICAL DEVICES
6
7
8
9
10
11
12  RETURN TO MAIN MENUE
=====
ENTER:    <-- SELECT BY NUMBER OR PFK
```

Our example continues with displaying the VOLSERs previously defined.

Select Menu item 2 - DISPLAY/MODIFY/DELETE VOLSERs by entering

- [PF 2] or
- [2] and [ENTER]

```
HAA 32/0 OPTICAL LIBRARY DISPLAY / MODIFY / DELETE VOLSER OBI1WD2
=====
```

```
SEL A-VOLS B-VOLS ST SYS ROB HOME COOR JB-NAME
      S OD001A OD001B OB 1 1 - 01020101
      - OD002A OD002B OE 1 1 - 01020103
      - OD003A OD003B OB 1 1 - 01020105
      - OD004A OD004B OB 1 1 - 01020107
      - OD005A OD005B OB 1 1 - 01020109
      - OD006A OD006B OB 1 1 - 01020111
      - OD007A OD007B OB 1 1 - 01020113
      - OD008A OD008B OB 1 1 - 01020115
      - OD009A OD009B OB 1 1 - 01020117
      - OD010A OD010B OB 1 1 - 01020119
      - OD011A OD011B OB 1 1 - 01020121
      - OD012A OD012B OB 1 1 - 01020123
      - OD013A OD013B OB 1 1 - 01020125
      - OD014A OD014B OB 1 1 - 01020127
      - OD015A OD015B OB 1 1 - 01020129
      - OD016A OD016B OB 1 1 - 01020201
      - OD017A OD017B OB 1 1 - 01020203
      - OD018A OD018B OB 1 1 - 01020205
```

Enter S to display, U to Update or D to Delete a VOLSER at SEL field

ENTER: X or PF12 to terminate / PF7 or PF8 to scroll

- | | | |
|-------|--------|---------------------------------------|
| Enter | [S] | - to obtain a detailed display or |
| | [U] | - to update data of a selected volser |
| | [D] | - to delete a selected volser or |
| | [X] | - to terminate the display or |
| | [PF7] | - to scroll the display or |
| | [PF8] | - to scroll the display or |
| | [PF12] | - to terminate the display. |

```
HAA 32/2          OPTICAL LIBRARY DISPLAY OD001A
=====
A-VOLSER: OD001A   B-VOLSER: OD001B   HOMECOORD: 01020101   LIBNAME:
SYSTEM #: 1   ROBOT #: 1 -   STATUS : OB/HOME POS

STATISTICS:
LAST MO/KE AT DATE: --- AND TIME: ---
LAST EJECT AT DATE: --- AND TIME: ---
LAST INSRT AT DATE: --- AND TIME: ---

FLAG SETTINGS
AROSTA MOU: 0   INA: 1   EJD: 0   SCR: 0   OD : 1   IDV: 0   JB : 0   HOM: 1
ARSTA1 VIR: 0   MVD: 0   MVH: 0   ALI: 0   IP : 0   HWS: 0   INT: 0   INV: 0
ARFLG INQ: 0   IUS: 0   ART: 0   FKE: 0   CLC: 0   PML: 0   PMU: 0

ENTER  Press any key to continue
```

This display is identical for all 3 functions (DISPLAY, MODIFY, DELETE).

MODIFY saves all modifiable fields.

DELETE displays the following message in the message line:

```
.
.
.
ENTER  Y to confirm
```

The function is exited at the end or after pressing [PF 12]. The application returns to the OPTICAL LIBRARY MAIN MENU.

3.3.6.3 DISPLAY JUKEBOXES / OPTICAL DEVICES

The OPTICAL LIBRARY MAIN MENU supports displaying the defined jukeboxes or optical units (towers, racks, input/output slots).

```

HAA 03/0          OPTICAL LIBRARY MAIN MENU          OBI1WD2
=====
PFK   FUNCTION
-----
1    DEFINE AND ASSIGN VOLSERs
2    DISPLAY / MODIFY / DELETE VOLSERs
3
4    DISPLAY JUKEBOX(ES)
5    DISPLAY OPTICAL DEVICES
6
7
8
9
10
11
12   RETURN TO MAIN MENUE

=====
ENTER:      <-- SELECT BY NUMBER OR PFK
  
```

Select Menu item 4 - DISPLAY JUKEBOX(ES) by entering

- [PF 4] or
- [4] and [ENTER]

```

HAA 03/4          OPTICAL LIBRARY DISPLAY JUKEBOX(ES)          OBI1WD2
=====
DEV LIBNAME     SYS  ROB CAPACITY     USED
D07 ODLIB1      1    1       144      3
D09 ODLIB2      1    1       144      3

=====
ENTER:      Any char or PF12 to terminate
  
```

Press [PF 12] to exit this function and to return to the OPTICAL LIBRARY MAIN MENU.

HAA 03/0	OPTICAL LIBRARY MAIN MENU	OBI1WD2
=====		
PFK	FUNCTION	
---	-----	
1	DEFINE AND ASSIGN VOLSERs	
2	DISPLAY / MODIFY / DELETE VOLSERs	
3		
4	DISPLAY JUKEBOX(ES)	
5	DISPLAY OPTICAL DEVICES	
6		
7		
8		
9		
10		
11		
12	RETURN TO MAIN MENUE	
=====		
ENTER:	<-- SELECT BY NUMBER OR PFK	

Select Menu item 5 - DISPLAY OPTICAL DEVICES - by entering

- [PF 5] or
- [5] and [ENTER]

HAA 03/2	DISPLAY ARCHIVE OPTICAL LIBRARY DEVICES	OBI1WD2								
=====										
DEV	S	ROB	NO	SEG	ROW	POS	COOR/ROW	SLOTS/ROW	TOT.SLOTS	TYPE
E22	1	1	00	02-02	15-16	01-22	22	11	22	OPT
I01	1	1	00	01-01	13-13	01-02	22	11	1	OPT
I11	1	1	00	01-01	13-13	01-22	22	11	11	OPT
I22	1	1	00	01-01	13-14	01-22	22	11	22	OPT
T01	1	1	01	02-04	01-13	01-22	22	11	429	OPT
=====										
ENTER:	<-- ANY CHAR TO CONFIRM									

3.3.7 MIGRATING FROM STATIC TO DYNAMIC ARCHIVE

The following steps must be performed in the sequence described to transform an archive previously defined hierarchically (static) into a dynamic (random storage) archive, even when only a part is affected:

1. HAA - Function 2.6
Un-assign and Assign to "virtual" (after cartridge is ejected)

The respective volters are immediately identified as virtual or dynamic but the associated coordinates are first released after ejection (Eject). The function qualification "after cartridge is ejected" means that the associated home coordinate is retained until the eject was performed. A distinction must be made as to whether, before the function was performed, the respective volter

 - a) is marked with status MB as inserted in the AML archive. An EJT command is generated internally during an eject which marks the associated slot as dynamic, for AMU as well.
 - b) is marked with status ME as ejected from the AML archive. The associated home coordinate is maintained until this volter is inserted in the AML archive again with a VI command. This volter and the slot are then released when a swap as described under a) is performed.
2. HACPARM1 Definition changes of the respective LDEV information with parameter ,DYN
3. HAA - Function 3.2
Generate coordinate records from HACPARM1
The changed or extended LDEV information must be transferred to the HCC archive mirror.
4. HAA - Function 2.1
Display complete volter entries
Check of associated volters where:
 - a) the status MB or MB and 'virtual' should have been assigned
 - b) if the status ME or ME and 'virtual' has been assigned, this can cause confusion in the subsequent inserts and ejects. See the note under point 1.
5. HAA - Function 2.2
Display/modify volter entries
Check of volters or coordinates
The field name Temp should contain 'DYN'.

3.4 HCC Operator Command Interface

Selecting **3** in **HACC Main Selection** displays the following screen:

```
-----  
ZHC0010P           EMASS/GRAU Software GmbH          96/02/15  
                   HACC Operator Command Interface      11:11  
-----  
Option/Selection:  
  
Function selection.  
  
1 - OPERATOR Display HACC operator buffer  
2 - COMMANDS Display, Select and Execute HACC commands  
3 - RESULTS Display results from commands  
  
H - HELP      Tutorial for Application  
:  
:  
:  
-----  
Enter HELP Command or HELP key for help.  
ENTER to process. Enter END command or END key to terminate.
```

3.4.1 Operator Buffer

Selecting **1** in the **Operator Command Interface** function selection displays the following screen:

```

----- Row 27 of 42
ZHC0020P          EMASS/GRAU Software GmbH      96/02/15
                  HACC Operator Command Interface    11:12
-----
Option/Selection:                                Scroll ===>
Display HACC operator buffer or results from commands.

TIME      TEXT
-----
11:06:13  HAC036I ROSA 2,1
11:06:13  HAC036I < H1A00,0002,ROSA, , , 2,1, , , , ,
11:06:13  HAC430I There is no communication path active for . Please check it
11:06:13  HAC082I CLEANING CARTRIDGE CL0001 IS NOW IN USE FOR SYS=1,ROB=1
11:06:14  HAC243I MESSAGE LOG IS ACTIVE, DSN=OBISD.OBI1KF1.PDSNMLG2
11:06:14  HAC431I ***** End of function *****
11:07:14  HAC129A NO MORE CLEAN-CARTRIDGES AVAILABLE, SYS=2,ROB=1, PLEASE INSER
11:07:14  HAC066A *HACC1* DOES NOT ANSWER
11:08:23  HAC066A *HACC1* DOES NOT ANSWER
11:09:37  HAC129A NO MORE CLEAN-CARTRIDGES AVAILABLE, SYS=2,ROB=1, PLEASE INSER
11:09:37  HAC066A *HACC1* DOES NOT ANSWER
11:10:38  HAC066A *HACC1* DOES NOT ANSWER
11:11:39  HAC129A NO MORE CLEAN-CARTRIDGES AVAILABLE, SYS=2,ROB=1, PLEASE INSER
11:11:39  HAC066A *HACC1* DOES NOT ANSWER
11:12:03  HAC036I SAK2215 IEF233A M 0963,104371,,SAK2215,STEP010,RZNT.T3BHSA02
11:12:03  HAC036I SAK2215 TMS009 IEF233A M 0963,104371,,SAK2215,STEP010,RZNT.
***** Bottom of data *****

```

Messages from HCC or responses to entered commands are displayed in the above form. Pressing [ENTER] updates the contents. Use the standard ISPF SCROLL commands or the respectively assigned PF keys, for example, **PF07/PF08** to scroll forwards or backwards. Use the **END** command or the **END PF key** to return to the selection screen.

3.4.2 Commands

Selecting **2** in the **Operator Command Interface** function selection displays the following screen:

```

----- Row 1 of 92
ZHC0030P          EMASS/GRAU Software GmbH      96/02/15
                  HACC Operator Command Interface    11:13
-----
Option/Selection:                                Scroll ===>

Enter L and command in the OPTION line to locate a command.
Enter a Command in the Command-Line for direct execution.
Enter S in front of a table line to select parameter list for this command.
Press PF05 to show result list or PF12 to retrieve previous commands.

Command:

S  Command                      Description
-----
_ ACC ...                      Compare archive by coordinate
_ ACOM 1                        Test communication
_ ACV 1,volser                 Compare 1 volser
_ ADD zzzzzz                     Assign volser zzzzzz for ROBTES
_ ALLOC cuu                     Allocate UNIT cuu
_ AOFF 1                         Shutdown archive-PC
_ AUTO 1,1                       Automatic mode
_ BOFF 1,1                       Barcode reading off
_ BON 1,1                        Barcode reading on
_ C[ANCEL] LABEL ...           Cancel Label process optical disk
_ CC ...                         Clear Counters
-----
```

HCC operator commands can be entered here.

The following inputs are possible:

- A LOCATE command in the 'OPTION' line, for example, **L BO**. The display scrolls forwards up to the first matching command which is then listed in the first line of the table.
- A valid HCC command in the 'Command' line.
- **PF05** to switch between the **RESULTS** screen and this screen, and vice versa.
- **PF12** to display previously entered HCC commands again.
- To obtain help for the syntax of a command, enter **S** in front of the command and the syntax of the command is then displayed as shown in the following:

```
-----  
ZHCO050P           EMASS/GRAU Software GmbH          96/02/15  
                  HACC Operator Command Interface      11:16  
-----  
Option/Selection:  
  
Command: BOFF 1,1  
  
Parameter List for: BOFF  
  
Command Syntax  
  
BOFF [s,r]  
  
Parameter Description  
  
s      = ABBA-system          Default: 1  
r      = robot no.            Default: 1  
  
Function Description  
  
The command BOFF deactivates the barcode-reader  
:  
:  
:  
-----  
Use UP and DOWN Commands or PF Keys to scroll.  
Enter END command or END key to terminate.
```

The command can now be entered in the 'Command' line with the correct parameters.

3.4.3 Results

Selecting **3** in the **Operator Command Interface** function selection displays the following screen:

```
----- Row 1 of 2
ZHCO040P           EMASS/GRAU Software GmbH
                   HACC Operator Command Interface      96/02/15
                                                               11:21
----- Option/Selection:          Scroll ===> PAGE
Available Output for OBI1KF1
Enter S to select the results for one command.
Enter D to delete the results for one command.
Press PF05 to show command list. END key returns to main menu.

S Cmd.Num  Text
-----
_ 1        DU
_ 2        DRQ
***** Bottom of data *****
```

The result of an entered command can be displayed by entering **S** in front of the respective command. Results which are no longer needed can be deleted by entering **D**.

The selected result is displayed as follows:

```
----- Row 1 of 10
ZHCO020P          EMASS/GRAU Software GmbH      96/02/15
                  HACC Operator Command Interface    11:22
-----
Option/Selection:           Scroll ==>
Display HACC operator buffer or results from commands.

TEXT
-----
HAC000I =====
HAC222I SYSTEM 1 NOT READY FOR COMMUNICATION
HAC223I SYS 1,ROB 1: NOT READY
HAC222I SYSTEM 2 NOT READY FOR COMMUNICATION
HAC223I SYS 2,ROB 1: NOT READY
HAC000I =====
HAC036I ID SQNR CMD S,R AUU VOLSER CUU      JOBNAME HH.MM FLAGS
HAC036I H1 0001 ROSA 1,1                      *HACC0* 11.06 S
HAC036I H1 0002 ROSA 2,1                      *HACC0* 11.06 S
HAC000I =====
***** Bottom of data *****
```

3.4.4 PF Keys

The PF keys are assigned as follows:

- PF01 - PF04 : ISPF Standard
- PF05 : Switching between **Command** screen and **Results** screen, and vice versa
- PF06 - PF11 : ISPF Standard
- PF12 : Retrieving HCC commands entered on the **Command** screen.

4 ISPF Error Messages

The following error messages are output during an ISPF session when wrong inputs are made. Most of the error messages are self-explanatory and require no further explanation. Names in texts which start with & are variables which are replaced by field contents when the messages are displayed. The following messages belong to the **Create HACPARM1** application.

- ZHCH000** Invalid command
- ZHCH001** System number greater than number of systems
- ZHCH002** Error create HACPARM1 Table &TNAME
- ZHCH003** Error update HACPARM1 Table &TNAME
- ZHCH004** Configuration must be done first
- ZHCH005** Input does not match configuration
- ZHCH006** COMDEF must not be defined
- ZHCH007** Required parameter SYSDEF1 not defined. Enter X to exit anyway
- ZHCH008** Invalid combination
- ZHCH009** Required parameter COMDEFn not defined. Enter X to exit anyway
- ZHCH010** Foreign Mount Area not defined.
- ZHCH011** Required parameter JES not defined. Enter X to exit anyway
- ZHCH012** Required parameter P/TDSNARCH not defined. Enter X to exit anyway
- ZHCH013** Required parameter P/TDSNSTMS not defined. Enter X to exit anyway
- ZHCH014** Required parameter P/TDSNULOG not defined. Enter X to exit anyway
- ZHCH015** Required parameter UNIT not defined. Enter X to exit anyway
- ZHCH016** Required parameter VOLGR not defined. Enter X to exit anyway
- ZHCH017** Lowest VOLSER lower or equal highest VOLSER
- ZHCH018** Parameter processed
- ZHCH019** Last segment lower than first segment
- ZHCH020** Last row lower than first row
- ZHCH021** Last position lower than first position
- ZHCH022** For LU 6.2 Communication COMDEF statement not needed
- ZHCH023** Required parameter LDEV not defined. Enter X to exit anyway
- ZHCH024** Required parameter HACNET not defined. Enter X to exit anyway
- ZHCH025** Table &TNAME already exists
- ZHCH026** Table &TNAME created
- ZHCH027** Table &TNAME does not exist
- ZHCH028** Table &TNAME erased
- ZHCH029** Table &TTNAME already exists
- ZHCH030** Read error table &TNAME, RC=&RC
- ZHCH031** Error create Table &TNAME, RC=&RC
- ZHCH032** Table &TNAME copied to table &TTname
- ZHCH033** Error write Table &TNAME, RC=&RC
- ZHCH034** For EXCP or LU 2 Communication no HACNET-Statement needed
- ZHCH035** Configuration not complete
- ZHCH036** Configuration for system &SYSN not found
- ZHCH037** Not allowed with Unitype IOS or OAD
- ZHCH038** Invalid Unit address, length must not exceed 4 characters

- ZHCH039** Invalid AML unit number
ZHCH100 Parameter &PARM not processed.
ZHCH101 Parameter &PARM processed.
ZHCH102 Required subparameter not entered or invalid
ZHCH103 For AMU Id Receive Program Name must be entered
ZHCH104 Invalid length lowest/highest VOLSER
ZHCH105 Lowest VOLSER lower or equal highest VOLSER
ZHCH106 Invalid length Scratch Warning Level
ZHCH107 Invalid length Eject unit
ZHCH108 Invalid system number
ZHCH109 Invalid HCC Id (A1-A9, H1-H9)
ZHCH110 Invalid message Id, see System Reference Guide
ZHCH111 Invalid priority type, see System Reference Guide
ZHCH112 &HPC, TMS already defined and TMSEXIT are mutually exclusive
ZHCH113 No AML System 2 defined
ZHCH114 Invalid length start/end coordinate
ZHCH115 Start coordinate lower or equal end coordinate
ZHCH116 Invalid Range
ZHCH117 One must be entered ABBSEND or HAA
ZHCH200 ABBACONFIG is not deletable
ZHCH201 Write error ZHCHHLPT
ZHCH202 Help not found
ZHCH203 Open error ZHCHHLPT
ZHCH204 &PLIB allocation error
ZHCH205 &PLIB write error
ZHCH206 HACCPARM1 not generated
ZHCH207 HACCPARM1 generated
ZHCH208 &PLIB does not exist
ZHCH209 Open error ZHCHCOMT
ZHCH210 &PLIB open error
ZHCH211 Member &PMBR not found in &PLIB
ZHCH212 Table &TNAME generated
ZHCH213 Table &TNAME not generated
ZHCM000 not used
ZHCM001 HACCPARM allocation error
ZHCM002 HACTABL allocation error

The following error messages belong to the **HACC Operator Command Interface** application. The short texts of the messages (text following the error number) are output first followed by the explanations in the second line using the **HELP** command or the help function key defined in ISPF, for example PF1.

ZHCO001 Release incompatibility
Please check if your STEPLIB contains the last HACCLOAD Version

ZHCO002 Invalid value
Please enter only one of the values listed below

ZHCO003 ISPF error
ISPF service TBBOTTOM ended with RC=&RC

ZHCO004 No output possible
There is no storage allocated in HCC for output buffers

ZHCO005 ISPF error
Function &HISPERR ended with RC &LASTCC

ZHCO006 SSCVT error
&HSSIID not defined, please call your administrator

ZHCO007 HCC not active
The HCC with SSINAME=&HSSIID is not active

ZHCO008 Function completed
&HISPERR ended with RC &LASTCC

ZHCO009 No output available
There is no output buffer allocated for &zuser

ZHCO010 Not used

-

ZHCO011 No buffer
There is no free buffer for Commands to be sent to HCC

ZHCO012 HACCVT is invalid
There is no or an invalid identifier for HACCVT

ZHCO013 No ISPF functions
All functions from ISPF to HCC are disabled

ZHCO014 TSF error
TSF R15:®F Rtc: &TSFRETC Reas: &TSFREAS Abend: &TSFABND

- ZHCO015** ZHC08400 error
There occurred an error in ZHC08400
- ZHCO016** Command not found
The command &CMD1 not found in table
- ZHCO017** Table open error
Temporary output table cannot be opened