IAI ENGINEERING DIVISION
Commercial Aircraft Group
ISRAEL AIRCRAFT INDUSTRIES LTD

HarnesSys™

DRAFT

User Manual

for the

CAESAR to *HarnesSys*

Project Conversion Procedure

IAI Publication Number TSN140/940878

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ISRAEL AIRCRAFT INDUSTRIES LTD

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Pages	Revision No.	Date Issued
Title	0	6-20-95
ii-xii	0	6-20-95
1-63	0	6-20-95

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Please make sure that your copy of this user guide contains the correct pages.

Record of Changes and Revisions

Doc. Change No.	Date Issued	Title & Description	Date Change Made	Signature

Record of Changes and Revisions (Cont.)

Doc. Change No.	Date Issued	Title & Description	Date Change Made	Signature

Foreword

This user guide is one of a set of user guides that make up Volume **6** of the ***HarnesSys*** user documentation. Below is a description of the volumes of the ***HarnesSys*** user documentation:

Volume 0 - Overview

Volume 1 - Schematics

Volume 2 - Layout Drawing

Volume 3 - Wiring

Volume 4 - Parts

Volume 5 - Integration

Volume 6 - Management and Configuration Control

Volume 7 - Manufacturing.

About this User Guide

This user guide describes the **CAESAR** to ***HarnesSys*** project conversion procedure. Below is a brief description of the sections that comprise this user guide.

Introduction
This section provides general information about the CAESAR to ***HarnesSys*** conversion procedure.

Operation Instructions - CDC
This section describes how to run the various steps of the conversion process which take place in the CDC environment.

Transfer Without a FTP
This section describes how to transfer the files from the CDC to the UNIX environment without using the FTP in the UNIX package.

Operation Instructions - UNIX
This section describes how to run the various steps of the conversion process which take place in the UNIX environment.

A**fter Conversion**

This section describes the steps which must be taken after the UNIX conversion package is run and before work begins in *HarnesSys.*

Family Code Conversion

Family code is a field used in both CAESAR and *HarnesSys* to indicate in which shield the wire is located. This section contains the conversion table used to convert the two character CAESAR field to the three character alphabetic *HarnesSys* field.

Conventions

Italic text	Italic text is used to indicate a word or phrase which has a special meaning with respect to HarnesSys, such as the name of a menu or option. Italic text is also used for examples. Smaller italic text is used for notes and helpful hints; these are also indicated by icons (see below).
Bold text	Bold text represents the exact text that you, the user, are supposed to enter.
Bold italics	Bold italics is used for emphasis.
COURIER	Text printed in Courier font represents text that appears on your screen.
	Indicates a note.
	Indicates an example.
	Indicates a helpful hint.
	Indicates additional information.
	Indicates cautionary text or a warning. Both types of text are framed in a box. A Warning, however, is printed on a raster (gray) and has the title "WARNING!".
	Indicates an operation that you, the user, are to perform. Operations in a series are also numbered.
	Indicates what you should see on the screen - the computer's response.
	Indicates a key on your keyboard.
	Indicates a path to take. This usually entails selecting a number of options from menus.
	Indicates the end of the user guide.

Contents

Contents (Cont.)

Contents (Cont.)

Contents (Cont.)

Introduction

This manual describes the procedure of converting projects from CAESAR (on CDC) to ***HarnesSys*** (on UNIX based workstations / network). The conversion procedure comprises the following:

- Running a conversion package on the CDC
- Transferring the resulting files from the CDC to the UNIX network server
- Running a conversion package inside ***HarnesSys***

CDC Conversion Package

This package comprises several programs, used to prepare the CAESAR documents together with their Top Drawing and EDM information for ***HarnesSys.***

The EDM information includes the date of each revision, with the private accounts changed to CAESAR.

The conversion programs also try to produce the Base and Dash numbers, needed by ***HarnesSys*** to uniquely identify a document of a certain type. As the document naming conventions used by the various CAESAR projects are not consistent, the system allows the user to manually correct this information.

Also, the system expands the CAESAR effectivity format to match the ***HarnesSys*** effectivity format.

Before transferring parts list information (EPL) to ***HarnesSys,*** the CAESAR database should be frozen. Only the frozen parts data are transferred to ***HarnesSys.***

The CDC conversion package comprises the following programs:

Program 1

This program extracts the HEADREP information of the project being transferred and stores it in a file in the local account. Also, it builds the "skipped issues" file (DELISS), used by Program 5.

Program 2

This program checks whether all documents in the EDM database are defined in the Top Drawing. If a document is not defined in the Top Drawing, the program adds a record to the TDADD file, used by Program 3. The program builds the TDMERR file, containing description of problems with the information listed in the EDM database.

It is good practice to check the TDADD file for drawings that should not be transferred to HarnesSys. Drawings not to be transferred, should be deleted from TDADD.

Program 3

This program extracts all the information from the Top Drawing for ELCID, BLO and wiring documents and adds the data in the TDADD file (created by Program 2) to the TDOUT file. The program tries to determine a unique Base and Dash, as required by ***HarnesSys.*** The program builds the Base number, as follows:

Document Type	Method
ELCID	6 consecutive digits after project code
WIRING	First 4 digits of bundle name
BLO	4 digit bundle name found in the WIRING document name (see above)

The program builds the Dash number by taking the last 3 characters of the document name.

Program 4

This program extracts the Base+Dash information from the TDOUT file (built by Program 3) and writes it in a concise format into the DASHLIS file. The user can examine and correct the Base+Dash data, using an editor. After the data is corrected, the user may run this program for a second time, to apply the changes in DASHLIS to TDOUT.

Then it checks if the Base+Dash are unique, as required by *HarnesSys.*

Program 5

This program extracts all drawing versions as listed in the EDM database

for all the documents listed in the TDOUT file and saves them in the local account and writes the following information to the DRAWLIS file:

- Version number
- File name
- Creation date
- Drawing size
- Issue.

This program adds dummy releases to comply with ***HarnesSys*** requirements. This operation works properly if the skipped issues (if any) were stored in the DELISS file by Program 1. The program also deletes duplicate releases (two releases with the same issue), saving only the last release for each issue. If the issue goes backwards, the program deletes the previous releases up to the present issue.

After the program finished running, the error output file should be examined. The documents listed in the error file should be checked against the information in the EDM and Top Drawing listing.

Program 6

This program converts all ELCID files from 6 bit binary format to 8 bit ASCII format and creates a list of all drawing files to be transferred to ***HarnesSys,*** using the ELCCONV and BLOCONV programs. Since this program uses a large amount of computer resources, it runs in batch mode.

Program 7

This program extracts all the wire records from the Wires file and stores records of released wires in the RELWIR file and records of open wires in the OPENWIR file. Added to each wire record is the full name of the document the wire was translated from. The full name is obtained by searching for the 6 digit diagram name in the wiring diagram Top Drawing file.

This program also converts all wire lengths to mm.

Program 8

This program extracts all records from the released EPL file and stores it in the RELEPL file.

Program 9

This program creates *HarnesSys* compatible files of all the released reports in CAESAR.

Program 10

This program extracts ELCID BOM information from the Symbol Bank.

Program 11

This program extracts the ELCID Symbol Bank information.

HarnesSys Conversion Package

This package comprises several programs which transfer the data from one computer to the other and then build the appropriate *HarnesSys* files and data. The programs are described below.

0: FTP: Data Transfer Between Computers

The data is transferred between the computers using the File Transfer Program (FTP), which is fully automatic.

1: Symbol File Conversion

This program takes the ASCII file created by program 11 in the CDC computer, which contains the the contents of the symbol bank, and converts it to the *HarnesSys* format. The program also adds special symbols required for the 2D Routing (BLO) program.

2: Define Documents

This program defines documents for ELCID, BLO and wirings, as listed in the TDOUT file.

3:Convert CAESAR Drawings to *HarnesSys* Format

This program converts the ELCID and BLO drawings to ***HarnesSys*** format and adds the letter **C** before the output document names. The names of the files to be converted are listed in the ELCONV and BLOCONV.

4: Insert CAESAR Drawings into *HarnesSys*

This program inserts all the versions of the ELCID and BLO drawings into ***HarnesSys.*** Since CAESAR only saves the last released version of a document, ***HarnesSys*** indicates that all released versions exist in the project directory, while only the last released version actually exists. The drawings to be inserted are listed in DRAWLIS file.

5: Insert Wiring into *HarnesSys*

This program inserts the wiring information into the ***HarnesSys*** database and builds a file for each released bundle in the project directory. Since CAESAR only saves the last released version of a document, ***HarnesSys*** indicates that all released versions exist in the project directory, while only

the last released version actually exists. The wires to be inserted are listed in RELWIR and OPENWIR files.

6: Part List Notes Conversion Table Creation

This script converts the CAESAR parts notes reference system to the *HarnesSys* system.

7: Load PART_OCCUR and PART_SPEC Tables

This program takes the RELEPL file (output from program 8) and inserts the data into various *HarnesSys* tables in the database such as the PART_OCCUR and PART_SPEC tables.

8: Load BINGROUP Table

This program loads the bin code table in CAESAR (KBANK and PBANK) into the relevant tables in the *HarnesSys* database.

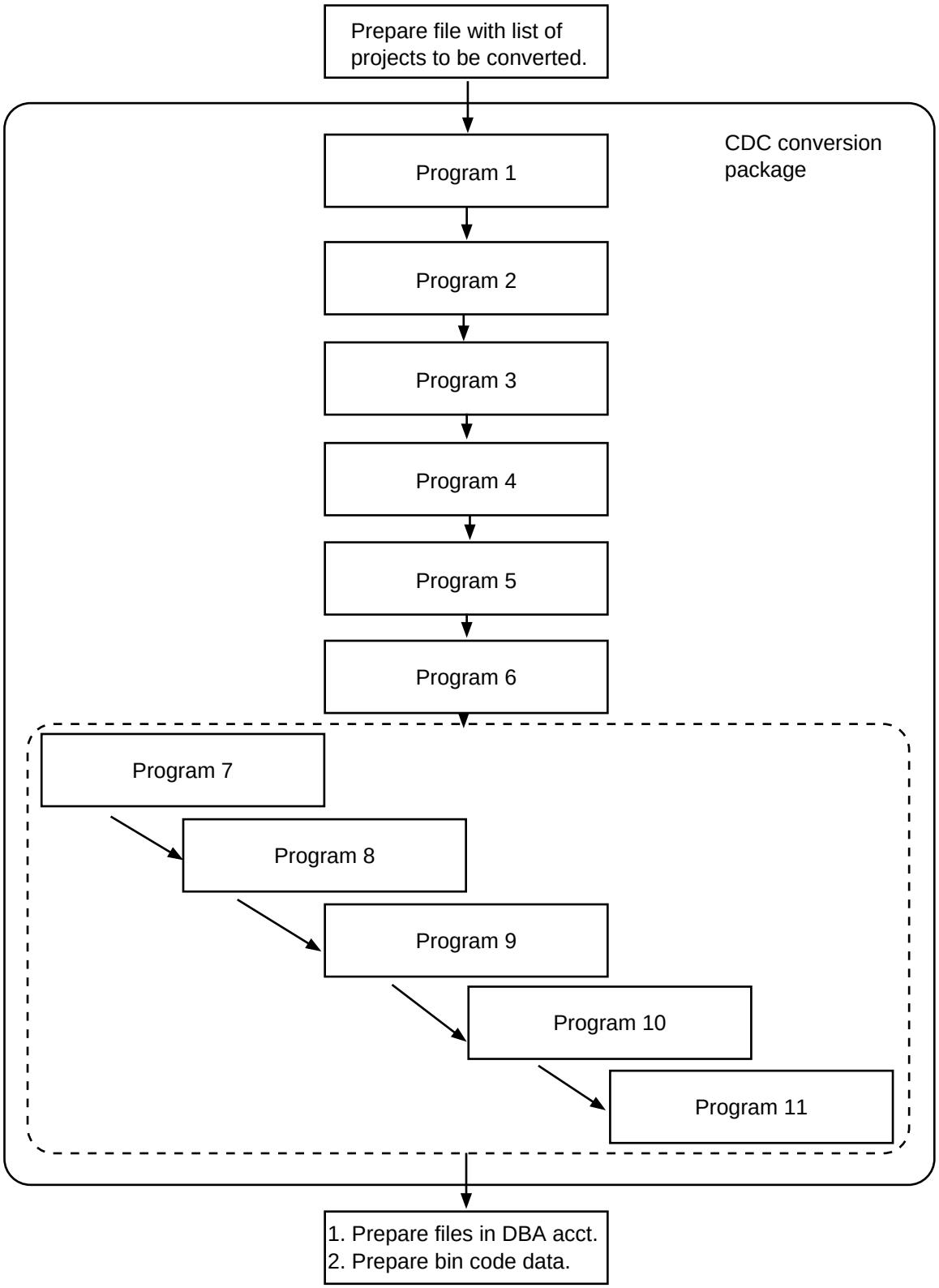
9: Multibundle for BRD10 Projects

Order of Work

The order of the activities which you must carry out in the CDC environment is described in the table below.

Step	Dependencies / Restrictions
1. Prepare file which contains list of projects to be converted.	Do this before invoking the CDC conversion package.
2. Program 1	Do after step 1.
3. Program 2	Do after step 2 (run of program 1).
4. Program 3	Do after step 3 (run of program 2).
5. Program 4	Do after step 4 (run of program 3).
6. Program 5	Do after step 5 (run of program 4).
7. Program 6	Do after step 6 (run of program 5).
8. Program 7	Do any time after step 2 (run of program 1). The order in which you run programs 7 - 11 is not important.
9. Program 8	
10. Program 9	
11. Program 10	
12. Program 11	
13. Prepare DBA files; prepare bin code data.	Do after completing all the steps in the CDC conversion package.

Below is a flowchart of the processes amd programs which you must run in the CDC environment.



Work Flow - CDC Environment

Limitations

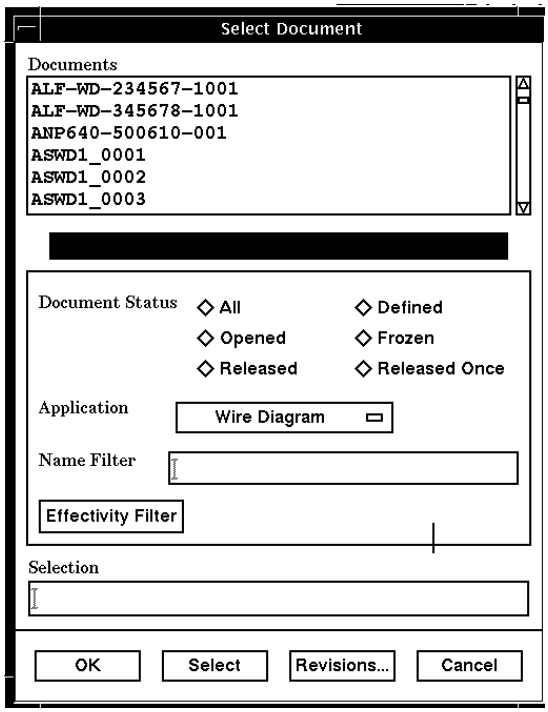
There are certain limitations and restrictions in the conversion process which are described below. Solutions for these limitations will be created in the future.

Document Prefix

Currently *HarnesSys* ignores the prefixes to document names. Therefore if there are two or more documents with the same name but different prefixes only the first document is converted into *HarnesSys.* The second and any subsequent documents with the same name but different prefixes are not converted.

Issue ZZ

Documents with issue ZZ in CAESAR are converted to *HarnesSys.* However *HarnesSys* does not display them in the Select Document windows (see example below). They can only be seen by doing a query through Configuration Control (see the *Configuration Control* user manual in Volume 6). These documents cannot become active documents within *HarnesSys.*



Select Document Window

Symbol Library

If there are symbols in CAESAR for wire diagrams which begin with the letter E they cannot be converted to *HarnesSys.* The method with dealing with this limitation is described on page 41.

BLO (2D Routing) Drawings

For drawings in CAESAR that have more than one configuration for the Bill of Materials, the conversion creates a separate drawing for each configuration. Each drawing has its own dash.

Small Pin Letters

For small pin letters *HarnesSys* only recognizes a symbol that appears before the letter.

For example, in CAESAR the project default could be that either -a or a- would indicate a small pin letter. In *HarnesSys* the only possibility is to select -a.

Reports

The CDC conversion package prepares the CAESAR reports for transfer to the UNIX environment and the FTP moves them from one computer to the other. However the UNIX conversion package does not deal with them because there is no appropriate way to enter them into *HarnesSys.* Reports in *HarnesSys* are not yet part of the Configuration Control system.

Bin Codes

Currently both the UNIX conversion program and *HarnesSys* itself are not able to handle gauge with a format of *N where N = 1 - 4 when this value is in the field Mating End.

Valid	Invalid
$20/*1-*2P201S205	$*1/20-24P201S205

These values may be found in the file BINREP.

Operating Instructions - CDC

General Information and Recommendations

Perform the steps below in an empty, unlimited CDC account or an empty account which has room for at least 100,000 PRUs and 2 permanent direct access files.

Make sure that all the information of the project to be transferred which may have been stored on tape to save disk space is put back on the disk.

Before starting the conversion, it is recommended that you print out the EDM information for the project and delete all unnecessary versions of the ELCID and BLO drawings.

It is recommended that the user of the CDC Conversion Package should be an experienced CAESAR user and should be familiar with the project being converted. This is necessary in order to understand the software error messages and to correct them.

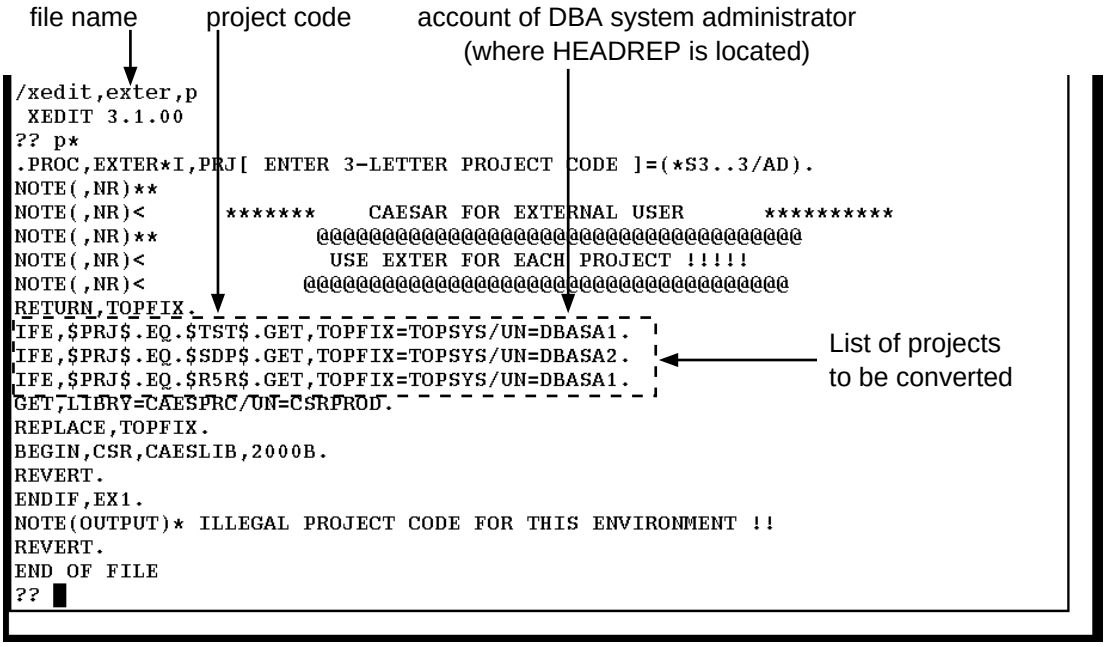
It is recommend that when you transfer projects you use one CDC account for all the transfers. It is also recommended that you convert one project at a time. Download one project from the CDC and move it to a tape file. Then clean the CDC transfer account and use the same account to transfer the second project. Repeat for as many projects as you want to convert.

When transferring the BRD10 files which may have a space in front of the BRD, the conversion program knows how to deal with the space.

Before Invoking the CDC Conversion Package

Before invoking the CDC conversion package prepare a file that contains a list of all the projects to be converted (see the example below). The format shown in the box (outlined with a broken line) must be followed exactly.

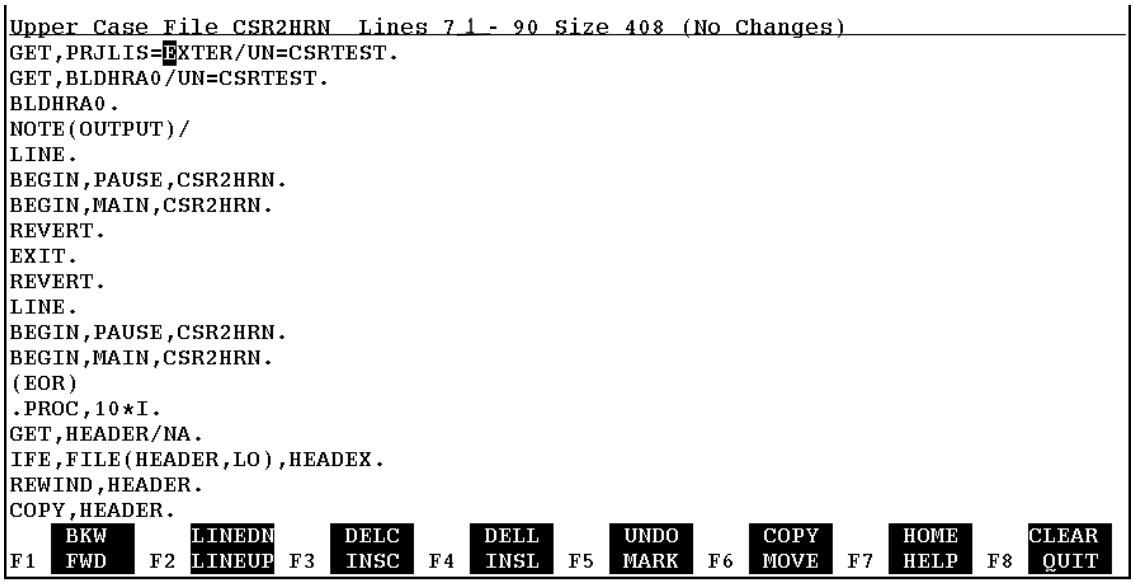
In most CEASAR installations the file shown below exists and is used for situations when there is more than one file called HEADREP. The name of the file is CAESART, and it is located in the DBA system account. A sample of this file is also in CRSTEST. If the file does not exist in your installation, create it.



File One

The file shown below is called exter. Prepare a file like this one.

Go to the file which is called CSR2HRN, which is in account CSRTEST (see below). In line 71 you can replace the file name exter and the user account CSRTEST with names of your choice. However the name you choose must be consistent with the names you used in file 1 (see above). Save the file CSR2HRN in your account.


Upper Case File CSR2HRN Lines 71 - 90 Size 408 (No Changes)
GET,PRJLIS=EXTER/UN=CSRTEST.
GET,BLDHRA0/UN=CSRTEST.
BLDHRA0.
NOTE(OUTPUT)/
LINE.
BEGIN,PAUSE,CSR2HRN.
BEGIN,MAIN,CSR2HRN.
REVERT.
EXIT.
REVERT.
LINE.
BEGIN,PAUSE,CSR2HRN.
BEGIN,MAIN,CSR2HRN.
(EOR)
.PROC,10*I.
GET,HEADER/NA.
IFE,FILE(HEADER,LO),HEADEX.
REWIND,HEADER.
COPY,HEADER.
F1 BKW FWD
F2 LINEDN LINEUP
F3 DELC INSC
F4 DELL INSL
F5 UNDO MARK
F6 COPY MOVE
F7 HOME HELP
F8 CLEAR QUIT

File Two

Invoking the CDC Conversion Package

1. Type **get,csr2hrn/un=account name** and press ↵ to get the program.

2. Type **csr2hrn** and press ↵ to activate the conversion program.

   The program displays the following:

```
                              CSR2HRN

TERMN 1-CDC721,2-CDC72230,3-BEEHIVE,4-VT,5-OTHERS,6-WY60,7-TEK,Q-QUIT: _____

                    Specify values and press NEXT when ready
```

3. Type the number corresponding to your terminal type and press ↵.

   The program displays the menu below.

```
          CAESAR-TO-HARNESS CONVERSION PACKAGE

  1.      CHOOSE PROJECT / BUILD DELISS FILE
 10.      BUILD SYMBOL BANK BOM
 11.      BUILD SYMBOL BANK FOR EXPORT TO HARNESS
  2.      CHECK EDM DB / BUILD MISSING TD RECORDS
  3.      BUILD TOP DRAWING RECORDS FOR EXPORT TO HARNESS
  4.      TD RECORDS SHORT-NUMBER/DASH CHECK AND UPDATE
  5.      GET ALL DRAWINGS / BUILD EDM RECORDS FOR EXPORT
  6.      CONVERT ELCID DRAWINGS FOR EXPORT
  7.      BUILD WIRE RECORDS FOR EXPORT TO HARNESS
  8.      BUILD PART RECORDS FOR EXPORT TO HARNESS
  9.      BUILD REPORT RECORDS AND FILES FOR HARNESS
 88.      EXIT FROM MENU

     SELECT FROM THE LIST ABOVE AND PRESS <CR> : __
```

Fig-1 CDC Conversion Package - Main Menu

STOP

Option 1 must be activated first.

Options 2 through 6 must be performed consecutively.

Operating Program 1

Type 1 ↵.

```
ENTER THE 3 CHARACTER PROJECT CODE?
```

Type in the code of the project to be converted and press ↵.

```
ENTER THE 1 CHARACTER PROJECT LETTER?
```

Type in the project letter and press ↵.

```
IS THIS A BRD10 PROJECT (Y/N)?
```

If you answer **Y** to the question above, the program places a **1** in column 2 and a **0** in column 3 of the HEADER file. When the transfer program sees the '10', it knows that all the 6 character designators must be replaced with 10 character designators.

If you answer **N** to the question above, the program places blanks in the two columns, and the transfer program does not replace one type of name with the other type.

Type Y or N according to the length of the BRD (designator) and press ↵.

If the program does not find the BRD10 file, it sends the following warning:

```
*WARNING: UNABLE TO GET VBRD10 FROM PRJDBA1
```

where V is the 1 character project letter and PRJDBA1 is the name of the project account.

If the BRD10 file exists, or you answer **N,** the program continues:

```
IS THIS A LONG WIRE PROJECT (Y/N)?
```

Type Y or N and press ↵.

If the program does not find the LWN (Long Wire Name) file, it sends the following warning:

```
*WARNING: UNABLE TO GET W25LWN FROM PRJDBA1
```

where W25 is the 3 character project code and PRJDBA1 is the name of the project account.

If the LWN file exists, or you answer **N,** the program continues:

```
HEADER FILE SAVED IN YOUR ACCOUNT.
BUILD A FILE WITH ISSUES TO BE SKIPPED
(Y/N)?
```

If the project to be converted has skipped issue letters (which is not allowed

in ***HarnesSys***), type Y. Otherwise type N. Press ↵.

Skipped issue letters are usually I, O, U and V.

If you pressed Y, the program displays the following message:

```
ENTER ONE LET AT A TIME OR
ENTER ALL THE LETTERS TOGETHER (I.E. IOUV)
OR <CR> TO END?
```

Type one or more letters indicating skipped issues and press ↵.

```
ENTER LETTER(S) OR <CR>?
```

Type more skipped issue letters and press ↵ or just press ↵.

```
DELISS IS = XXXX
DELISS SAVED IN YOUR ACCOUNT
TO CONTINUE - TYPE C?
```

Type C ↵.

The program redisplays the menu.

Operating Program 2

1 Type **2** ↵.

The program displays the data entered for Program 1:

```
PROGRAM EDMLS VERSION A00 - DATE DD-MM-YY
PROJ LETTER IS X, PROJ CODE IS XXX
IS THIS THE CORRECT PROJECT (Y/N)?
```

2 Make sure that the data above is correct and press **Y** ↵.

If the data is incorrect, press **N** ↵ and then re-run Program 1.

The program displays information similar to the example below.

```
 ERROR: UNABLE TO GET FILE DU0206A FROM ACCOUNT TAL::::
 ERROR: UNABLE TO GET FILE DU0207A FROM ACCOUNT TAL::::
 ERROR: UNABLE TO GET FILE DU0208A FROM ACCOUNT TAL::::
 ERROR: UNABLE TO GET FILE DU0195A FROM ACCOUNT TAL::::
 ERROR: UNABLE TO GET FILE DU0194A FROM ACCOUNT TAL::::
 ERROR: UNABLE TO GET FILE DU0241A FROM ACCOUNT INDIK3:
 ERROR: UNABLE TO GET FILE DU0221A FROM ACCOUNT INDIK3:
 ERROR: UNABLE TO GET FILE DU0227A FROM ACCOUNT INDIK3:

OUTPUT FILE EDMOUT WITH  229 RECORDS (INCLUDES  TDADD)
OUTPUT FILE TDADD  WITH    0 RECORDS
OUTPUT FILE EDMERR WITH    8 RECORDS

 THE EDM DATA BASE HAS -  155 ELCID DRAWINGS
                       -   74 BLO DRAWINGS
                       -    0 UNKNOWN TYPE DRAWINGS
    STOP   EDMLS COMPLETED

*  EDMOUT SAVED IN YOUR ACCOUNT *
*  EDMERR SAVED IN YOUR ACCOUNT *

                TO CONTINUE - TYPE C?
```

3 Type **C** ↵.

The program redisplays the menu.

4 Read the EDMERR file and correct the error conditions.

Operating Program 3

1. Type 3 ↵.

   The program displays the data entered for Program 1:

```
PROGRAM TDHRN VERSION A00 - DATE DD-MM-YY
PROJ LETTER IS X, PROJ CODE IS XXX
IS THIS THE CORRECT PROJECT (Y/N)?
```

2. Make sure that the data above is correct and press Y ↵. If the data is incorrect, press N ↵ and then re-run Program 1.

   The program displays information similar to the example below.

```
ERROR: DUPLICATE BLO SHORT NUM + DASH R21655007      F01
ERROR: DUPLICATE BLO SHORT NUM + DASH R21655009      F01
ERROR: DUPLICATE BLO SHORT NUM + DASH R2166510       F01
ERROR: DUPLICATE BLO SHORT NUM + DASH R21671002      F01
ERROR: DUPLICATE BLO SHORT NUM + DASH R2168114900M01F01

PROJECT IS R21

          TOP
         DRAWING   TDOUT
         -------   -----
ELCID:    156       156   RECORDS
WIRING:   109       109   RECORDS
BLO:       71        71   RECORDS

TDERROR -     2 NOTES
             48 WARNINGS
             41 ERRORS
    STOP  TDHRN COMPLETED

*  TDOUT SAVED IN YOUR ACCOUNT *
*  TDERROR SAVED IN YOUR ACCOUNT *

                TO CONTINUE - TYPE C?
```

3. Type C ↵.

   The program redisplays the menu.
   29

4. Read the TDERROR file and correct the error conditions.

Operating Program 4

To invoke Program 4, type **4** ↵.

```
PROGRAM DASH LEVEL A00 DATE 16/11/93

ENTER OPTION LETTER:
(P) - PRINT SHORT NUMBER & DASH ON DASHLIS
(U) - UPDATE TDOUT WITH CONTENTS OF DASHLIS
(D) - FOR DUPLICATE SHORT/DASH CHANGE DASH
(Q) - QUIT THE PROGRAM
ENTER (P,U,D OR Q) ?
```

STOP *Option **P** must be activated before **U**.*

Producing and Correcting the DASHLIS File

***P** is an off-line option, which builds the DASHLIS intermediate file. This file contains the base and dash information, which is a subset of the information contained in the TDOUT file. Since at this stage, the user should correct only the base and dash data, the other information in the TDOUT file is irrelevant and redundant.*

Type **P** ↵.

```
DASHLISS FILE REPLACED
TO CONTINUE - TYPE C?
```

Type **88** and press ↵ to exit the application.

Edit the DASHLIS file using an editor.

A typical DASHLIS file portion is shown below.

TYPE	DOCUMENT	SHORT	DASH	TITLE
ELCID	R2134680001	468000	001	A.O.A AND ALPHA SAT. SYSTEM
ELCID	R21600 002	600 0	002	D.C POWER SUPPLY
ELCID	R21600 006	600 0	006	A.C. POWER SUPPLY
ELCID	R21600 008	600 0	008	STATIC INVERTER AND 26VAC XFMR
ELCID	R21600 021	600 0	021	STARTING IGNITION SYSTEM
ELCID	R21600 022	600 0	022	AFTER BURNER
ELCID	R21600 022M01	600 0	M01	AFTER BURNER
ELCID	R21600 027	600 0	027	AIRCRAFT LIMIT
ELCID	R21600 029	600 0	029	ENGINE OVERSPEED
BLO	R21601 019 F01	XXXX	F01	DC POWER CABLE
BLO	R21601 028 F01	XXXX	F01	CABLE ASSY 25YP

BASE NUMBER
WHICH COULD NOT
BE DETERMINED
BY THE PROGRAM

Re-enter the program by typing **csr2hrn** ↵ ⇨ **4** ↵ ⇨ **4** ↵.

Type **U** ↵ to apply the corrected data in DASHLIS to TDOUT.

```
UPDATED TDOUT FILE REPLACED
TO CONTINUE - TYPE C?
```

Type **C** ↵.

The program redisplays the menu.

Eliminating Duplicate Short + Dash Data

⇩

4

2 Type D ↵.

ENTER NEW DASH NUMBER FOR DOCUMENT XXX WITH DASH YYY

3 Type the new dash and ↵ or just ↵ to leave the dash unchanged.

The program re-displays the prompt in the previous step for all duplicate base + dash data. After you answered the last prompt, the program displays the following:
TO CONTINUE - TYPE C?

4 Type C ↵.

The program redisplays the menu.

Operating Program 5

1 Type 5 ↵.

ENTER MAXIMUM LEGAL ISSUE?

In very old projects there may be issues that were manually entered that are irrelevant and do not need to be converted. After answering the question above, the the program knows which issues it can ignore (all those that are later than the issue entered here).

2 Enter the highest issue in your project.

After the program finishes running, a list of the files created by the program should be in the account in which you are working. The list should include:
ELCLIS
BLOLIS
EDMGTER
DRAWLIS
and every drawing file.

Operating Program 6

This program always runs as a batch program and may take several hours to run. The actual time it takes depends on the number of files which are to be converted, and the work load on the computer at the time the program runs. Program 6 cannot be run until program 5 has run successfully.

Type **6** ↵.

You can check whether the program has finished by doing the following:

Type **88** and press ↵ to exit the application.

Type **status, ujn** at the system prompt.

The system displays the status of all the jobs running in the system, including batch jobs. When program 6 has finished running, the system will not display the job number any more.

When the job has finished running, check the dayfile called DAYCONV.

Operating Program 7

Program 7 is not dependent on programs 5 or 6; therefore you can run program 7 while program 5 or program 6 is running.

1. Type 7 ↵.

   The program displays the data entered for Program 1:

```
PROGRAM HRWIR VERSION A00 - DATE DD-MM-YY
PROJ LETTER IS X, PROJ CODE IS XXX
IS THIS THE CORRECT PROJECT (Y/N)?
```

2. Make sure that the data above is correct and press Y ↵. If the data is incorrect, press N ↵ and then re-run Program 1.

   The program displays information similar to the example below

```
 NO ELCID TOP DRAWING FOUND FOR FL-TST
 NO ELCID TOP DRAWING FOUND FOR FL-TST

NUMBER OF RELEASED RECORDS 11400
NUMBER OF OPEN RECORDS         3

RELEASED RECORDS ON FILE RELWIR
OPEN RECORDS ON FILE OPENWIR
*  RELWIR SAVED IN YOUR ACCOUNT AS DIRECT ACCESS FILE  *
*   OPENWIR IS SAVED IN YOUR ACCOUNT  *

                TO CONTINUE - TYPE C?
```

3. Type C ↵.

   The program redisplays the menu.

Operating Program 8

1. Type 8 ↵.

   The program displays the data entered for Program 1:

```
PROGRAM HREPL LEVEL A00 - DATE DD-MM-YY
PROJ LETTER IS X, PROJ CODE IS XXX
IS THIS THE CORRECT PROJECT (Y/N)?
```

2. Make sure that the data above is correct and press Y ↵. If the data is incorrect, press N ↵ and then re-run Program 1.

   The program displays information similar to the example below

```
510 R21EPL::::

TOTAL OCCURRENCES IN R21EPL: COPIED TO LFN TAPE99 = 1359

*  RELEPL SAVED IN YOUR ACCOUNT AS DIRECT ACCESS FILE  *

                TO CONTINUE - TYPE C?
```

3. Type C ↵.

   The program redisplays the menu.

Operating Program 9

1 Type 9 ↵.

The program displays the data entered for Program 1:

```
PROGRAM HREPL LEVEL A00 - DATE DD-MM-YY
PROJ LETTER IS X, PROJ CODE IS XXX
IS THIS THE CORRECT PROJECT (Y/N)?
```

2 Make sure that the data above is correct and press Y ↵. If the data is incorrect, press N ↵ and then re-run Program 1.

The program displays information similar to the example below:

```
PROJECT IS W25

          TOP
        DRAWING   REPOUT
        -------   -----
REPORT:  137        137   RECORDS
RPERROR -     3 NOTES
              0 WARNINGS
              0 ERRORS
   STOP  RPHRN COMPLETED
*  REPOUT IS SAVED IN YOUR ACCOUNT *
*  REPLIS IS SAVED IN YOUR ACCOUNT *
*  REPCONV IS SAVED IN YOUR ACCOUNT *

               TO CONTINUE - TYPE C? c
```

3 Type C ↵.

The program redisplays the menu.

Operating Program 10

Run this program once per project.

Type **10** ↵.

The program displays the following:

```
U  0CM  11R21 R21   POLAND          R21-W R21 AAUY PRJDBA2   1    - UXXX  Y 1 S2
ISRAEL AIRCRAFT INDUSTRIES LTD.
AIRCRAFT DIVISION.
TASHAN-ENGINEERING CTR.
ELEC. & AVIONICS ENG.
WIRING DEPT. 2463

 IS THIS THE CORRECT PROJECT - ENTER Y/N? ▌
```

Make sure that the data above is correct and press Y ↵. If the data is incorrect, press N ↵ and then re-run Program 1.

```
EXTRACTING BOM INFO. FROM SYMBOL BANK
* SYMBOL BANK BOM INFO, STORED ON BANKBOM
TO CONTINUE - TYPE C
```

Type C ↵.

The program redisplays the menu.

Operating Program 11

Run this program only once.

1 Type **11** ↵.

The program displays the following:

```
U  0CM  11R21 R21   POLAND          R21-W R21 AAUY PRJDBA2   1    - UXXX  Y 1 S2
ISRAEL AIRCRAFT INDUSTRIES LTD.
AIRCRAFT DIVISION.
TASHAN-ENGINEERING CTR.
ELEC. & AVIONICS ENG.
WIRING DEPT. 2463

 IS THIS THE CORRECT PROJECT - ENTER Y/N? ▌
```

2 Make sure that the data above is correct and press **Y** ↵. If the data is incorrect, press **N** ↵ and then re-run Program 1.

```
          PROCESSING MB
          PROCESSING P6
          PROCESSING QE    *
          PROCESSING S7    *
          PROCESSING YJ
          PROCESSING TK
          PROCESSING MC
          PROCESSING P3
          PROCESSING TN
          PROCESSING CFH01P
          PROCESSING MA
          PROCESSING QD
          PROCESSING QF
          PROCESSING RIB02P
          PROCESSING TD    *
          PROCESSING CI
          PROCESSING AD
          PROCESSING AF
          PROCESSING TG
          PROCESSING TH    *
          PROCESSING TF    *

        *  SYMBOL BANK STORED ON PFN   BANK
                        TO CONTINUE - TYPE C? ▌
```

Fig-3 End of Message List for Program 11

3 If the program stops because of a problem, type **MODE,1**
Rerun program 11 from step 1.

However if the program ends successfully, type **C** ↵.

The program redisplays the menu.

Output Files Created By Programs 1 - 11

The table below lists all the output files created by the programs which are run in the first stage of the CAESAR to ***HarnesSys*** conversion.

Program Outputs

Program Number	Comments	Output Files	Description
1	Program 1 creates a minimum of one file and a maximum of four files.	HEADER	Contains information from the HEADREP file (project information from one project). This file is always created.
		DELISS	Lists issues which were skipped in this project. This file is only created if you answered yes to the question: `BUILD A FILE WITH ISSUES TO BE SKIPPED (Y/N)?`
		BRD10	A file which translates short names to names which are 10 characters in length. This file is only copied into the conversion account if you answered yes to the question: `IS THIS A BRD10 PROJECT (Y/N)?`
		LWN	The Long Wire Name file. It is moved into the conversion account if you answered yes to the question: `IS THIS A LONG WIRE PROJECT (Y/N)?`
2		EDMOUT	Lists all the files located in the EDM database.
		EDMERR	Lists all files which are problematic.
	Check the contents of this file and delete all files which do not need to be converted, such as temporary files.	TDADD	Lists all files which are in the EDM database but not in the Top Drawing database (files which have not been released, and if ELCID files, were never translated to a wire list).

Program Outputs (Cont.)

Program Number	Comments	Output Files	Description
3		TDOUT	Lists all top drawing files including the contents of the TDADD file from the previous step. The program builds the base and dash numbers which will be used in ***HarnesSys.***
		TDERROR	Lists all errors found.
4	This program extracts the base and dash numbers from the TDOUT file (output of program 3) to create a file which can be manually updated.	DASHLIS	1. Program four creates the DASHLIS file. 2. You can manually change base and dash numbers in the DASHLIS file. 3. Update the TDOUT file with the base and dash numbers which have been updated on the DASHLIS file.
5	All the file names should exist in the conversion account.	EDMGTER	Lists all errors found by the program.
		DRAWLIS	Lists all EDM information which will be transferred to ***HarnesSys.***
6		ELCCONV	Lists unique ELCID file names.
		BLOCONV	Lists unique BLO file names.
7		RELWIR	Lists all released wires.
		OPENWIR	Lists all open wires (those that have not been released).
		WIRERR	Lists errors or overflows caught by the program.
8		RELEPL	Lists all frozen electrical parts.

Program Outputs (Cont.)

Program Number	Comments	Output Files	Description
9	Creates *HarnesSys* compatible files of all the released reports in CAESAR.	REPLIS	Lists all the released reports in CAESAR.
		REPCONV	Lists unique report file names.
		REPOUT	1. Contains base and dash for report documents; 2. Contains information for the Top Drawing record; 3. Contains information from REPTAB such as report name and its parameters.
10		BANKBOM	In the Symbol Bank in CAESAR you could enter technical data about the parts. This file contains this data. *HarnesSys* does not use the data; however this file can be moved to the UNIX environment to save the data for future use.
11	This program should be run only once.	BANK	Lists the contents of the symbol bank.

Additional Preparation In CDC

The conversion package prepares most of the CAESAR files for the UNIX environment. However there are additional files which may be needed, which are not prepared by the conversion package. These are described below.

The conversion package does not convert all the data in CAESAR.

Files From DBA Account

These files exist in the DBA account. The FTP transfers these files from the conversion account to the UNIX environment; however the UNIX conversion package does not transfer the data from the files in the UNIX environment into the appropriate *HarnesSys* table.

If the amount of data in a particular file is small, the data can be manually entered into the appropriate *HarnesSys* library. If the amount of data is significant, the DBA can write a script to transfer that particular set of data automatically from the UNIX file into the *HarnesSys* database.

DBA Account Files

File	Description
ELCNOTE	Contains the notes from the ELCID drawings.
MLDNOTE	Contains the notes from the BLO drawings.
EPLVND	Vendor codes and data.
TAB	Wire specifications (type and gauge). The name of this file in CAESAR is TABXXX.

To prepare these files for the conversion, do the following:

Copy these files from the DBA account to the conversion account. The file names in the conversion account should be the names in the above table.

Bincode Data

BINREP

If you want to transfer the bin code data from CAESAR to *HarnesSys*, create the BINREP file and move it into the conversion account. If the BINREP file exists in the conversion account, the UNIX conversion package automatically transfers the file to the UNIX environment and enters the data into the *HarnesSys* database (option 8, see page 40).

To create this file, do the following:

In CAESAR, select menu option 342 - PRINT BIN CODE BANKS. Choose #3 - PRINT BOTH LISTS.

CAESAR creates the file and report called BINREP

Move this file to the conversion account.

Transfer Without a FTP

If your site does not have an automated File Transfer Program (FTP) you can transfer the data from the CDC to the UNIX environment by using tapes. The section below tells you what files to transfer, where they are located in the CDC and where to put them in the UNIX environment.

CDC Output

The first group of files is created as output from the CDC conversion programs. However the conversion programs only creates the files that are necessary; therefore when you run the conversion programs, they may not create all of these files for every project. The conversion programs also create error and message files which do not have to be transferred to the UNIX environment.

The files created by the conversion programs that you must transfer to the UNIX environment are:

BANK	DELISS	OPENWIR	REPLIS
BANKBOM	DRAWLIS	RELEPL	REPOUT
BLOCONV	ELCCONV	RELWIR	TDOUT
BRD10	HEADER	REPCONV	

Drawing and Report Files

The second group of files is the drawing and report files. The ELCCONV and BLOCONV files (CDC output) contain the list of the ELCID and BLO drawings which must be converted; therefore you can check the contents of these files to see what drawings must be transferred. The conversion package converts the ELCID and BLO drawings to a *HarnesSys* compatible format. These files are in the conversion account in the CDC environment.

The report files exist in the xxxBANK account of the project and begin with the letter R. You must transfer all of the drawing and report files from the CDC to UNIX environment.

Other

There are other files which must also must be transferred. See details on the BINREP file on page 32 and DBA account files on page 31.

Operating Instructions - UNIX

After successfully running the CDC conversion package, the files it creates and the files created manually must be transferred to the UNIX environment. This may be accomplished within the UNIX conversion package or done outside of it. However before invoking the UNIX conversion package, there are certain tasks which must be accomplished. These preliminary tasks and the UNIX / *HarnesSys* conversion package are all described below.

Before Invoking the UNIX Conversion Package

Setup Operations

Before running the programs in the UNIX conversion package (described on page 44), various setup operations must be performed. These include:

Person	Task
ORACLE DBA and System Administrator:	1. Create the *HarnesSys* database.
HarnesSys Administrator:	2. Create the new, target project within *HarnesSys*
Project Administrator:	3. Determine and enter the project defaults for the new project.
Project Administrator or user with authorization	4. Fill the Standard Note Library (see the user manual *Libraries* in Volume 6).
	5. Open a new directory for the purposes of the conversion.
	6. Instruct *HarnesSys* to save the process as it is displayed on the terminal (optional).

The first three tasks must be performed in the order presented above. The other tasks must be done after task three, but the order of these tasks is not significant. Task six is optional: only do it if you want to save system messages/prompts and your responses.

There are two ways to open a new project. The first is through Motif, the second is through a script supplied with *HarnesSys* which is called "harness add_project". If you use the script to create the project, it asks you which

size, small, medium, or large, you want for the tables. However you can choose specific values for individual tables if you think it is necessary.

For further details on creating a database and project, see the *Installation* manual.

Project Defaults

When opening any new project the Project Administrator must enter the project defaults for it. For projects that are being converted from CAESAR, the procedure is almost exactly the same.

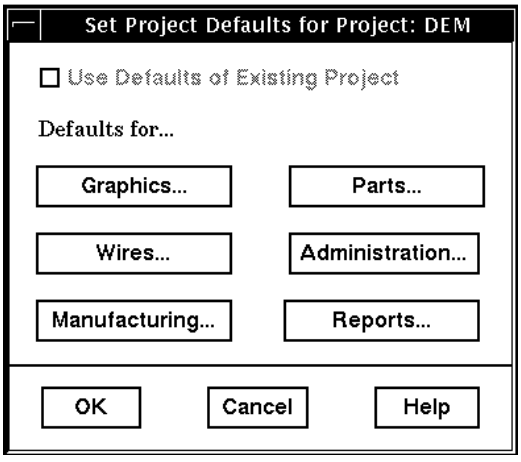
For more information on project defaults, see the user guide *Project Defaults,* in Volume 6.

There are two fields which have values you must change. This is described below.

Big Splices

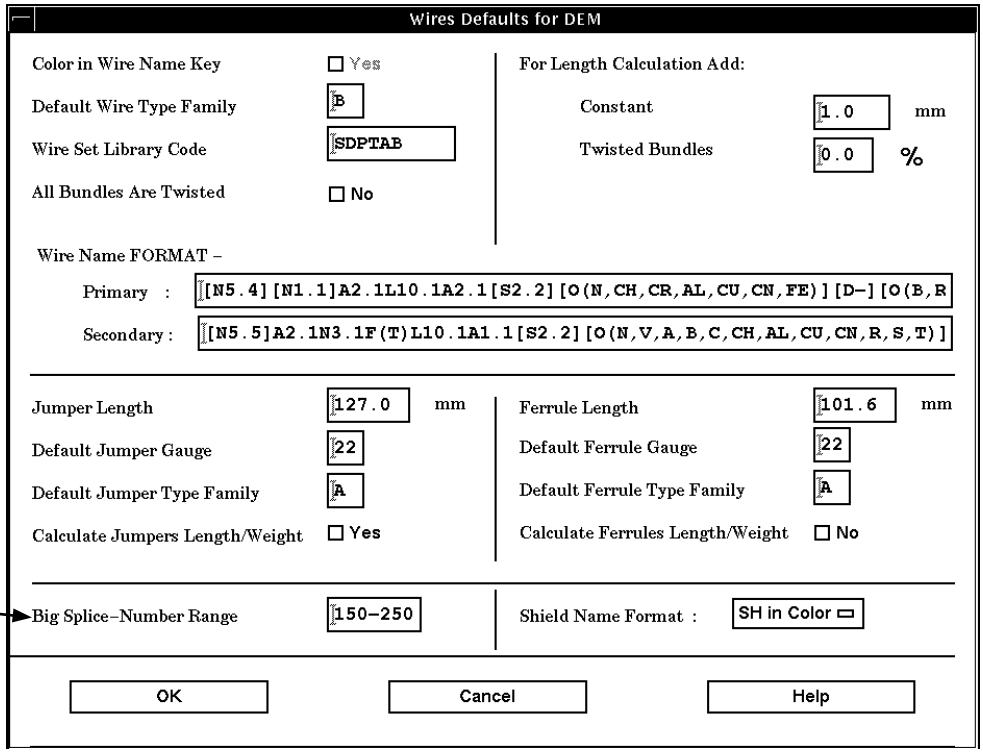
1. Select **Maintenance** ⇨ **Project Defaults....**

   The program displays the window shown below.



2. Press **Wires....**

   The program displays a window like the one below:



Big Splice-Number Range

3 In the field Big Splice-Number Range, change the upper number of the range (in the example above, 250) to 700 or a larger value

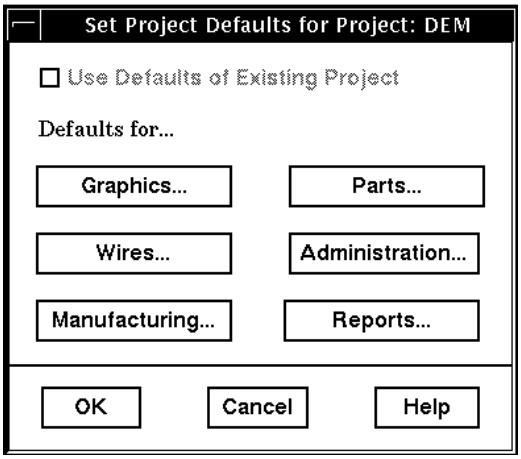
4 Press **OK**. Press **OK** in the Set Project Defaults window.

Setting this value in the field Big Splice-Number Range can be done any time before you integrate the first drawing. This default does not have to be set before the data is entered into HarnesSys.

Skipped Issue Letters

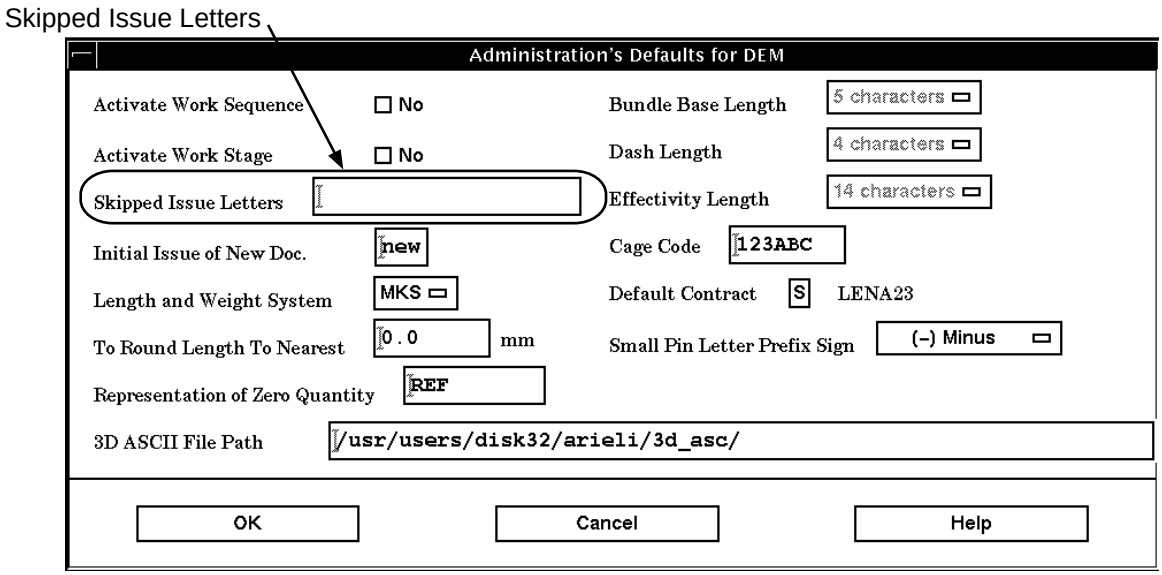
1 Select **Maintenance** ⇨ **Project Defaults....**

The program displays the window shown below.



2 Press **Administration....**

The program displays a window like the one shown below.



3 Erase the contents of the field *Skipped Issue Letters*. The field should appear as it does in the example above.

4 Press **OK**. Press **OK** in the Set Project Defaults window.

Saving Messages

In order to save messages displayed on the terminal (task 6) do the following:

At the system prompt in the UNIX environment, type **script xxxx** where **xxx** = the name of the file which will contain the messages.

Options In the UNIX Conversion Package

Below is a list of the options in the UNIX part of the CAESAR to *HarnesSys* conversion package:

Option/ Program	Description
0	Transfer CAESAR files into *HarnesSys* via the FTP.
1	Convert the symbol file; add new BLO symbols
2	Define documents.
3	Convert CAESAR drawings to *HarnesSys* format.
4	Insert CAESAR drawings into *HarnesSys.*
5	Insert wiring data into *HarnesSys.*
6	Create the Part List notes conversion table.
7	Load data into the Part Occurrence (PART_OCCUR) and the Part Specification (PART_SPEC) tables.
8	Load data into the BINGROUP table and update the Part Specification (PART_SPEC) table.
9	Process multi-bundle plugs for BRD10 projects.
B	Fix BINGROUP.

Order of Work

The options in the UNIX conversion package must be performed in a certain order. The order of the options is:

Option/ Program	Dependencies / Restrictions
0	This function is optional. The files must be transferred from the CDC environment to the UNIX environment, but you may prefer to use a different method for the file transfer.
1	Do after the transfer of the files is complete (either option 0 or another method). Converting the symbol file only needs to be done once, regardless of the number of CAESAR projects you are converting. When converting the first project you perform this function; for all other projects you skip this function. The symbol setup command must be entered into *HarnesSys* before invoking this program (see below).
2	Define documents: Select after the files have been transferred to the UNIX environment (option 0 or by an external transfer process).
3	Convert drawings: Select after the successful completion of options 1 and 2. The symbol setup command must be entered into *HarnesSys* before invoking this program (see below).
4	Insert drawings: Run after the successful completion of option 3.
5	Insert wiring: Run after option 4 successfully finishes.
6	Convert part list notes: Run any time after the files have been transferred into the UNIX environment (option 0 or by an external transfer process). Can run when the Define documents (option 2) function is running.
7	Insert part list: Run after option 6 successfully finishes.
8	Build bin group data: Run after option 7 successfully finishes.
9	Only run for BRD10 projects: run after options 3 and 7 successfully finish.

Symbol Library Preparation

Symbols in CAESAR for wire diagrams that begin with the letter E cannot be converted as they are. If, in your site, there are symbols that begin with

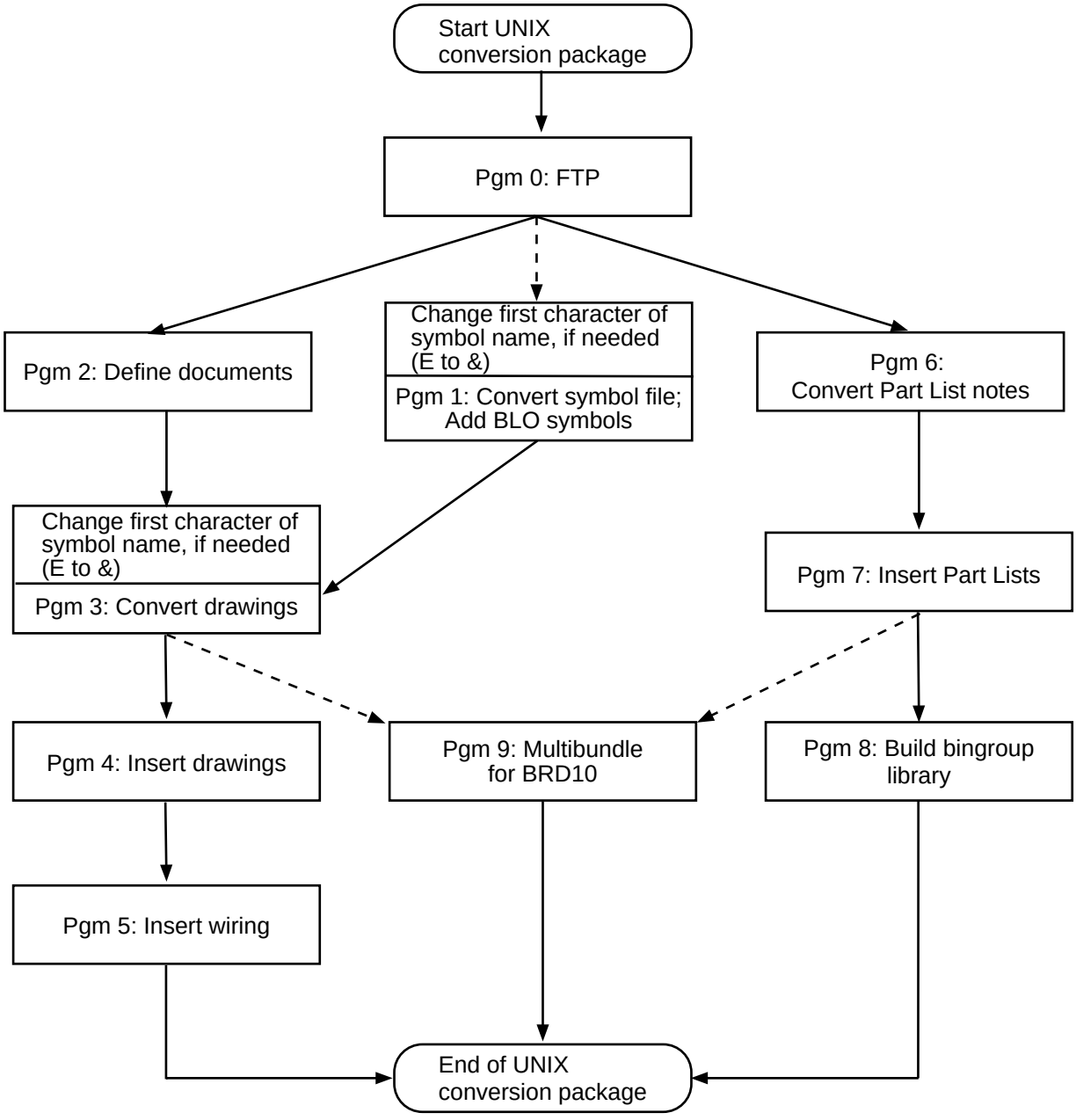
E, you must perform an extra step before the symbol file and the wire diagrams (ELCID) are converted (programs 1 and 3 in the UNIX conversion package). Do the following:

At the UNIX system prompt, type **setenv BLO_CODE_EDIT YES**

The UNIX conversion program converts all symbols that begin with "E" to symbols that begin with the character "&".

When work begins in the HarnesSys environment, instruct the wire diagram designers to use the new symbols that begin with "&" instead of the old symbols that begin with "E".

Below is a flowchart of the processes amd programs which you must run in the UNIX environment.



Work Flow - UNIX Environment

Invoking the UNIX Conversion Package

To begin running the UNIX / *HarnesSys* conversion package, regardless of the option you want to invoke, do the following:

1

In the UNIX computer:
change directories to the the conversion directory;
type: **harness ansi**

The computer displays a menu (see example below).

```
eyanov> harness ansi
Starting HarnesSys version r4a.05 on mht29
   New HarnesSys resources: ~/HARNESS and/or ~/Tk2Motif .
   Please update using : 'harness color_setup'.
 You have nothing in message queue.
Oracle on node @t:zoo3:tps7

Ansi terminal Options:
======================
   1 ) file_convert
   2 ) csr_convert
   3 ) Update_Part_Spec
   4 ) Update_Part_Occur
   5 ) Standart_Notes_Library
   6 ) Part_Description_Library
   7 ) Vendors_Library
   8 ) Area-Codes_Library
   9 ) Manual_Transaction_Update_Wires
   10 ) Bingroup_Library
   11 ) Wire_Set_Desc_Library
   12 ) Wire_Spec_Library
   13 ) Wire_Set_Library
   31 ) Analyzer_Single_Wire_Change
   32 ) Analyzer_Group_Wire_Change
   33 ) Analyzer_Path
   34 ) Next_Assembly_Document
   35 ) Exit ( or 'q')

Select option number :
```

2

Type: **2**

```
Select option number : 2
 == Selected csr_convert
 Enter project name :
```

3

Type the name of the project you want to convert.

```
Enter project name : 25X
==============
Project is 25X
==============

Select option
 0 ) FTP CSR files
 1 ) Define documents
 2 ) Convert caesar documents to harness format
 3 ) Insert caesar drawings into harness system
 4 ) Insert wiring into harness_system
 5 ) Convert SYMBOLS file (adding BLO new symbols)
 6 ) Create PART-LIST notes conversion table
 7 ) Load into PART_OCCUR & PART_SPEC
 8 ) Load into BINGROUP & Update PART_SPEC
 B ) Fix BINGROUP
 q ) Exit the program
Enter the option number:
```

Fig-4 CAESAR TO HarnesSys Conversion Menu

From this menu you can choose the option you want to invoke, taking into account the order of the actions you have already performed, as described on page 41.

Program 0: FTP CSR Files

To automatically carry out the file transfers within *HarnesSys*, do the following:

At the menu prompt '`Enter the option number:`' type: **0**

```
 Running FTP CSR files option ...
 Enter ftp cdc computer name m60
 Enter cdc account user name shiff
 Enter cdc account password shiff
 Enter cdc account charge including ,1 at end 80247570,1
  File hr_cdclist1 created. Now FTPing to get initial files ...
  Continue or quit (y/q) [y] ? y
netin: Connection reset by peer
Not connected.
Not connected.
Not connected.
Not connected.
Not connected.
Not connected.
Not connected.
  File hr_cdclist2 created. Now submiting FTP to get drawing files ...
  Continue or quit (y/q) [y] ? y
[1] 807

 Select option
  0 ) FTP CSR files
  1 ) Define documents
```

1

After answering y to continue point 1, the computer transfers the files listed below by using the FTP:

```
cdcftp1
cdcftp2
hr_cdclist1
ELCCONV
BLOCONV
TDOUT
HEADER
DRAWLIS
hr_cdclist2
RELWIR
```

The second part of the transfer is the transfer of the drawing files. This process occurs in the background, and you can continue to use the workstation for other processes in the meantime.

In order to check the progress of the FTP do the following:

Check the contents of the ELCCONV and the BLOCONV files to see which files will be transferred by the FTP.
In the directory in which the file transfer is taking place, type: **ls**

The computer displays the files in the directory in alphabetical order.

When you see the name of the last file (alphabetically) that needs to be converted in the list, you know that the FTP has finished.

Program 1: Convert SYMBOLS File

Checking the BANK File

The BANK file is the output of program 11 in the CDC environment and the input of program 1 in the UNIX environment. Some data is acceptable in the CDC environment, but causes program abends in the UNIX environment. Therefore before running program 1 in the UNIX environment it is recommended that you check the contents of this file for data that may cause abends.

Invalid data in the BANK file may consist of empty (blank) lines or lines that lack the symbol code at the beginning of the line. To check the file, do the following:

1. In UNIX, scan the BANK file. If you see any lines with invalid data, delete them. Save the updated file.

Symbol Library Setup Process

Before running program 1, remember to perform the symbol library setup process described below.

1. At the UNIX system prompt, type **setenv BLO_CODE_EDIT YES**

   The UNIX conversion program converts all symbols that begin with "E" to symbols that begin with the character "&".

Running Program 1

Enter the conversion package as described on page 44, then do the following:

4. At the menu prompt '`Enter the option number:`' type: **1**

```
Enter the option number: 1

Running convert SYMBOLS file option ...
 Creating NEW SYMBOLS file elcid_symbol_library_25x_hp.sym .
 New SYMBOLS file created.
 Copy this file to ~harness/dat directory with 644 access.
```

Fig-11

Program 2: Define Documents

This function defines the documents within *HarnesSys.* Input is the file TDOUT.

At the menu prompt '`Enter the option number:`' type: **2**

```
Enter the option number: 2
Running define documents option ...
Automatically add partlist (y/n,<cr> = n): y
Enter partlist dash number (max 4 char, default - 01): 001
Enter constant between prj and bundle (max 5 char, <cr> - none): autpl
Enter constant between bundle and dash (max 5 char, <cr> - none): -
 running...
```

Fig-10 Define Documents

For each wire list the program defines automatically a part list if you answer Y in the third line above.

The part list will be in the format that you define by answering the above questions. The effectivity of the part list will cover the entire range of the project.

If a problem occurs during this processing you can begin the process again. If some of the documents have already been defined, the program informs you,

```
Number of documents defined: 1823
Number of partlist doc defined: 151
```

Fig-12 End of Define Documents Process

Fig. 12 is an example of the notification at the end of the Define Documents process.

Program 3: Convert Drawings

This option converts all the wire diagrams and 2D Routing (BLO) drawings from the CAESAR format to the *HarnesSys* format.

Before running the program, do the following:

1 At the UNIX system prompt, type **setenv BLO_CODE_EDIT YES**

The UNIX conversion program converts all symbols that begin with "E" to symbols that begin with the character "&".

Enter the conversion package as described on page 4444, then do the following:

4 At the menu prompt '`Enter the option number:`' type: **3**

The program begins converting the wire diagrams. It lists each one as it converts it.

```
CONVERTED ELCID DRAWING EV1234
CONVERTED ELCID DRAWING DV1301A ...
```

and after all the ELCID drawings have been converted, reports how many it converted:

```
CONVERTED NNN ELCID DRAWINGS
```

After all the wire diagrams have been converted, the program asks:

```
ADJUST CLOCKING ANGLE BY 90 - Y/N
```

5 Type **Y** or **N**

This question is relevant for the BLO (2D Routing diagrams). If you answer **Y,** the program keeps the clocking angle symbol exactly as it is in CAESAR. If you answer **N** the program shifts the symbol by 90 degrees.

```
DRAWING FILE CBV0248 HAS BEEN CREATED!
DRAWING FILE CBV0259 HAS BEEN CREATED!
DRAWING FILE CBV0260 HAS BEEN CREATED!
CONVERTED  127 BLO DRAWINGS

Select option
 0 ) FTP CSR files
 1 ) Define documents
 2 ) Convert caesar documents to harness format
```

Fig.-16 End of Option 3

Program 4: Insert Drawings Into HarnesSys

This process enters the last released issue of each drawing into *HarnesSys.* The conversion also transfers the release dates and the issue numbers of all previous issues from CAESAR. However the drawings themselves are not saved and cannot be accessed.

Every drawing that is in status open is transferred, with each copy of the drawing that was saved in CAESAR.

At the menu prompt '`Enter the option number:`' type: **4**

```
Enter the option number: 4

Running insert drawings into harness option ...
 Getting MISSING_ISSUES from project defaults ...
 Getting USED_ISSUES from DRAWLIS + RELWIR files ...
 Updating MISSING_ISSUES (from- IOQ) excluding USED_ISSUES (to-).
```

Fig-15 Option 4

Program 5: Insert Wiring Into *HarnesSys*

Only the last released revision of the wire list document is transferred. The program does not convert history.

At the menu prompt '`Enter the option number:`' type: **5**

```
Enter the option number: 5

Running insert wiring into harness option ...
 Warning bundle 1101 has wires not from a wiring diagram
 Warning bundle 1101 has wires not from a wiring diagram
 Warning bundle 1101 has wires not from a wiring diagram
 Warning bundle 1101 has wires not from a wiring diagram
 Warning bundle 1101 has wires not from a wiring diagram
```

Fig-25

The program inserts wiring into the *HarnesSys* database. The program checks the wiring before doing the insert. If data is missing or invalid the program sends warning or error messages to the screen. For example if the diagram in the wire was not defined in the previous step, the program sends a warning message to the screen like those in Fig-25.

```
 Error unable to get sh2 family for 9999701
 Error unable to get jp family for 9999701
 Error unable to get tw family for 9999701
 Error unable to get sp family for 9999701
 Error: document undefined for 9999701
506 released bundles were processed
10 open bundles were processed

Select option
```

Fig-26

Fig-26 is an example of error messages displayed by the program and the totals it has accumulated. (The program displays the total number of released and open bundles it processed.)

Restart

If program 5 falls in the middle, you can continue from the point at which the program fell by following the instructions below:

In the UNIX environment using SQL, list the wires in the WIRE table (in *HarnesSys)* in descending order by the field LCD (LAST CHANGE DATE). The first wire in the list is the last wire that the program transferred.

In the files RELWIR and OPENWIR in the UNIX environment, erase all the wires which were already entered into the database.

Execute option 5 again.

Program 6: Create Part List Notes Conversion Table

At the menu prompt '`Enter the option number:`' type: **6**

```
Enter the option number: 6

Running create PART-LIST notes conversion option ...
Please enter Note Conversion numbers for following notes :
=== 1 4 5 6 A B C D F G J N P R Y Z ===
Enter number of note equivalent to note <1> ? 100
Enter number of note equivalent to note <4> ? 101
Enter number of note equivalent to note <5> ? 102
Enter number of note equivalent to note <6> ? 103
Enter number of note equivalent to note <A> ? 104
Enter number of note equivalent to note <B> ? 105
Enter number of note equivalent to note <C> ? 106
Enter number of note equivalent to note <D> ? 107
Enter number of note equivalent to note <F> ? 108
Enter number of note equivalent to note <G> ? 300
Enter number of note equivalent to note <J> ? 301
Enter number of note equivalent to note <N> ? 302
Enter number of note equivalent to note <P> ? 1001
Enter number of note equivalent to note <R> ? 1002
Enter number of note equivalent to note <Y> ? 1004
Enter number of note equivalent to note <Z> ? 1005
 File for NOTES  RELEPL.notes created.

Select option
```

Fig-17: Option 6

Program 7: Load *HarnesSys* Tables

At the menu prompt '`Enter the option number:`' type: **7**

```
Enter the option number: 7

Running insert PARTS into harness option ...
maxrejects is set to 50 .
Commit in 50
Commit in 100
Commit in 150
Commit in 200
Commit in 250
Commit in 300
Commit in 350
```

Fig-18: Option 7

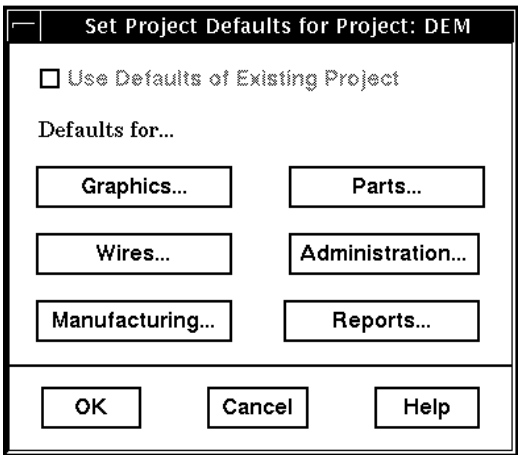
Program 8: Load BINGROUP Table

Setup Before Invoking Option 8

Before invoking this option, it is necessary to do the following:

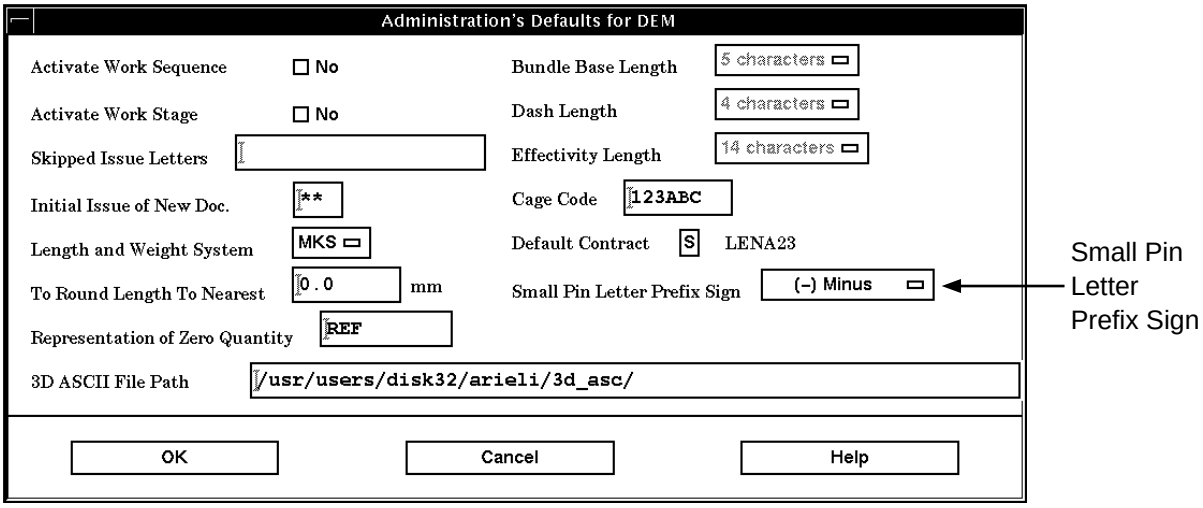
1. Select **Maintenance** ⇨ **Project Defaults....**

   The program displays the window shown below.



2. Press **Administration...**

   The program displays a window like the one below:



3. Check that the value in the file BINREP is the same as the value chosen in the field Small Pin Letter Prefix Sign.
   If the two values are not the same, either change the value in the Project Defaults or change the values in the BINREP file.

Operating Instructions for Program 8

4 At the menu prompt '`Enter the option number:`' type: **8**

.

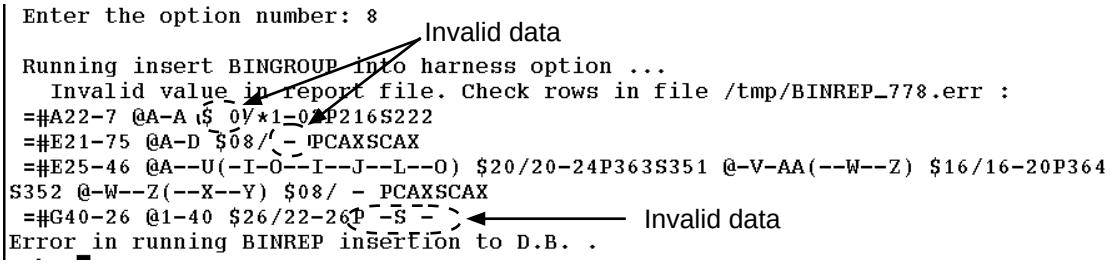


Fig-19: Option 8

The program checks every bin group record. For every record with invalid data the program displays an error message and displays the invalid data. See Fig-19.

For example, in Figure 19 there are various invalid data, circled with a broken line..

5 Fix the invalid data in the file BINREP in the UNIX environment using your system editor.

6 After correcting the invalid data, select option 8 again.

```
Enter the option number: 8

Running insert BINGROUP into harness option ...
 File /tmp/BINREP_12446 created with 166 /tmp/BINREP_12446 lines.
 File /tmp/BINREP_12446.sql created with 225 /tmp/BINREP_12446.sql lines.
Going to delete data of following tables:
  BINGROUP; CONTACT; PINBINCODE; BINCODE; BINCODE_AWG;
Delete (y/n) [y] ?
```

Fig-20

The program notifies you that it is deleting the data that may have already been loaded into the *HarnesSys* database. This may happen if you are running the program a second or third time. See Fig-20.

```
Delete (y/n) [y] ?
 File /tmp/BINREP_12446.lis created with log of oracle inserts. Please check.
 File /tmp/BINREP_ps_12446.sql created with 1169 /tmp/BINREP_ps_12446.sql lines
.
 Please remove /tmp/BINREP_* after done.
 File /tmp/BINREP_ps_12446.lis created with log of oracle updates. Please check
.

     List  duplicate bincode with different data
 ------------------------------------------------------
           BINCODE              DATA
             18P                18/18-22
             18P                20/18-18
             18P                20/18-18
             18P                26/22-26
             18S                18/18-22
             18S                20/18-18
             18S                20/18-18
             18S                26/22-26
             20P                20/18-24
             20P                20/20-24
             20S                20/18-24
             20S                20/20-24
             354                22/22-28
             354                2D/22-26

Do you want to exit the program and correct data in the BINREP file?
        ( Y[es] - exit ;  N[o] - continue) [N] -
```

Fig-21

The program checks the input file from CAESAR and if there is duplicate data, sends a warning.

At the end of the run

```
BINKEY = #I07A0    PINDATA = $20/16-16P16PS16S    PINGROUP = @1-7
contact_size=20  awg_from-16  awg_to-16
Contact key=I07A0  type=PIN,SOCKET  bincode(PIN)=16P   bincode(SOCKET)=16
Pin name(realy):  1  2  3  4  5  6  7


BINKEY = #I12D0    PINDATA = $20/20-24P20PS20S    PINGROUP = @1-12
contact_size=20  awg_from-20  awg_to-24
PIN's bincode=20P already exists with another  data contact size and AWG range.

 Enter: S - Skip this row; E - Exit from program; xxx - New bincode value (3 pos
) [S] ? s
```

Fig-22

Program 9: Process Multi-Bundle Plugs

This program should only be run if the project you are converting is a BRD10 project.

At the menu prompt '`Enter the option number:`' type: **9**

After Conversion

There are certain tasks that you must do after you have successfully completed all the conversion options (1 - 8) and before you begin ordinary work in *HarnesSys.*

```
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1301 has wires not from a wiring diagram
  Warning bundle 1302 has wires not from a wiring diagram
 Error cannot add free_pin record for 1302705 - 4YP M

ERROR FROM
ORACLE_ERROR   -1
ORA-00001: unique constraint (HARNESS.FREE_PIN_KEY) violated
           Warning bundle 1302 has wires not from a wiring diagram
```

Fig-23

Family Code Conversion

Family code is a field used in both CAESAR and *HarnesSys* to indicate in which shield the wire is located. In CAESAR the family code is a two character code which may consist of letters or four characters: - + $ and *. In *HarnesSys* this field is a three letter code. Program 5 in the UNIX conversion package, which inserts the wiring into *HarnesSys*, converts the CAESAR values to the equivalent *HarnesSys* values.

If the CAESAR code is just letters, the conversion program adds the letter "A" before the value in CAESAR.

The table below shows the conversion of alphabetic values:

CAESAR	*HarnesSys*
A	AA
BA	ABA
CD	ACD

For CAESAR codes with special characters the program converts them according to the table below:

Code Conversion

CSR	HRN	CSR	HRN	CSR	HRN	CSR	HRN	CSR	HRN
A+	BAA	N+	BCA	+A	BEA	-W	BGA	$O	BIA
A-	BAB	N-	BCB	+B	BEB	-X	BGB	$P	BIB
A*	BAC	N*	BCC	+C	BEC	-Y	BGC	$Q	BIC
A$	BAD	N$	BCD	+D	BED	-Z	BGD	$R	BID
B+	BAE	O+	BCE	+E	BEE	-+	BGE	$S	BIE
B-	BAF	O-	BCF	+F	BEF	--	BGF	$T	BIF
B*	BAG	O*	BCG	+G	BEG	-*	BGG	$U	BIG
B$	BAH	O$	BCH	+H	BEH	-$	BGH	$V	BIH
C+	BAI	P+	BCI	+I	BEI	*A	BGI	$W	BII
C-	BAJ	P-	BCJ	+J	BEJ	*B	BGJ	$X	BIJ
C*	BAK	P*	BCK	+K	BEK	*C	BGK	$Y	BIK
C$	BAL	P$	BCL	+L	BEL	*D	BGL	$Z	BIL
D+	BAM	Q+	BCM	+M	BEM	*E	BGM	$+	BIM
D-	BAN	Q-	BCN	+N	BEN	*F	BGN	$-	BIN
D*	BAO	Q*	BCO	+O	BEO	*G	BGO	$*	BIO
D$	BAP	Q$	BCP	+P	BEP	*H	BGP	$$	BIP
E+	BAQ	R+	BCQ	+Q	BEQ	*I	BGQ		
E-	BAR	R-	BCR	+R	BER	*J	BGR		
E*	BAS	R*	BCS	+S	BES	*K	BGS		
E$	BAT	R$	BCT	+T	BET	*L	BGT		
F+	BAU	S+	BCU	+U	BEU	*M	BGU		
F-	BAV	S-	BCV	+V	BEV	*N	BGV		
F*	BAW	S*	BCW	+W	BEW	*O	BGW		
F$	BAX	S$	BCX	+X	BEX	*P	BGX		
G+	BAY	T+	BCY	+Y	BEY	*Q	BGY		
G-	BAZ	T-	BCZ	+Z	BEZ	*R	BGZ		
G*	BBA	T*	BDA	++	BFA	*S	BHA		
G$	BBB	T$	BDB	+-	BFB	*T	BHB		
H+	BBC	U+	BDC	+*	BFC	*U	BHC		
H-	BBD	U-	BDD	+$	BFD	*V	BHD		
H*	BBE	U*	BDE	-A	BFE	*W	BHE		
H$	BBF	U$	BDF	-B	BFF	*X	BHF		
I+	BBG	V+	BDG	-C	BFG	*Y	BHG		
I-	BBH	V-	BDH	-D	BFH	*Z	BHH		
I*	BBI	V*	BDI	-E	BFI	*+	BHI		
I$	BBJ	V$	BDJ	-F	BFJ	*-	BHJ		
J+	BBK	W+	BDK	-G	BFK	**	BHK		
J-	BBL	W-	BDL	-H	BFL	*$	BHL		
J*	BBM	W*	BDM	-I	BFM	$A	BHM		
J$	BBN	W$	BDN	-J	BFN	$B	BHN		
K+	BBO	X+	BDO	-K	BFO	$C	BHO		
K-	BBP	X-	BDP	-L	BFP	$D	BHP		
K*	BBQ	X*	BDQ	-M	BFQ	$E	BHQ		
K$	BBR	X$	BDR	-N	BFR	$F	BHR		
L+	BBS	Y+	BDS	-O	BFS	$G	BHS		
L-	BBT	Y-	BDT	-P	BFT	$H	BHT		
L*	BBU	Y*	BDU	-Q	BFU	$I	BHU		
L$	BBV	Y$	BDV	-R	BFV	$J	BHV		

ode Conversion, Cont.

CSR	HRN	CSR	HRN	CSR	HRN	CSR	HRN	CSR	HRN
M+	BBW	Z+	BDW	-S	BFW	$K	BHW		
M-	BBX	Z-	BDX	-T	BFX	$L	BHX		
M*	BBY	Z*	BDY	-U	BFY	$M	BHY		
M$	BBZ	Z$	BDZ	-V	BFZ	$N	BHZ		

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CAESAR To *HarnesSys* Manual Comment Form

Your comments and suggestions help us determine how well we meet your needs and also help us improve the documentation. Please fill out this form and fax it to:

HarnesSys Project Manager
Israel Aircraft Industries
Engineering Division
Department 4422
Fax: 972 - 3 - 935-5049

Who Are You?

☐ Project manager ☐ Engineer (wiring designer)
☐ DBA ☐ Data entry personnel
☐ Programmer ☐ External user
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