

VLA Technical Report No. 51

DRAWING LISTING PACKAGE VERSION 3.0 (11/19/79)

User's Self Help Guide

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SECTION 1.0 PROGRAM OVERVIEW

The drawing listing package available to draftpersons on the DEC-10 system is intended to eliminate much of the drudgery of manually maintaining sorted up-to-date lists of all drawings currently logged in NRAO's Drafting Department. When a new drawing is generated, the draftsman adds the drawing's description to a hand written list maintained for history purposes. Once several new drawings are accumulated, he is then responsible for entering this new data into the Drawing Maintenance Package, which in turn merges this data with previous drawing data to produce neat, sorted listings for later reference (i.e. for locating a drawing based on scanty or no information). The listings produced are sorted by unit type, project number within a unit type, and finally by the drawing size within a unit. Given this type of information, it is possible to locate a drawing given little more than what the drawing is about and which system assembly this component is used in.

Optionally, the program will generate a master sorted listing of all NRAO drawings based on ONLY the drawing size and the project-assembly number (drawing #). This listing is very useful for locating a given drawing with only a drawing number.

All these operations are performed not only on current NRAO drawings, but also on a file of 'obsolete' drawings which have been removed from the active drawings filing system. This option is used to maintain traceability of previous revision levels within the system. When the operator deletes an entry from the current drawings

information, the program provides an option to automatically cross-post this drawing to the obsolete file. Conversely, when a drawing is eliminated from the 'obsolete' file, the operator has the option of posting it back into the current drawings file (i.e. if the operator had accidentally obsoleted a current drawing and wishes to restore it).

The actual logic within the program will not be covered in this manual, however the program operation from the operators standpoint will be covered in the following sections, with a full description of each sub-program operation presented.

SECTION 2.0 PROGRAM OPERATION

A. General Information

On the DEC-10 computer system, a special user's area has been allocated strictly for the drafting department. This area is copied onto magnetic tape on a monthly basis as part of the VLA software backup to allow for reconstruction of information if (or should I say "when"?) a MAJOR crash of the computer occurs. Should this ever occur, seek help from the VLA computer librarian(s), currently Ina Cole or Sandy Treppa-Richards, to reconstruct the previous months version of drafting data.

Drafting User Area #: [13,340]

Drafting Password: DRAFT

B. Starting the Program

The first (and one of the major) step in using this program is locating an unused computer terminal on the DEC-10. Once this is done, follow EXACTLY the procedure outlined below for logging in and starting program execution:

.TC	(USER TYPES CONTROL C)
.LOG 13,340,DRAFT	(USER TYPES USER AREA # & PASSWORD)
:	:
: COMPUTER PRINTS	:
: LOGON DATA HERE	(COMPUTER TYPES LOGON INFO)
: JOB #, TTY#, ETC.	:
:	:
.DO DRAFT	(USER TELLS DEC TO START PROGRAM)
.SET TTY UC	(COMPUTER TYPES ALL THIS INFORMATION)
.SET TTY WIDTH 132	(" " " ")
.R BASIC	(" " " ")
READY, FOR HELP TYPE HELP	(" " " ")
OLD	
OLD FILE NAME --DRAFT.BAS	(DEC LOADS PROGRAM IN)
READY	(PROGRAM LOADED AT THIS POINT)
RUNNH	(DRAFTING PROGRAM EXECUTED FINALLY)
	(PROGRAM RUNNING AT THIS POINT)

FOR THIS ENTIRE SECTION:
WHICH FILE DO YOU WANT TO WORK ON ?
CURRENT (CURRENT) OR OBSOLETE (OBSOLETE) DRAWINGS
? <YOU TYPE CHOICE HERE>

(SCREEN IS CLEARED & MENU PRINTED)

ADD	ADD NEW RECORDS TO THE DATA BASE
DELETE	DELETE DRAWINGS FROM THE DATA BASE
EDIT	EDIT (CORRECT) EXISTING RECORDS
PRINT	PRINT THE DATA BASE AS IT IS CURRENTLY SORTED
SORT	SORT THE DATA AND PRINT COPIES
LONGSORT	SORT THE CURRENT FILE BY PROJECT # ONLY
LONGPRINT	PRINT THE <LAST ONE DONE> LONGSORT FILE
QUIT	QUIT THE PROGRAM

CURRENT FILE = (EITHER CURRENT OR OBSOLETE DEPENDING ON CHOICE ABOVE)

<TYPE YOUR CHOICE HERE>	(PROGRAM JUMPS TO PROCEDURE SPECIFIED)
	(IF YOU MAKE AN ERROR, IT ASKS AGAIN)

C. ADD RECORDS Command

You will get to this point by having typed 'ADD' at the main menu level. The purpose of this module is to add new information (drawings) to the existing data base. The information added here will be appended to the proper data file regardless of whether current or obsolete was specified for this session's workfile.

Through this entire program description, the data typed by the computer is shown unbracketed while user supplied data is enclosed in angle brackets. Example: <choice>. Comments are presented in parenthesis. The individual modules in this document are presented in a 'semi' flowchart mode. Please note that on revision entry, the program automatically adds asterisks so the effective revision level is limited to three characters.

```

-->>(screen cleared)

REF #   XXXX                                (NEXT AVAILABLE ENTRY IN FILE)
WORK FILE = CURRENT/OBSOLETE                (TELLS WHICH FILE IS ACTIVE)
UNIT/MODULE (MAX 6 CHAR) [QUIT TO EXIT] ? <UNIT/MODULE>
                                              (TO EXIT TYPE 'QUIT')
DRAWING # (MAX 20 CHAR) ? <DRAWING #>      (ENTER DWS #)
TITLE (MAX 45 CHAR) ? <TITLE>              (ENTER TITLE)
REVISION (MAX 5 CHAR) ? <REV>              (ENTER REV, MAX 3 CHAR, *---*)

<UNIT>          <DRAWING #>               (COMPUTER PRINTS DATA FOR)
<*REV#>         <TITLE>                   (VERIFY, DOUBLE CHECK ONLY)

IS THIS RIGHT (Y,N) ? <Y/N>                (YOU VERIFY CORRECTNESS)
        |Y                               |N
        |                               |
<<----WRITE ENTRY TO DISK
|
|
<<----DO YOU WANT TO QUIT NOW (Y,N) ? <Y/N>
    N           |Y
                |
                |
                RETURN TO MAIN MENU

```

D. DELETE Command

You get to this point by typing 'DELETE' at the main menu level. To delete a record, the reference number of the entry MUST be known. This number is available from the unit/module or standard sort listings. If an attempt to delete a non-existent record is made, the program keeps asking for a valid number.

```
----->> <screen cleared>
|
| REF # OF ITEM TO DELETE (0 TO EXIT) ? <####> (TELL IT WHICH ITEM)
| REAL # 10
|
| RETURN TO MAIN MENU
|
| REF # #### (DISPLAYS DATA IN)
| (QUESTION)
|
| UNIT = (UNIT#) DRAWING # (DWG #)
| REVISION = (REV) (TITLE)
| CONFIRM DELETION (Y,N) ? <Y/N> (GIVES YOU AN OUT)
| IN Y
|<<-----
|
|<<-----WANT TO POST THIS ITEM TO: 'OTHER FILE' (Y,N) ? <Y/N>
| N Y
|
|<<-----COPIES ENTRY TO OTHER FILE
```

E. EDIT Command

To reach this module, you will have typed 'EDIT' at the main menu level. The purpose of this unit is to allow making changes to an existing entry rather than having to (1) delete the old entry, (2) re-entering the corrected data, and (3) repeating this process until no mistakes are made. Note that when the revision field is changed, the operator MUST add leading and trailing asterisks if they are desired, as the editor doesn't do this.

```
----->> <screen cleared>

WORK FILE = (SESSION WORK FILE)

REF # OF RECORD TO EDIT (0 TO EXIT) ? <#>----->>MAIN MENU
      |
      |VALID #
      |
REF # (####)                                     (SHOWS ENTRY AS IT IS)

UNIT/MODULE = (UNIT)    DRAWING # (DWG #)
REV = (REV)             (TITLE)

EDITOR: UNITS DRAWING REVISION TITLE QUIT ? <U/D/R/T/Q>

<<-----WRITES ENTRY AS DISPLAYED <<-----Q-----
<<-----NEW TITLE (MAX 45 CHAR) ? <TITLE> <<-----T-----
<<-----NEW REV (MAX 5 CHAR) ? <REV> <<-----R-----
<<-----NEW DRAWING # (MAX 20 CHAR)? <DWG#> <<-----D-----
<<-----NEW UNIT/MODULE (MAX 6 CHAR)? <UNIT> <<-----U-----
```


F. PRINT Command

'PRINT' at the main menu point will get to this utility, whose purpose is to create a disk file called 'PRINT.LPT', containing the formatted listings of whichever file is the current work file. For the CURRENT data file, the input file is 'DRAFT.BAS', while the OBSOLETE data file is 'OLD.DAT'. Although the program says it is printing the data, it is really just written to a disk file and held until the operator exits the drafting program and explicitly tells the computer to go out and print all data being held. This operations is covered in a later section.

This utility also has the option of printing drawing lists for a single unit/module rather than the entire data file, such that the operator can go in and run off a listing of all drawings explicitly assigned to a single unit.

<screen cleared>

```
HOW MANY COPIES (1..5) ? <#>                (WON'T ALLOW MORE THAN 5)
WANT A LISTING FOR A SINGLE UNIT/MODULE (Y,N) ?<Y/N>
IN      Y
|      UNIT/MODULE TO LOOK FOR (MAX 6 CHAR) ? <UNIT>
|      |
|<<-----
|
|
|
--->>PRINTING COPY # (1)
    PRINTING COPY # (.)
    PRINTING COPY # (N)
    |
    |
    MAIN MENU
```

G. SORT Command

Type 'SORT' at the main menu to get here. This module takes the work file and sorts it according to a) unit/module, b) by project/assembly number and optionally c) by the drawing sizes. This routine is very slow due to large amounts of number crunching and I/O operations, so don't start sorting a data file at 4:00 pm or just prior to system downtime. SORT will jump into the print routine when the sort is completed.

SORT THE DRAWINGS BY SIZE TOO (Y,N) ? <Y/N>

|
|Y,N
|

COMPACTING.....

(ELIMINATE DELETED RECORDS)

M=(# RECORDS)

M=(# RECORDS/2)

M=(# RECORDS/4)

.....

M= 1

(SORT PROGRESS INDICATOR)

|
|
|

PRINT ROUTINE

H. LONGSORT Command

'LONGSORT' will get you to this point. This routine starts by copying the current workfile into a file called 'LONG.DAT', compacts it and proceeds to sort it only by drawing (project) numbers, resulting in a strict alpha/numeric sort. Here again, budget enough time for this subroutine to complete operation in the current working day. LONGSORT will destroy any previously created LONG.DAT file, so if DRAFT is run twice (current and obsolete drawings) with a LONGSORT performed on both files, the first created file MUST be renamed prior to the second execution to keep from losing the first LONGSORT data file. Refer to a DEC-10 Tops 10 operation manual for details.

```
COPY COMPLETED, COMPACTING NOW...      (ELIMINATE DELETED RECORDS)
M=( # RECORDS)                          (SORT PROGRESS INDICATOR)
M=( # RECORDS/2)
M=( # RECORDS/4)
.....
M= 1
  |
  |
  |
LONGPRINT ROUTINE
```

I. LONGPRINT Command

To get here, type 'LONGPRINT' at the main menu level. This utility will take the file 'LONG.DAT' (created by the last execution of LONGSORT) and format it, appending it to any previous data in the PRINT.LPT file for later printing. There are NO options other than the number of copies desired (1..5). Upon completion, it returns to the main menu level.

J. QUIT Command

QUIT causes the drafting program to terminate operation and returns control to the DEC basic interpreter, whose presence is signified by a prompt of 'READY'. The user is now free to actually print the previously generated printer files, or the exit (Log Off) the computer system. Refer to Section 3.0 for BASIC operations or to the DECSYSTEM-10 User's Manual for monitor commands.

3.0 DECSYSTEM-10 BASIC INTERPRETER COMMANDS

The intent of this section of the manual is to present just enough information for the person using the Drafting Logging Package to be able to interface with the DEC BASIC interpreter well enough to perform cursory operations, including listing and disk directories, submit printing jobs and to exit from the system. For more indepth information, the reader is referred to the DECSYSTEM 10 BASIC CONVERSATIONAL LANGUAGE MANUAL which should be available from the DEC software librarian.

A. BYE or GOODBYE Commands

These commands are used at the BASIC interpreter level (prompt is READY) to exit the user from not only the BASIC interpreter, but also from the DEC-10 itself. This command is invoked by typing 'BYE'CR'', and will automatically log the user off without destroying any disk files (data, programs, etc.).

B. COPY Command

COPY is used to transfer disk files (information) from one device to another. If the data to be transferred is a text file, it can be transferred to the user's terminal or to the line printer directly. The proper format for this command is:

```
COPY dev1:file1.ext>dev2:file2.ext
```

where devn: is the device (default value is DISK: for disk)

file1.ext is the file to be transferred

file2.ext is the destination file

EXAMPLES: COPY DRAFT.DAT>OLD.DAT (COPY DRAFT.DAT TO OLD.DAT)

COPY LISTS.LPT>LPT: (LISTS.LPT XFERRED TO PRINTER)

COPY PRINT.LPT>TTY: (DISPLAY PRINT.LPT ON USER'S TERMINAL)

C. CAT Command

The CAT command is used to display a catalog of all disk files contained in the user's disk area. The proper format for this command is "CAT'CR'", and will produce a listing as shown below.

```
READY          (BASIC says its ready for a user command)
CAT            (user types this)

DRAFT.BAS      (this is a typical directory for the drafting area)
DRAFT.DAT
PRINT.LPT
OLD.DAT
LONG.DAT
```

D. MON Command

The MON command is used to transfer control from the DEC basic interpreter to the TOPS-10 monitor, which will allow the user to perform more low-level operations with the computer than are available through the basic interpreter, including querying devices such as the line printer for their status, controlling mag tapes, executing other programs, etc. The proper form for this command is: 'MON'CR'', and the monitor's presence is denoted by a period (.) for a prompt.

E. QUEUE Command

The QUEUE command is used to transfer text files from the disk to the line printer for printing purposes. The user has the option of destroying the disk file once it has been printed, or preserving the file for later use. Another option (switch) will allow printing of multiple copies of the file without repeating the QUEUE command N times.

FORMAT:

```
QUEUE file.ext/UNSAVE/nCOPIES/LIMITm
```

where: file.ext is the complete name of the file to print

/UNSAVE is an option switch to delete the file upon completion.
DON'T use /UNSAVE unless deletion is desired.

/nCOPIES is the number of copies desired (if not 1)

/LIMIT m is a switch to over-ride a predefined limit of 200
pages, in the event of a large print job.

EXAMPLE:

```
QUEUE PRINT.LPT/UNSAVE/5COPIES/LIMIT 1000
```

print the file PRINT.LPT, destroy upon completion,
make 5 copies, boost output limit to 1000 pages.

F. RUNNH Command

The RUNNH command is used to restart execution of a basic program currently in memory. If the user has returned to the monitor and restarted the basic interpreter, the previously resident program will have been destroyed. However, if the user has merely exited his program to the basic level to do some print queueing, disk cataloging, etc. the program will be resident and can be restarted by typing 'RUNNH'.

G. UNSAVE Command

The purpose of the UNSAVE command is to delete file names on disk (a housekeeping function). Care must be exercised with this command, as once a file is deleted IT CANNOT BE RECOVERED!!!

FORMAT:

UNSAVE file1.ext,file2.ext....