

# Printing Objects

Objects that can be edited and saved can also be printed in a number of ways.

1. Issue the PR line command for an object from a list of object names;
2. Issue the PRINT function command from the object's Entry Panel with identifiers in the parameter input fields to print the object;
3. Issue the PRINT function command from any system screen in the format

```
PRINT object-type object-parameters,function-parameters
```

where the object parameters depend on the object type (see the description of the required object type). Function parameters can consist of the following:

Parameter	Meaning
ASIS	Valid from an Editor session only: prints the whole Editor session, including header, PF key line etc. For more details see the subsection Printing from an Editor Session.
CONTROL / CC	Honors any ASA or machine code control characters. No additional headers are printed.
<printer name>	Name of the printer. This printer overrides the printer specified in your user profile.
NOCONTROL / NO	Deactivates automatic carriage control when printing Natural objects or job SYSOUT files.
WORKPOOL	Writes the output to the user workpool.

Or the following keyword parameters can be used:

Parameter	Meaning
PRINTER	Name of the printer.
DRIVER	Specify the name of a printer control character table as defined in the Natural NTCC macro, or under Com-plete you can specify the name of a logical output driver routine, which can perform additional output formatting during printing.
FORM	Specify a printout form specification.
NAME	Specify a list name for the printout.
DISP	Specify the disposition of the printout (Com-plete printing): DDelete after printing (default); HHold printout, do not print; L Leave in spool queue after printing.
COPIES	You can specify the number of additional printouts.
PS	Specify the number of lines per page you want for this printout.
SUPPRESS	If you enter Y, Natural does not print header information or generate form feeds.
NOM	NOM=YES indicates that the extended Entire Output Management interface is used for printing. For further information see the subsection Natural ISPF Parameters in Section System Configuration of the Natural ISPF Administration Documentation.

**Example:**

```
PRINT NAT T1M1, PRINTER=DAEPR1 COPIES=3 PS=20
```

In addition to printing Natural objects you can also print help texts currently displayed on the screen. Just enter the PRINT command from your help screen.

**Note:**

Carriage control when printing Natural objects or SYSOUT files is automatic (see the NO function parameter).

The user workpool can be used as destination for various types of output: macro output, output of Natural programs, output from Natural facilities. For more information, see the subsection User Workpool beginning on page 3 in Section Common Objects.

When printing to the user workpool is selected, the interpretation of carriage control characters is automatically switched off.

**Example:**

The command:

```
PR N NSPF120(MYPROG),NO
```

prints Natural object MYPROG in library NSPF120 at the default printer without automatic carriage control.

The hardcopy device at which the output is printed is selected according to the following hierarchy:

- The printer specified in the function parameters;
- The printer specified in your user profile.

If a wildcard \* is specified as printer name, a window opens after you issue the PRINT command prompting you for the printer name and other printer parameters. The data entered in this window become the defaults for the next PRINT command prompting in your Natural session:

```
----- NATURAL ISPF MAIN MENU -----
OPTION  ===> PRINT N NSPF120(MYPROG),*
                                         Userid   BRY
                                         Time     12:21:35
                                         Terminal DAELC630
          +-----Print parameters-----+
0  PROF !                               !
1  NATU ! Enter printer : _____ !
2  VIEW ! Lines per page : 60          ! Views   Node   148
3  ERRO ! Interpret CC : _____ ! es
4  PRED ! Suppress Header: _____ !
5  WORK ! Listname      : _____ !
6  CONT ! Form          : _____ !
          ! Disp         : _____ (D/L/H) !
7  JOBS ! Copies        : _____ (0-255) ! OS/390)
8  PDS  ! Log.-Driver   : _____ !
9  DATA +-----+
10 JOBS          - Display JOBS status and data (VSE)
```

The input fields are described on the following page.

- If no printer is specified in your user profile, the group profile is searched for a printer: for example, if your user ID is ABC, profile AB\* is searched, then A\*, and then \*;
- If no printer is specified in your user group profile, the printer specified in your TP environment is used;
- If no printer is specified in your TP environment, the printer assigned to NATURAL PRINTER 2 is used (see the Natural profile parameter PRINTER);

If none of the above is found, you are notified by an error message.

Meaning of the input fields:

Field	Meaning
Enter printer	Enter printer name (this can also be Workpool).
Lines per page	Number of lines to be printed on a page before a page break.
Interpret CC	Specifies whether ASA or machine control characters, if they appear in the printout, are honored ( <b>Y</b> or <b>N</b> ).
Suppress Header	If you enter <b>Y</b> , Natural does not print header information or generate form feeds.
Listname	Specify a name of the printout.
Form	Specify a printout form.
Disp	Disposition of printout: Del (D): Delete after printing (default); Hold (H): Hold printout, do not print; Keep (L): Leave in spool queue after printing.
Copies	Specify number of copies (maximum is 255).
Log.-Driver	Specify the name of a profile form, that is, the name of a printer control character table as defined in the NTCC macro (see the <b>Natural Documentation</b> for more information); or: Specify the name of a logical output driver routine to perform additional output formatting during printing. Note: If you want to use the logical output drivers under Software AG's TP monitor Com-plete ask your administrator to activate the special USPOOL interface with APPLYMOD 22.

## Printing from an Editor Session

1. Issue the PRINT command from an Editor session with the object in EDIT or BROWSE mode to print the member;
2. Use the Editor line command **P** to print the selected line, or mark the first and the last lines of a block of text with the Editor **PP** line command to print the block from the member;

**Note:**

When issuing the PRINT command from an Editor session, the current boundary settings (BNDS Editor command) are respected: only the data within the set boundaries are printed.

When issuing a PRINT command from an Editor session, you can use the special parameter ASIS as follows:

```
PRINT, ASIS
```

- If you have a printer defined in your Natural profile, the whole Editor session is printed as it would appear on your screen.
- If you have an asterisk defined as printer in your Natural profile, you are prompted for the printout parameters:

```

BROWSE-NAT: NSPFEXAM(IDB-ADRP)-Program->Struct ----- Columns 001 072
COMMAND===> print,asis                                SCROLL===> CSR
***** *** +-----Print parameters-----+ *****
000010 * E !                                           ! a window:
000020 * ! Lines per page      : 60                    ! pplication logic
000030 * ! Take linesize from   :                      ! or messages only
000040 * !   edit session       : X                    !
000050 DEF !   or screensize    :                      !
000060 LOC ! Print prefix       : X                    !
000070 LOC ! Enter printer     : DAEPR12              !
000080 1 A ! Listname          : _____            !
000090 2 ! Form                  : _____            !
000100 2 ! Disp                  : L_____ (D/L/H)    !
000110 2 ! Copies                : _____ (1-255)   !
000120 2 ! Log.-Driver          : _____            !
000130 2 ! Print via NOM        : _____ (Y/N)      !
000140 1 K +-----+
000150 2 PERSONNEL-ID
000160 2 NAME
000170 2 ADDRESS-LINE (1:2)
000180 2 COUNTRY
000190 1 #FUNK (A1)
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help Split End  Suspe Rfind Rchan Up      Down Swap Left  Right Curso
    
```

Meaning of the input fields:

Field	Meaning
Lines per page	Number of lines to be printed on a page before a page break.
Take linesize from edit session	Mark this field if the line length of the printout is to correspond to the length of the edit session (this might be more than 80).
or screensize	Mark this field if the line length of the printout is to correspond to the line length of your screen.
Print prefix	Mark this field if you want the prefix area (line numbers, labels, etc.) printed.
Enter printer	Enter printer name (this can also be Workpool).
Listname	Specify a name of the printout.
Form	Specify a printout form.
Disp	Disposition of printout: Del (D) Delete after printing (default); Hold (H) Hold printout, do not print; Keep (L) Leave in spool queue after printing.
Copies	Specify number of copies (maximum is 255).
Log.-Driver	Specify the name of a profile form, that is, the name of a printer control character table as defined in the NTCC macro (see the <b>Natural documentation</b> for more information); or: Specify the name of a logical output driver routine to perform additional output formatting during printing. Note: If you want to use the logical output drivers under Software AG's TP monitor Complete ask your administrator to activate the special USPOOL interface with APPLYMOD 22.
Print via NOM	Enter <b>Y</b> to use the extended interface between Natural and Entire Output Management.

