Using Reporting Transactions

This section describes reporting transactions and the commands which you can use with them.

Note:
Data maintenance transactions are described in the section Data Maintenance Transactions later in this documentation.

This section covers the following topics:

- What are Reporting Transactions?
- Listing Transactions
- Adding Transactions
- Keeping Transactions
- Saving Transactions
- Running Transactions
- Reports Which are Too Wide
- Modifying Transactions
- Executing Transactions
- Copying Transactions
- Deleting Transactions
- The Information (Info) Function
-

Commands Available From Within a Transaction

What are Reporting Transactions?

Reporting transactions are the most important part of Super Natural.

Super Natural's main task is to obtain data from a database file, work file or PC file. Reporting transactions provide you with the framework necessary to tell Super Natural which data you want.

Modes for reporting govern the basic conditions under which the transaction runs, for example report type and report destination. For further information on modes, see Modes for Reporting in **Defining Transaction Modes for Reporting**.

When you have finished adding a reporting transaction and run it,Super Natural provides you with the data you have requested in the form of a report.

Note:
You can use the CHECKLIST function and theNEXT function to help you add and modify reporting transactions. For further information, seeUsing Super Natural.

Listing Transactions

To obtain a list of transactions:

- Select the object type Transactions from the Menu

  Or:

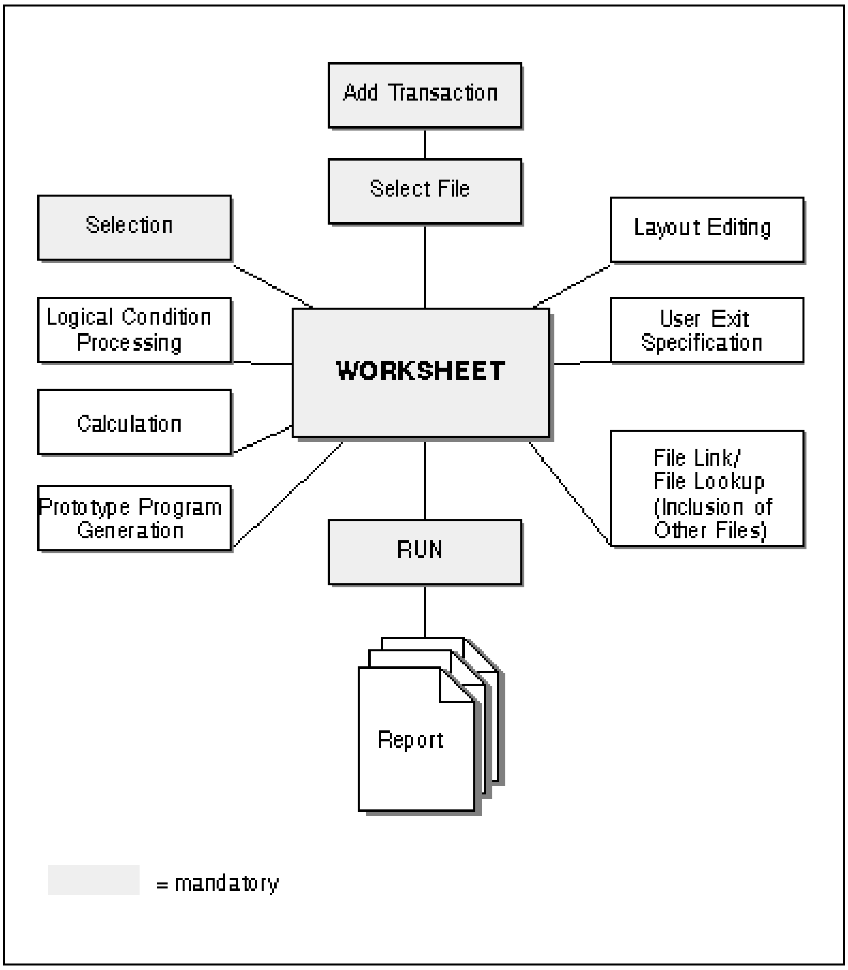
  Issue the TRANSACTION command.

  The Transaction List screen appears. TheTransaction List screen lists both reporting and data maintenance transactions.

  The Transaction List screen functions in the same way as all Object List screens inSuper Natural. For information on how to use object list screens, seeThe Object List Screens in **Starting Up**.

Adding Transactions

The following diagram gives you an overview of the paths you can take when adding a reporting transaction. The diagram shows you which steps are mandatory and which are optional.



To add a transaction:

1. Enter a new transaction name in the Add field.

   Or:

   Issue the ADD TRANSACTION command.

   The Add Transaction window appears:

```
11:56                    ***** Super Natural *****                  93-01-04
                           - Transaction List -                       SN1110

Cmd  Name      Descript +-------------------Add Transaction--------------------+
     *_______           !                                                      !
 __  ADD       ________ ! Transaction ID .... _______                          !
 __  AUTO      ________ ! Description ....... (93-01-04 11:56)______________   !
 __  CHECKL    !91-11-2 !                     ______________________________   !
 __  CONT      (92-01-1 !                                                      !
 __  CONTROL   control  ! File name ......... ________________________________ !
 __  CONT2     (91-09-1 !                                                      !
 __  CONT3     1-09-18  ! Modify modes ...... _                                !
 __  CONT4     PERSONNE ! Data maintenance .. N (Y/N)                          !
 __  DATACH    (92-11-1 !                                                      !
 __  DATACH2   (92-11-1 +------------------------------------------------------+
```

2. Enter a new transaction name in the Transaction IDfield if no name is present.
3. Modify or delete the transaction description if required.
4. If you know the name of the file you want to get your data from, enter it in the File Name field.

   The file you choose here is called your primary file.
5. If you don’t know the name of the file you want to use, enter an asterisk (*).

   The File Selection List window appears:

```
11:56                       ***** Super Natural *****                  93-01-04
                              - Transaction List -                       SN1110

Cmd  Name      Descript + +----------------File Selection List-----------------+
     *_______           ! !     File Name                         Access  Info !
 __  ADD       ________ ! !  _  SAG-TOURS-E-CH-PRICES               R       _  !
 __  AUTO      ________ ! !  _  SAG-TOURS-E-COMPANY                 R       _  !
 __  CHECKL    !91-11-2 ! !  _  SAG-TOURS-E-CONTRACT                D       _  !
 __  CONT      (92-01-1 ! !  _  SAG-TOURS-E-CONTRACT-WRKMKO         D       _  !
 __  CONTROL   control  ! !  _  SAG-TOURS-E-CRUISE                  R       _  !
 __  CONT2     (91-09-1 ! !  _  SAG-TOURS-E-PERSON                  R       _  !
 __  CONT3     1-09-18  ! !  _  SAG-TOURS-E-YACHT                   R       _  !
 __  CONT4     PERSONNE ! !  _  SPOOL-QUEUE                         R       _  !
 __  DATACH    (92-11-1 ! !  _  SUBMIT                              R       _  !
 __  DATACH2   (92-11-1 + !  _  SUE                                 R       _  !
 __  DATACH3   Destinatio !  _  SUP-AAA                             R       _  !
 __  DATACH4   DATA MAINT !  _  SYSSND                              R       _  !
Add  _______              !  _  SYSTEM1                             R       _  !
                          !                                                    !
Cmd(s): Modify, Execute, +More: - +--------------------------------------------+
```

The File Selection Listwindow displays a selection list of the files which you can use and also contains the following columns:

Column	Description
Access	"S" indicates a superfile and "F" indicates a user file. For further information on superfiles, see Defining Files. For further information on user files, see User Files. The codes"R", "U","A","D" and "*"indicate file access level. File access levels are only relevant for data maintenance transactions. For further information on data maintenance transactions, seeWorking with Data Maintenance Transactions.
Info	Mark this column to obtain first comments if available and then an extended file description from the data dictionaryPREDICT. This feature is only available at sites where Predict is installed. No dictionary information is available for user files.

Inserting fields into a DDM or deleting them affects Super Natural’s internal field referencing. This means that you may either not be able to run existing transactions or that running them will result in unpredictable data.

To insert a field

1. Select your primary file.

2. Press Enter.

   You are returned to the Add Transactionwindow. The name of the file you have selected is entered in theFile Name field.

3. Mark the Modify Modes field to modify your default transaction modes for the current transaction only.

   If you don’t mark this field, you continue to add the transaction using your default modes.
   For further information on transaction modes, seeDefining Transaction Modes for Reporting and Defining Transaction Modes for Data Maintenance.

4. Enter "Y" in the Data Maintenance field if you want to add a data maintenance transaction.

   For further information on data maintenance transactions, seeWorking with Data Maintenance Transactions.

   If you leave the default setting "N" (No), you continue to add a reporting transaction.

5. Press Enter.

   The Worksheet appears:

```
12:06                     ***** Super Natural *****                 04.Jan.1998
SN3011                          - Worksheet -                            Monday

Ref DB    Field Name                        Seq   S/C  Func Def  Info Del
AQ        ________________________________  ___   ___   __   __   __   __
AR        ________________________________  ___   ___   __   __   __   __
AS        ________________________________  ___   ___   __   __   __   __
AT        ________________________________  ___   ___   __   __   __   __
AU        ________________________________  ___   ___   __   __   __   __
AV        ________________________________  ___   ___   __   __   __   __
AW        ________________________________  ___   ___   __   __   __   __
AX        ________________________________  ___   ___   __   __   __   __
AY        ________________________________  ___   ___   __   __   __   __
AZ        ________________________________  ___   ___   __   __   __   __
BA        ________________________________  ___   ___   __   __   __   __
BB        ________________________________  ___   ___   __   __   __   __
BC        ________________________________  ___   ___   __   __   __   __
BD        ________________________________  ___   ___   __   __   __   __


Enter "*" in Fieldname column to select fields or enter NEXT
Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Next  Exit  Incl        Flip  -     +           Sel   Run   Canc
```

For information on how to use the Worksheet, see Working with the Worksheet.

As shown in the diagram at the beginning of this section, you can leave the Worksheet to perform one of several major functions in any order you wish. The following table shows the major functions available from the Worksheet and where they are documented:

Function	section Where it is Documented
Selection criteria specification (mandatory)	Editors
Calculation criteria specification	Editors
Logical condition criteria specification	Editors
User exit specification	User Exits
Layout editing	Natural Report Manager
File linking and/or lookup (Including other files in the transaction)	Files
Prototype program generation	Prototype Programs

Keeping Transactions

If you want to, you can keep a transaction which is either not finished or still has errors in it and finish it later.

To save a transaction which is incomplete or has errors in it:

- Issue the KEEP command from within the transaction.

Note:
You can not execute the transaction (for example from theTransaction List) if it has errors or is incomplete.

Saving Transactions

If you have completed a transaction but do not want to see the results immediately, you can save it.

To save a transaction:

- Issue the SAVE command from within the transaction.

  Note:
  You can not save a transaction which has errors in it.

  If the report is too wide, the Report Line Lengthwindow appears. For further information, seeReports Which are Too Wide.

Running Transactions

If you want to see the results of a transaction, you must run it.

To run a transaction:

- Issue the RUN command from within the transaction.

  Super Natural then provides you with the data you require in the form you have chosen. The transaction is saved.

Note:
You can not run a transaction which has errors in it.

If you want to run an existing transaction without modifying it, it is most efficient to issue theEXECUTEcommand from the Transaction List screen.

Note:
For further information on theSAVE,KEEP,RUN andEXECUTEcommands, seeCommand List.

If the report is too wide, the Report Line Length window appears. For further information, see Reports Which are Too Wide.

Reports Which are Too Wide

When using the transaction modes Destination SCREEN, PRINTER, Con-Nect or EDITOR, you may select so many fields for display that they exceed the width (line length) of the screen or printer to which you are sending the report. If your report is too wide, the Report Line Length window appears when you save or run the transaction:

```
12:10                       ***** Super Natural *****               04.Jan.1998
SNZUL-S                        - Selection Editor -                      Monday

                          +-----------------Report Line Length-----------------+
      1  < AA             !                                                    !
      2  <                ! The selected fields required a line size of .. 149 !
      3  <                ! The field headers required a line size of .... 193 !
      4  <                ! The available Online  line size at present ... 79  !
      5  <                !                                                    !
      6  <                !   _  Enlarge Available Line Size                   !
      7  <                !   _  Change to Report Type Vertical List           !
      8  <                !   _  Truncate Headers                              !
      9  <                !   _  Remove Excess Fields                          !
     10  <                !   _  Remove Excess Fields and Truncate Headers     !
     11  <                !   _  Modify Transaction                            !
     12  <                !                                                    !
     13  <                +----------------------------------------------------+
     14  <                                                               >   14
     15  <                                                               >   15
```

The Report Line Length window also appears if the headers of the fields you have selected for display exceed the width (line length) of the screen or printer to which you are sending the report.

The Report Line Length window tells you the line length of the fields and headers you have selected for display, the line length available at present and the Report Destination you are using. TheReport Line Length window offers the following options:

Option	Description
Enlarge available line size	Report Destination SCREEN: The line size can be enlarged to 249 and you can look at the data using the shift functions. Report Destination Con-Nect: You must make sure that the line size of your report does not exceed that of your screen. Report Destination PRINTER: You must make sure that the line size of your report does not exceed that of your printer. Report Destination EDITOR: The line size can be enlarged to 249.If the length of the fields or headers you have selected for display exceeds these values, this option is not available.
Change To Report Type Vertical List	The report is displayed as for Report Type Vertical List. Each record is displayed on a separate screen with the display fields and their values listed vertically.
Truncate Headers	If only the headers are too wide, you can opt to truncate them (only available if your transaction option setting for "Heading Width Override = N").
Remove Excess Fields	Fields are removed from the right-hand side of the report until the required line length is achieved.
Remove Excess Fields	Fields are removed from the right-hand side of the and Truncate Headers/tab/report and headers are truncated until the required line length is achieved.
Modify transaction	You are returned to the Worksheet where you can modify your report. For example, you can modify your transaction options to make the online screen size larger (for further information, see Working with User Files) or you can modify the width of the columns and their headers by changing their output definition (for further information, see The Field Definition Column in **Working with the Worksheet**).

Modifying Transactions

You may want to go back and modify (change) a transaction once you have run it or modify an existing transaction.

To modify a transaction:

- Enter the command abbreviation MO in the command column of the Transaction List screen next to the transaction name.

  Or:

  Issue the MODIFY TRANSACTION*name* command.

  The Worksheet appears.

  You may not change the following when modifying a transaction:

  - File specification

  - Certain reporting modes. For example, if you created a transaction using the data selection mode SQL-SELECT, you may not change it.

Transactions with Restricted Access

If you are in a common library, some transactions may have restricted access. Transactions with restricted access are marked with an exclamation mark (!) in the first position in the Description column and you can only execute them.

Executing Transactions

If you want to run an existing transaction without modifying it, it is most efficient to issue the EXECUTE command from the Transaction List screen. This is because when you issue the EXECUTEcommand,Super Natural uses the transaction as it was when the transaction was last run or saved. When you run a transaction using theRUN command, Super Natural completely recreates the transaction even if you have not modified it since it was last run or saved.

To execute a transaction:

- Enter the command abbreviation EX in the command column of the Transaction List screen next to the transaction name.

  Or:

  Issue the EXECUTE TRANSACTION*name* command.

  For further information on the SAVE, KEEP, RUNandEXECUTE commands, see Command List.

Note:
You can not execute a transaction which you left using theKEEP command.

Copying Transactions

You may not copy a transaction into a public library.

You may not copy transactions with destination USERFILE.

To copy a transaction:

1. Enter the command abbreviation CO in the command column of the Transaction List screen next to the transaction name.

   Or:

   Issue the COPY TRANSACTION*name* command.

   The Copy window appears:

```
13:55                      ***** Super Natural *****               04.Jan.1998
SN1110                       - Transaction List -                       Monday

Cmd  Name     Description                +----------------Copy-----------------+
     *_______                            !                                     !
 __  ADD      _________________________  ! Source object ... AUTO              !
 CO  AUTO     _________________________  !                                     !
 __  CHECKL   !91-11-26 16:21)_________  ! Target object ... AUTO___           !
 __  CONT     (92-01-16 11:30)_________  ! Common library .. ________          !
 __  CONTROL  control breaks___________  !                   (leave blank for  !
 __  CONT2    (91-09-17 16:06)_________  !                    private library) !
 __  CONT3    1-09-18 14:24____________  !                                     !
 __  CONT4    PERSONNEL FILE + IA______  +-------------------------------------+
```

The Source Object field contains the name of the transaction you want to copy.

2. Enter the name you want the copy to have in theTargetfield.

   If you do not make an entry in this field, the copy will have the same name as the original transaction. You may not have two or more transactions with the same name in the same library. If you copy a transaction into another library where a transaction of the same name already exists, you are asked if you want to overwrite the existing transaction.

3. If you want to copy the transaction into a common library, enter its name in the Common Library field.

   If you leave this field blank, the transaction is copied into your private library. When you copy a transaction to a new name, theInformation function does not show the new name until you modify the transaction.

Deleting Transactions

To delete a transaction:

1. Enter the command abbreviation DE in the command column of the Transaction List screen next to the transaction name.

   Or:

   Issue the DELETE TRANSACTION*name* command.

   The Confirm Delete window appears:

```
 13:56                      ***** Super Natural *****           04.Jan.1998
 SN1110                       - Transaction List -                   Monday

 Cmd  Name      Description
      *______
  __  ADD       ____________________________________________________________
  de  AUTO      _ +--------------Confirm Delete---------------+ ____________
  __  CHECKL    ! !                                           ! ____________
  __  CONT      ( !                                           ! ____________
  __  CONTROL   c !        Delete transaction AUTO            ! ____________
  __  CONT2     ( !                                           ! ____________
  __  CONT3     1 !        Enter Y to confirm: N              ! ____________
  __  CONT4     P !                                           ! ____________
  __  DATACH    ( !                                           ! ____________
  __  DATACH2   ( !                                           ! ____________
  __  DATACH3   D !                                           ! ____________
  __  DATACH4   D +-------------------------------------------+ ____________
 Add  _______
```

2. Enter "Y" to confirm the deletion.

   You can also delete several transactions at the same time. In this case, theConfirm Multiple Delete window appears. You can choose if you want to confirm each deletion, delete without confirmation or cancel the deletion.

The Information (Info) Function

To obtain information about a transaction:

- Enter the command abbreviation IN in the command column of the Transaction List screen next to the transaction name.

  Or:

  Issue the INFO TRANSACTION*name* command.

  The Transaction Information window appears:

```
13:57                      ***** Super Natural *****              04.Jan.1998
SN1110                       - Transaction List -                      Monday

Cmd  Name  +---------------------Transaction Information----------------------+
     *____ ! Transaction .......... DATACH   Version .... 3.1.0               !
 __  ADD   ! Created/modified by .. SBE      Date/Time .. 1992/11/11 14:30:43 !
 __  AUTO  ! Description .......... (92-11-11 11:39)                          !
 __  CHECK !                                                                  !
 __  CONT  ! Type ................. Report                                    !
 __  CONTR ! Selection ............ Full-screen                               !
 __  CONT2 ! Data change .......... Map                                       !
 __  CONT3 ! Report type .......... List                                      !
 __  CONT4 ! Report level ......... Detailed                                  !
 in  DATAC ! Destination .......... Screen                                    !
 __  DATAC ! Run mode ............. Online                                    !
 __  DATAC ! Primary file ......... SAG-TOURS-E-COMPANY                       !
 __  DATAC ! Sec. file ............                                           !
Add  _____ ! Userfile .............                                           !
           !                                                                  !
Cmd(s): Mo +More:   +---------------------------------------------------------+
```

The Transaction Information window supplies the following information:

- Transaction name
- Super Natural version with which the transaction was created
- Who created/last modified the transaction
- When the transaction was created/last modified
- User-entered transaction description
- Information about the transaction modes (Report Type, Data Selection etc)
- Primary file
- Secondary file (if defined)
- Name of user file (for Destination USERFILE)

You can page forward to obtain information on the following if relevant to the transaction:

- Link and lookup fields used.
- Selection criteria
- Calculation
- Logical conditions
- Fields used

When you print the information, you are also provided with information on the entries made in the Worksheet.

Note:
When you copy a transaction to a new name, the Information function does not show the new name until you modify the transaction.

Commands Available From Within a Transaction

The following commands are available from within a transaction (the defaultPF key functions and commands specific to the Worksheet are not included):

Note:
For a list of the default PF key functions, seeUsing Super Natural.

Note:
For a list of commands specific to the Worksheet, seeWorking with the Worksheet.

Command (Abbreviation)	**Description**
CALCULATION (CAL)	Invokes the Calculation Editor.
CHECKLIST (CHECKL)	Invokes theChecklist window (not in Natural Report Manager).
COUNT (COU)	Counts the number of records found by the present transaction but does not display the resulting data.
GENERATE (GE)	Generates a prototype program from the transaction you are working on. You can not generate a prototype program from a transaction which is not finished.
INCLUDE (INC)	Invokes theInclude Files window where you can do the following (not in Natural Report Manager):

Command (Abbreviation)	Description
	- Change the original primary file (as long as no fields have been used or user fields defined) - Define/change a secondary file - Define/change the lookup file(s)
KEEP (K)	Keeps any transaction even if it contains errors.
	When you keep a transaction, the commentary lines (transaction specification) for a Natural program are generated and saved but the Natural program for the transaction itself is not generated. If you keep a transaction which has already been run or saved, the program generated by the run or save is deleted and only the commentary line are kept.
LAYOUT (LA)	Invokes the Layout Editor which displays either the default layout for the current transaction or a layout you have already edited.
LOGICS (LOG)	Invokes the Logical Conditions Editor.
MODES (MODES)	Invokes theModify Modes for Reporting or theModify Modes for Data Maintenance window depending on the type of transaction you are creating or modifying.
	The modifications you make in these windows are only valid for the current transaction.
	Issue from within a transaction (not in Natural Report Manager).
NEXT (NE)	Takes you to the next step you have selected in the Checklist window. If you have selected no further function, the Checklist window appears. (not in Natural Report Manager).
OPTIONS (O)	Invokes theTransaction Options window.
	The modifications you make in this and the following windows are only valid for the current transaction (not in Natural Report Manager).
RELEASE (REL)	All fields not currently in use in a transaction are removed from the source area and are no longer available. For example, if you invoke the Field Listwindow from an editor or the Worksheet, only the fields in use when you issued the RELEASE command are listed. If you are using very large files, you can use this command to avoid problems with temporary memory capacity (buffer overflow) (not in Natural Report Manager).
RUN (RU)	Runs a transaction you are modifying or creating. You can not run a transaction which is not finished or still has errors in it
	When you run a transaction, a Natural program is generated, catalogued and executed.
SELECTION (SEL)	Invokes the Selection Editor, PC file editor or Work File editor depending on the selection mode setting.
SAVE (SA)	If you have completed a transaction but do not want to see the results immediately, you can save it. You can not save a transaction which still has errors in it. You can execute a transaction using the EXECUTE command when it has been saved.
	When you save a transaction, a Natural program is generated and catalogued but not run.
TABULAR (TABU)	Invokes theTabular Report Specification screen when you are adding a report of report type TABLE. Issue from within a transaction of report type TABLE (not in Natural Report Manager).
USEREXIT (USERE)	Invokes theExit Specification screen.
WORKSHEET (W)	Invokes the Worksheet (not in Natural Report Manager).