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Title:

RC3600 DATA ENTRY
RELEASE 2
OPERATING GUIDE



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Abstract:

This manual describes how to install a Data Entry System, how to start it and how to shut down the system. The manual also describes the restart log and the supervisor program TRANSLATE.

Foreword

The present second edition is an extension of the RC3600 Data Entry Release 2 Operating Guide, first edition (November 1976).

In order to support disc types different from RC3652, i.e. RC8221, RC8222, RC8223, the sections 3, 5, 6, and 7 have been changed.

A new section describing the power restart procedure - section 10 - has been included.

CONTENTS

PAGE

1.	INTRODUCTION	1
2.	POWER ON	3
3.	START UP PROCEDURE	4
4.	RESTART LOG	10
5.	SHUTDOWN PROCEDURE	13
6.	DISC INITIALIZATION	14
7.	INSTALLATION OF NEW SYSTEM VERSIONS	17
8.	SUPERVISOR PROGRAM TRANSLATE	18
8.1	Single Processor Systems.....	18
8.1.1	Stand-Alone Translation.....	18
8.1.2	Return to Normal Data Entry.....	19
8.2	Processor Expansion Systems (1).....	19
8.3	Processor Expansion Systems (2).....	20
8.4	Memory Expansion Systems.....	20
9.	ERROR MESSAGES.....	21
10.	POWER RESTART.....	24

Appendix 1 Index

1. INTRODUCTION

This manual describes the operation of the RC3600 Data Entry System from the RC3600 console device.

The manual describes among other subjects the installation of the Data Entry System and how to start it.

The Data Entry System consists of the following modules :

1. A MUS basic system including the disc operation system DOMUS and a disc catalog handling system.
2. A number of system device drivers for peripherals connected to the RC3600 (e.g. telemultiplexor, line printer).
3. The Data Entry master program called NANNY controlling the registration of data batches.
4. A number of independent supervisor programs which are loaded into memory from disc when required controlled by NANNY.
5. A number of standard formats.

During the installation of a Data Entry System all the modules are moved to disc from the system tape (magnetic tape).

At system start-up the modules are moved from the disc and into the core memory.

The operator on a Data Entry System is supposed to possess a basic knowledge about the MUS system and the operating system DOMUS.

- Section 2 in this manual describes how to run power on the RC3600.
- Section 3 is a step by step description of the start-up of an already installed Data Entry System.
- Section 4 contains the description of the restart log produced at every system start.
- Section 5 is a guide in how to shut down the Data Entry System.
- Section 6 describes the initialization of the Data Entry discs, i.e. the procedure to be followed when first-time installing the system.
- Section 7 deals with the actions to be performed when a new version of the Data Entry System is received.
- Section 8 describes how to activate the supervisor program TRANSLATE as a so-called stand-alone program.
- Section 9 is a list of messages which may occur during system installation, start-up, and stand-alone translation.
- Section 10 describes the actions to be performed by the operator at a power restart.

Throughout this manual the RC3600 console device will be referred to as the 'Teletype' covering all the different devices supported by the DOMUS system.

2. POWER ON

1. Turn on the main power supply.
2. Switch power to the RC3600 by turning the POWER key on the Power and Autoload Panel.

3. START UP PROCEDURE

The following procedure is executed at the daily system start-up and after system break-down. The system will continue operating with the existing disc contents.

- 1) Mount the same disc cartridges/disc packs in the same disc drives as was the situation at the latest system shut-down time.
- 2) Press the RUN or START button on all disc drives and wait for the READY lamps to light.
- 3) Press the AUTOLOAD button on the Power and Autoload Panel.

The Autoload lamp will be extinguished when the system is initialized.

If the AUTOLOAD lamp remains lit the load operation was unsuccessful.

Therefore check that :

- a. The READY lamp on all disc drives are lit and that the correct cartridges/packs are mounted in the correct drives. Please note that if your system is equipped with an F01 MT autoload feature you should press LOAD and then turn RUN on disc unit 0 before each disc-autoload attempt.

- b. The data/autoload device select switches on the CPU (processor expansion systems : the cpu to which the disc is connected) are positioned as follows :
- if your system is equipped with an F01 MT autoload feature then switch 0 must be in the upper position.
 - switches 10,11,12,14, and 15 must be in the upper position if your system is equipped with RC3652 disc cartridge drives.
 - switch 11 must be in the upper position if your system is equipped with RC8221,22,23 disc storage modules.
 - all other switches must be in the lower position.

Repeat the start-up procedure, if this is not successful after several attempts, please fill out an Error Report.

- 4) If the text SYSTEM : appears on the teletype then press the RETURN key indicating that the normal RC3600 basic system should be loaded.

The text DOMUS REV xx.yy

>S

will now appear.

- 5) If your system is equipped with a processor expansion,
type : INT DOUBL
and press the RETURN key.

A restart log is now produced (see section 4) and the text

FINIS DUAL

will appear on the teletype indicating that the process expansion is loaded.

Proceed at point 9)

If the latter does not appear please check that :

- a. the AUTOLOAD ENABLE button on the FPA702 connected to the processor expansion is in position 'ON'.
- b. the data/autoload device select switches on the processor expansion are positioned as follows :
 - switches 0, 10, 13, 14 must be in the upper position.
 - all other switches must be in the lower position.

Repeat the start-up procedure, if this is not successful after several attempts, please fill out an Error Report.

- 6) In a non-processor expansion system,
type : INT SINGL
and press the RETURN key.
- 7) A restart log is now produced (see section 4).

8) The text

SELECT SYSTEM:
NORMAL DATA ENTRY (N)
FEW KEYSTATIONS (F)
STAND-ALONE FORMAT TRANSLATION (T):

will appear on the teletype.

If a system message (e.g. DISC ALMOST FULL) is printed before this question is answered :

- press CTRL and BELL keys simultaneously. This will cause the text > to appear.

- type : RSST
and press the RETURN key.

If a normal data entry tasks are to be performed,

type : N
and press the RETURN key.

If start-up with few keystations is wanted,

type : F
and press the RETURN key.

If format translation is to be performed using the supervisor program TRANSLATE in stand-alone mode

type : T
and press the RETURN key.

A start-up with few keystations may be performed if the system is configured for it. The purpose may be the possibility of running extra-large supervisor or stand-alone programs simultaneously with normal data entry functions.

Consult section 8 concerning format translation in stand-alone mode.

- 9) The text DATE, YY.MM.DD = will appear now.

Type : a. year (2 digits)
 b. period
 c. month in year (2 digits)
 d. period
 e. day in month (2 digits)

and press the RETURN key.

If a system message (e.g. DISC ALMOST FULL) is printed before this question or the question in 10) is answered :

- press CTRL and BELL keys simultaneously. This will cause the text > to appear.

- type : TIME
and press the RETURN key.

- 10) The text TIME, HH.MM.SS = will now appear.

Type : a. hour in day (2 digits, 00-24)
 b. period
 c. minute in hour (2 digits)
 d. period
 e. second in minute (2 digits)

and press the RETURN key.

- 11) Press the CTRL and BELL keys simultaneously. This will cause the text > to appear on the teletype.

In non-processor expansion systems, type : S
In processor expansion systems, type : Q
and press the RETURN key.

Type : START NANNY
and press the RETURN key.

The system is now operating and is ready for the keystation operators to perform the login procedure (see section 3.2 in Data Entry Users Guide part 1).

4. RESTART LOG

During a system start-up (section 3) a restart log is produced.

The log will normally be empty :

- at the daily system start-up and
- after system break-down at a time when no keystation was keying, rekeying, or editing.

After a system break-down with active keystations the restart log will contain the following information about each keystation :

KEYSTATION	Keystation number. Keystations are numbered from 1 and upwards.
MODE	The keystation mode at system break-down : KEY REKEY REKEY-INSERT EDIT EDIT-INSERT EDIT-KEY The mode indicates what was performed on the batch.
BATCH	Name of batch used by the keystation.
LAST RECORD OUTPUT	A listing of the last record output to the batch in the same layout as is used by supervisor program LIST, i.e. including the record number (see Users Guide part 2 section 9).

For keystations that were being used for rekeying or editing the following additional information is given :

LAST RECORD READ	A listing of the last record read in the batch during the rekeying or editing. Printed in the same format as LAST RECORD OUTPUT.
------------------	--

The listings of the records should be compared with the last records keyed before the break-down as the restart log and thereby the active batches represent a situation as it was 10 to 25 seconds before the break-down.

To resume the work on the batches the keystation operators simply enter the same KEY, REKEY, or EDIT commands as were entered to start the registration on the batches before the system break-down (see sections 6.1., 7.1., and 8.1. in Users Guide part 1).

The following messages may occur on the restart log :

1. BATCH NOT FOUND ON DISC

Is printed instead of the listing of a record when a batch does not exist on the disc. This may be the situation when the batch was deleted just before system break-down but after creation of the checkpointfile used by the restart program. Check the operator log (see Users Guide part 2) to see if this was the situation. If not, the batch is missing due to a fatal system error.

2. CHECKPOINT ERROR, RESTART IMPOSSIBLE

See section 9.

3. ERROR ON BATCH <batchname> <code>

See section 9.

4. ERROR ON JOBNAME LIBRARY <jobname> <code>

See section 9.

5. LIBRARY ERROR, RESTART IMPOSSIBLE

See section 9.

6. NO RECORDS OUTPUT

Is printed instead of the listing of a record when the batch is empty.

7. NO RECORDS READ

Is printed instead of the listing of a record when no records have been read from the batch in rekey or edit mode.

5. SHUTDOWN PROCEDURE

Make sure that all programs have reached a defined end-of-job status.

On RC3652 disc cartridge drives, press LOAD on all disc drives.

On RC8221,22,23 disc storage modules, press START.

Remove power from the RC3600 by turning the POWER key on the Power and Autoload Panel.

6. DISC INITIALIZATION

When a new set of disc cartridges/disc packs is to be used or an old set is to be scratched the system must be initialized in the following way :

- 1) Mount the disc cartridges/disc packs in the disc drives.
- 2) Position the data/autoload device select switches on the CPU (processor expansion systems : the cpu to which the disc is connected) as follows :
 - switches 0, 11, 12 must be in the upper position
 - all other switches must be in the lower position.
- 3) Press the RUN or START button on all disc drives and wait for the READY lamps to light.
- 4) Mount the system tape - labeled DATA ENTRY SYSTEM - on tape unit number 0.
- 5) Depress the LOAD button on the tape unit until the LOAD lamp remains lit.
- 6) Depress the ON LINE button on the tape unit until the ON LINE lamp lights.
- 7) Press the AUTOLOAD button on the Power and Autoload Panel.

The AUTOLOAD lamp will be extinguished when the system is initialized.

If the AUTOLOAD lamp remains lit, the load operation was unsuccessful.

Therefore check that :

- a. The DATA ENTRY SYSTEM tape is mounted.
- b. The density (of a dual-density tape unit) is correct.
- c. The data/autoload device select switches on the CPU are positioned as described in point 6, 2).

Depress the ON LINE button on the tape unit until the ON LINE lamp is extinguished. Press the REWIND button once. Repeat the start-up procedure. If this is not successful after several attempts, please fill out an Error Report.

- 8) The text >S will appear on the teletype.

Type : INT DINIT
and press the RETURN key.

The disc initialization program is now loaded into memory.

- 9) The text INITIALIZE CATALOG : will appear on the teletype.

Wait for the tape unit to be rewound. Press the ON LINE button on the tape unit until the ON LINE lamp lights.

- 10) Type : NEW
and press the RETURN key.

11) The text

*** THIS MEANS THAT ALL EXISTING BATCHES AND FORMATS ARE DELETED

*** ARE YOU SURE YOU WANT THAT (YES OR NO):

will now appear on the teletype.

Type : YES
and press the RETURN key.

12) The text NO OF DISC DRIVES TO BE USED (MAX. x) :
will appear.

Type : The number (less than or equal to 'x') of disc
drives connected and press the RETURN key.

13) System files (supervisor programs, standardformats etc.)
will now be moved from magnetic tape to disc. When this
is done the text END DISCINITIALIZATION will appear
on the teletype.

The discs are now ready to be used and the system can
be started as described in section 3.

To install eventual user-defined system messages and
passwords, proceed as described in Users Guide part 1,
section 14 and 15.

7. INSTALLATION OF NEW SYSTEM VERSIONS

When a new DATA ENTRY SYSTEM tape is received the system files on disc (supervisor programs, standardformats etc.) must be reinitialized. This is done in the following way :

- 1) Mount the same disc cartridges/disc packs in the same disc drives as was the situation at the latest system shutdown time.
- 2) Perform the actions described in 6, 2) through 6, 9) (see above).
- 3) Type : UPD
and press the RETURN key.
- 4) System files are now moved from magnetic tape to the disc. When this is done the text END DISCINITIALIZATION will appear on the teletype.

The System can now be started as described in section 3.

Please note that installation of a new system tape leaves batches and user-formats untouched. However, user-defined system messages must be re-installed, see section 14 in Users Guide Part 1.

8. SUPERVISOR PROGRAM TRANSLATE

The Data Entry supervisor program TRANSLATE is used for creation of new formats, subprograms, and tables (see Data Entry Format Language Guide section 5 and Data Entry Users Guide part 2 section 9).

As the program is a very large one it is in some configurations not possible to activate it in the same way as the other supervisor programs are activated.

8.1 Single Processor Systems

The configuration is described in Users Guide part 2, section 4.1.

To activate the program the system must be shut down and restarted.

The question asked as described in section 3, 8) is answered by the letter 'T' and TRANSLATE will be loaded into memory as a stand-alone program together with a program named STRAN controlling a dialog on the teletype.

8.1.1 Stand-Alone Translation

- 1) The text

TRANS COMMAND :

will appear on the teletype.

- 2) Type the TRANSLATE command as described in Users Guide part 2 section 9 and press the RETURN key.
- 3) When the translation has finished the receipt from TRANSLATE will appear on the teletype (see Users Guide part 2 section 9).

- 4) The text

MORE TRANSLATIONS (YES OR NO) :

will appear.

- 5) If more translations are wanted

type : YES

and press the RETURN key. Proceed at point 1 (above).

If no more translations are wanted

type : NO

and press the RETURN key.

Please note that printouts generated by TRANSLATE will appear on the normal hardcopy device as described in section 7.3 of Users Guide part 2.

8.1.2 Return to Normal Data Entry

When no more translations are wanted a system start is automatically initiated by the program STRAN, as if the answer in section 3, 8) was 'N'.

Therefore proceed at the actions described in section 3, 9).

8.2 Processor Expansion Systems (1)

The configuration is described in Users Guide part 2 section 4.2.

The TRANSLATE program may be activated as a normal supervisor program, see section 9 in Users Guide part 2.

8.3 Processor Expansion Systems (2)

The configuration is described in Users Guide part 2 section 4.3.

TRANSLATE is activated as a stand-alone program in the following way :

- 1) On the teletype press the CTRL and BELL keys simultaneously.
This will cause the text > to appear on the teletype.

Type : S
and press the RETURN key.

Type : STRAN
and press the RETURN key.

- 2) Perform the actions described in section 8.1.1.

STRAN and TRANSLATE are automatically removed from core memory when no more translations are wanted.

8.4 Memory Expansion Systems

As a memory expansion (section 4.4 in Users Guide part 2) cannot contain supervisor programs the actions described in point 8.1, 8.2, or 8.3 are executed.

9. ERROR MESSAGES

This section contains a list of the error messages which may occur on the teletype during system installation, system start-up, and stand-alone translation.

Other error messages than the below mentioned ones may be found in DOMUS Users Guide part 1.

CHECKPOINT ERROR, RESTART IMPOSSIBLE

The system uses two discfiles for periodic dumping of information about active keystations. In the event of a disc error or an error on both files, normal restart is impossible.

If the error does not disappear after a second start-up attempt, proceed as follows :

1. Perform the actions described in section 3, 9) and following sections.
2. Try to save all batches and formats on the disc by using the supervisor programs RESCUE and SAVE.
3. Initialize the discs as described in section 6.
4. Restart the system and install the saved batches by using the supervisor program LOAD.

ERROR ON BATCH <batchname> <Code>

During start-up after a system break-down it is not possible to repair a batch due to a disc error described by <Code> (see Users Guide part 2, appendix 2).

Upon system start the supervisor program RESCUE may be used to rescue the contents of the batch.

ERROR ON JOBNAME LIBRARY <jobname> <Code>

A job containing a batch to be repaired by the restart program after a system break-down cannot be accessed due to a disc error given by <Code> (see appendix 2 in Users Guide part 2).

Consult the restart log and try to use supervisor program RESCUE upon system start to rescue the contents of the batch.

HARD ERROR ON DISC, STATUS: <Code>

The message means that a system installation (section 6 and 7) or a system start-up cannot be completed due to a disc error given by <Code> (see Users Guide part 2, appendix 2).

HARD ERROR ON MAGTAPE, STATUS: <Code>

The message will occur during a system installation (section 6 and 7). <Code> is described in appendix 3 in part 2 of the Users Guide.

LIBRARY ERROR, RESTART IMPOSSIBLE

The joblibrary (JBLIB) containing the names of all jobs in the system cannot be accessed during a system start-up due to a disc error.

If the error persists the actions described under CHECKPOINT ERROR must be followed.

LPT ERROR <Code> REP (YES OR NO)

An error has occurred during printing of the restart log (see section 4). The error is given by <Code> described in appendix 4, 5, or 6 in Users Guide part 2.

If the operator replies YES, the system will try to continue the restart log on the printer. If the operator replies NO, normal restart will be performed without the restart log, but error printouts will still be provided on the teletype.

MT ERROR <Code>

A magnetic tape station error has occurred during loading of the disc initialization program (section 6, 8)).

The <Code> is described in the RC3600 operationg guide.

If the <Code> is 28 (block length error) it could be because of an incorrect way of disc initialization (see section 6 and 7).

SYSTEM ERROR 21

The operator has answered the question asked in section 3, 8) by the letter 'F' in a system not delivered with the possibility of system start with few keystations..

Repeat the start-up procedure.

10. POWER RESTART

The system automatically executes a power restart when the computer has been stopped either on operator initiative by his turning the POWER key or because of a power failure.

A power restart is indicated by the appearance of the text POWER on the teletype.

To adjust system time, proceed as follows :

1. On the teletype, press the CTRL and BELL keys simultaneously.
This will cause the text > to appear.
2. In non-processor expansion systems, type : S
In processor expansion systems, type : Q
and press the RETURN key.
3. Type : BREAK TIME
press the RETURN key and set time as described in
sections 3, 9) and 3, 10).

The work on active keystations will be interrupted as described in Users Guide part 1 which also describes how to resume the work.

The system will not be in full operation until the disc drives become ready (i.e. a short time after the appearance of the POWER message).

Appendix 1

Index

The references are pointing out page number.

autoload, from disc (daily).....	4
- , from mt (NEW).....	14
- , from mt (UPD).....	17
autoload device select switches, mt.....	14
- - - , processor expansion.....	6
- - - , rc 3652 (disc).....	5
- - - , rc 8221,22,23 (disc).....	5
daily start up.....	4
data switches, mt.....	14
- - , processor expansion.....	6
- - , rc 3652 (disc).....	5
- - , rc 8221,22,23.....	5
disc initialization, NEW.....	14
disc initialization, UPD.....	17
error messages.....	11,21
error messages, restart log.....	11
- - , TTY.....	21
few keystations, daily.....	7
initialization, disc, NEW.....	14
- , - , UPD.....	17
- , TIME.....	8
installation, passwords.....	16
- , system messages.....	16,17
- , system tape.....	14
normal start up, daily.....	7
passwords, install.....	16
power failure.....	24
power off.....	13
power on.....	3
power restart.....	24

restart log.....	10
selection of number of disc drives.....	16
shut down.....	13
stand - alone TRANSLATE.....	7,18, 20
start up, after system break down.....	4
- - , daily.....	4
- - , - , non processor expansion.....	6
- - , - , processor expansion.....	6
- - , - , single processor.....	6
- - , from mt.....	14, 17
STRAN.....	18, 19, 20
system messages, install.....	16
- - , reinstall.....	17
system tape, use of.....	14, 17
TIME initialization.....	8
TRANSLATE.....	7, 18
- , memory expansion.....	20
- , processor expansion.....	19, 20
- , return from.....	19
- , single processor.....	18
- , stand alone.....	7,18, 20
Use of system tape.....	14, 17