Title:

RC BASIC SYSTEM

LOGICAL DISC FORMATTING PROGRAM

OPERATING GUIDE

A/S REGNECENTRALEN

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Abstract:

Flexible discs and catalog-system files used for secondary storage by RC BASIC systems require a special format. This publication tells how to operate the Logical Disc Formatting Program, which provides facilities for formatting, listing, resetting, and copying such discs/files.

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1. INTRODUCTION

Flexible discs and catalog-system files used for secondary storage by RC BASIC systems require a special format. The Logical Disc Formatting Program, which can run simultaneously with RC BASIC, permits the user to format and maintain such ogical disc devices. This guide tells how to operate the program.

The formatting program has four different functions:

NEW	:	To format a logical disc device
LIST	:	To list the contents of a logical disc device
RESET	:	To reset a logical disc device
COPY	:	To copy one flexible disc to another.

The program, which is operated from the console, starts, when it is loaded, by outputting the text

```
>LDFOO
LOGICAL DISC FORMATTING PROGRAM. REV. XX.XX
SELECT FUNCTION: NEW/LIST/RESET/COPY
```

Before selecting a function, the user should either place a diskette in at least one flexible disc drive unit, or, if running under the DOMUS operating system, he should create the catalog-system file which is to be formatted.

When a function is selected, the program will ask the user one or more questions, all according to the function selected. The four functions are described separately in Sections 2 to 5. Note that each user response must be terminated by pressing the RETURN key.

When a selected function has been performed, the program will again output the text SELECT FUNCTION: NEW/LIST/RESET/COPY.

2. NEW

The NEW command is used when a logical disc device is to be formatted (re-formatted). The format of a logical disc device as used in RC BASIC is described in Chapter 7 of the RC BASIC Programming Guide (RCSL 31-D406).

When the NEW function is selected, as described in Section 1, the program outputs the question

DEVICE NAME:

The user should type either $/FD0 (flexible disc unit 0), $/FD1 (flexible disc unit 1), or the name of the catalog system file to be formatted.

The second question is:

DEVICE ID:

Here the user can type any identification (0 to 30 characters). This identification will be output on the terminal when the logical disc device is initialized from RC BASIC (the INIT command, described in Chapter 7 of the RC BASIC Programming Guide).

The third question is

DEVICE SIZE

Here the user should type a number in the range 3 to max. If a diskette is formatted then max = 1850. If a catalog system file is formatted then max = file size - 2, where file size is the number of blocks in the file to be formatted.

The size of the device is expressed as the number of blocks each containing 512 (catalog system file) or 128 (diskette) bytes.

Now the logical discs must be created. A logical disc device may contain any number of logical discs. For each logical disc, the program asks three questions:

LD NAME:
LD SIZE:-
PROTECTION KEY:

After LD NAME: the user should type the name of the next logical disc to be created (1 to 8 characters).

After LD SIZE: the user should type a number defining the size of the logical disc expressed as the number of blocks.

After PROTECTION KEY: the user should type a number in the range 0 to 65535. This key must then be specified when a user connects his terminal to the logical disc, if he wishes to write to, delete, create, or rename a file (the CONNECT command, described in Chapter 7 of the RC BASIC Programming Guide). If the protection key is 0 (zero), the logical disc is not protected.

When no more logical discs are to be created, the user should answer the next LD NAME: question by pressing the RETURN key.

3. LIST

The LIST command is used when a listing of the logical discs on a logical disc device is desired.

When the LIST function is selected, as described in Section 1, the program outputs the question

DEVICE NAME:

The user should type either $FD0 (flexible disc unit 0), $FD1 (flexible disc unit 1) or the name of the catalog system file to be listed.

4. RESET

The RESET command is used when a logical disc device must be reset. This is necessary if a logical disc device is removed from the drive unit (or a system breakdown occurs) while one or more terminals are connected.

When the RESET function is selected, as described in Section 1, the program outputs the question

DEVICE NAME:

The user should type either $FD0 (flexible disc unit 0), $D1 (flexible disc unit 1) or the name of the catalog system file to be reset.

The program now makes a search of the main catalog, which contains entries describing the logical discs on the logical disc device (see Chapter 7, Section 7.1, of the RC BASIC Programming Guide).

If an entry is found in which the USERS field is not equal to zero, then that logical disc was in use when the logical disc device was removed.

The USERS field is now set to zero, and the program proceeds to a search of the subcatalog of the logical disc in question, examining the entries that describe the sequential files in the logical disc.

If a file was being used for reading (USERS field in the subcatalog entry > 0), then USERS is set to zero.

If a file was being used for writing (USERS field in the subcatalog entry - 1) then USERS is set to zero and the file is cleared (by assigning zero to the subcatalog entry fields LAST BLOCK and LAST BYTE).

For each logical disc that is reset, the program outputs the text

LD: <ldname> RESET

For each (sequential) write file that is cleared, the program outputs the text

WRITE FILE: <filename>

5. COPY

The copy command is used when one flexible disc is to be copied to another flexible disc.

When the COPY function is selected, as described in Section 1, the program outputs two questions:

FROM UNIT:
TO UNIT:

After FROM UNIT: the user should type either $ FD0 or $ FD1, depending on whether the flexible disc to be copied is placed in drive unit 0 or 1.

After TO UNIT: the user should type the name of the other drive unit, in which a flexible disc is also placed, i.e. $ FD1 or $ FD0.

6. ERROR MESSAGES

If an error is detected during reading from or writing to a logical disc device the message

I/O ERROR: <xxxxx>

will be output, <xxxxx> being an error code from 00120 to 00134.

The meanings of these error codes are explained in Appendix A of the RC BASIC Programming Guide.

7. EXAMPLES

User input, which is terminated by pressing the RETURN key, is shown underlined in the following two examples. Comments are given on the right.

7.1 Formatting and listing a flexible disc

```
>LDFOO
LOGICAL DISC FORMATTING PROGRAM. REV. 01.00
SELECT FUNCTION: NEW/LIST/RESET/COPY? NEW

DEVICE NAME: $FDO
DEVICE ID: FORMATTING EXAMPLE 77.02.09
DEVICE SIZE: 1850

LD NAME: DISC1
LD SIZE: 300
PROTECTION KEY: 1

LD NAME: DISC2
LD SIZE: 250
PROTECTION KEY: 2

LD NAME: DISC3
LD SIZE: 800
PROTECTION KEY: 23

LD NAME : DISC4
LD SIZE : 450
PROTECTION KEY : 778

LD NAME :

SELECT FUNCTION : NEW/LIST/RESET/COPY? LIST

DEVICE NAME : $FDO

LIST OF UNIT : $FDO
DEVICE SIZE : 01850
DEVICE ID : FORMATTING EXAMPLE 77.02.09
```

LD NAME	SIZE	KEY
DISC1	00300	00001
DISC2	00250	00002
DISC3	00800	00023
DISC4	00450	00778

SELECT FUNCTION : NEW/LIST/RESET/COPY?

7.2 Resetting a flexible disc

```
>LDFOO
LOGICAL DISC FORMATTING PROGRAM
SELECT FUNCTION: NEW/LIST/RESET/COPY? RESET
DEVICE NAME : $FDO
DEVICE: $FDO RESET
DEVICE SIZE : 01850
DEVICE ID: FORMATTING EXAMPLE 77.02.09
LD : DISC4 RESET                          DISC4 was in use when the
WRITE FILE : TESTFILE                     flexible disc was removed.

SELECT FUNCTION : NEW/LIST/RESET/COPY?    The file TESTFILE on DISC4
                                          has been cleared.
```