MSX RAMFILE
TM220
OPERATION MANUAL

TECALL SYSTEM CO., LTD.

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Chapter 1. Preparation for use

1.Instructions for use of RANFILE

Read carefully the following instructions before operating RANFILE so that you can understand correctly the way to use it and avoid any damage of it.

: Before inserting or taking out the cartridge,be sure to turn the power switch off.
: Keep your hands off the terminals.
: Do not spil coffee,juice,water etc.
: Never disassemble the cartridge.
: Do not turn the switch power off while writing programme into RANFILE.
  (it may damage files on RANFILE.If content of files fails,the files will be erased and the saved programmes and data will disappear.)

2.Specifications

Power supply voltage	5V +- 5 percent
Power consumption	40mA(TYP)
Outside dimensions	109 × 70 × 17(mm)
Weight	About 85gs
Max.capacity	About 16K bytes
Power life	About 5 years
	(Exchange of battery BR2330-1HF made by Matsushita battery industry inc.)

3.RANFILE

RANFILE is the most suitable storage media of high speed, high reliability and low price to those who claim that cassette tapes are too slow and floppy disks are too expensive.It is backed-up by a bulit-in battery which make possible to preserve programmes and data over a long period of time.

Advantages of RANFILE

- High speed, high reliability and low cost
- No need to use RAM in the MSX
  Therefore long programmes you have used can be kept to be used.
  (However, programmes exceeding the capacity of RANFILE can not be saved in RANFILE.)
- Easy to handle
  Just insert the cartridge before turning the switch power on.
  There is no connection by cable.
- Possible automatically to start up BASIC programme which is impossible by cassette tape.
- Usable under such environments(dust,humidity,temperature etc.) as cassette tapes,floppy disks etc can not be used.

4.Description of file

File signifies the collection of information which has meanings. Programmes and variables saved into RANFILE are treated as file.

(1)FILESPEC

FILESPEC specifies input and output devices and file names.
"<DEVICE NAME>:<FILE NAME>.<EXTENDED ELEMENT>"
FILESPEC shall be encircled by quotation mark (").

(2)DEVICE NAME

<DEVICE NAME> specifies input and output devices and corresponds to cas: in cassette tapes.
<DEVICE NAME> shall be specified by one English character without distinction of capital or small letters. The omission of <DEVICE NAME> will be regarded as "A:". When plural number of RANFILE issued,<DEVICE NAME> will be allocated as A:,B:,C:--- in order of slot numbers.

(3)FILE NAME

<FILE NAME> is the name applied to file.
<FILE NAME> a character-string of upto 8 characters.<FILE NAME> exceeds 8 characters, 8 characters from the front will be takes as <FILE NAME> and the remaining as EXTENDED ELEMENT.

(4)EXTENDED ELEMENT

<EXTENDED ELEMENT> is adopted to distinguish between sorts of files and specified by upto three characters.

: Put a period mark (.) after <FILE NAME> to input <EXTENDED ELEMENT>.
: <EXTENDED ELEMENT> can be omitted but cannot be omitted when file saved with <EXTENDED ELEMENT> is loaded.
: English characters and numerals,can be used for both <FILE NAME> and <EXTENDED ELEMENT>.
  There is no distinction of capital and small letters.

(5)DATAFILE

Only one DATAFILE can be used in RANFILE.When a variable is RPUT,DATAFILE named "VAR.DAT" will automatically be implemented.There is no instruction such as OPEN statement,CLOSE statement etc.

5.Automatic start-up of BASIC programme
   If a file named "AUTOEXEC.BAS" exists in RAMFILE,RAMFILE has a function
   automatically to load and run the file immediately upon turning the power
   switch on or pushing the reset button.
   It enables BASICc programme automatically to start up.
   Change the name of the file by RNAME in order to start up already implemented
   programme automatically.
   Where "AUTOEXEC.BAS" exists in plural number of RAMFILEs,the smallest slot
   number will be run.

   CAUTION:There may be a case of automatic start-up being impossible depending
           upon model of MSX.

Chapter 2.Extended BASIC for RAMFILE

1.Table of Extended BASIC for RAMFILE
   Use Extended BASIC for RAMFILE together with CALL statement as it is
   all extended statement.("_"can be used instead of "CALL".)

   RSAVE   To save programme
   RLOAD   To load programme
   RRUN   To load programme and run
   RKILL   To erase file
   RNAME   To change file name
   RFILES   To display file name
   RPUT   To write variable
   RGET   To read variable
   RCLR   To erase variable
   RFRE   To take out remaining memory capacity of RAMFILE
   RBSAVE   To save machine language programme
   RBLOAD   To load machine language programme

2.Description of Extended BASIC language for RAMFILE
   The instructions are described in the following manner.

   : Function   To show the function of order simply
   : Format   To show how to write order
                  : Input can be made either by small letters or by capital
                    letters.
                  : Items surrounded by < > are specified by user.
                  : Items surrounded by [ ] can be omitted.
                  : Items with continous omission mark "-" can be repeated at
                    random number of times within the limit of length allowed
                    in one line.
   : Example   To show simple examples as actual input models.
   : Description To explain directions and detailed functions of order and
                  related precautions.

RBLOAD

Function	To load machine language programme
Format	CALL RBLOAD (<FILESPEC>[,<OFFSET>])
Example	CALL RBLOAD ("ABC.BIN")
	CALL RBLOAD ("XYZ.BIN",&H100)
Description	It loads on memory machine language programme specified by <FILESPEC>.

When <OFFSET> is omitted,machine language programme start to be loaded from TOP ADDRESS specified at the time of save by RBSAVE.
When <OFFSET> is specified,machine language programme start to be loaded from the address <OFFSET> is added to <TOP ADDRESS> specified at the time of saving.
As machine language programme loaded with <OFFSET> is loaded in the different address from that at the time of saving,it must be relocatable programme.
DATAFILE cannot be specified on <FILESPEC>.
BASIC programme file saved by RSAVE cannot be specified on <FILESPEC>.
<OFFSET> shall be specified by hexadecimal digit but not by variable or by decimal digit.

RBSAVE

Function	To save machine language programme
Format	CALL RBSAVE (<FILESPEC>,<TOP ADDRESS>,<END ADDRESS>)
Example	CALL RBSAVE ("ABC.BIN",&HE000,&HE100)
Description	It saves on file specified by <FILESPEC> machine language programme on memory from <TOP ADDRESS> to <END ADDRESS>.

When there is no file specified by <FILESPEC>, implement and new file a when there is such a file, rewrite the content.
DATAFILE cannot be specified on <FILESPEC>.
Specify <TOP ADDRESS>,<END ADDRESS> by hexadecimal digit, but not by variable or by decimal digit.

RCLR

Function	To delete the specified variable from DATAFILE
Format	CALL RCLR ([<"DEVICE NAME:">,]<VARIABLE>[,<VARIABLE>-])
Example	CALL RCLR ("A:",A,B( ),C)
Description	It deletes the variable specified by <VARIABLE> from DATAFILE (VAR.DAT) on RAMFILE.

Use RKILL when deleting all variables.
Specified variables must be the ones existing on DATAFILE.
Strings cannot be used for <VARIABLE>.
When specifying array,omit subscript.
(Otherwise that will delete all the members of the array.)
When omitting <DEVICE NAME>,omit it including "," at the back of the name of the <DEVICE NAME>.

RFILES

Function	To display file name on RAMFILE.
Format	CALL RFILES [(<"DEVICE NAME:">)]
Example	CALL RFILES
	CALL RFILES ("B:")
Description	It displays all the files on RAMFILE.

When omitting <DEVICE NAME>,omit it together with ( ).
Numeric value after file name shows memory capacity occupied on RAMFILE.
The last line displays the remaining memory capacity of RAMFILE.

RFRE

Function	To check the remaining memory capacity of RAMFILE.
Format	CALL RFRE ([<"DEVICE NAME:">,]<VARIABLE>)
Example	CALL RFRE ("B:",A)
Description	It assigns the value of the remaining capacity of RAMFILE to the variable specified by <VARIABLE>.

Neither strings nor array variable can be used for <VARIABLE>.
When omitting <DEVICE NAME>,omit it together with "," at the back of <DEVICE NAME>.

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