

ELLIOTT

9000

Volume 2: PROGRAMMING INFORMATION
Part 7: MAGNETIC TAPE ROUTINES
Section 5: QMCLOSE

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Chapter 1: INTRODUCTION

1.1 Function

This program is a SIR coded subroutine which terminates a magnetic tape file with the correct end of file data and closes it for reading or writing. It may also be used to rewind a tape without closing the file.

1.2 Form of Distribution

The routine is distributed on a SIR mnemonic tape, part of the MTBLOCK tape.

1.3 Method of Use

The program is assembled and entered as a SIR subroutine.

1.4 Configuration

The minimum configuration for running this program is a 903 central processor with 8192 words of store, a magnetic tape controller and at least one magnetic tape handler.

Chapter 2: FUNCTIONS

```

Enter by:  11  QMT
           8   QMCLOSE
           0   FT
           8   ERROR
           X
    
```

where 0 FT points to the file table, ERROR to the error routine and the parameter word X refers to the various options.

Word 0; of the file table (see Volume 2.7.1) must hold the handler number.

	FUNCTION	VALUE OF X
2.1	WRITE EOF block, do not close file.	/8 0
2.2	Close file for writing (and reading), rewind in Manual.	/3 0
2.3	Close file for writing (and reading), rewind.	/1 0
2.4	Close file for writing only, rewind.	/5 0
2.5	Close file for reading, rewind in Manual.	3 0
2.6	Close file for reading, rewind.	1 0
2.7	Rewind, do not close file.	5 0

Only the above values of X may be used - the effects of any other value are undefined.

Close for writing writes an EOF block. The tape should not have been moved since the last data block was written.

2.8 Exit

Normal exit is to the fourth location after entry. If a rewind option is used the tape may be busy rewinding on exit.

2.9 Error Exit

The error exit is to the second location after entry. The A-register holds an error status, consisting of indicator bits. If the appropriate bit is one, then the error implied is:

- Bit 16: Handler not available, or in Manual.
- Bit 15: Instruction has been rejected as "do nothing".
- Bit 13: Attempting to close file for writing, when file is not opened for writing.
- Bit 10: Zero character - false end of block - repeated hardware error.
- Bit 4: Parity failure, repeated hardware error.
- Bit 3: Missed transfer, repeated hardware error.

Chapter 3: METHOD USED

If the file is to be closed for writing, an EOF block is written onto tape, and an indicator bit, which, when set within the magnetic tape routines, signifies the file is open for writing, is cleared.

If the file is to be closed for reading, another indicator bit within the routine is cleared.

The rewind, or rewind in Manual instruction is then initiated, and the program exits.

Chapter 4: STORE USED

QMCLOSE occupies 80 locations.

Chapter 5: STORE LOCATIONS AFFECTED

QMCLOSE alters locations

QMT, 4; of the file table and workspace used internally by the magnetic tape software.