

DataGeneral

**TECHNICAL
STATEMENT**

TEXT LISTING

068-000039-03

PROGRAM

4048 DISK PACK FORMATTER

TEXT TAPE

097-000039-03

ABSTRACT

THIS PROGRAM IS PROVIDED FOR WRITING FORMAT INFORMATION ON
2311 TYPE DISK PACKS USED WITH THE 4046 DISK PACK CONTROLLER.
PROPER FORMATTING IS A PREREQUISITE TO READING AND WRITING ON
A DISK PACK.

10005 .MAIN

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5. FORMAT PATTERN
EACH TRACK ON THE DISK SURFACES CONSISTS OF
6 SECTORS WHERE DATA CAN BE WRITTEN. SYNC AND
INTERSPERSED BETWEEN THE SECTORS IS SYNC AND
ADDRESS INFORMATION USED BY THE HARDWARE
FOR CONTROL. WHEN GENERATING THE FORMAT
ALL OF THIS DATA MUST BE OUTPUT TO THE
DISK CONTROL FROM MEMORY. THE FORMAT OF
THIS DATA IS OUTLINED BELOW.

A. INDEX AREA
36 BYTES OF ALL ZEROS

B. HOME ADDRESS GAP
31 BYTES OF ALL ZEROS
3 BYTES OF ALL ZEROS
1 BYTE OF ALL ONES
1 SYNC BYTE

C. HOME ADDRESS
FLAG BYTE 000000AB
(A) 1 IF DEFECTIVE TRACK.
ALWAYS 0 FOR THIS SYSTEM.
(B) 1 IF ALTERNATE TRACK.
TRACKS 200-202 ARE SET
TO 1 SINCE A COMPLETE
SYSTEM IS DEFINED AS HAV-
ING 200 ACTIVE TRACKS.

2 BYTES FOR CYLINDER NUMBER
2 BYTES FOR HEAD NUMBER
2 CHECK WORD BYTES

D. ALPHA GAP
LEAD BYTE 11001100
LEAD AREA 12 ZERO BYTES
VFO AREA 3 ZERO BYTE
VFO AREA 1 ONES BYTE
SYNC BYTE 00001110

E. SECTOR 0 ADDRESS AREA
FLAG BYTE (SEE PAR. 6.C)
2 BYTES FOR CYLINDER NUMBER
2 BYTES FOR HEAD NUMBER
1 BYTE FOR SECTOR NUMBER
1 KEY BYTE (ALWAYS ZERO)
2 BYTES FOR DATA LENGTH (1000 OCTAL)
2 CHECK BYTES

F. ALPHA PRIME GAP
LEAD BYTE 11001100
LEAD AREA 9 BYTES OF ONES
VFO AREA 6 BYTES OF ZEROS
VFO AREA 1 BYTE OF ONES
SYNC BYTE 00001110

G. DATA AREA SECTOR ZERO
512 BYTES OF ZEROS
2 CHECK BYTES

10004 .MAIN

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H. BETA GAP (PRECEEDS SECTOR N ADDRESS AREA)
LEAD BYTE 11001100
47 BYTES OF ONES
VFO AREA 4 ZERO BYTES
VFO AREA 1 ONES BYTE
ADDRESS MARK 2 BYTES OF ONES
SYNC BYTE 00001110

I. ADDRESS AREA, SECTOR N
(SAME AS SECTOR 0, SEE PARAGRAPH 6.E)

J. BETA PRIME GAP
(SAME AS ALPHA PRIME GAP. SEE
PARAGRAPH 6.F)

K. DATA AREA SECTOR N
512 ZERO BYTES
2 CHECK BYTES

THE SEQUENCE IN PARAGRAPHS H, I, J, AND K
IS REPEATED FOR EACH SECTOR. AN ADDITIONAL
BETA GAP FOLLOWS THE LAST DATA AREA.

7. PROGRAM DESCRIPTION
IN GENERATING THE FORMAT THE PROGRAM PRODUCES
ONE TRACK OF DATA IN MEMORY, THEN EXECUTES
A WRITE INSTRUCTION. THE FORMAT MODE
HARDWARE ESTABLISHES THE WORD COUNT AND THE
ENTIRE TRACK IS WRITTEN. 3712 BYTES
(1856 WORDS) ARE REQUIRED.

WHEN READING IN THE FORMAT MODE ALL DATA EXCEPT
THE INDEX AREA AND THE HOME ADDRESS GAP IS
BROUGHT INTO CORE FOR VERIFICATION. THE FORMAT
MODE READ LOGIC SETS THE WORD COUNT TO 1792.

.EOT

0005 .MAIN
**00000 TOTAL ERRORS, 00000 PASS 1 ERRORS