

DataGeneral

**TECHNICAL
STATEMENT**

TEXT LISTING

068-000233-02

PROGRAM

ECLIPSE CP DIAGNOSTIC, PART 1

TEXT TAPE

097-000233-02

ABSTRACT

'ECLIPSEA' CP DIAGNOSTIC PROGRAM IS USED TO CHECK OUT THE ALC SKIP LOGIC FOR ALU AND CARRY BIT, CRY ENAB LEVEL FOR CONTROLLING THE STATE OF CARRY, LOAD/NO LOAD FUNCTION ON ALU AND CARRY, SHIFTER OPERATIONS, COMPLETE ALU OPERATIONS AND THE ARITHMETIC AND LOGIC INSTRUCTIONS GIVEN BELOW OF THE ECLIPSE CENTRAL PROCESSOR.

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; NAME: ECLIPSEA.TX      PART NUMBER: 097-000233
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; DESCRIPTION: ECLIPSE CENTRAL PROCESSOR DIAGNOSTIC, PART 1
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; REVISION HISTORY:
;
; REV.      DATE
; 00      08/02/74
; 01      12/20/74
; 02      08/06/76
;
; COPYRIGHT © DATA GENERAL CORPORATION, 1974, 1976
; ALL RIGHTS RESERVED.
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;PART 1 OF CENTRAL PROCESSOR DIAGNOSTIC FOR
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IF PROGRAM WAS LOADED WITH 'CAT' OR 'KITTEN AND A RESTART
IS NECESSARY, START AS FOLLOWS:
STARTING ADDR=170 (FOR RESTART WITHOUT 'CAT'.)
STARTING ADDR=171 (FOR RESTART WITH 'CAT'.)

MONITOR LOCATION X6000 TO VERIFY 'CAT' OR "KITTEN" OPERATION
NORMALLY THIS LOCATION CONTAINS A PATTERN CHANGING FROM ALL
ZEROS, TO ALL ONES, TO AN INC/SWAP PATTERN.
X=THE NUMBER OF HIGHEST MEMORY MODULE (BETWEEN 1 & 7)

OPERATING PROCEDURE/OPERATOR INPUT
-----
LOAD THE PROGRAM VIA THE BINARY LOADER OR INSERT A
PRELOADED MEMORY MODULE.
SET SWITCHES TO 200.
PRESS START.
PROGRAM MUST HALT AT ADDRESS "A00".
PRESS CONTINUE TO PROCEED.
THE PROGRAM WILL RUN UNTIL MANUALLY STOPPED OR UNTIL
AN ERROR IS DETECTED.

PROGRAM OUTPUT/ERROR DESCRIPTION
-----
FOR ANY MALFUNCTION DETECTED BY THE TEST, THE PROGRAM
WILL HALT. (PROGRAM COUNTER=1) IS THE ERROR HALT
LOCATION.
REFER TO THE LISTING FOR EXPLANATION OF THE ERROR.
TO LOOP ON ERROR, STROKE 'JMP TO BEGINNING OF TEST
THAT FAILED' IN THE ERROR HALT LOCATION AND START
PROGRAM AT THE BEGINNING OF THE TEST.

IF LOOPING OCCURS IN THE PROGRAM, STOP THE COMPUTER
AND CHECK LOCATION 201 TO FIND OUT THE TEST THAT
WAS RUNNING BEFORE THE LOOPING OCCURRED.

PROGRAM DESCRIPTION/THEORY OF OPERATION
-----
EACH TEST IS COMPLETE IN ITSELF, SO THE PROGRAM CAN
BE STARTED FROM ANY TEST WITHOUT CAUSING ANY
INITIALIZATION ERRORS.
ECLIPSE IS A MICRO-PROGRAMMED COMPUTER.
EACH INSTRUCTION IS ACCOMPLISHED BY SET OF MICRO
CODE WORDS CONTAINED IN (512 X 56) WORD ROM.
THE TESTS ARE WRITTEN SO AS TO FOLLOW THE MICRO
CODE FLOW FOR THE INSTRUCTION AND IDENTIFY THE
ERROR CAUSE TO AN UNIQUE MICROCODE WORD AND
TO ITS INDIVIDUAL FIELDS WHENEVER POSSIBLE.
ADDITIONAL DIAGNOSTIC REFERRING TO THE LHD PRINTS
IS ALSO GIVEN.

THE OPERATOR SHOULD HAVE CAPABILITY OF READING
SIMPLE MICROCODES TO USE THIS PROGRAM TO ITS
UTMOST EFFICIENCY.

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RESTRICTIONS/MISC

CERTAIN INSTRUCTIONS LIKE BLM, XCT, BAM, ETC.,
DO ALLOW INTERRUPTS TO OCCUR DURING THEIR
EXECUTION. THIS FEATURE OF THOSE INSTRUCTIONS IS
NOT CHECKED IN THIS TEST.

.EOT

00006 ECLPA

*A00000 TOTAL ERRORS, 00000 PASS 1 ERRORS