

dec

PERMANENT  
MEMORANDUM

M 1125  
PAGE 1 OF 3

DATE

August 29, 1961

SUBJECT Multiply Step and Divide Step Test Program  
TO PDP Distribution List

ABSTRACT

This program is designed to test the multiply step  
and divide step instructions.

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### Introduction

To test the multiply step and divide step instructions, a test number is put in the test word switches and written into memory. This number is then multiplied by itself. The product is then divided by the original test number. The result of this division is then compared with the original test number. If an error occurs, the program will halt at location 1066. If no error occurs, the program will continue looping. If another test number is to be used for this program, stop the program and put the new number in the test word switches.

### Operating Instructions

#1 With all sense switches down, load the reader with the test tape and push readin switch.

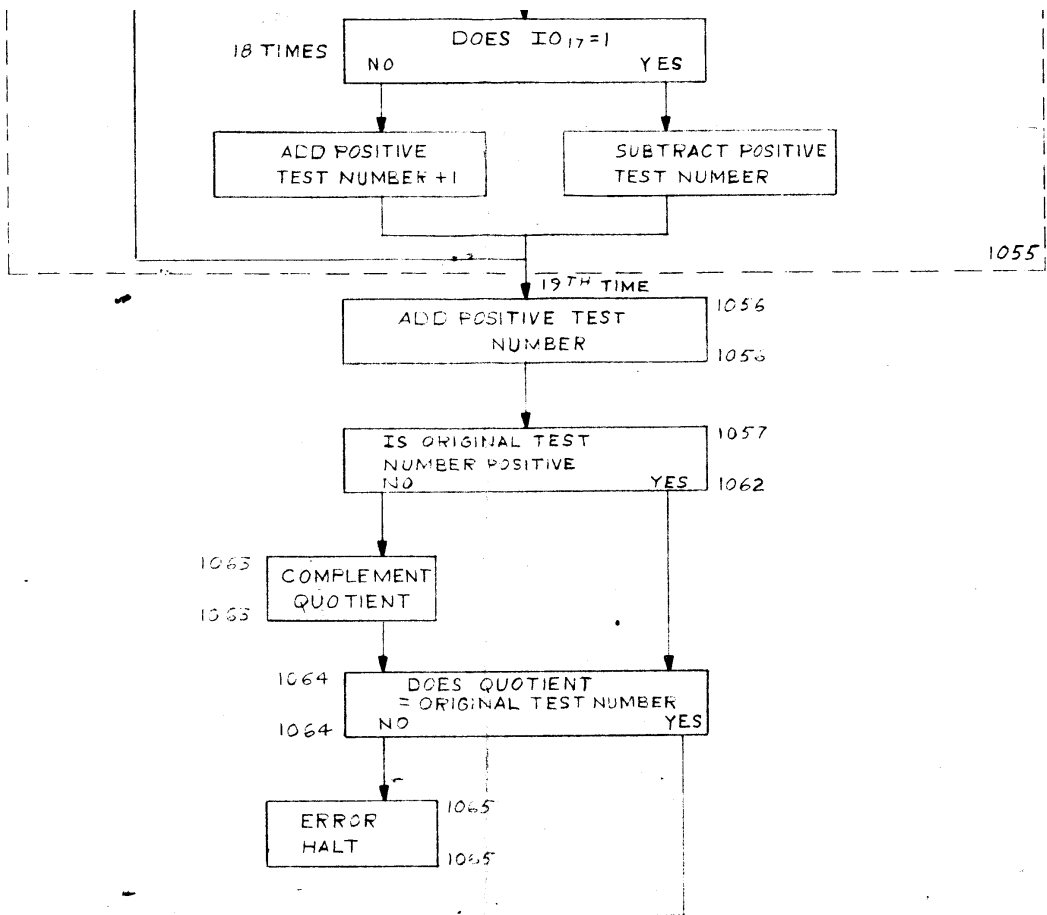
#2 After the tape reads in and reader stops, put the test number in the test word switches, and with a starting address of 1000 in the test address switch, press the start button.

#3 If a new test number is to be used, press the stop button and put the new number in the test word switches and press start button again.

1000	lat test number )	,stores test word
1001	dac 100 )	,in memory
1002	dac 101 )	
1003	lac 100 )	,takes absolute value
1004	spa )	,of test numbers
1005	cma )	
1006	dac 102 )	
1007	scr 9 )	,puts absolute factor
1010	scr 9 )	,in IO
1011	cla	,clears AC
1012	mus 102 )	,seventeen mus instructions
1013	mus 102 )	,at the end of which the
1014	mus 102 )	,AC has most significant
1015	mus 102 )	,seventeen bits of the product
1016	mus 102 )	,along with the sign bit.

1017	mus 102	)	,The IO has the seventeen
1020	mus 102	)	,least significant bits of
1021	mus 102	)	,the product.
1022	mus 102	)	
1023	mus 102	)	
1024	mus 102	)	
1025	mus 102	)	
1026	mus 102	)	
1027	mus 102	)	
1030	mus 102	)	
1031	mus 102	)	
1032	mus 102	)	
1033	sub 102		,first step of division
1034	dis 102	)	,At the end of the add
1035	dis 102	)	,instruction in 1056 the
1036	dis 102	)	,IO has the quotient.
1037	dis 102	)	,The AC has the remainder.
1040	dis 102	)	
1041	dis 102	)	
1042	dis 102	)	
1043	dis 102	)	
1044	dis 102	)	
1045	dis 102	)	
1046	dis 102	)	
1047	dis 102	)	
1050	dis 102	)	
1051	dis 102	)	
1052	dis 102	)	
1053	dis 102	)	
1054	dis 102	)	
1055	dis 102	)	
1056	add 102	)	
1057	lac 100		
1060	scr 9	)	,puts quotient in AC and
1061	scr 9	)	,original test number
1062	spi	)	,takes absolute value of
1063	cma	)	,quotient
1064	sas 100		
1065	hlt		
1066	jmp to start		





ch. no. app.

Changes

exper. production other

drawn by fault checked engineer

MUS & DIS TEST PROGRAM ITT PDP-1C-2

digital

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MAYNARD MASSACHUSETTS

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