PAL TAPE ASSEMBLY

PRE AND POST PASS

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2.0 INTRODUCTION

The PAL tape system, in order that it may assemble programs using a 1004 processor online, has been designed with a pre-pass which will read cards from the 1004 processor and write them on a tape which then can be used by REGENT or PAL. It also has a post-pass which will punch object code cards and/or print codedit listings on the 1004 equipment.

3.0 PRE-PASS OPTION

The pre-pass option requires a minimum 8K storage.

3.1 LOCATION IDENTIFICATION

The location identification is 1804 for an 80 column system and 1904 for a 90 column system.

a. To locate the pre-pass of PAL, follow the operating procedures required by your computing system.

b. Place source code cards in the 1004 input hopper.

1) If a REGENT program, the first card must have a $ (dollar sign) in column 1 followed by REG1 in columns 2-5 inclusive.

2) If a PAL program, the first card must be a BEGIN card.

3) The source code deck in either case must have an END card, followed by a number of blank cards.

c. REGENT programs are written on tape unit 1.

d. PAL programs are written on tape unit 2.

e. When the END card is detected the output tape will be rewound and either REGENT or PAL will be located and loaded by the Executive Routine (OPR).

3.2 PROGRAM DISPLAY STOPS:

DISPLAY	DESCRIPTION	ACTION
16666	The pre-pass of PAL has been loaded.	Depress the PROGRAM START button.
17771	No BEGIN card.	Clear the reader and reload the deck with BEGIN card.
150206	Out of tape on output tape unit.	Cannot be permitted, restart.

4.0 P O S T - P A S S   O P T I O N

The post-pass option requires a minimum 16K storage.

4.1 LOCATION IDENTIFICATION

The location identification is 1854 for an 80 column system and 1954 for a 90 column system.

a. This final pass of PAL must be located from the MIT according to the operating procedures of the 1050 system.

b. If continuing on, immediately after pass 4 of PAL, no tape mounting or loading should be required by the operator. However, if picking up at this point, following an interruption after pass 4 of PAL, the operator will be required to take precautions to insure that the correct tapes are mounted on the correct tape units.

c. Follow standard operating procedures for inserting and aligning the paper in the 1004 printer and remember to place blank cards into the 1004 punch hopper if doing a tape-to-card.

d. After the program is loaded, there will be an initial display stop to allow the operator time to check himself and to insert the parameter information to direct the routine as to what it must do. The parameter breakdown (a single character) follows:

OCTAL VALUE	BINARY CONFIGURATION	MEANING
01	000001	Print the codedit from TAPE2.
02	000010	Punch the object program from TAPE1.
03	000011	Both of the above.
--	000x00	Zero (0) if 80 Column One (1) if 90 Column
--	00x000	Zero (0) if the program on tape unit 1 and/or 2 is the first or only program on the tapes. One (1) if the program which is to be printed and/or punched needs to be located from the tapes.

e. If the presence of a one (1) bit is detected, in the 02 (octal) position of the parameter character, a further test is made to determine if Sense Switch 1 is ON or OFF.

1) Sense Switch 1 OFF: A card will be read from the 1004 Reader in order to determine what the four character identification of the program is. A dollar sign ($) must appear in the first column position of the card followed by the identification in columns 2-5.

2) Sense Switch 1 ON: The program identification must be supplied by trace switch settings on the 1050 console.

4.2 PROGRAM DISPLAY STOPS:

DISPLAY	DESCRIPTION	ACTION
010522	1050 Stop	Set the parameter into the trace switches.
012220	The parameter that was supplied, indicates that neither printing nor punching was requested.	Reload the parameter by whatever means used originally and depress the PROGRAM START button.
017005	1050 Stop	Set the first two characters of the identification of a program which is to be searched from tape into the trace switches (UNIVAC XS 3 configuration.)
017006	1050 Stop	Set the second two characters into the trace switches.
010524	The card that was to supply the four character ID of a program did not have a dollar sign in the first column.	Program start will read another card and look for a dollar sign ($).
010501	The program requested to be punched was not found on tape unit one.	Mount correct tape and depress the PROGRAM START button.
010502	The program requested to be printed was not found on tape unit two.	Mount correct tape and depress the PROGRAM START button.
015206	Either tape unit one or two has been read to the end without detecting a proper ending sentinel.	Restart.