SAT

SCIENTIFIC ADVISORY TEAMS

1401 Computer Program Documentation For Behavioral Tasks

Working Paper 101B27.100

Atlantic ASW System

COMMANDER ANTISUBMARINE WARFARE FORCE
UNITED STATES ATLANTIC FLEET
Norfolk, Virginia 23511

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Encl: (1) McLaurin, J. A. "1401 Computer Program Documentation for Behavioral Tasks," COMASWFORLANT Working Paper 101B27.100

1. Reference (a) established a Coordinated Human Factors Program supported by a small computer application team for the storage and retrieval of ASW human performance data. This paper documents the ADP procedures used to collect and print the officer and enlisted data from the Bureau of Naval Personnel for those ASW sensor personnel assigned to the Atlantic ASW System.

2. Each section of this paper is designed to serve different functions and readers. A general nontechnical view of the operational capability of the ADP system can be gained by reading the Functional Description section. Professional research personnel will find their requirements are best met by reading the Data Requirements Document and System Specification sections. Computer programmers and operating technicians will find the Program Specification and Operations Manual sections the most useful.

3. Enclosure (1) is forwarded for information and retention.

Marvin E. Barnett
MARVIN E. BARNETT
Chief of Staff

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1401 COMPUTER PROGRAM DOCUMENTATION FOR BEHAVIORAL TASKS

Working Paper 101B27.100

by

John A. McLaurin

Commander Antisubmarine Warfare Force
United States Atlantic Fleet
Norfolk, Virginia 23511
April 1968

PREFACE

This paper was written to support the Commander Antisubmarine Warfare Force, U. S. Atlantic Fleet human performance data collection, analysis, storage, and retrieval. program.

Funding is under Chief of Naval Operations (Op-95) and Office of Naval Research PO8-0037 of 1 August 1967.

The assistance given to COMASWFORLANT by the Assistant Chief of Naval Personnel for Management Information (Pers-N) in the retrieval of selected records contained in the Bureau of Naval Personnel data bank is gratefully acknowledged. This supportive relationship is proving to be more valuable to COMASWFORLANT because of the aperiodic updating requirements of the ASW Human Performance Data Bank.

The programming of the PS-03 program, which is in reality the first updating change to the basic program, was completed by Mrs. P. P. Mason. This valuable addition will enable the several Scientific Advisory Teams in the Atlantic ASW System to use the most current retrieval program in their demographic analyses.

ABSTRACT

This paper was written to document the ADP procedures used to collect and print the Officer and Enlisted data from BUPERS for those ASW sensor and weapons personnel assigned to COMHUKFORLANT, COMTAIRWINGSLANT and COMOCEANSYSLANT. Each section of this paper is designed to be informative at different levels.

The Functional Description reflects the initial analysis of the system and defines the operational capability to be developed without going into the details of each individual operation. An overall non-technical view of the system may be obtained by reading this section.

The Data Requirements Document defines the data elements used within the system. This section gives detailed information about inputs and outputs of the system.

The System Specification is a more detailed documentation of the entire system. Detailed requirements are given for program design and the system environment is described.

The Program Specification describes program design so as to permit program production. Each program within the system is defined in a separate Program Specification and only information pertaining to that program and how it relates to other operations within the system is presented in these sections. Program listings are included in this section.

The Operations Manual documents the operating procedures necessary to operate each function within this system. Instructions are given for initiating, running, terminating, interrupting and restarting each function within the system.

TABLE OF CONTENTS

LIST OF CHARTS

Functional Description
101B27.100
FD-01

1. General

1.1 Purpose of Functional Description. The Functional Description for Project 101B27.100 is written to fulfill the following objectives:

(a) To provide in writing the system requirements as a basis for mutual understanding between user and developer.

(b) To provide a definition of performance requirement, preliminary design, and user impacts.

(c) To provide a basis for the development of system test.

1.2 Project Reference. The Active Duty Enlisted/Officer Master Magnetic Tape Record Print Procedure, Project No. 101B27.100, objective is to acquire from BUPERS the Active Duty Enlisted/Officer Master Magnetic Tape Record file for enlisted and officer personnel in COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT and provide the Scientific Advisory Teams at these commands with a detailed list of this file.

1.3 Applicable Documents.

(a) Manual of the Active Duty Enlisted Master Magnetic Tape Record, NAVPERS 15,949A Oct 1962.

(b) Manual of the Active Duty Officer Master Magnetic Tape Record, NAVPERS 15,921A May 1965.

(c) BUPERS ltr Pers-N103-PA of 13 Nov 1967. Manual of the Active Duty Officer Automated Record (Preliminary Revision to NAVPERS 15,921A).

(d) COMASWFORLANT OPORDER 71-(YR).

(e) COMASWFORLANT ltr ser 71/71 of 6 Feb 1968.

2. Scope

2.1 General System Description. This system will contain four major steps.

(a) Preparation of crew data cards from crew list by the three commands in paragraph 1.2.

(b) Sorting crew data cards into service number sequence by COMASWFORLANT.

(c) BUPERS processing of crew data cards and producing Active Duty Enlisted/Officer Master Magnetic Tape Records for those service numbers contained in these cards.

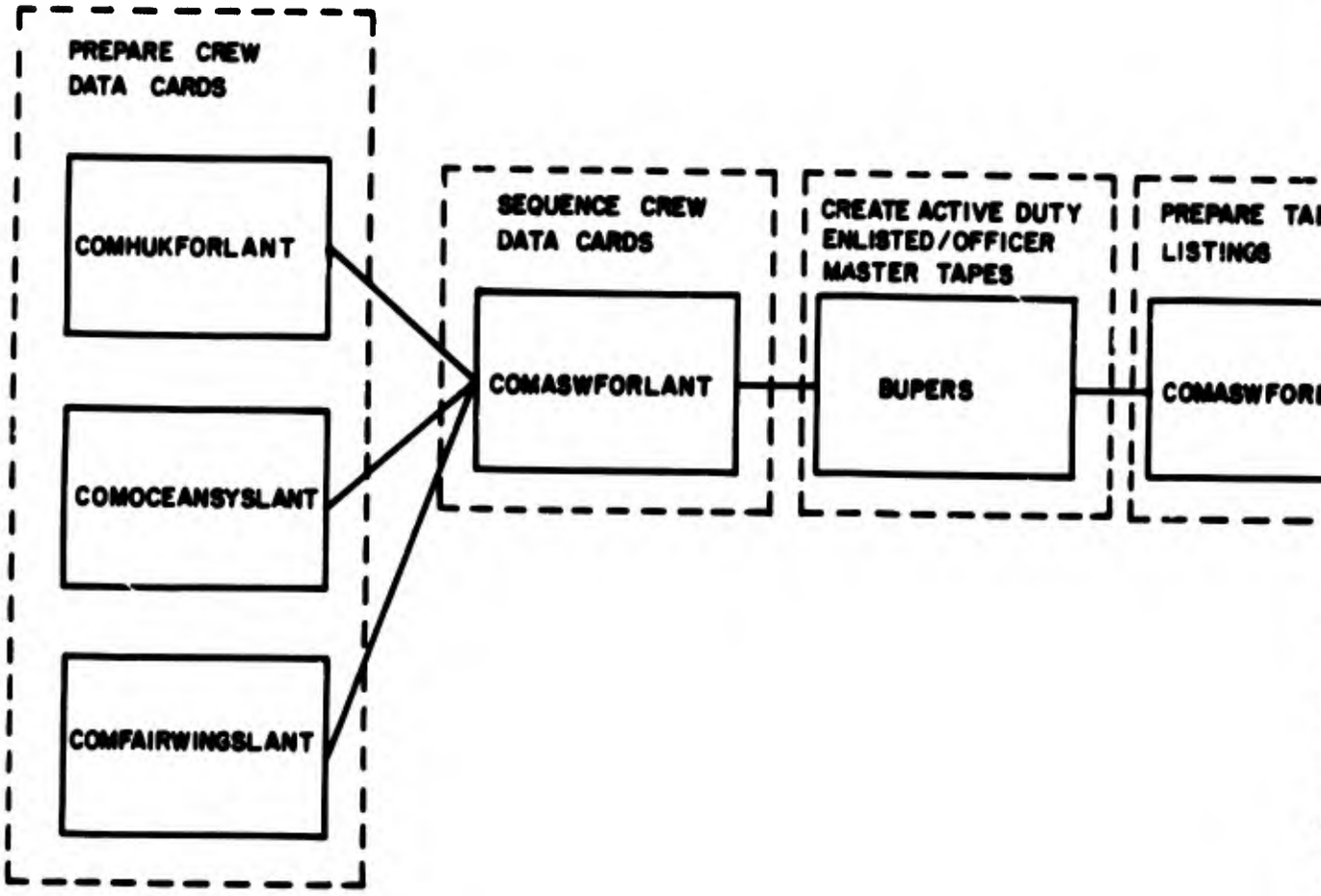
(d) COMASWFORLANT producing a detailed printout of the Active Duty Enlisted/Officer Master Magnetic Tape Record file.

2.2 Existing Methods and Procedures. Not applicable.

2.3 Proposed Methods and Procedures. The three commands named in paragraph 1.2 will provide COMASWFORLANT with a deck of crew data cards produced from their crew list. When the crew cards are received in COMASWFORLANT they will be sorted into service number sequence and sent to BUPERS. BUPERS will furnish a tape containing the Active Duty Enlisted/Officer Master Magnetic Tape Record for those enlisted men and officers included in the crew decks. Upon receiving the Active Duty Enlisted/Officer Master Record tape from BUPERS, COMASWFORLANT will produce a detailed printout by command and send a copy to the appropriate command.

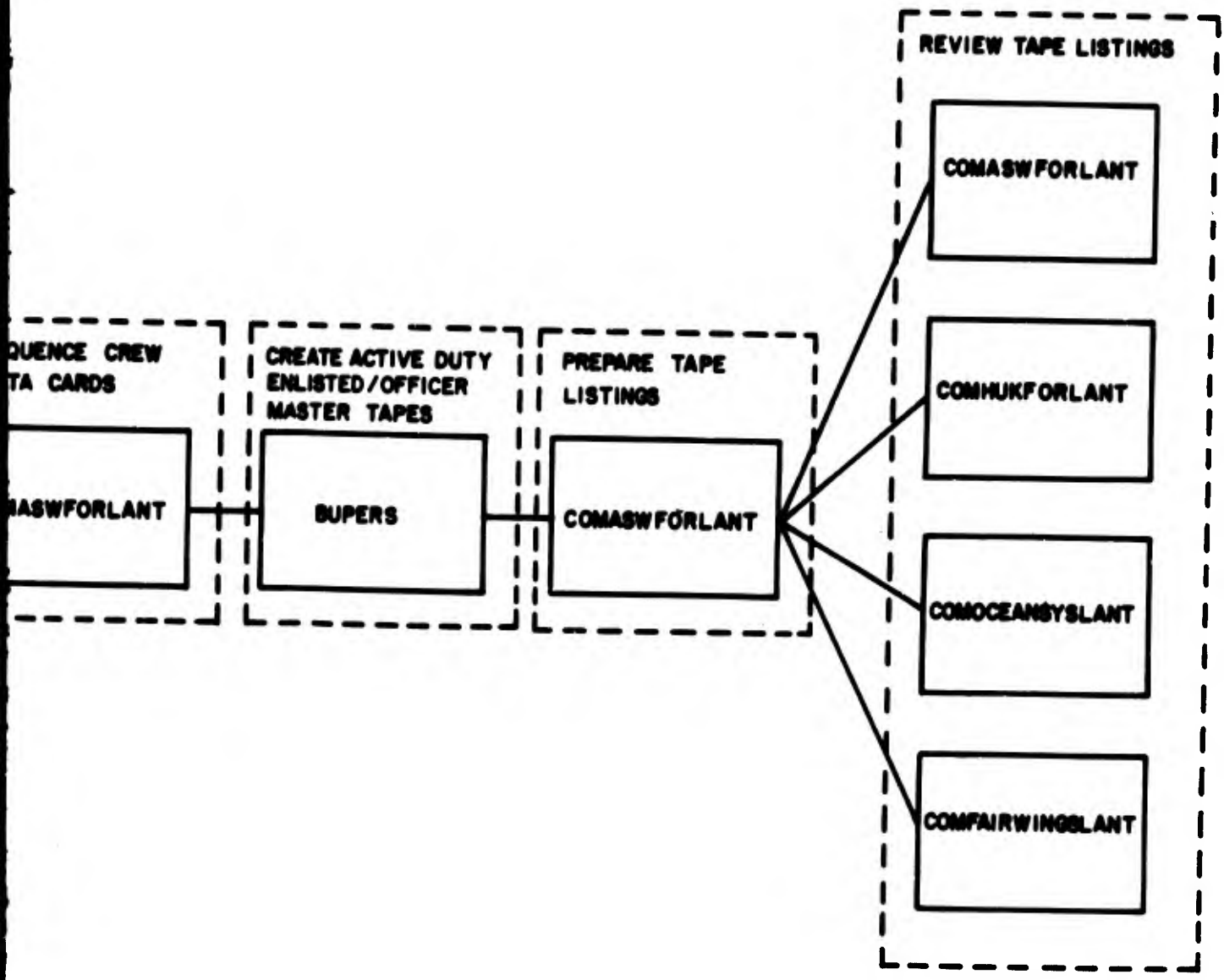
2.3.1 Summary of Improvements. The tape and list produced by this system will provide the Scientific Advisory Team members of each command with a list of the enlisted and officer personnel within their commands. This list will indicate to the Scientific Advisory Team members what information is available on this tape for future statistical and analytical reports. After the original review of this tape by each command the list of the entire tape will be produced only on request.

2.3.2 Summary of Impacts. This system will require no additional equipment. This system will be run quarterly and will require the following machine times:



SYSTEM ORGANIZATION CHART

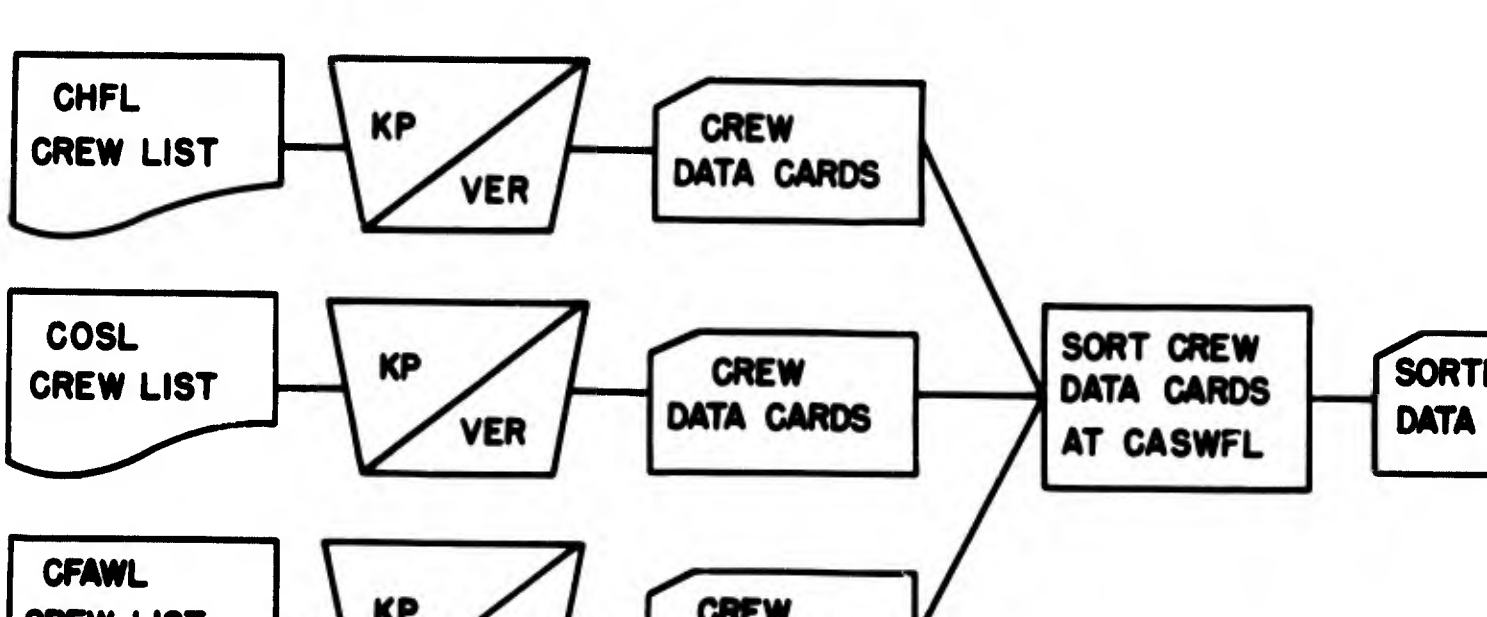
A



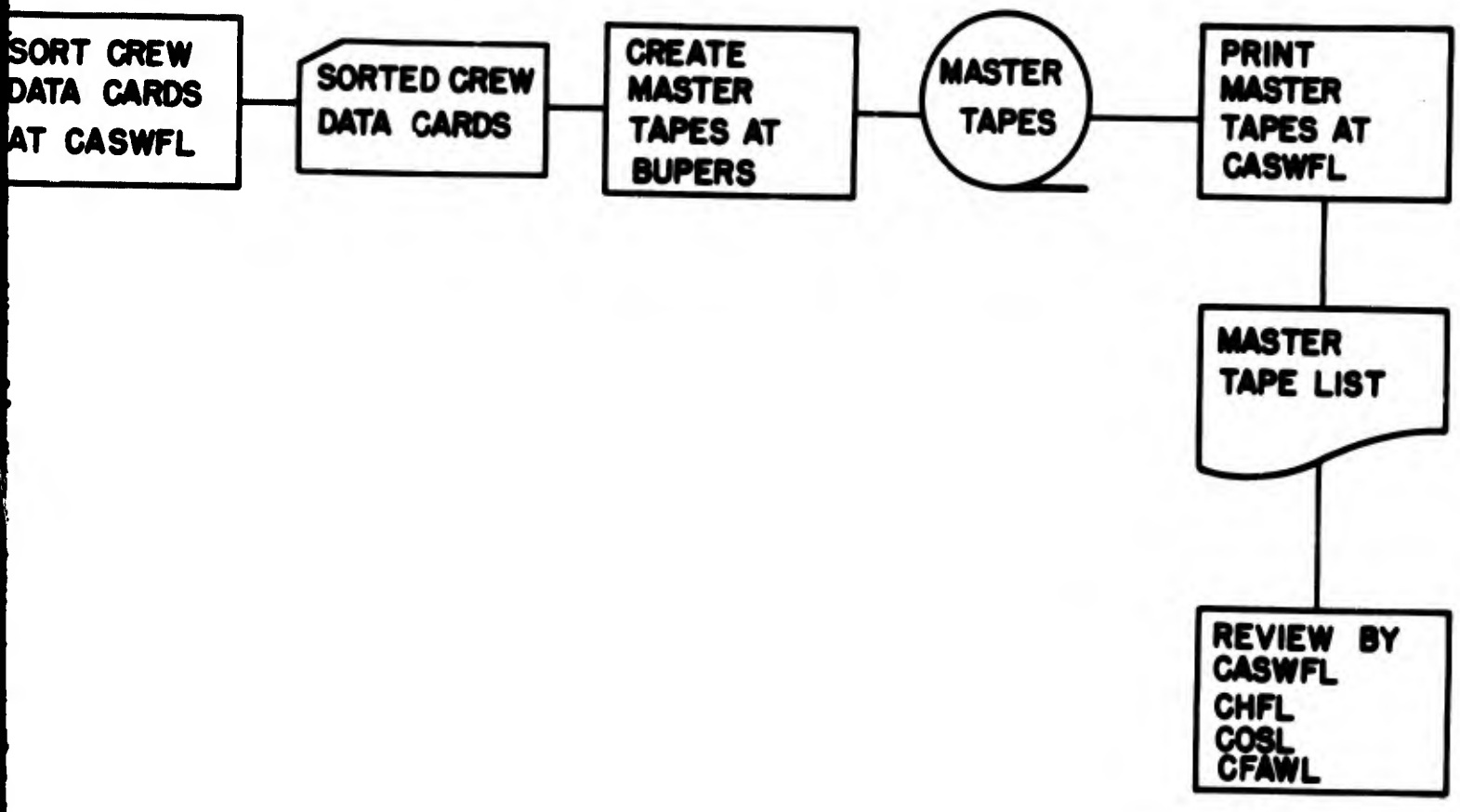
EM ORGANIZATION CHART

I-3

B

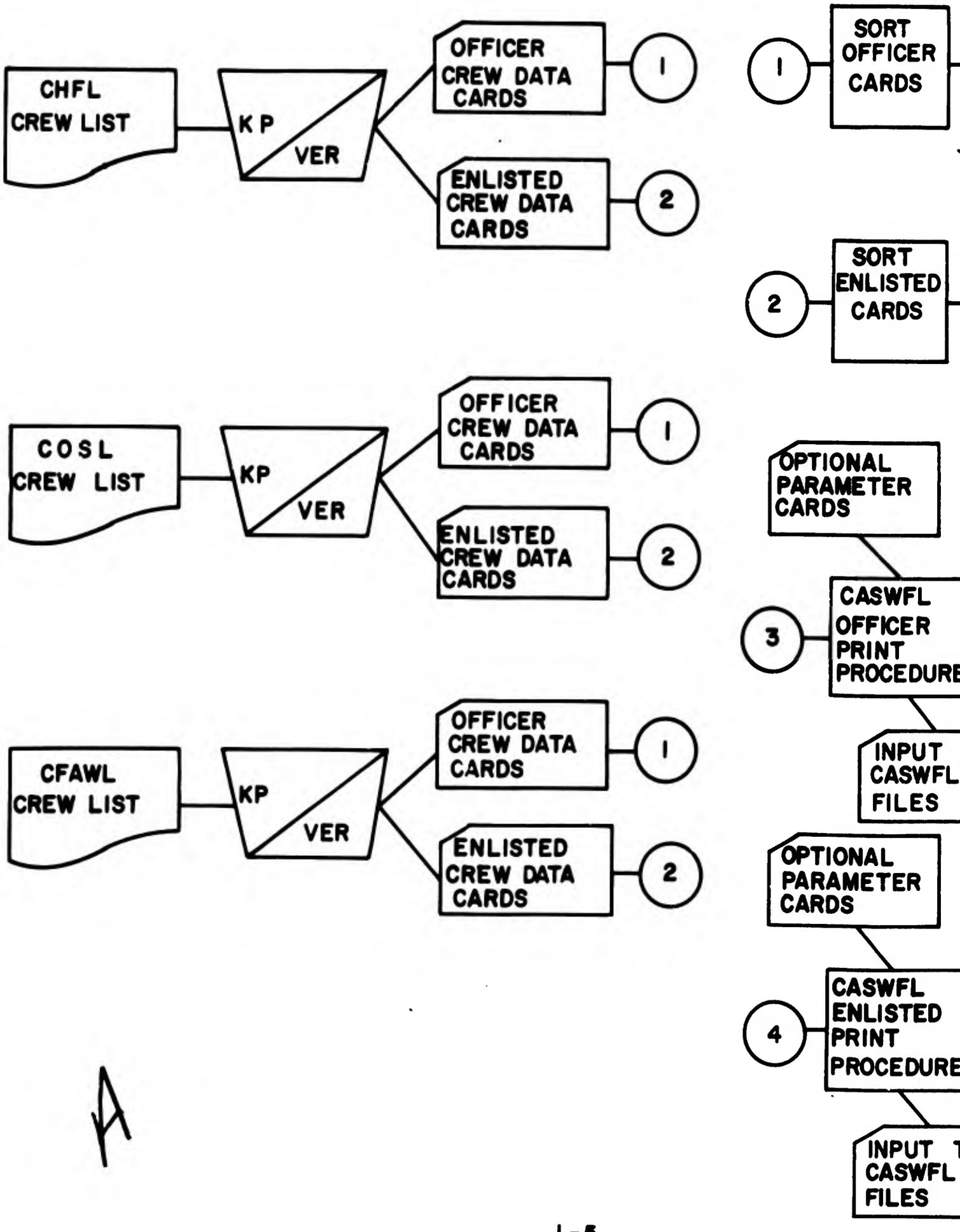


SYSTEM INFORMATION FLOW CHART

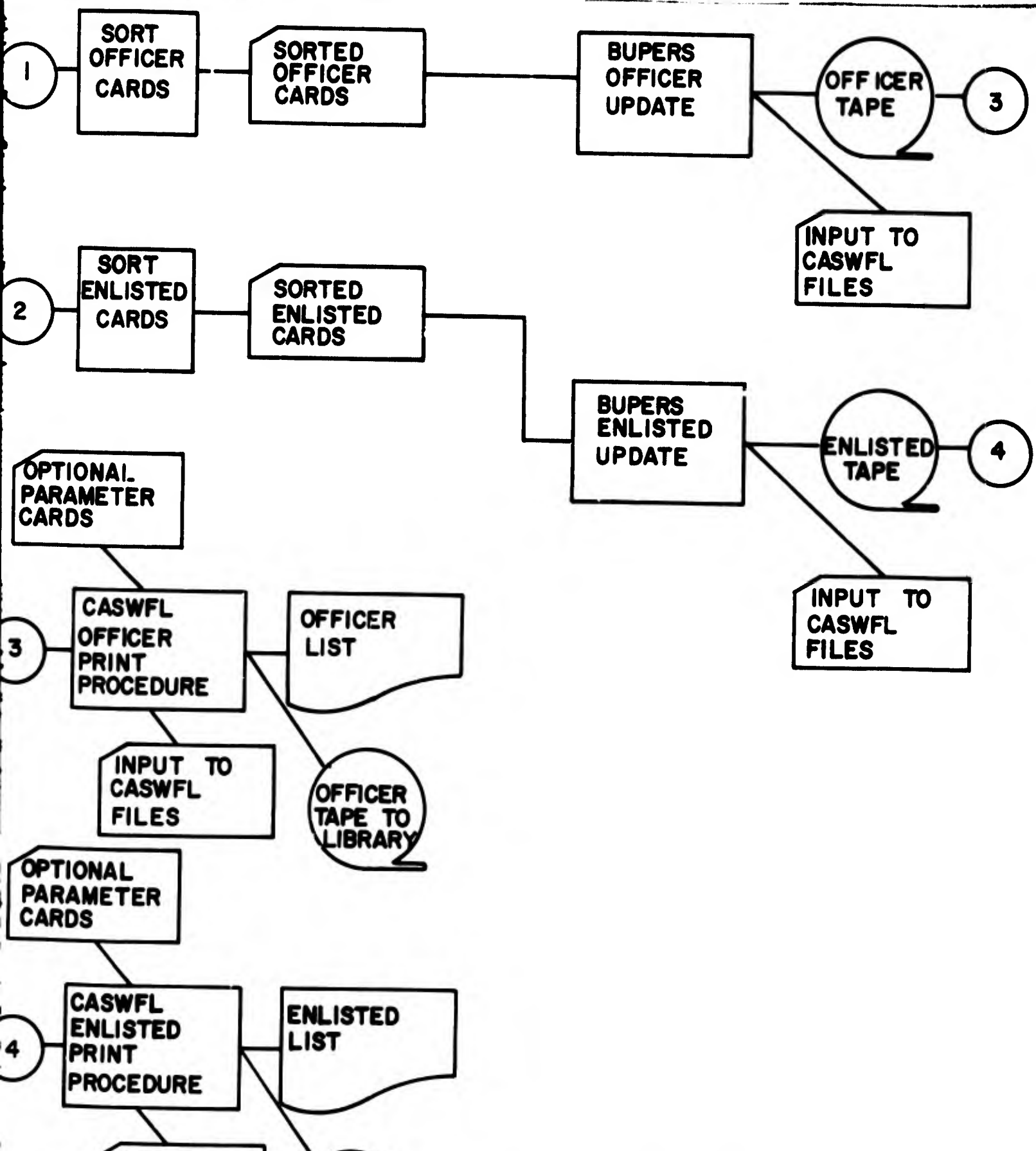

SORT CREW DATA CARDS AT CASWFL
SORTED CREW DATA CARDS
CREATE MASTER TAPES AT BUPERS
MASTER TAPES
PRINT MASTER TAPES AT CASWFL
MASTER TAPE LIST
REVIEW BY CASWFL CHFL COSL CFAWL

LOW CHART

B


CHFL
CREW LIST
KP
VER
OFFICER
CREW DATA
CARDS
1
ENLISTED
CREW DATA
CARDS
2
SORT
OFFICER
CARDS
1
SORT
ENLISTED
CARDS
2
COSL
CREW LIST
KP
VER
OFFICER
CREW DATA
CARDS
1
ENLISTED
CREW DATA
CARDS
2
OPTIONAL
PARAMETER
CARDS
CASWFL
OFFICER
PRINT
PROCEDURE
3
INPUT
CASWFL
FILES
CFAWL
CREW LIST
KP
VER
OFFICER
CREW DATA
CARDS
1
ENLISTED
CREW DATA
CARDS
2
OPTIONAL
PARAMETER
CARDS
CASWFL
ENLISTED
PRINT
PROCEDURE
4
INPUT
CASWFL
FILES

A



INTEGRATED ADP FLOW CHART

B

084 sorter - 3 hours
1401 computer with one printer and one tape drive - 20 hours

These times are based on an estimate of 12,000 records. Each of the three commands named in paragraph 1.2 will require from six to twelve hours of keypunch and verifier time to prepare the crew data cards that are to be sent to BUPERS.

2.3.3 Specific Performance Requirements.

(a) Crew data cards will be prepared in BUPERS format.

(b) Crew data cards will be sorted into service number sequence.

(c) The program to print the Active Duty Enlisted/Officer Master Magnetic Tape Record will provide for the following:

(1) A tape header label check routine.

(2) A tape read error routine that will print incorrectable read errors.

(3) A wrong length record check that will print records of incorrect length.

(4) A routine to bypass padded records (all 9's).

(5) A routine to select only records matching card input for printing.

(6) A routine to select all records for printing.

(7) A print routine to give a detailed printout of all pertinent fields within the record with appropriate headings.

(8) A program interrupt and restart routine.

2.3.4 System Function. The three commands named in paragraph 1.2 will produce crew data cards from their crew list. These cards will be sent to BUPERS where they will be matched against the Active Duty Enlisted/Officer Master Magnetic Tape Record and a tape file created of those matching records. This tape file will then be sent to COMASWFORLANT and a detailed printout made.

2.3.5 Data Base Magnitude. There will be five data elements used within this system:

(a) Crew data cards. There should not be more than 12,000 cards per quarter in this file. These cards will be retained at least one full quarter.

(b) Active Duty Enlisted Master Magnetic Tape Records. This record will be 500 characters in length and blocked by five on tape. There should not be more than 10,000 records in this file. When this file is produced for all commands at one time the entire file should be contained on one reel of tape, however, it is likely that this data will be obtained for each command separately. This will necessitate the use of three reels of tape, one for each command each quarter.

(c) Enlisted Active Duty Record Printout. This is a detailed printout of the Active Duty Enlisted Master Magnetic Tape Record. There will be one page per record and the entire printout should not be larger than 10,000 pages per quarter.

(d) Active Duty Officer Master Magnetic Tape Record. There are two formats for this tape. The old format, prior to March 1968, and the new format, March 1968 and after. The old format is 1,000 characters in length. The new format is 1,121 characters in length. When this file is produced for all commands at one time the entire file should be contained on one reel of tape and contain approximately 2,000 records. If this file is produced individually for each command, three reels of tape will be required for storage per quarter.

(e) Officer Active Duty Record Printout. This is a detailed printout of the Active Duty Officer Master Magnetic Tape Record. There will be one page per record and the entire printout should not be larger than 2,000 pages per quarter.

2.3.6 Outputs

(a) Active Duty Enlisted Master Magnetic Tape Record.

(b) Active Duty Officer Master Magnetic Tape Record.

(c) Enlisted Active Duty Record Printout.

(d) Officer Active Duty Record Printout.

2.3.7 Accuracy and Validity. Care should be taken by each command to insure that a source card has been produced for each enlisted man and officer within their command and that these source cards contain valid data. The source card supplied by these commands will provide BUPERS with the control information needed to produce the Active Duty Enlisted/ Officer Master Magnetic Tape Record file. Invalid data in the source cards will produce an invalid tape file.

2.3.8 Timing. Throughput time for each phase of this system, with the exception of that phase to be done by BUPERS, is outlined in paragraph 2.3.2. Crew data source cards will be sent to BUPERS by the 10th of the month in which they are to be processed as these cards are included in their normal monthly processing of the Active Duty Enlisted/Officer Master Magnetic Tape Record.

2.3.9 Failure Contingencies. Not Applicable.

3. Environment.

3.1 Equipment Environment.

(a) One central processing unit.

(b) One tape unit.

(c) One on line printer.

(d) One on line card reader.

(e) One card sorter.

(f) Each command must have access to at least one keypunch.

(g) Each command must have access to at least one verifier.

3.2 Software Environment.

(a) One IBM autocoder compiler with ZZERRR macro.

3.3 System Interface. The source cards produced by the three commands are sent to BUPERS and are use ' as inputs in the monthly

update of the Active Duty Enlisted/Officer Master Magnetic Tape Record. These source cards do no actual updating,, but a tape is produced containing all Active Duty Enlisted/Officer Master Magnetic Tape Records that match the source cards. This tape is sent to COMASWFORLANT and a detailed printout is produced. The source cards are unclassified. The Active Duty Enlisted/Officer Master Magnetic Tape Record is also unclassified but should be handled on an official "need to know" basis.

3.4 Security. The data in this system is unclassified but should be distributed only on a "need to know" basis.

Data Requirements Document
101B27.100
RD-01

1. General

1.1 Purpose and Scope of Data Requirements Document. The objectives of writing a Data Requirements Document for Project 101B27.100 are to list and define data elements which the system must handle and to communicate data requirements to the user for support in the data collection activity. The user will need to supply only a deck of data cards containing the name and service number of the enlisted men and officers within their command, however, all data elements used in this system will be described.

1.2 Project Reference. The Active Duty Enlisted/Officer Master Record Print Procedure, Project No. 101B27.100, objective is to acquire from BUPERS the Active Duty Enlisted/Officer Master Magnetic Tape Record file for enlisted personnel and officers in COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT and provide the Scientific Advisory Teams at these commands with a detailed list of this file.

1.3 Applicable Documents.

(a) The Active Duty Enlisted/Officer Master Magnetic Tape Record Print Procedure Functional Description.

(b) Manual of the Active Duty Enlisted Master Magnetic Tape Record NAVPERS 15,949A Oct 1962.

(c) Manual of the Active Duty Officer Master Magnetic Tape Record NAVPERS 15,921A May 1965.

(d) BUPERS ltr Pers-N103-PA of 13 Nov 1967. Manual of Active Duty Officer Automated Record (Preliminary Revision to NAVPERS 15,921A).

(e) COMASWFORLANT OPORDER 71-(YR).

1.4 Modification of Data Requirements. Not applicable.

2. Data Description

2.1 Logical Organization of Static System Data.

(a) Crew data cards.

2.2 Logical Organization of Dynamic Input Data.

(a) Active Duty Enlisted Master Magnetic Tape Record.

(b) Active Duty Officer Master Magnetic Tape Record.

2.3 Logical Organization of Dynamic Output Data.

(a) Active Duty Enlisted Master Magnetic Tape Record.

(b) Active Duty Officer Master Magnetic Tape Record.

(c) Enlisted Active Duty Record Printout.

(d) Officer Active Duty Record Printout.

2.4 Internally Generalized Data. Not applicable.

2.5 System Data Constraints. This system will produce only an Active Duty Enlisted/Officer Master Magnetic Tape Record file and a detailed list of these files for those enlisted personnel and officers in the commands named in paragraph 1.2. These files may then be used in other systems to produce statistical and analytical reports. These files will contain approximately 12,000 records on two reels of magnetic tape when produced for all commands at the same time. It is anticipated, however, that this file will be created on an individual basis for each command each quarter and will require eight reels of magnetic tape, two for each command.

3. User Support Required for Data Collection.

3.1 Data Collection Requirement and Scope. Each command named in paragraph 1.2 will submit a deck of crew data cards containing service number, name and constants in the following format for each enlisted man and officer on the crew list.

Column	Enlisted	Column	Officer
1-7	Service Number	1-6	Service Number
8	Blank	7-38	Blank
9-13	99999	39-56	Last, first and middle name
14-29	Blank		
30-32	"INQ"	57-80	Blank
33-38	Blank		
39-56	Last, first and middle name		
57-62	Blank		
63-67	"E145*"		
68-73	999999		
74-80	Blank		

A tape, containing one record for each of the cards described in the preceding paragraph, will be created by BUPERS in the format outlined in the Manual of the Active Duty Enlisted Master Magnetic Tape Record NAVPERS 15, 949A, Oct 1962 and the Manual of the Active Duty Officer Master Magnetic Tape Record. For those officer records received after March 1968 refer to BUPERS letter Pers-N103-PA of 13 Nov 1967. Each command will receive a detailed printout of this tape containing those enlisted personnel and officers under their command.

3.2 Recommend Source of Input Data.

(a) A crew data deck, as described in paragraph 3.1, will be produced by each command named in paragraph 1.2.

(b) BUPERS will produce a tape file with the Active Duty Enlisted/ Officer Master Magnetic Tape Record for each person in the data deck described in paragraph 3.1.

3.3 Data Collection and Transfer Procedures.

(a) Each command named in paragraph 1.2 will submit quarterly, as requested, the data deck described in paragraph 3.1 to COMASWFORLANT Scientific Advisory Team.

(b) COMASWFORLANT will send these data cards to BUPERS. This data must be sent to BUPERS before the 10th of the month in which processing is desired.

(c) BUPERS will send the Active Duty Enlisted/Officer Master Magnetic Tape Records that match the above data cards to COMASWFORLANT.

(d) COMASWFORLANT will list this tape and distribute the list to the appropriate commands.

3.4 Data Base Impacts. The preparation of the data deck described in paragraph 3.1 will impose from six to twelve hours of keypunching and verification time upon each command.

System Specification
101B27.100
SS-01

1. General

1.1 Purpose of System Specification. The System Specification for Project 101B27.100 is written in fulfillment of the following objectives.

(a) To communicate details of the on-going analysis to the user operational personnel for their information, not concurrence.

(b) To allow early completion of the FD by deferring detailed definition of the system functions to this document.

1.2 Project Reference. The outputs of the Active Duty Enlisted/Officer Master Magnetic Tape Record Print Procedure, Project 101B27.100, will be analyzed by the Scientific Advisory Teams at COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT to determine what future application may be made of these data.

1.3 Applicable Documents.

(a) The Active Duty Enlisted/Officer Master Magnetic Tape Record Print Procedure Functional Description.

(b) The Manual of the Active Duty Enlisted Master Magnetic Tape Record, NAVPERS 15,949A Oct 1962.

(c) The Enlisted Active Duty Master Record Print Procedure Data Requirements Document.

(d) BUPERS ltr Pers-N103-PA of 13 Nov 1967. Manual of Active Duty Officer Automated Record (Preliminary Revision to NAVPERS 15,921A).

(e) COMASWFORLANT OPORDER 71-(YR).

2. Scope

2.1 System Description. This utility system will produce an Active Duty Enlisted/Officer Master Magnetic Tape Record file and list for those enlisted men and officers in COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT..

2.2 System Functions. Each of the three commands named in paragraph 2.1 will produce a deck of data cards from their crew list. These data cards will then be sorted into service number sequence by COMASWFORLANT and forwarded to BUPERS. BUPERS will produce a tape file containing the Active Duty Enlisted/Officer Master Magnetic Tape Record for each service number in the crew data deck. This tape will be forwarded to COMASWFORLANT where it will be printed in detail. A copy of this printout will be sent to the appropriate command.

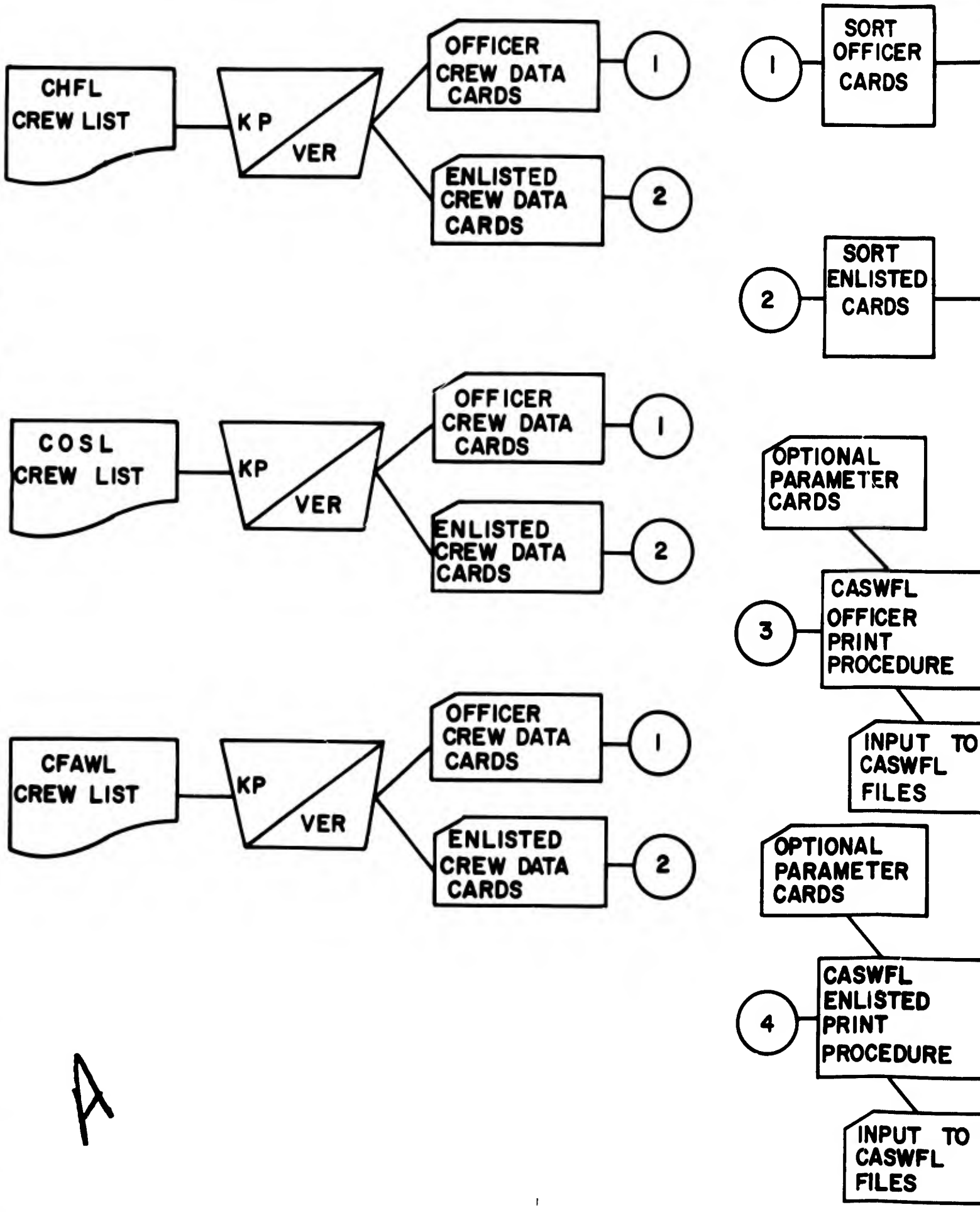
2.3 Physical Description. The three commands named in paragraph 2.1 will keypunch and verify crew data cards from their crew lists. COMASWFORLANT will sort these cards and send them to BUPERS. BUPERS will produce a tape file containing the Active Duty Enlisted/Officer Master Magnetic Tape Record for each service number in the crew data cards. This file will be sent to COMASWFORLANT where a detailed list will be printed and forwarded to the appropriate command.

2.4 Timing. Crew data cards will be sent to BUPERS before the 10th of the month in which they are to be processed as they are included in the normal monthly processing of the Active Duty Enlisted/Officer Master Magnetic Tape Record file. Machine time other than that required at BUPERS is as follows:

084 sorter	2 hours
1401 computer with one tape drive and printer	17 hours
Keypunch	6 to 12 hours per command
Verifier	Same as keypunch

2.5 Accuracy. Care should be taken by each command to insure that a crew data card has been produced for each enlisted man and officer within their command and that these cards contain valid data. The crew data card to be provided BUPERS with the control information needed to produce the Active Duty Enlisted/Officer Master Magnetic Tape Record file. Invalid data in the crew data cards will produce an invalid tape file.

2.6 Flexibility. This system is designed to produce and print the Active Duty Enlisted/Officer Master Magnetic Tape Record file. Flexibility will be limited to possible changes in the tape records and print formats. Both the old and new officer tapes have print programs. A new enlisted print program will be needed when this tape is revised.


CHFL
CREW LIST
KP
VER
OFFICER
CREW DATA
CARDS
1
ENLISTED
CREW DATA
CARDS
2
1
SORT
OFFICER
CARDS
2
SORT
ENLISTED
CARDS
COSL
CREW LIST
KP
VER
OFFICER
CREW DATA
CARDS
1
ENLISTED
CREW DATA
CARDS
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OPTIONAL
PARAMETER
CARDS
3
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PROCEDURE
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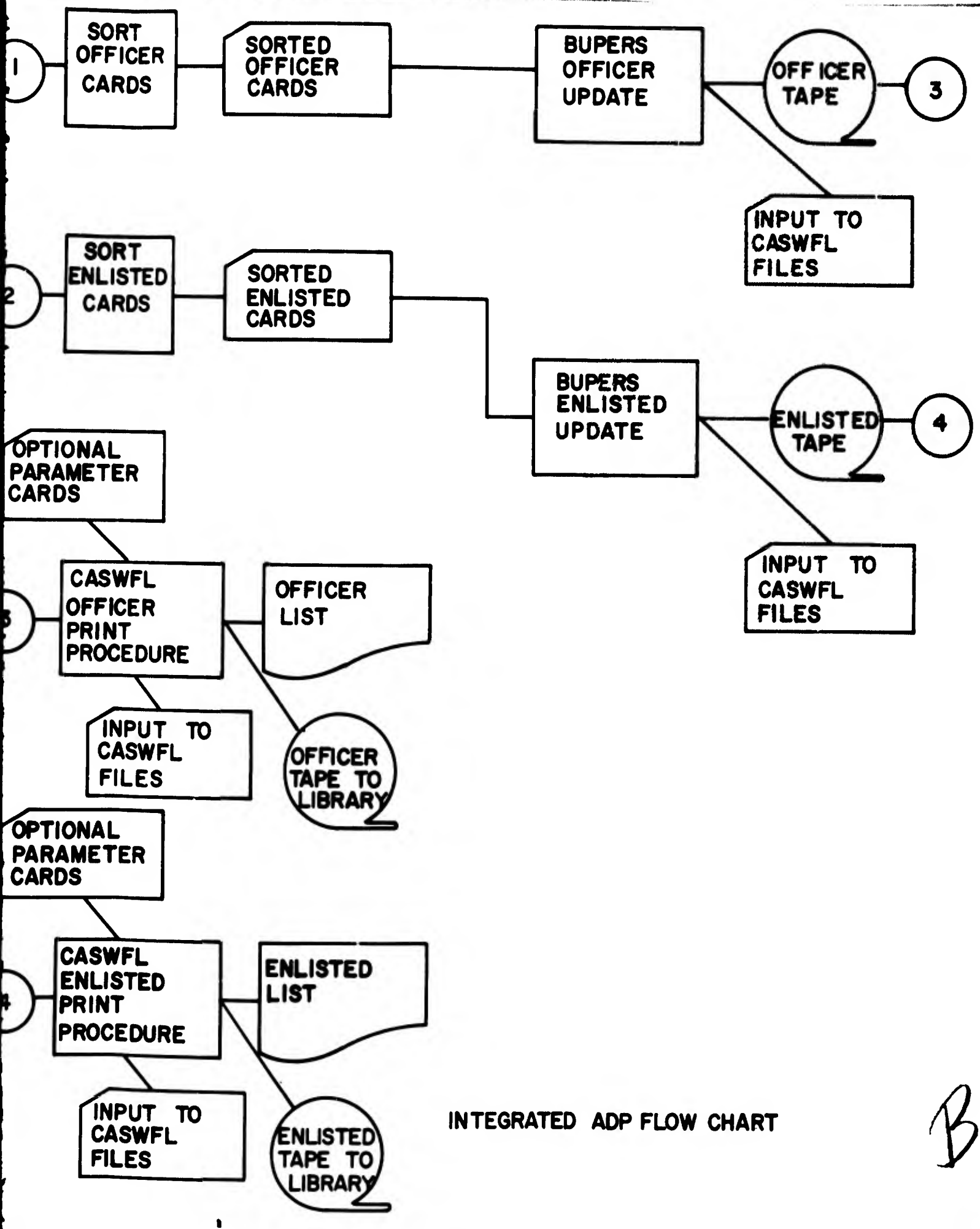
A



INTEGRATED ADP FLOW CHART

B

3. Environment.

3.1 Equipment Environment.

(a) One central processing unit.

(b) One tape unit.

(c) One on line printer.

(d) One on line card reader.

(e) One card sorter.

(f) Each command must have access to at least one keypunch.

(g) Each command must have access to at least one verifier.

3.2 Software Environment.

IBM autocoder compiler with ZZERRR macro.

3.3 Interfaces. The crew data cards produced by the commands named in paragraph 1.2 are sent to BUPERS for extracting selected data from the Active Duty Enlisted/Officer Master Magnetic Tape Record. A tape is produced containing all Active Duty Enlisted/Officer Master Magnetic Tape Records that match the crew data cards.

3.4 Security. All data in this system is unclassified but should be handled on a "need to know" basis only.

3.5 Controls. Not applicable.

4. Design Data.

4.1 Program Descriptions.

4.1.1 Program Description. The Print Enlisted Tape program, number PD-01, will read the Active Duty Enlisted Master Magnetic Tape Record file and print each record in detail. The printed output will be in the same format as the tape record except that one or more spaces will separate each field and all fields will have identifying headings printed above them. Also

date fields, as well as any other field requiring editing, will have the appropriate editing such as (/), (-), (.), etc., performed. The program will also include routines to perform:

(a) Printing of only selected records.

(b) Printing all records.

(c) Appropriate tape read checks.

(d) Printing of invalid tape records.

(e) An interrupt routine.

(f) A restart routine.

(g) Check for correct tape header.

(h) Check for end of reel and end file.

(i) Print date of tape on list.

Inputs

(a) Title. Active Duty Enlisted Master Magnetic Tape Record file.

(b) Format. See APPENDIX A.

(1) Header label. 80 characters.

(2) File. 500 characters, including a record mark, blocked in groups of 5.

(3) Trailer label. 80 characters.

(4) Tape marks. One before and after the trailer label.

(c) Number of Items. Approximately 10,000 records for all commands.

(d) Means of entry. Input is by one tape unit.

(e) Frequency. Quarterly.

(f) Priority. Routine.

(g) Source. These data are received from BUPERS and retained by COMASWFORLANT.

(h) Security. Unclassified but handled on a "need to know" basis.

(i) Parameter Cards. See APPENDIX B.

Outputs

(a) Title. Enlisted Active Duty Record list.

(b) Format. See APPENDIX C.

(c) Number of items. One page per input record.

(d) Means of display. One on line printer.

(e) Volume. Approximately 10,000 pages.

(f) Priority. Routine.

(g) User Recipients. COMASWFORLANT, COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT.

(h) Security. Unclassified but handled on a "need to know" basis.

Data Base

(a) Title. Active Duty Enlisted Master Magnetic Tape Record file.

(b) Description. This file contains a history of each enlisted man's schools, duty stations, rates and other such data.

(c) Number of records. Approximately 10,000.

(d) Storage. Magnetic tape.

(e) Classification. Unclassified but handled on a "need to know" basis

(f) Data Retention. Minimum of two quarters.

4.1.2 Program Description. The Print Officer Active Duty Tape program, number PD-02, description is the same as that described in paragraph 4.1.1 except that it will use the old Active Duty Officer Master Magnetic Tape Record file on input.

Inputs

(a) Title. Active Duty Officer Master Magnetic Tape Record.

(b) Format. See APPENDIX A.

(1) Header Label. 80 characters.

(2) File. 1,000 characters including record mark.

(3) Trailer Label. 80 characters.

(4) Tape Marks. One before and one after the trailer label.

(c) Number of Items. Approximately 2,000 records for all commands.

(d) Means of entry. One magnetic tape unit.

(e) Frequency. Quarterly.

(f) Priority. Routine.

(g) Source. These data are received from BUPERS and retained by COMASWFORLANT.

(h) Security. Unclassified but handled on a "need to know" basis.

(i) Parameter cards. See APPENDIX B.

Outputs

(a) Officer Active Duty Record list.

(b) Format. See APPENDIX C.

(c) Number of items. One page per input record.

(d) Means of display. One on line printer.

(e) Volume. Approximately 2,000 pages.

(f) Priority. Routine.

(g) User Recipients. COMASWFORLANT, COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT.

(h) Security. Unclassified but handled on a "need to know" basis.

Data Base

(a) Title. Active Duty Officer Master Magnetic Tape Record file.

(b) Description. This file contains a history of the officer's naval career.

(c) Number of records. Approximately 2,000.

(d) Storage. Magnetic tape.

(e) Classification. Unclassified but handled on a "need to know" basis.

(f) Retention. Minimum of two quarters.

4.1.3 Program Description. The Print New Officer Tape program, number PD-03, description is the same as that described in paragraph 4.1.1 except that it will use the new Active Duty Officer Master Magnetic Tape Record as an input. (NOTE: Care should be taken when printing fields FAYN1 and FAYN2 as these fields use each bit as an indicator. If a bit is on, print an X under the appropriate heading. If a bit is not on, leave this space on the printout blank.)

Inputs

(a) Title. Active Duty Officer Master Magnetic Tape Record file.

(b) Format. See APPENDIX A.

(1) Header label. 80 characters.

(2) File. 1,121 characters.

(3) Trailer label. 80 characters.

(4) Tape marks. One before and one after the trailer label.

(c) Number of items. Approximately 2,000 records for all commands.

(d) Means of entry. One magnetic tape unit.

(e) Frequency. Quarterly.

(f) Priority. Routine.

(g) Source. These data are received from BUPERS and retained by COMASWFORLANT.

(h) Security. Unclassified but handled on a "need to know" basis.

(i) Parameter card - see APPENDIX B.

Outputs

(a) Officer Active Duty Record list.

(b) Format. See APPENDIX C.

(c) Number of Items. One page per input record.

(d) Means of display. One on line printer.

(e) Volume. Approximately 2,000 pages.

(f) Priority. Routine.

(g) User Recipients. COMASWFORLANT, COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT.

(h) Security. Unclassified but handled on a "need to know" basis.

Data Base

(a) Title. Active Duty Officer Master Magnetic Tape Record file.

(b) Description. This file contains a history of the officer's naval career.

(c) Number of records. Approximately 2,000.

(d) Storage. Magnetic tape.

(e) Classification. Unclassified but handled on a "need to know" basis.

(f) Retention. Minimum of two quarters.

4.2 Logical Flow. Crew data cards will be prepared by each of the three commands in paragraph 1.2 and sent to COMASWFORLANT where they will be sorted into service number sequence. The sorted crew data cards will then be sent to BUPERS where a file of the Active Duty Enlisted/Officer Master Magnetic Tape Record file will be sent to COMASWFORLANT where a detailed list will be prepared and distributed to the appropriate command. See macro charts, APPENDIX D, for logical flow of the Active Duty Enlisted/Officer Master Magnetic Tape Record print programs.

APPENDICES:

A - Data Elements
B - Required Data Elements
C - Officer/Enlisted Active Duty Record
D - Macro Charts

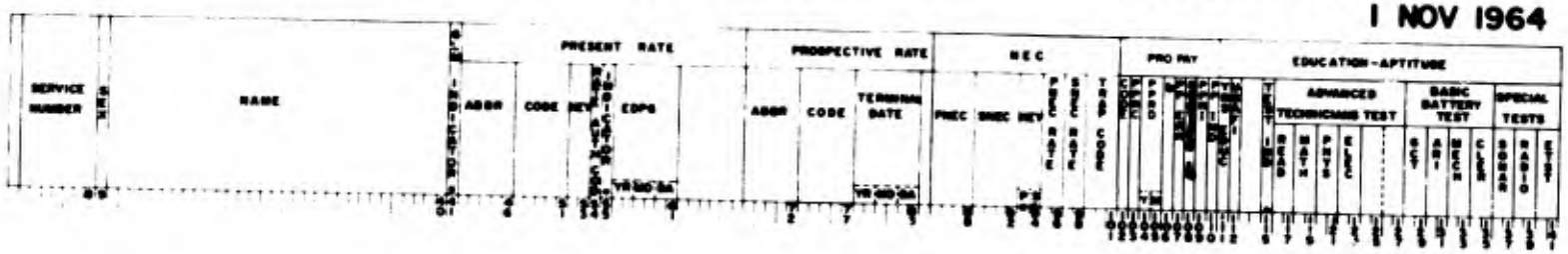
APPENDIX A

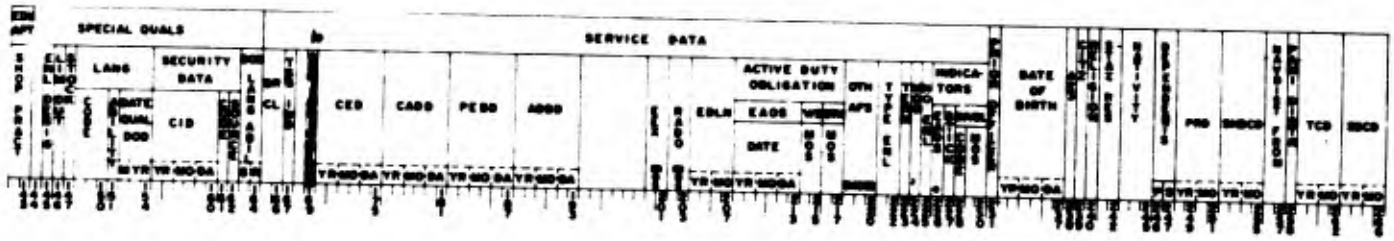
Data Elements

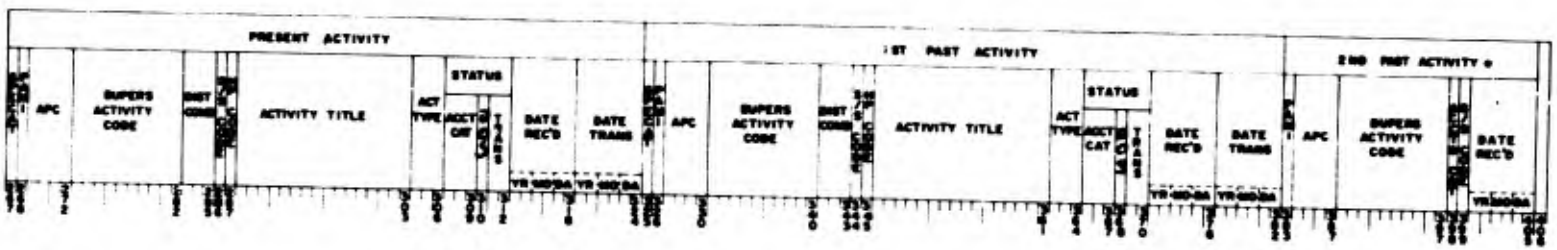
The data elements used in this system are described in the Manual of the Active Duty Enlisted Master Magnetic Tape Record, NAVPERS 15, 949A Oct 1962; the Manual of the Active Duty Officer Master Magnetic Tape Record, NAVPERS 15, 921A May 1965 and APPENDIX B.

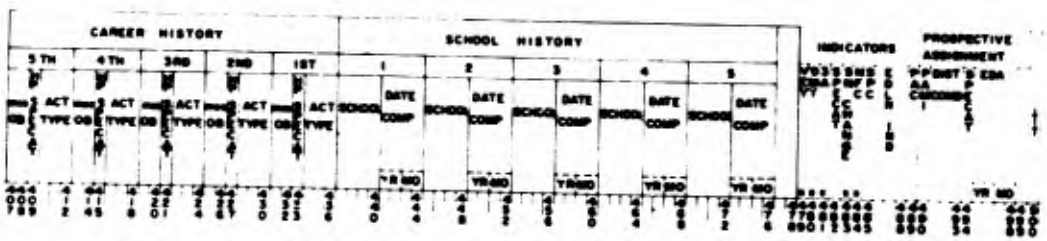
ENLISTED MASTER TAPE RECORD

1 NOV 1964









* NMIS USE

OLD OFFICER
DATA ELEMENTS TAPE LA

APPLICATION APPENDIX A

OLD ACTIVE DUTY OFFICER RECORD

1-99

SYMBOLIC	[illegible] · FILE * · NAME (LAST FIRST MIDDLE)
DATA	
LOCATION	10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

100-199

SYMBOLIC	DATE OF GAIN ← · DATE OF RANK · DATE OF BIRTH · PAY ENTRY BASE DATE · ACT. DUTY BASE DATE · ACT. COMM. BASE DATE · CLASS · YR · SERVICE · SDATE · 1ST YR. ELIG FOR RET. · PROFESSI... SERVICE D...
DATA	
LOCATION	0 · 5 · 10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

200-299

SYMBOLIC	YR. OF ENL. IN SER. · NO. OF MOS. IN PRE ACT. SER. · HIGHEST RANK PRE ACT. SER. · MARP CODE · BUPERS ACTIVITY CODE · ACTIVITY TITLE · PLC CODE · TYPE BASIC · ACCT. CATEGOR...
DATA	
LOCATION	0 · 5 · 10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

300-399

SYMBOLIC	DEP. ON STAT. OVERSEAS DATE ARRIVED · PROCESS CONTROL* · EST. DATE OF DETACH. · DATE REPORTED CURRENT DUTY STATION · ESTIMATED LOSS DATE AND CODE · PROJECTED ROTATION DATE · TOUR DATE
DATA	
LOCATION	0 · 5 · 10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

400-499

SYMBOLIC	385 ← EDUCATION · BLANK
DATA	LEVEL · MAJOR · SPECIALTY · UNIV. NAME · NO. OF MOS. · YR OF GRAD · SPECIAL · MAJOR · SPECIALTY · LANG. ABB. · PROF. · PRO. CODE · LANG. ABB. · PROF. · PRO CODE
LOCATION	0 · 5 · 10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

500-599

SYMBOLIC	491 ← QUALIFICATIONS
DATA	KEY · OFFICER BILLET CLASS. · SHFT. STAT. CODE · NO. OF MOS. · KEY · OFFICER BILLET CLASS. · SHFT. STAT. CODE · NO. OF MOS. · KEY · OFFICER BILLET CLASS. · SHFT. STAT. CODE · NO. OF MOS. · KEY · OFFICER BILLET CLASS. · SHFT. STAT. CODE · NO. OF MOS. · KEY · OFFIC... BILLE... CLASS...
LOCATION	0 · 5 · 10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

600-699

SYMBOLIC	← · TOTAL PC HOURS · TOTAL CARRIER LANDINGS · OPNAV 3760 DUE FLYING TIME REPORT DATE AND TYPE · AI...
DATA	KEY · MODEL · HOURS · CARR. LAND. · TYPE OFF · YR. LAST FLOWN · MODEL · HOURS · CARR. LAND.
LOCATION	0 · 5 · 10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

700-799

SYMBOLIC	PAST DUTY
DATA	DATE ← TO · ACTIVITY TITLE · TYPE BASIS · HOME PORT · DEPLOYMENT AREA · NO MOS. · DATE FROM TO
LOCATION	0 · 5 · 10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

800-899

SYMBOLIC	
DATA	← · TYPE BASIS · HOME PORT · DEPLOYMENT AREA · NO. OF MOS. · DATE FROM TO · ACTIVITY TITLE · TYPE BASIS · HOME PORT
LOCATION	0 · 5 · 10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

A

900-999

SYMBOLIC	
DATA	DATE TO · ACTIVITY TITLE · TYPE BASIS · HOME PORT · DEPLOYMENT AREA · DATE FROM TO
LOCATION	0 · 5 · 10 · 15 · 20 · 25 · 30 · 35 · 40
WORD MARK	

OLD OFFICER
LEMENTS TAPE LAYOUT

DATE _____

E.)	PRESENT GRADE	PROMOTION STATUS	DESIGNATOR	COM	SUBSPEC	PERM. GRADE	PRESENT GRADE	PERM GRADE	SOURCE CODE ORIGINAL	SOURCE CODE PRESENT	LOSS CODE DISPERS	LOSS CODE DOD	YEAR GROUP	PRECEDENCE SUB NUMBER	CITIZENSHIP	BIRTH CODE	DATE OF RANK
30 35 40	45	50	55				65			75		80		90			

T. COMM. DATE	YEARS	SERVICE	DATE 1ST YR. ELIG FOR RET.	PROFESSIONAL SERVICE DATE	PROMOTIONAL HISTORY DATES WARRENT	ENS.	LTJG.	LT.	LT. CDR.	CDR.	CAPT.	FLAG	BLANK	TYPES OF PRIOR MILITARY SERVICE
30	35		40		45 50	55	60	65	70	75 80	85	90	95	

ITLE	PEC CODE	PRIMARY SECONDARY	ACCT. CATEGORY	DESIG. SYM.	DATE OF PRESENT BILLET	DUTIES, PRIMARY	COLLATERAL DUTIES	FLAG	BILLET SEQUENCE CODE	DUTIES IN TRAINING FOR	DUTIES IN TRAINING DATE QUALIFIED	DATE DEPARTED CONUS	DUTY AFLOAT	DUTY ASHORE
30 35			40		45 50 55 60		65 70 75		80	85	90	95		

NATED DATE CODE	PROJECTED ROTATION DATE	PROJECTED ROTATION CODE	TOUR DATE	SECURITY	ALLOWANCE ENT. CODE	DETAILER'S REMARKS	SPECIAL DESIGNATION CODE	SUBSPECIALTY CODE	EDUCATION → 625 UNIV. NAME	NO. OF YEARS	YR. OF DEGREE	SUBSPECIALTY
30	35		40	45 50		55 60	65 70	75 80	85 90	95		

SERVICE SCHOOLS → 561

					SCH. CODE	COMP DATE	NO. OF WKS	SCH. CODE	COMP. DATE	NO OF WKS	SCH CODE	COMP DATE	NO. OF WKS	SCH CODE	COMP. DATE	NO OF WKS	SCH CODE	COMP DATE	NO. OF WKS		OFFICER BILLET CLASS.	SHIFT STAT. CODE	NO. OF YRS
					45	50		55	60		65		70		75		80		85			95	

KEY	OFFICER BILLET CLASS.	SHIFT STAT. CODE	NO. OF YRS	KEY	OFFICER BILLET CLASS.	SHIFT STAT. CODE	NO. OF YRS	KEY	OFFICER BILLET CLASS.	SHIFT STAT. CODE	NO. OF YRS	KEY	COCKPIT AREA	PAY	FLY-IN-ST.	TYPE PILOT	TYPE PILOT EXP.	HEAVIER THAN AIR PILOT DES. DATE	NAV. FLIGHT OFFICER DES. DATE	BLANK	LIGHTER THAN AIR DES. DATE	TOTAL NAV. FLIGHT OFFICER HOURS	← LAST 5 YEARS	TOTAL JET HOURS	→600 TOTAL VH HOURS
30		35	40			45	50			55	60			65			70	75		80	85	90	95	

AIRCRAFT MODELS ← 977

TYPE OFF	YR. LAST FLOWN	MODEL	HOURS	CARR. LAND.	TYPE OFF	YR. LAST FLOWN	MODEL	HOURS	CARR. LAND.	TYPE OFF	YR. LAST FLOWN	MODEL	HOURS	CARR. LAND.	TYPE OFF	YR. LAST FLOWN	MODEL	HOURS	CARR. LAND.	TYPE OFF	YR. LAST FLOWN	DATE FROM
30		35	40		45		50	55		60		65	70	75		80		85	90		95	

DUTY

DEPLOYMENT AREA	NO MOS	DATE FROM	DATE TO	ACTIVITY TITLE	TYPE DUTY	HOME PORT	DEPLOYMENT AREA	NO. OF MOS	DATE FROM	DATE TO	ACTIVITY TITLE
30	35	40		45 50 55 60		65	70	75	80		85 90 95

Y TITLE	TYPE DUTY	HOME PORT	DEPLOYMENT AREA	NO. OF MOS	DATE FROM	DATE TO	ACTIVITY TITLE	TYPE DUTY	HOME PORT	DEPLOYMENT AREA	NO. OF MOS	DATE FROM
30 35 40		45	50	55	60		65 70 75 80		85	90	95	

DEPLOYMENT AREA	DATE FROM	DATE TO	ACTIVITY TITLE	TYPE DUTY	HOME PORT	DEPLOYMENT AREA	NO MOS	
30	35 40		45 50 55 60		65	70	75	80 85 90 95

B

A-3

APPLICATION APPENDIX A

NEW OFFICER[S]
DATA ELEMENTS TA[BLE]

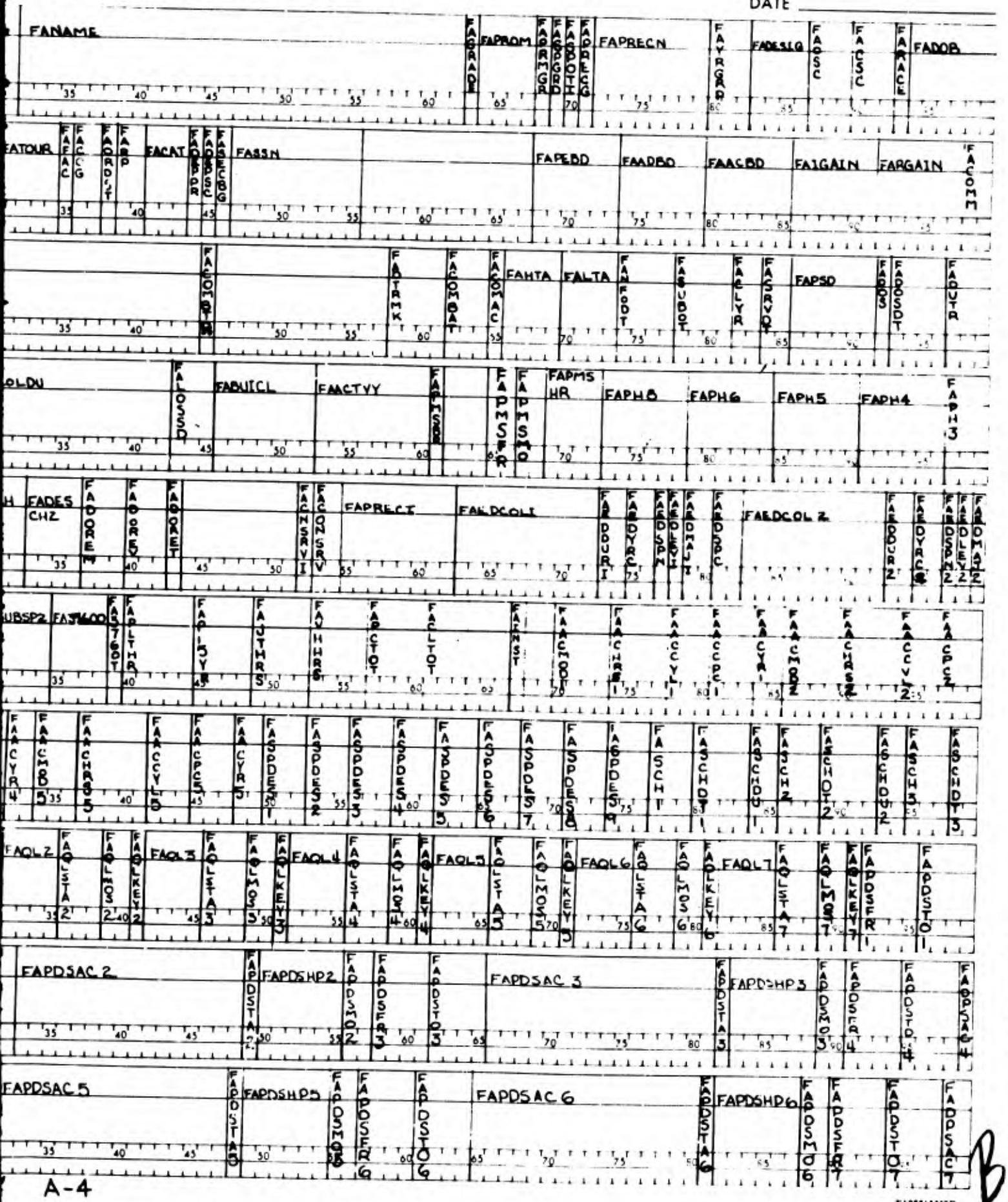
NEW ACTIVE DUTY OFFICERS RECORD

Locations	Symbolic
1-99	FAYN1, FAYN2, FAPAMI, FACOMOST, FABLDUP, FADECOR, FACLI, FAFILE, FANAME
100-199	FAPCAT, FASGC, FAPAD, FAPRC, FALOSS, FAPLC, FAELD, FABUTC, FADTRPT, FAPRD, FATOUR, FAFAC, FACOG, FAGRDST, FAMP, FACAT, FADPOR
200-299	FACOMM, FADOR, FASPDOR, FASECDT, FAYFER, FAPCN
300-399	FADUTR, FADUTRQ, FABILDT, FAPRIDU, FABSC, FACOLDU, FALOSSD
400-499	FAPH3, FAPH2, FAPH1, FAPHØ, FADCHDT1, FADESCH1, FADCHDT2, FADESCH2, FADOREM, FADORES, FADORET
500-599	FAEDMA1, FADSPC2, FALANG1, FALNGP1, FALNGPR, FALNGDT1, FALANG2, FALNGP2, FALNGPR2, FALNGDT2, FASUBSP1, FASUBSP2, FAT600, FAST600T, FAPLTHR, FAPLTY
600-699	FAACYR3, FAACMOD3, FAACHRS3, FAACCYL3, FAACPC3, FAACYR4, FAACMOD4, FAACHRS4, FAACCYL4, FAACPC4, FAACYR5, FAACMOD5, FAACHRS5, FAACCYL5, FAACPC5
700-799	FASCHD3, FASCHDT3, FASCH4, FASCHD4, FASCHDU4, FASCH5, FASCHDT5, FASCHDU5, FAQL1, FAQLST1, FAQLMOS1, FAQLKEY1, FAQL2, FAQLST2, FAQLMOS2, FAQLKEY2, FAQL3
800-899	FAPDSAC1, FAPDUST1, FAPDSHP1, FAPDSMO1, FAPDSER2, FAPDST2, FAPDSAC2
900-999	FAPDSAC4, FAPDST4, FAPDSHP4, FAPDSMO4, FAPDSER5, FAPDST5, FAPDSAC5

A

NEW OFFICER
FA ELEMENTS TAPE LAYOUT

DATE



A-4

B

E108615MSP

APPLICATION APPENDIX A

1000-1099	SYMBOLIC	FAPDSAC 7 / FAPDSTA7 / FAPDSHP7 / FAPDSMO7 / FAPDSFR8 / FAPDSTO8 / FAPDSAC8
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40
	WORD MARK	
1100-1121	SYMBOLIC	FADESIG / FADRSTA / FABUICA / FABSCA / FADRPTA / ‡
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40
	WORD MARK	
	SYMBOLIC	
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40
	WORD MARK	
	SYMBOLIC	
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40
	WORD MARK	
	SYMBOLIC	
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40
	WORD MARK	
	SYMBOLIC	
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40
	WORD MARK	
	SYMBOLIC	
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40
	WORD MARK	
	SYMBOLIC	
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40 45
	WORD MARK	
	SYMBOLIC	
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40 45
	WORD MARK	
A	SYMBOLIC	
	DATA	
	LOCATION	0 5 10 15 20 25 30 35 40 45
	WORD MARK	

NEW OFFICER

DATA ELEMENTS TAPE LAYOUT

DATE _____

FAPDSTAB	FAPDSAC 8	FAPDSTAD	FAPDSHP 8	FAPDSHD	FACATP	FACOGP	FASADP	FASCP	FAFACP	FAFDD	FAFCD	FAELDP	FASARHP	FARRDP	FATOUAP	FAEOAP	FAEDD	FABUICP	FABSCP	FATYDEP	FAPESHP
30	35 40 45	50		55				60			65		70		75	80	85	90	95		

30 35 40 45 50 55 60 65 70 75 80 85 90 95

30 35 40 45 50 55 60 65 70 75 80 85 90 95

30 35 40 45 50 55 60 65 70 75 80 85 90 95

30 35 40 45 50 55 60 65 70 75 80 85 90 95

30 35 40 45 50 55 60 65 70 75 80 85 90 95

30 35 40 45 50 55 60 65 70 75 80 85 90 95

30 35 40 45 50 55 60 65 70 75 80 85 90 95

30 35 40 45 50 55 60 65 70 75 80 85 90 95

B

APPENDIX B

Required Data Elements

Data Element Title	Element Name	Tape Position
Active Commission Data Base	FAACBD	180-185
Active Duty Data Base	FAADBD	174-179
Class Year-U.S. Naval Academy	FACLYR	282-283
Constructive Service Indicator	FACNSRVI	452
Constructive Service Year	FACONSRV	453-454
Date of Birth	FADOB	94-99
Date of First Commission	FACOMM	198-201
Date of Gain to Active Duty-Current	FARGAIN	192-197
Date of Gain to Active Duty-Initial	FAIGAIN	186-191
Date of Rank	FADOR	202-207
Decorations Code-Highest	FADECOR	24
Dependency Code-Primary	FADEPPR	144
Dependency Code-Secondary	FADEPSC	145
Designator	FADESIG	83-86
Designator Change History-Date	FADCHDT1	421-424
Designator Change History-Date	FADCHDT2	429-432
Designator Change History-Designator	FADESCH1	425-428
Designator Change History-Designator	FADESCH2	433-436
File Number	FAFILE	26-31
File Number Change Indicator	FAYN2	7 Bit B
Gain/Loss Indicator	FAGLI	25
Permanent Grade	FAPRMGR	68
Present Grade	FAGRADE	63
Spot Promotion Grade	FASPGRD	69
Inactive Precedence Number	FAPRECI	455-462
Loss Code-BUPERS	FALOSS	104-106
Loss Code-DOD	FALOSSD	343-345
Name	FANAME	32-62
Name Change Indicator	FAYN2	7 Bit 2
Over Four Years Active Enlisted Service	FAYN1	5 Bit B
Pay Entry Base Date (PEBD)	FAPEBD	168-173
Precedence Group Code	FAPRECG	71
Precedence Number/Subnumber	FAPRECN	72-79
Promotion Status	FAPROM	64-67
Race	FARACE	93
Reserve Buildup Indicator	FABLDUP	23
Source Code-Original	FAOSC	87-89

Data Element Title	Element Name	Tape Position
Source Code-Current	FACSC	90-92
Previous Military Service	FAPMSBR	361
Previous Military Service-From Date	FAPMSFR	365-366
Previous Military Service-Highest Rate/ Grade	FAPMSHR	369-372
Previous Military Service-Months	FAPMSMO	367-368
Professional Service Date	FAPSD	286-291
Promotional History (Warrant through Flag)	FAPH8	373-378
	FAPH6	379-384
	FAPH5	385-390
	FAPH4	391-396
	FAPH3	397-402
	FAPH2	403-408
	FAPH1	409-414
	FAPHØ	415-420
Security Code	FASECBG	146
Security Investigation Date	FASECDT	214-219
Service Data	FASRVDT	284-285
Sex	FAYN1	6 Bit 8
Social Security Number	FASSN	147-155
Spot Promotion Indicator	FASPOTI	70
Spot Promotion Date of Rank	FASPDOR	208-213
Year First Eligible to Retire	FAYFER	220-221
Year Group	FAYRGRP	80-82
Accounting Category Code	FACAT	141-143
Assignment Restriction	FAYN2	7 Bit 8
Billet Sequence Code (Current)	FABSC	324-328
BUPERS Unit Identification Code (BUIC)-Current	FABUIC	114-120
BUPERS Unit Identification Code (BUIC)-Previous	FABUICL	346-352
Collateral Duties	FACOLDU	329-342
Date of Present Billet	FABILDT	306-309
Date Reported/Estimated Date of Arrival	FADTRPT	121-126
Dependents on station overseas-Date Arrived	FADOSDT	293-296
Detail Cognizance Code	FACOG	136-137
Detailers Remarks	FADTRMK	258-261
Duties in Training for-by Billet Sequence Code	FADUTR	297-301
Duties in Training for-Date Qualified	FADUTRQ	302-305
Estimated Loss Code (ELC)	FAELC	107

Data Element Title	Element Name	Tape Position
Estimated Loss Date (ELD)	FAELD	108-113
Functional Area Code	FAFAC	135
Master PAMI	FAPAMI	9
Number of Dependents on Station Overseas	FADOS	292
Occupying Public Quarters	FAYN1	5 Bit 8
Order Status Code	FAORDST	138
Phased Activity Code	FAACTVY	353-360
Primary Duties	FAPRIDU	310-323
Process Control Number	FAPCN	222-227
Projected Rotation Date	FAPRD	127-130
Rotation Projection	FARP	139-140
Tour Date	FATOUR	131-134
Aircraft Flown in Combat	FACOMAC	265
Carrier Landings Total	FACLTOT	561-563
Combat Tour	FACOMBTR	245
Currently Serving on Combat Duty	FAYN1	5 Bit 4
Date Last Serving on Combat Duty	FACOMBAT	262-264
Flight Student Indicator	FAYN1	5 Bit 2
Flying Status Code	FAFSC	103
Heavier than Air Pilot, Designation Date	FAHTA	266-269
Instrument Rating	FAINST	567
Lighter than Air Pilot, Designator Date	FALTA	270-273
Model Aircraft-Aircraft Commander/ NFO Designator	FAACPC1	581-583
	FAACPC2	597-599
	FAACPC3	613-615
	FAACPC4	629-631
	FAACPC5	645-647
Model Aircraft-Carrier Landings	FAACCVL1	578-580
	FAACCVL2	594-596
	FAACCVL3	610-612
	FAACCVL4	626-628
	FAACCVL5	642-644
Model Aircraft Flown	FAACMOD1	570-573
	FAACMOD2	586-589
	FAACMOD3	602-605
	FAACMOD4	618-621
	FAACMOD5	634-637
Model Aircraft-Hours Flown	FAACHRS1	574-577
	FAACHRS2	590-593
	FAACHRS3	606-609
	FAACHRS4	622-625
	FAACHRS5	638-641

Data Element Title	Element Name	Tape Position
Model Aircraft-Year Last Flown	FAACYR1	584-585
	FAACYR2	600-601
	FAACYR3	616-617
	FAACYR4	632-633
	FAACYR5	648-649
Naval Flight Officer, Designation Date	FANFODT	274-277
OPNAV 3760 Date	FA3760D	535-538
OPNAV 3760 Type	FA3760T	539
Pilot Category	FAPCAT	100
Primary Aeronautical Designation	FAPAD	102
Service Group Code	FASGC	101
Pilot/Naval Flight Officer Hours-Last 5 Years	FAP15YR	545-548
Total Jet Hours	FAJTHRS	549-552
Total Months on Combat Duty	FACOMMOS	21-22
Total Plane Commander Hours	FAPCTOT	557-560
Total Pilot/Naval Flight Officer Hours	FAPLTHR	540-544
VH Hours	FAVHHRS	553-556
DOD Junior Officer Aptitude Test Score-M	FADOREM	437-439
DOD Junior Officer Aptitude Test Score-T	FADORET	443
DOD Junior Officer Aptitude Test Score-V	FADOREV	440-442
Language	FALANG1	503-506
	FALANG2	514-517
Language Exception Indicator	FAYN1	5 Bit 1
Language Proficiency Date	FALNGDT1	512-513
	FALNGDT2	523-524
Language Proficiency-Defense Language Institute Test	FALNGPR1	508
	FALNGPR2	519
Language Proficiency-Self Evaluated/Test Conversion	FALNGP1	507
	FALNGP2	518
Naval Officer Classification	FAQL1	722-725
	FAQL2	732-735
	FAQL3	742-745
	FAQL4	752-755
	FAQL5	762-765
	FAQL6	772-775
	FAQL7	782-785
Naval Officer Classification Key Code	FAQLKEY1	731
	FAQLKEY2	741
	FAQLKEY3	751
	FAQLKEY4	761
	FAQLKEY5	771
	FAQLKEY6	781
	FAQLKEY7	791

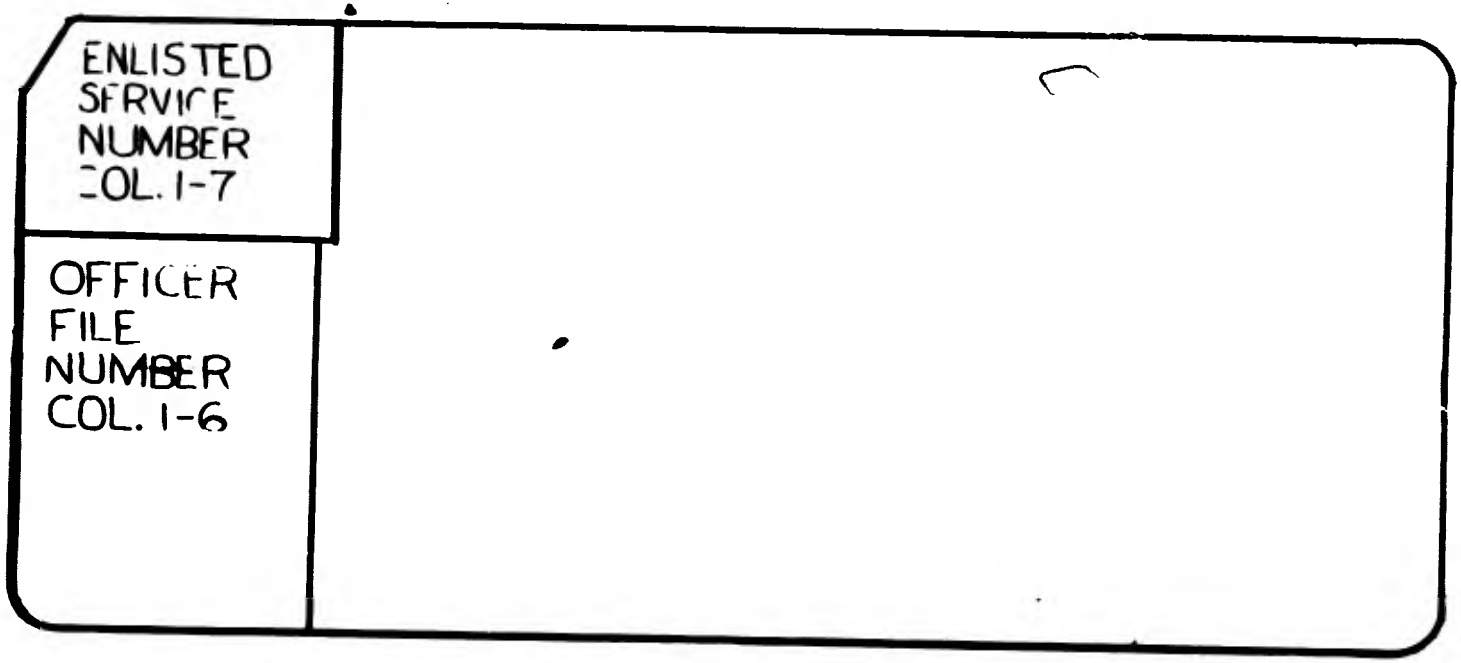
Data Element Title	Element Name	Tape Position
Naval Officer Classification-Months	FAQLMOS1	729-730
	FAQLMOS2	739-740
	FAQLMOS3	749-750
	FAQLMOS4	759-760
	FAQLMOS5	769-770
	FAQLMOS6	779-780
	FAQLMOS7	789-790
Naval Officer Classification-Station Code	FAQLSTA1	726-728
	FAQLSTA2	736-738
	FAQLSTA3	746-748
	FAQLSTA4	756-758
	FAQLSTA5	766-768
	FAQLSTA6	776-778
	FAQLSTA7	786-788
Past Duty Station-Activity Title	FAPDSAC1	800-815
	FAPDSAC2	833-848
	FAPDSAC3	866-881
	FAPDSAC4	899-914
	FAPDSAC5	932-947
	FAPDSAC6	965-980
	FAPDSAC7	998-1013
	FAPDSAC8	1031-1046
Past Duty Station-Deployment Duration	FAPDSMO1	823-824
	FAPDSMO2	856-857
	FAPDSMO3	889-890
	FAPDSMO4	922-923
	FAPDSMO5	955-956
	FAPDSMO6	988-989
	FAPDSMO7	1021-1022
	FAPDSMO8	1054-1055
Past Duty Station-From Date	FAPDSFR1	792-795
	FAPDSFR2	825-828
	FAPDSFR3	858-861
	FAPDSFR4	891-894
	FAPDSFR5	924-927
	FAPDSFR6	957-960
	FAPDSFR7	990-993
	FAPDSFR8	1023-1026
Past Duty Station-Home Port	FAPDSHP1	817-822
	FAPDSHP2	850-855
	FAPDSHP3	883-888

Data Element Title	Element Name	Tape Position
	FAPDSHP4	916-921
	FAPDSHP5	949-954
	FAPDSHP6	982-987
	FAPDSHP7	1015-1020
	FAPDSHP8	1048-1053
Past Duty Station-To Date	FAPDSTO1	796-799
	FAPDSTO2	829-832
	FAPDSTO3	862-865
	FAPDSTO4	895-898
	FAPDSTO5	928-931
	FAPDSTO6	961-964
	FAPDSTO7	994-997
	FAPDSTO8	1027-1030
Past Duty Station-Type Assignment	FAPDSTA1	816
	FAPDSTA2	849
	FAPDSTA3	882
	FAPDSTA4	915
	FAPDSTA5	948
	FAPDSTA6	981
	FAPDSTA7	1014
	FAPDSTA8	1047
Qualified in or for Command of Submarines	FAYN1	6 Bit B
Special Designations	FASPDES1	650-652
	FASPDES2	653-655
	FASPDES3	656-658
	FASPDES4	659-661
	FASPDES5	662-664
	FASPDES6	665-667
	FASPDES7	668-670
	FASPDE38	671-673
	FASPDES9	674-676
Submarine Qualification Date	FASUBDT	278-281
Subspecialty	FASUBSP1	525-529
	FASUBSP2	530-534
Education-College Name	FAEDCOL1	463-472
	FAEDCOL2	483-492
Education Duration	FAEDDUR1	473-474
	FAEDDUR2	493-494
Education Exception Indicator	FAYN1	6 Bit 4

Data Element Title	Element Name	Tape Position
Education Level	FAEDLEV1	478
	FAEDLEV2	498
Education Major	FAEMAJ1	479-480
	FAEDMAJ2	499-500
Education Specialty	FAEDSPC1	481-482
	FAEDSPC2	501-502
Education Sponsor	FAEDSPN1	477
	FAEDSPN2	497
Education-Year Completed	FAEDYRC1	475-476
	FAEDYRC2	495-496
Service School Code	FASCH1	677-679
	FASCH2	686-688
	FASCH3	695-697
	FASCH4	704-706
	FASCH5	713-715
Service School Completion Date	FASCHDT1	680-683
	FASCHDT2	689-692
	FASCHDT3	698-701
	FASCHDT4	707-710
	FASCHDT5	716-719
Service School Length/Duration	FASCHDU1	684-685
	FASCHDU2	693-694
	FASCHDU3	702-703
	FASCHDU4	711-712
	FASCHDU5	720-721
Accounting Category Code-Pending	FACATP	1056
Assignment Restriction-Pending	FAYN2	7 Bit 1
Billet Sequence Code-Pending	FABSCP	1093-1097
BUPERS Unit Identification Code (BUIC)-Pending	FABUICP	1086-1092
Designator-Pending	FADESIGP	1099-1101
Detail Cognizance Code-Pending	FACOGP	1057-1058
Estimated Date of Arrival-Pending	FAEDAP	1078-1081
Estimated Date of Detachment	FAEDD	1082-1085
Estimated Loss Code-Pending	FAELCP	1064
Estimated Loss Date-Pending	FAELDP	1065-1068
Flying Status Code-Pending	FAFSCP	1060
Functional Area Code-Pending	FAFACP	1061
PAMI-Pending	FAPAMIP	1069
Primary Aeronautical Designation-Pending	FAPADP	1059

Data Element Title	Element Name	Tape Position
Projected Rotation Date-Pending	FAPRDP	1070-1073
Rotation Projection-Pending	FARPP	1062-1063
Tour Date-Pending	FATOURP	1074-1077
Type Assignment "A"-Pending	FATYPEAP	1098
ADDU Overflow Indicator	FAYN2	7 Bit 4
Billet Sequence Code-Additional Duty	FABSCA	1110-1114
BUPERS Unit Identification Code (BUIC)-ADDU	FABUICA	1103-1109
Date Reported-Additional Duty	FADRPTA	1115-1120
Order Status-Additional Duty	FAORSTA	1102
Record Mark (≠)		1121

APPENDIX B



PARAMETER CARD LAYOUT

The following is a list of the headings used in the Enlisted/Officer Active Duty Record list and the page numbers within the Manual of the Active Duty Officer Master Magnetic Tape Record, NAVPERS 15,921A, May 1965 and Manual of the Active Duty Enlisted Master Magnetic Tape Record, NAVPERS 15,949A, October 1962 in which a definition of the data described by these headings may be found.

Officer Active Duty Record

Heading	Page No.	Heading	Page No.
File No.	7	LCDR	46
Name	8	Commander	46
Pres Grade	9	Captain	46
Pro Stat	11	Flag	46
Cat Desg	12	Pre Mil Service-Bran	48
Staff Code	16	Pre Mil Service-Year	48
Sex	17	Pre Mil Service-Mo	48
Per Grade	18	Pre Mil Service-Rank	48
Grade Pres	19	MARP Code	50
Grade Per	20	BUPERS Act	51
Pres Abbr	21	Activity Title	52
Per Abbr	22	Plc Code	53
Source Orig	23	Assign Code	54
Source Code-Cur	23	Acct Code	55
Loss Code-BUPERS	27	Ord Stat	56
Loss Code-DOD	29	Present Billet	57
Yr Gr	30	Primary Duties	58
Precedence Number	31/32	Collateral Duties	59
Over Four	33	Fun Area	60
Cit	34	Billet Code	61
Race	35	Train Duties	62
Date Gain	36	Qual Date	63
Date Rank	37	Conus Departure	64
Date Birth	38	Dependents-Pri	65
Pay Entry Base Date	39	Dependents-Sec	66
Active Base Date	40	Dependents-O/S	67
Comm Base Date	41	O/S Dep Date ar	68
Class Year	42	Public Qutr	69
Ser Date	43	Order Number	70
Retire Year	44	Fac Code	71
Prof Service	45	Detach Date	[illegible]
Warrant	46	Assign Code	[illegible]
Ensign	46	Detail Code	74
LTJG	46	Current Duty	77
Lieutenant	46	Loss Code	78

Enlisted Active Duty Record

OFFICER ACTIVE DU

```
                                                          PRES. PRO  CAT  STAFF      PER    G
FILE     N A M E                                          GRADE STAT DESG CODE SEX GRADE PRE

XXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  XXX  XXXX XXXX  X    X   XXX   X.


            DATE      DATE       DATE    PAY ENTRY  ACTIVE    COMM        CLASS  SE
CIT RACE    GAIN      RANK       BIRTH   BASE DATE BASE DATE BASE DATE    YEAR   DA

 X    X   XX/XX/XX XX/XX/XX XX/XX/XX XX/XX/XX  XX/XX/XX  XX/XX/XX   XX     X


                                          PRE MIL SERVICE MARP
LCDR      COMMANDER CAPTAIN   FLAG        BRAN YR MO RANK CODE BUPERS ACT  ACTI

XX/XX/XX XX/XX/XX XX/XX/XX XX/XX/X7 XXXX XX XX XXXX XXXX XXXXXXXXX XXXXX


  COLLATERAL    FUN   BILLET TRAIN  QUAL    CONUS     DEPENDENTS   O/S DEP PUB
    DUTIES      AREA   CODE  DUTIES DATE  DEPARTURE  PRI SEC O/S  DATE AR  QU

XXXXXXXXXXXXXX  X     XXXXX  XXXXX XX/XX XX/XX/XX    X    X   X    XX/XX    X


ROTA   ROTA  TOUR    SECURITY        ASSIG RES DETAILERS  SPECIAL DESIGNATION
DATE   PRO   DATE   INV AGY  DATE    RESTR EXT REMARKS    CODE SUB QUAL CODE

XX/XX XX     XX/XX   X    X XX/XX/XX   X    XXX XXXXXXXXX XXX    XX/XX    X  X


*-------EDUCATION-------* *-----------LANGUAGES------------* *-----------
MO YR SPON LEVEL MAJ SPEC LANG CODE TEST LANG CODE TEST MORE SCH COMP  WKS

XX XX  X      X    XX   XX XXXXX  X    XXXX XXXX  X    XXXX  X   XXX XX/XX  XX


DEC  AERO FLY    FLIGHT   HEAVIER FLIGHT LIGHT TOTAL 5 YR JET   VH   PH   CA
CODE CODE STAT TRAIN EXP   AIR    QUAL    AIR  HOURS HOUR HOUR HOUR HOUR  LA

 X    X    X     XX   XX  XX/XX  XX/X7 XX/XX XXXXX XXXX XXXX XXXX XXXX  XX


   QUALIFICATIONS    AIRCRAFT MODEL EXPERIENCE *----------P A S T  D U T
NOBC STATION MOS KEY CRAFT HOURS CARR   IND  YR REPORT DETACH ACTIVITY

XXXX   XXX    XX  X  XXXX   XXXX  XXX   XXX  XX  XX/XX  XX/XX XXXXXXXXXXX
XXXX   XXX    XX  X  XXXX   XXXX  XXX   XXX  XX  XX/XX  XX/XX XXXXXXXXXXX
XXXX   XXX    XX  X  XXXX   XXXX  XXX   XXX  XX  XX/XX  XX/XX XXXXXXXXXXX
XXXX   XXX    XX  X  XXXX   XXXX  XXX   XXX  XX  XX/XX  XX/XX XXXXXXXXXXX
XXXX   XXX    XX  X  XXXX   XXXX  XXX   XXX  XX  XX/XX  XX/XX XXXXXXXXXXX
XXXX   XXX    XX  X  XXXX   XXXX  XXX   XXX  XX  XX/XX  XX/XX XXXXXXXXXXX
XXXX   XXX    XX  X                              XX/XX  XX/XX XXXXXXXXXXX
XXXX   XXX    XX  X                              XX/XX  XX/XX XXXXXXXXXXX
                                                 XX/XX  XX/XX XXXXXXXXXXX
```

```
C E R   A C T I V E   D U T Y   R E C O R D                         D A T E

 CAT  STAFF      PER    GRADE  PRES PER  SOURCE CODE LOSS CODE  YR  PRECEDENCE OVER
 DESG CODE  SEX GRADE PRES PER ABBR ABBR  ORG    CUR BUPERS DOD GR  NUMBER     FOUR

 XXXX  X     X   XXX   X    X  XXXX XXXX  XXX    XXX   XXX   XXX XXX XXXXXXXXX    X

IVE   COMM       CLASS SER   RETIR  PROF
 DATE BASE DATE YEAR  DATE  YEAR  SERVICE  WARRANT  ENSIGN   LTJG     LIEUTENANT

X/XX  XX/XX/XX   XX    XX    XX   XX/XX/XX XX/XX/XX XX/XX/XX XX/XX/XX XX/XX/XX

CE MARP                                PLC  ASSIGN ACCT ORD  PRESENT
NK CODE BUPERS ACT  ACTIVITY TITLE     CODE  CODE  CODE STAT  BILLET PRIMARY DUTIES

XX XXXX XXXXXXXXX XXXXXXXXXXXXXXXX  X     X    XXXX  X    XX/XX  XXXXXXXXXXXXX

 DEPENDENTS  O/S DEP PUBLIC ORDER  FAC  DETACH ASSIG DETAIL CURRENT    LOSS
 PRI SEC O/S DATE AR  QUTR  NUMBER CODE  DATE  CODE   CODE   DUTY    CODE   DATE

  X   X   X   XX/XX   X    XXXXXX  X    XX/XX   X      XX   XX/XX/XX   X  XX/XX/XX

ERS  SPECIAL DESIGNATION              *--------------E D U C A T I O N-------------*
S    CODE SUB QUAL CODE  SUBSPECIALTY SCHOOL    MO YR SPON LEVEL MAJ SPEC SCHOOL

XXXX XXX    XX/XX    X  XXXXXXXXXXXX XXXXXXXXXX XX XX  X     X    XX  XX XXXXXXXXXX

----------* *-------------------S E R V I C E  S C H O O L S------------------*
E TEST MORE SCH COMP  WKS SCH COMP  WKS SCH COMP  WKS SCH COMP  WKS SCH COMP  WKS

 XXXX  X   XXX XX/XX  XX XXX XX/XX  XX XXX XX/XX  XX XXX XX/XX  XX XXX XX/XX  XX

AL 5 YR JET  VH   PH   CARR       SER INST OPNAV 3760
RS HOUR HOUR HOUR HOUR LAND IOMT GR  RATE TYPE DATE

X XXXX XXXX XXXX XXXX  XXX   X        X    X  XX/XX

----------P A S T  D U T Y  S T A T I O N S--------*
EPORT DETACH ACTIVITY         ROTA  PORT  AREA    MOS

XX/XX  XX/XX XXXXXXXXXXXXXXXX  X  XXXXXX XXXXXXX  XX
XX/XX  XX/XX XXXXXXXXXXXXXXXX  X  XXXXXX XXXXXXX  XX
XX/XX  XX/XX XXXXXXXXXXXXXXXX  X  XXXXXX XXXXXXX  XX
XX/XX  XX/XX XXXXXXXXXXXXXXXX  X  XXXXXX XXXXXXX  XX
XX/XX  XX/XX XXXXXXXXXXXXXXXX  X  XXXXXX XXXXXXX  XX
XX/XX  XX/XX XXXXXXXXXXXXXXXX  X  XXXXXX XXXXXXX  XX
XX/XX  XX/XX XXXXXXXXXXXXXXXX  X  XXXXXX XXXXXXX  XX
```

B

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                                                    E N L I S T E D  A C T I V E  D U T

                                                                  *---------PRESENT RATE----------
                                                                                    AUTH       DATE OF
  SER  SEX   NAME                                                 ABBR  CODE KEY  CODE IND  PAY GRAD

XXXXXXX X XXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXX XXXXX XX  X     X  XX/XX/XX


*------PROFICIENCY PAY-----* *----------------E D U C A T I O N    A P T I
     RET  RET       RET AWARD          TEST *----TECH TEST----*   BASIC BATT
CODE CODE DATE ERR IND  IND  YRS USAFI IND READ MATH PHYS ELEC GCT ARI MECH

 X    X    XX  XX  XX    X    X    XXX  X   XX   XX   XX   XXXXXXXX  XX  XX


ANG                              DOD  *-------------------------------------------S
QUAL *-----SECURITY-----* LANG BRANCH TSS CURRENT  ACTIVE   PAY ENTRY ACTIV
DATE CID DATE CODE SOURCE ABIL CLASS  IND ENLIST   DUTY     BASE DATE BASE

X/XX XX/XX/XX  X      X    XX    XX    XXXXX/XX/XX XX/XX/XX XX/XX/XX   XX/X


*------SERVICE DATA------*                                                    C
NO  EXP RECALL INVOL INVOL PRIOR  BIRTH    CIT   STAT BIRTH DEPENDENT ROTA  S
ENL IND  IND    IND   MOS   OFF   DATE  A23 REL RES  PLACE    P S    DATE  D

 X   X    X      X     XX    X  XX/XX/XX X  X X   XX   XXX     X X   XX/XX X


*---------------P R E S E N T   A C T I V I T Y---------------* *----------
S/S  HOME                    ACT  ACCT              DATE     DATE   SPEC     PAM
CODE PORT ACTIVITY           TYPE CODE DOS TRANS RECEVIED   TRANS  CAT PAMI COD

 X    X  XXXXXXXXXXXXXXXX   XXX  XXX  X   XX   XX/XX/XX XX/XX/XX  X   X   XXX


    1ST PAST ACTIVITY     *---------2ND PAST ACTIVITY---------* *-----------
       DATE      DATE          PAMI   BUPERS  ACCT S/S    DATE   MOS HOME ACT
TRANS RECEIVED   TRANS   PAMI CODE   ACTIVITY CAT  CODE RECEIVED OB  PORT TYPE

 XX   XX/XX/XX XX/XX/XX    X  XXXX XXXXXXXXXX X     X   XX/XX/XX XXX   X  XXX


    *-------------S C H O O L   H I S T O R Y------------*
     DATE       DATE       DATE       DATE       DATE   S/S DMT HIST SPEC CHG
SCH  COMP  SCH  COMP  SCH  COMP  SCH  COMP  SCH  COMP   IND IND  IND  CAT  IND

XXXX XX/XX XXXX XX/XX XXXX XX/XX XXXX XX/XX XXXX XX/XXXXX  X   X    X    X
```

A

```
S T E D  A C T I V E  D U T Y  R E C O R D                                    D A T E

------PRESENT RATE----------*  PROSPECTIVE RATE        NAVY CLASSIFICATION
          AUTH      DATE OF                  TERMINAL                    PNEC SNEC TRAP
 CODE KEY CODE IND PAY GRADE ABBR  CODE      DATE     PNEC SNEC KEY     RATE RATE CODE

X XXXXX XX  X     X  XX/XX/XX  XXXXX XXXXX XX/XX/XXXXXXX XXXX  XX  XX   XX   XXX


 D U C A T I O N    A P T I T U D E--------------------*
-TECH TEST----*   BASIC BATTERY   *-------SPECIAL------* ENL  LIM  ORGIN  LANG LANG
 MATH PHYS ELEC GCT ARI MECH CLER SONAR RADIO ETST SHOP DISG DUTY  KEY    CODE PROF

  XX   XX  XXXXXXXX XX  XX   XX    XX    XX   XX   XX   XX   X     X     XXX   X

---------------------------S E R V I C E  D A T A-----------------------------------*
NT  ACTIVE   PAY ENTRY ACTIVE DUTY EXT RES DATE  ACT DUTY  EXT EXT OTH TYPE TERM MIL
    DUTY     BASE DATE BASE DATE   MOS MOS LOSS EXPIRATION VEY OTH SER ENL  IND  OBL

XX XX/XX/XX XX/XX/XX   XX/XX/XX   XX  XX XX/XX  XX/XX/XX   XX  XX XXX  XX   X    X


                                COMM  NAVY      TOUR        *------PRESENT ACTIVITY------*
 STAT BIRTH DEPENDENT ROTA      SHORE DIST PAMI COMP  SEA   SPEC      PAMI   BUPERS   DIST
 RES  PLACE    P S    DATE      DUTY  FROM DIST DATE  DUTY  CAT  PAMI CODE  ACTIVITY COM

  XX   XXX      X X   XX/XX    XX/XX XX   X  XX/XX XX/XX  X    X  XXXX XXXXXXXXXX XXX


--------------* *---------------1 S T  P A S T  A C T I V I T Y--------------------*
DATE      DATE   SPEC     PAMI   BUPERS  DIST S/S  HOME                    ACT  ACCT
CEVIED    TRANS  CAT PAMI CODE   ACTIVITY COMD CODE PORT ACTIVITY          TYPE CODE DOS

/XX/XX XX/XX/XX  X   X    XXXX XXXXXXXXXX XXX  X    X  XXXXXXXXXXXXXXXX XXX  XXX  X


VITY---------* *--------------------C A R E E R  H I S T O R Y--------------------*
 S/S    DATE   MOS HOME ACT  MOS HOME ACT  MOS HOME ACT  MOS HOME ACT  MOS HOME ACT
 CODE RECEIVED OB  PORT TYPE OB  PORT TYPE OB  PORT TYPE OB  PORT TYPE OB  PORT TYPE

  X   XX/XX/XX XXX   X  XXX  XX   X  XXX  XX   X  XXX  XX   X  XXX  XX   X  XXX


--------*
                                                *-----PRO ASSIGN-----*
 DATE  S/S DMT HIST SPEC CHG FIN SP  LOSS PAC       DIST SPEC  EST
 COMP  IND IND IND  CAT  IND IND PRO IND IND  PAMI  COMD CAT   ARR

XX/XXXXX  X   X   X    X   X   X   XXX  X   X    XXX   X    XX/XX
```

B

OFFICER ACTIVE DUTY

FILE	SSN	NAME	SEX	RACE	DATE OF BIRTH	NAME CHG	FILE CHG
XXXXXX	XXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		X	XX/XX/XX	X	

RRBS GRADE	PROM STAT	*DESIG-* CUR	PEND	PERM GRADE	SPOT PROM GRADE I	SOURCE ORG	CUR	RES B/U	*LOSS CODE* BUPERS	DOD	YR GRP	SERV DATE	*PRECE ACTIV
X	XXXX	XXXX	XXX	X	X	X	XXX	XXX	X	XXX	XXX	XXX	XX	XXXXXX

RAY ENTRY BASE DATE	ACT DUTY BASE DATE	ACT COMM BASE DATE	FIRST COMM WARRANT	*----------PROMOTIONAL ENS	LTJG	LT	LC
XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX	XX/XX/XX XX/X

RROF SERVICE	*---BUPERS UNIT IDENT CODE----* CURRENT	PREV	PENDING	ADDU	PAMI C P	DETAIL C	P	ACCTG GAIN ORDER C P	LOSS	PHASE C A	ACTIVI
XX/XX/X X	XXXXXXX	XXXXXXX	XXXXXXX	XXXXXXX	X X	XX	XX	XXX X	X	X X	XXXXXX

RUNC C P	*BILLET SEQ CODE* CUR	PEND	ADDU	*----REPORT DATE------* CUR DUTY	PEND	ADDU	*-ESTIMATED LOSS CODE-* CUR	DATE	PEND DATE	*ROTA DA CUR
X X	XXXXX	XXXXX	XXXXX	XX/XX/XX	XX/X7	XX/XX/XX	X	XX/XX/X X	X	XX/X X	XX/XX XX

DETACH PEND	AERO DESIG CUR	PEND	*----COMBAT DUTY----* CUR MOS	TOUR DATE	A/C	FLIGHT STUDENT	SUBMARINE QUAL DATE	*CONST SERV* IND	YR	*PILOT TOTAL
XX/XX	X	X	X XX	X	X/XX	X	X	XX/XX	X	XX	XXXXX

DOD APTITUDE M	V	T	*----------EDUCATION----------* COLLEGE	MO	YR	SPON	LEV	MAJ	SPEC	MORE	*-LANGUAGES--* LANG CODE	TEST	YR	MORE	D
XXX	XXX	X	XXXXXXXXXX	XX	XX	X	X	XX	XX	X	XXXX	X	X	XX	X
			XXXXXXXXXX	XX	XX	X	X	XX	XX		XXXX	X	X	XX	

SUBSPECIALTY	SERVICE SCHOOLS SCH	COMP	WKS	*--QUALIFICATIONS--* NOBC	STATION	MOS	KEY	AIRCRAFT MODEL EXPERIENCE * MODEL	HRS	CARR	DESIG	YR	REP
XXXXX	XXX	XX/XX	XX	XXXX	XXX	XX	X	XXXX	XXXX	XXX	XXX	XX	XX
XXXXX	XXX	XX/XX	XX	XXXX	XXX	XX	X	XXXX	XXXX	XXX	XXX	XX	XX
	XXX	XX/XX	XX	XXXX	XXX	XX	X	XXXX	XXXX	XXX	XXX	XX	XX
	XXX	XX/XX	XX	XXXX	XXX	XX	X	XXXX	XXXX	XXX	XXX	XX	XX
	XXX	XX/XX	XX	XXXX	XXX	XX	X	XXXX	XXXX	XXX	XXX	XX	XX
				XXXX	XXX	XX	X						XX
				XXXX	XXX	XX	X						XX
													XX
													XX

```
E R  A C T I V E  D U T Y  R E C O R D
                                                                              D A T E
         DATE OF  NAME FILE DEPENDENTS    O/S DEP  PUBLIC *SECURITY* DECO ORDER   SER
EX RACE   BIRTH   CHG  CHG  PRI SEC O/S   DATE AR   QTRS  T INV DATE CODE NUMBER  GRP

    X    XX/XX/XX  X         X   X   X    XX/XX          X XX/XX/XX  X   XXXXXX   X

 *LOSS CODE* YR  SERV *PRECEDENCE NUMBER* OVER *-DATE OF GAIN--* *-DATE OF RANK--*
 BUPERS    DOD GRP DATE  ACTIVE    INACTIVE FOUR CURRENT  INITIAL  PRESENT  SPOT PRO

   XXX     XXX XXX  XX  XXXXXXXX  XXXXXXXX       XX/XX/X7 XX/XX/XX XX/XX/X7 XX/XX/XX

------P R O M O T I O N A L  H I S T O R Y------------------* *PREV MIL SERV* CL RET
NS       LTJG      LT       LCDR      CDR       CAPT      FLAG   BRAN YR MO RANK YR YR

XX/XX XX/XX/XX XX/XX/XX XX/XX/XX XX/XX/XX XX/XX/XX XX/XX/XX    X   XX XX XXXX XX XX

AIL   ACCTG GAIN ORDER  PHASED  PRESENT *---PRIMARY--* *-COLLATERAL-*  TRAIN   QUAL
 P      C  P LOSS C A  ACTIVITY BILLET      DUTIES         DUTIES      DUTIES  DATE

 XX   XXX X  X    X X  XXXXXXXX  XX/XX  XXXXXXXXXXXXXX XXXXXXXXXXXXXX  XXXXX  XX/XX

STIMATED LOSS CODE-* *ROTA DATE* *ROTA PROJ* *TOUR DATE* RESTR DETAILER ASSIG MORE
  DATE       PEND DATE  CUR   PEND  CUR   PEND  CUR   PEND  C P  REMARKS  PEND  ADDU

 XX/XX/XX   X  XX/XX XX/XX XX/XX  XX    XX  XX/XX XX/XX   X     XXXX      X     X

UBMARINE *CONST SERV*   *PILOT/NFO TOT FLIGHT HR*  CARR INSTRUMENT  *--OPNAV 3760-*
UAL DATE   IND   YR     TOTAL 5-YR JET  VH   PC    LAND   RATING    DATE       TYPE

   XX/XX    X    XX     XXXXX XXXX XXXX XXXX XXXX  XXX      X       XX/XX        X

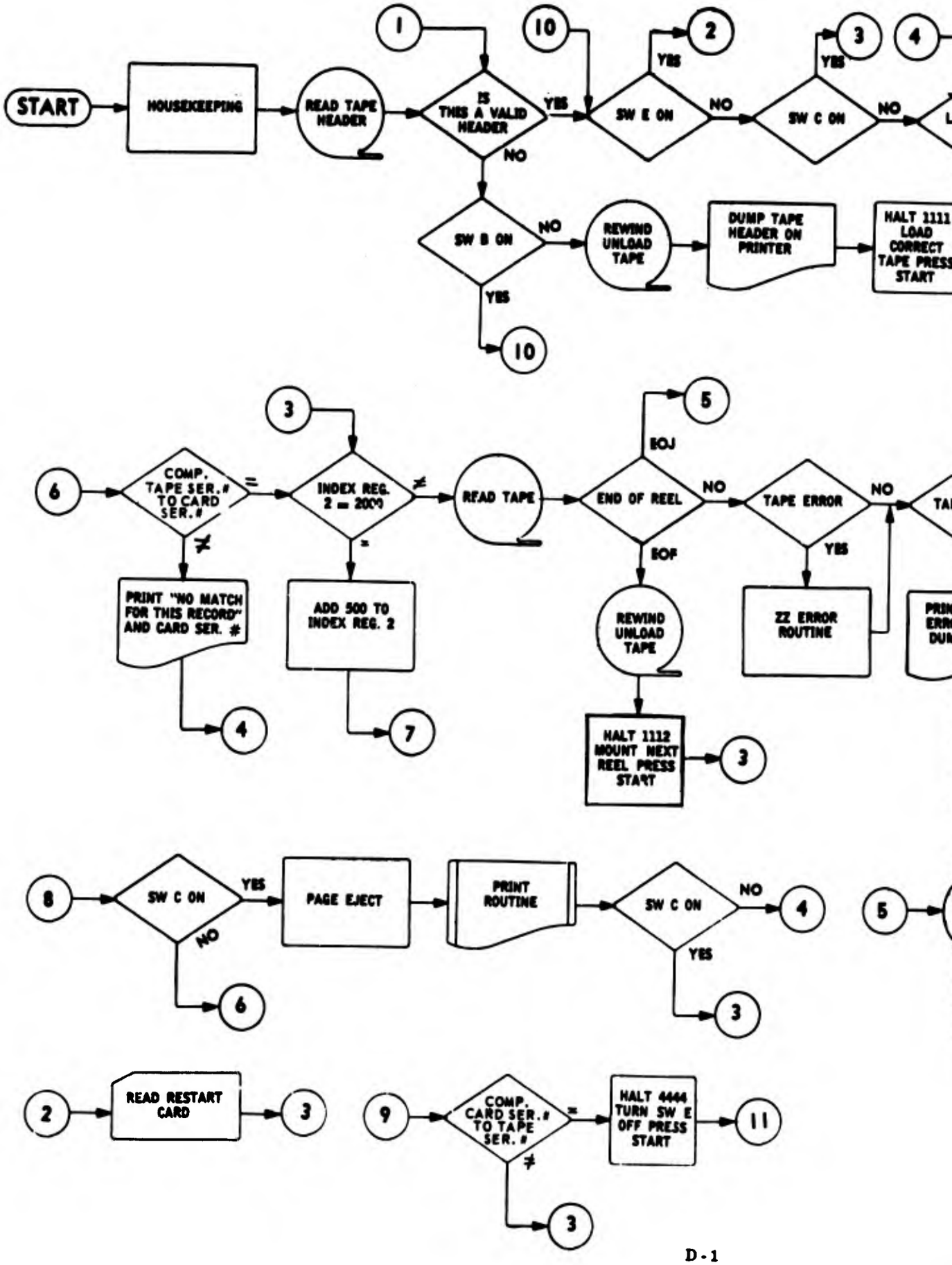
-*  *-L A N G U A G E S--*  DESIG CHANGE  PILOT DESIG   NFO   PILOT  FLYING STATUS
RE  LANG CODE TEST YR MORE   DATE DESIG    HTA   LTA   DESIG   CAT   CURRENT PEND

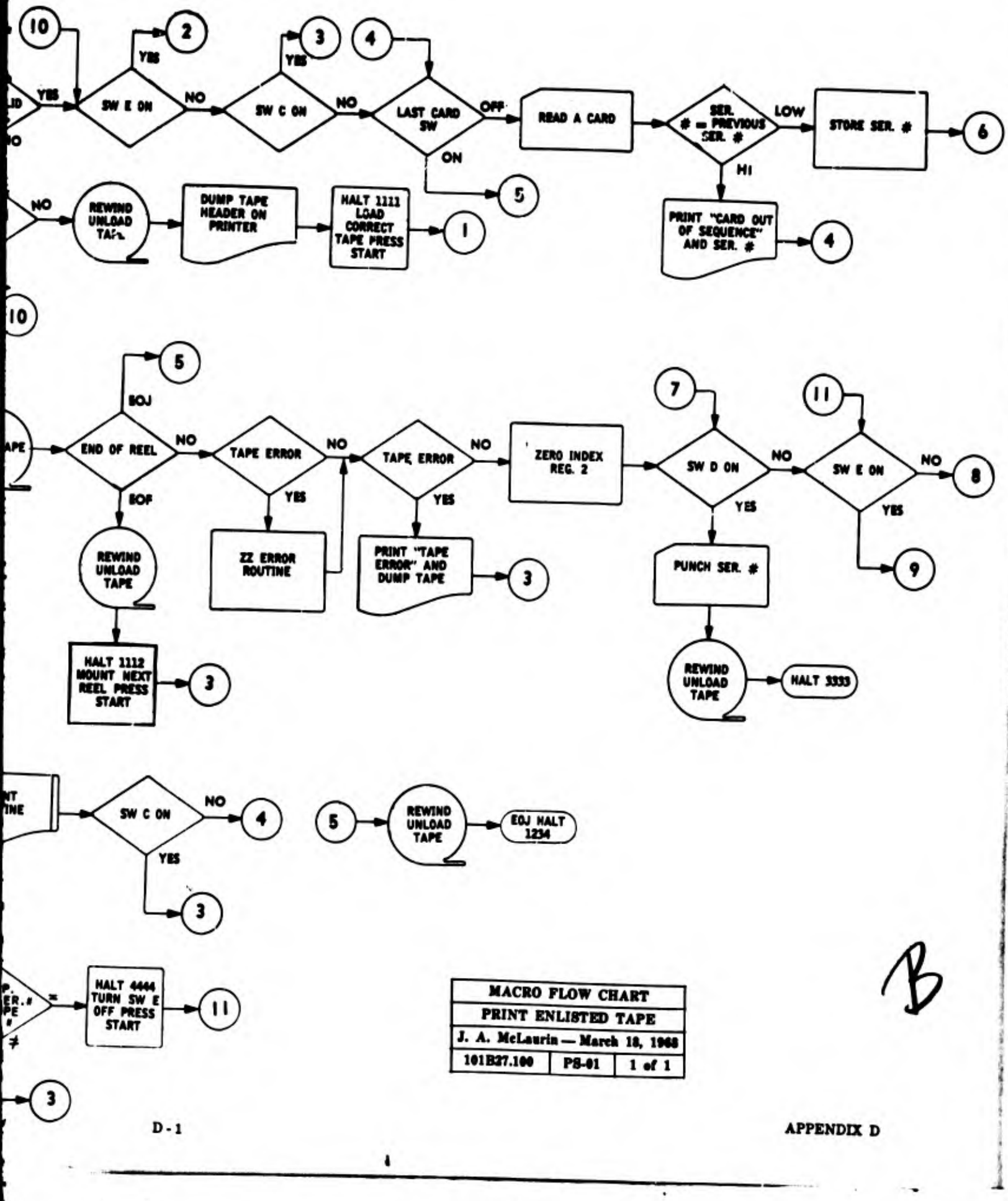
    XXXX  X    X   XX  X    XX/XX  XXXX  XX/XX XX/XX   XX/XX    X       X      X
    XXXX  X    X   XX       XX/XX  XXXX

AIRCRAFT MODEL EXPERIENCE *------P A S T  D U T Y  S T A T I O N S------*  SPECIAL
MODEL HRS  CARR DESIG YR  REPORT DETACH      ACTIVITY     TYPE HOME PT MOS  DESIG

XXXX  XXXX  XXX  XXX  XX   XX/XX  XX/XX XXXXXXXXXXXXXXXX  X   XXXXXX  XX    XXX
XXXX  XXXX  XXX  XXX  XX   XX/XX  XX/XX XXXXXXXXXXXXXXXX  X   XXXXXX  XX    XXX
XXXX  XXXX  XXX  XXX  XX   XX/XX  XX/XX XXXXXXXXXXXXXXXX  X   XXXXXX  XX    XXX
XXXX  XXXX  XXX  XXX  XX   XX/XX  XX/XX XXXXXXXXXXXXXXXX  X   XXXXXX  XX    XXX
XXXX  XXXX  XXX  XXX  XX   XX/XX  XX/XX XXXXXXXXXXXXXXXX  X   XXXXXX  XX    XXX
                           XX/XX  XX/XX XXXXXXXXXXXXXXXX  X   XXXXXX  XX    XXX
                           XX/XX  XX/XX XXXXXXXXXXXXXXXX  X   XXXXXX  XX    XXX
                           XX/XX  XX/XX XXXXXXXXXXXXXXXX  X   XXXXXX  XX    XXX
                                                                            XXX
                                                                            XXX
```

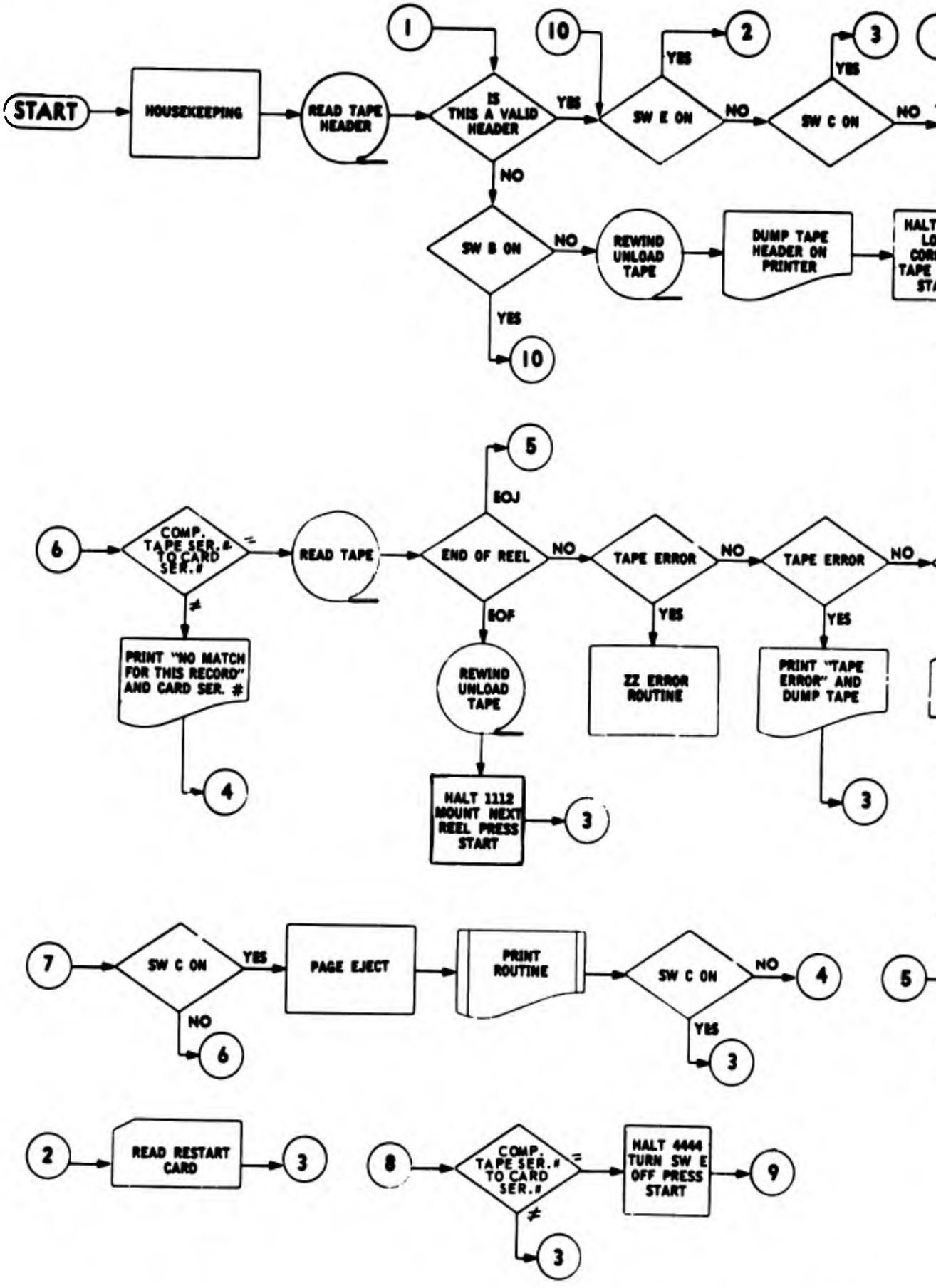
B


START
HOUSEKEEPING
READ TAPE HEADER
IS THIS A VALID HEADER
YES
NO
SW E ON
SW C ON
SW B ON
REWIND UNLOAD TAPE
DUMP TAPE HEADER ON PRINTER
HALT 1111 LOAD CORRECT TAPE PRESS START
COMP. TAPE SER.# TO CARD SER.#
INDEX REG. 2 = 2000
READ TAPE
END OF REEL
TAPE ERROR
EOJ
EOF
PRINT "NO MATCH FOR THIS RECORD" AND CARD SER. #
ADD 500 TO INDEX REG. 2
REWIND UNLOAD TAPE
ZZ ERROR ROUTINE
HALT 1112 MOUNT NEXT REEL PRESS START
PAGE EJECT
PRINT ROUTINE
READ RESTART CARD
COMP. CARD SER.# TO TAPE SER. #
HALT 4444 TURN SW E OFF PRESS START

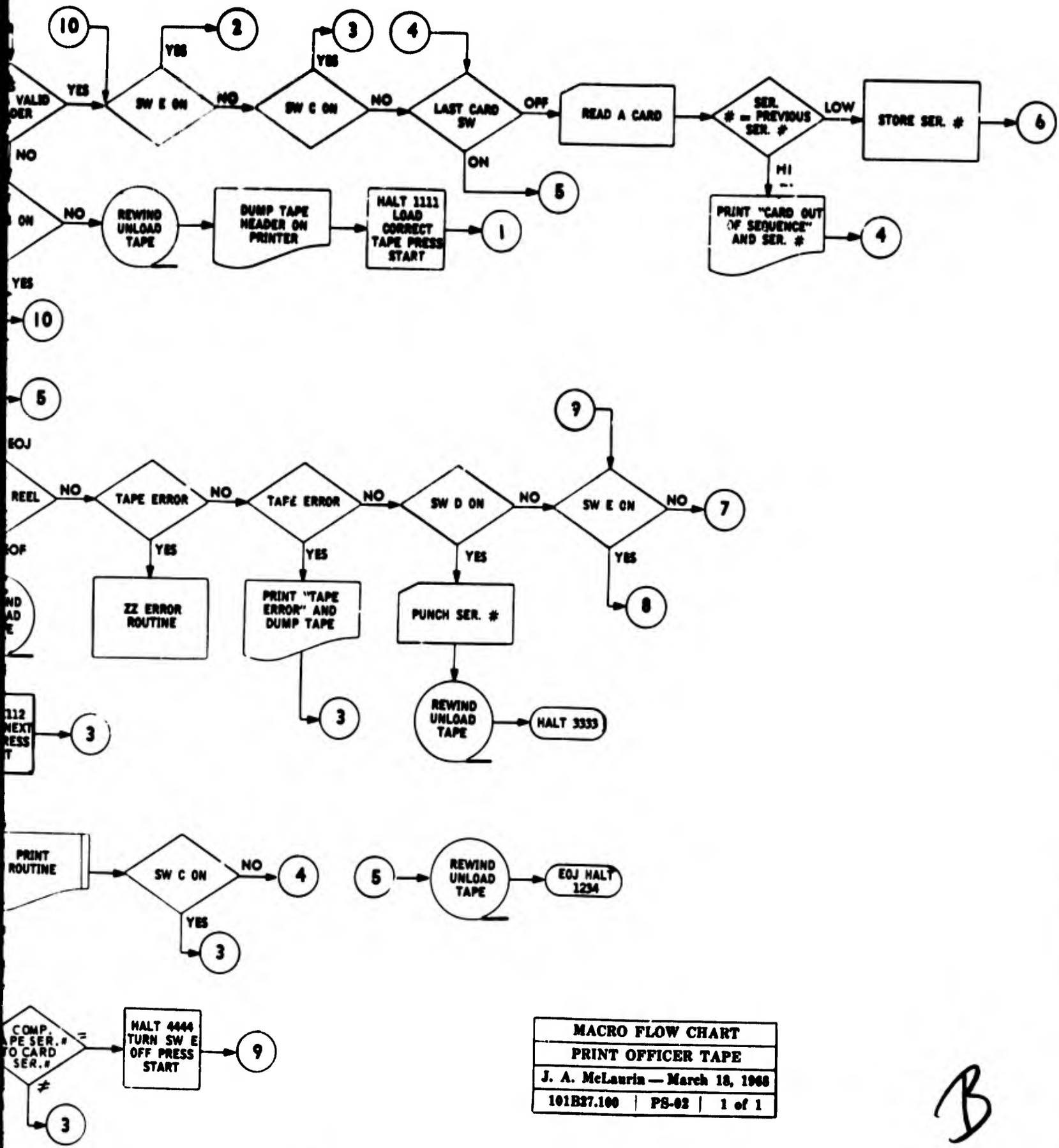


MACRO FLOW CHART		
PRINT ENLISTED TAPE		
J. A. McLaurin — March 18, 1968		
101B27.100	PS-01	1 of 1

B

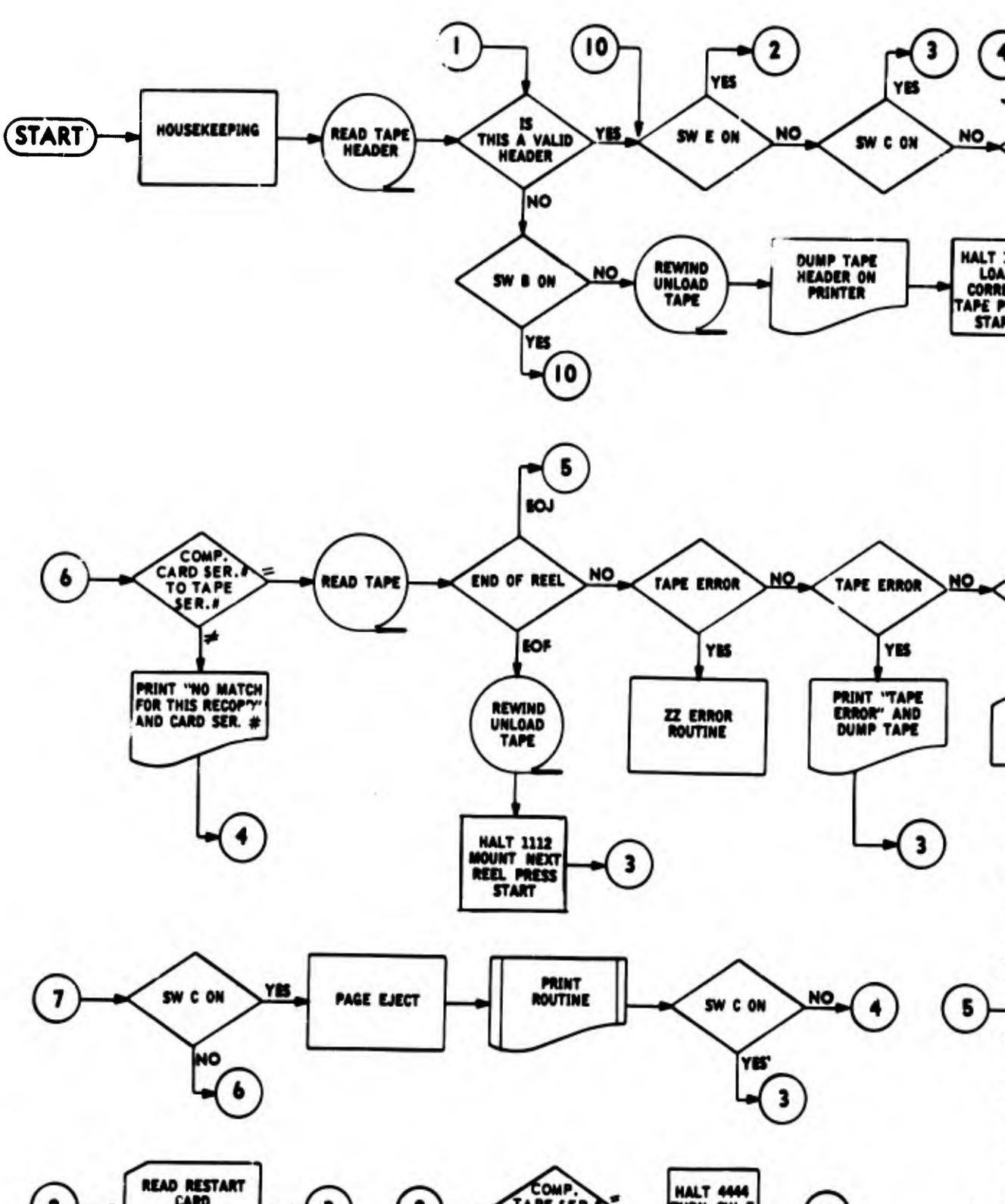

START
HOUSEKEEPING
READ TAPE HEADER
IS THIS A VALID HEADER
YES
NO
SW E ON
SW C ON
SW B ON
REWIND UNLOAD TAPE
DUMP TAPE HEADER ON PRINTER
1
10
2
3
COMP. TAPE SER.# TO CARD SER.#
=
≠
READ TAPE
END OF REEL
EOJ
EOF
TAPE ERROR
PRINT "NO MATCH FOR THIS RECORD" AND CARD SER. #
REWIND UNLOAD TAPE
ZZ ERROR ROUTINE
PRINT "TAPE ERROR" AND DUMP TAPE
HALT 1112 MOUNT NEXT REEL PRESS START
4
5
6
7
SW C ON
PAGE EJECT
PRINT ROUTINE
READ RESTART CARD
COMP. TAPE SER.# TO CARD SER.#
HALT 4444 TURN SW E OFF PRESS START
8
9

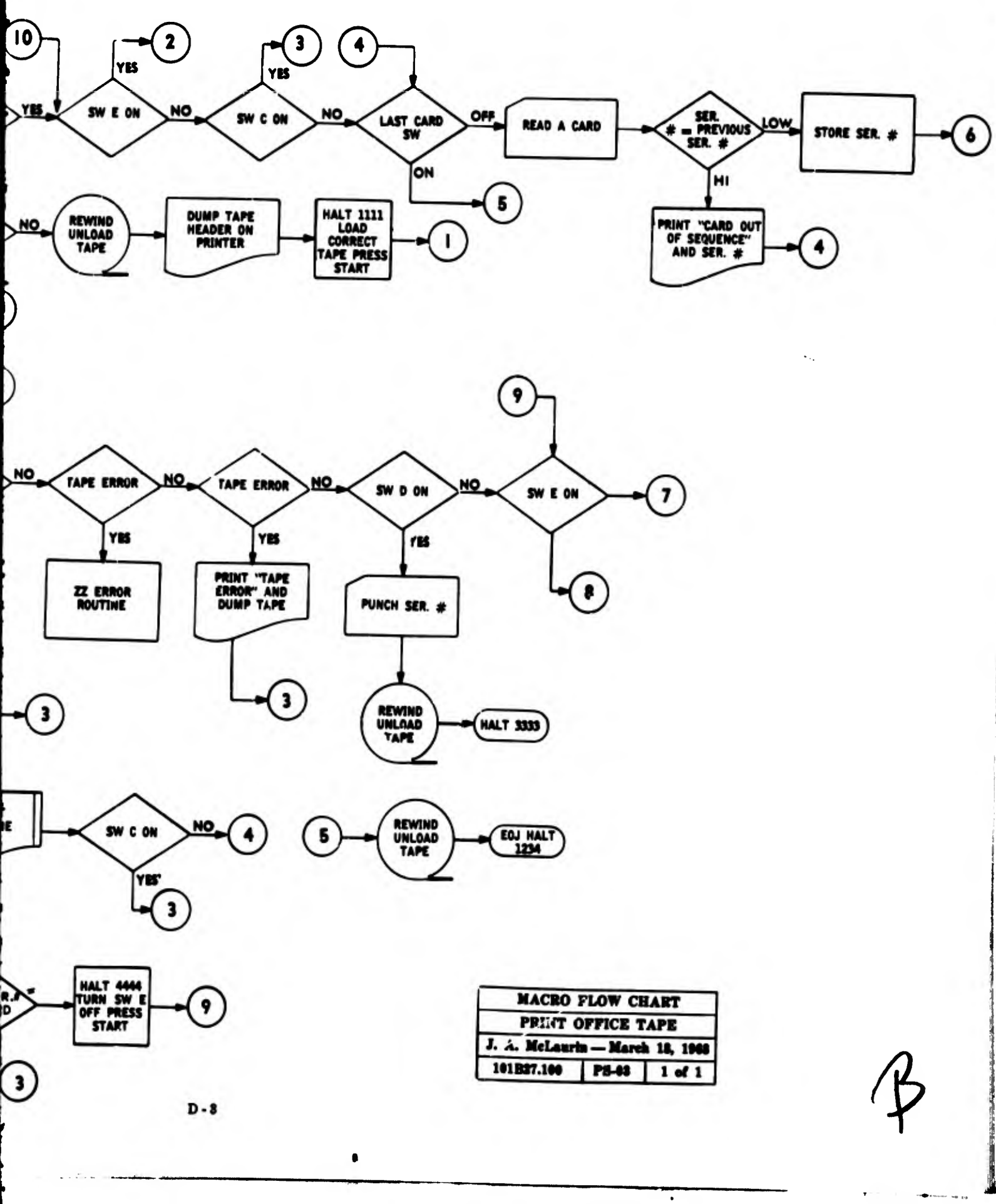
A



MACRO FLOW CHART
PRINT OFFICER TAPE
J. A. McLaurin — March 18, 1968
101B27.100 | PS-02 | 1 of 1

B


START
HOUSEKEEPING
READ TAPE HEADER
IS THIS A VALID HEADER
YES
NO
SW E ON
SW C ON
SW B ON
REWIND UNLOAD TAPE
DUMP TAPE HEADER ON PRINTER
COMP. CARD SER.# TO TAPE SER.#
PRINT "NO MATCH FOR THIS RECOPY" AND CARD SER. #
READ TAPE
END OF REEL
EOJ
EOF
TAPE ERROR
ZZ ERROR ROUTINE
PRINT "TAPE ERROR" AND DUMP TAPE
HALT 1112 MOUNT NEXT REEL PRESS START
SW C ON
PAGE EJECT
PRINT ROUTINE
READ RESTART CARD
COMP. TAPE SER.# TO CARD SER.#
HALT 4444 TURN SW E OFF PRESS START



MACRO FLOW CHART		
PRINT OFFICE TAPE		
J. A. McLaurin — March 18, 1968		
101B27.100	PS-03	1 of 1

B

Program Specification
101B27.100
PS-01

1. General

1.1 Purpose of Program Specification. The objective for writing a Program Specification for Project 101B27.100, PS-01, is to describe the program design to permit program production by the program coder with sufficient detailed information so that the design ultimately may be translated into instructions.

1.2 Project Reference. The outputs of the Enlisted Active Duty Master Record Print Procedure, Project 101B27.100, PS-01, will be analyzed by the Scientific Advisory Teams at COMHUKFORLANT, COMFAIRWINGS-LANT and COMOCEANSYSLANT to determine what future application may be made of these data.

1.3 Applicable Documents.

(a) Functional Description 101B27.100, FD-01.

(b) Data Requirements Document 101B27.100, RD-01.

(c) System Specification 101B27.100, SS-01.

(d) Program Specification 101B27.100, PS-02.

(e) Program Specification 101B27.100, PS-03.

(f) Manual of the Active Duty Enlisted Master Magnetic Tape Record, NAVPERS 15,949A Oct 1962.

(g) COMASWFORLANT OPORDER 71-(YR).

2. Scope

2.1. Program Description. See System Specification 101B27.100, SS-01, paragraph 4.1.1.

2.2 Program Functions. This program will fulfill the requirement to produce a detailed list of the Active Duty Enlisted Master Magnetic Tape Record file. Programs described in Program Specification 101B27.100 PS-02 and PS-03 will fulfill the remaining programming requirements of this system. This program meets these requirements by:

(a) A routine to check for the proper tape header label.

(b) A routine to print incorrectable read errors.

(c) A routine to check for and print wrong length record.

(d) A routine to bypass padded records; those records consisting of all 9's.

(e) A routine to select records by parameter cards for printing.

(f) A routine to select all records for printing.

(g) A routine to print a pertinent field within the record with descriptive headings.

(h) An interrupt and restart routine.

(i) A routine to handle blocked records.

2.3 Timing. It is anticipated that this program will print at the rate of eleven records per minute. When the complete Active Duty Enlisted Master Magnetic Tape Record file is printed throughput time will be approximately 15 hours. Maximum response time for one parameter will be approximately 10 minutes. This time will, of course, vary with the physical location of the record on the tape.

2.4 Accuracy. Not applicable.

2.5 Flexibility. See System Specification 101B27.100, SS-01, paragraph 2.6.

3. Environment

3.1 Software Environment

IBM Autocoder Compiler with ZZZERRR macro.

3.2 Program Interfaces. See System Specification 101B27.100, SS-01, paragraph 3.3.

3.3 Storage.

(a) Core Storage. Approximately 7,000 permanent positions.

(b) Tape Storage. One tape unit.

3.4 Security. Unclassified but handled on a "need to know" basis.

3.5 Controls. Not applicable.

4. Design Data.

4.1 Terminal Procedures.

(a) Start. Check tape header label to assure that the correct tape is being used as input.

(b) Stop. Rewind and unload tape.

(c) Interrupt.

(1) To interrupt when printing only those records selected by parameter cards, press stop on the printer during a page overflow cycle. Remove all parameter cards from the reader and the printed listing from the printer. Rewind and unload the input tape.

(2) To interrupt when printing all records turn on sense switch D. The program will stop printing after the next complete block of records have been printed and a restart card containing the service number of the next record to be printed will be punched; save this card as it is needed to restart the program. The input tape will be rewound and unloaded by the program. Remove the printed listing from the printer and the input tape from the tape unit.

(d) Restart.

(1) To restart when printing only those records selected by a parameter card, reload the program and all parameter

cards with a service number higher than the last one printed before interrupting.

(2) To restart when printing all records, load the program followed by the restart card with sense switches A, C and E on. When the input tape is repositioned the program will halt with address 4444 in the B address register. Turn sense switch E off and press start. The program will start printing with the next sequential record.

4.2 Inputs. See System Specification 101B27.100, SS-01 inputs in paragraph 4.1.1.

4.3 Outputs. See System Specification 101B27.100, SS-01 outputs in paragraph 4.1.1.

4.4 Data Environment.

(a) Title. Active Duty Enlisted Master Magnetic Tape Record.

(b) Description. This record contains history data for enlisted personnel including such items as schools, grades, rate, aptitude, service data and activities.

(c) Start of file. 80 character header label.

(d) End of file. Tape mark, 80 character trailer label and tape mark.

(e) Number of records. A maximum of approximately 10,000.

(f) Start of record. First position blank.

(g) End of record. Last position is a record mark.

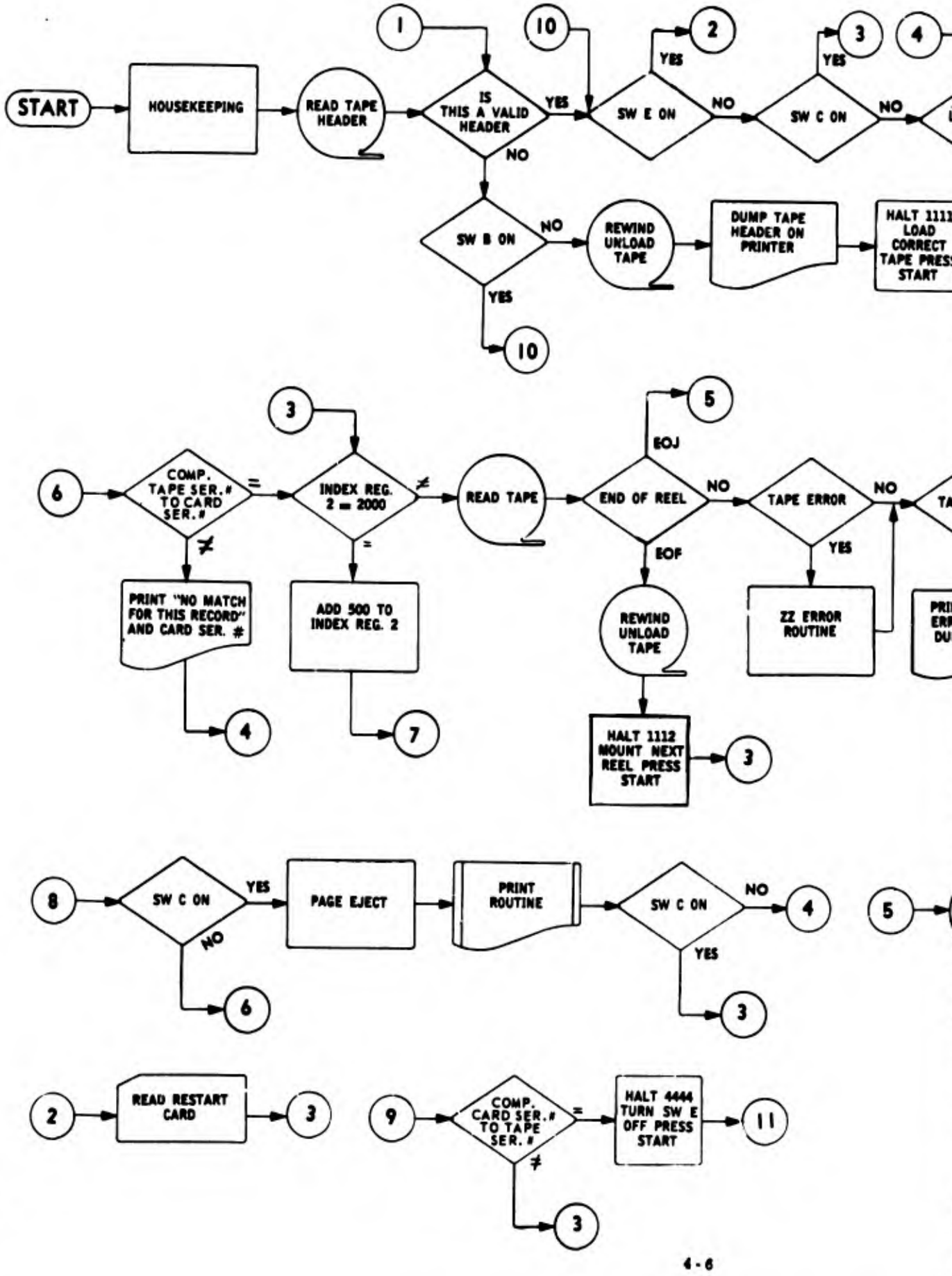
(h) Storage. Magnetic tape.

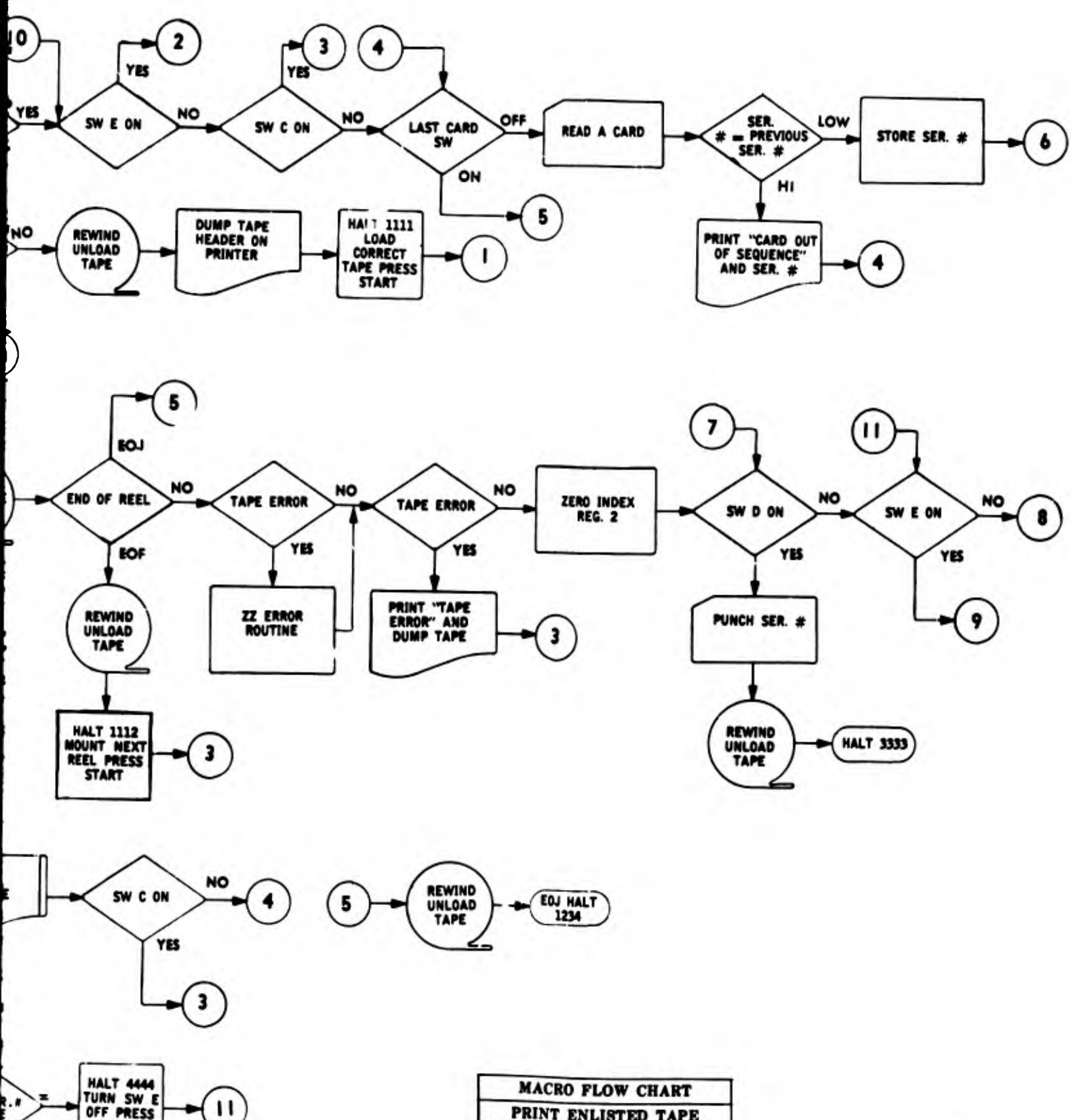
(i) Normal order of file. Service number sequence.

(j) File classification. Unclassified but handled on a "need to know" basis.

(k) Retention cycle. A minimum of two quarters.

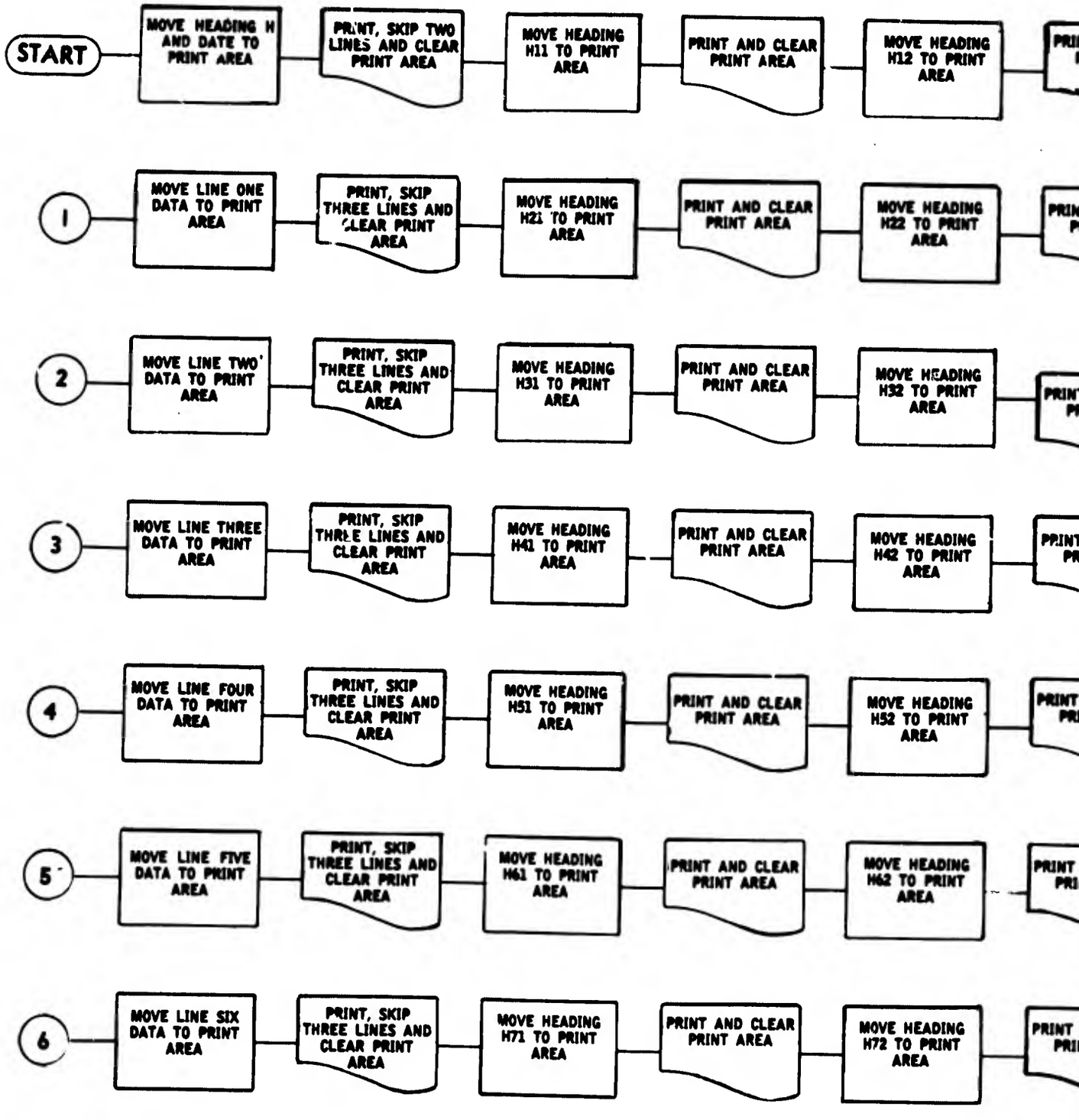
4.5 Logical Flow. See macro charts.


START
HOUSEKEEPING
READ TAPE HEADER
IS THIS A VALID HEADER
YES
NO
SW E ON
SW C ON
SW B ON
REWIND UNLOAD TAPE
DUMP TAPE HEADER ON PRINTER
HALT 1111 LOAD CORRECT TAPE PRESS START
COMP. TAPE SER.# TO CARD SER.#
INDEX REG. 2 = 2000
READ TAPE
END OF REEL
TAPE ERROR
EOJ
EOF
PRINT "NO MATCH FOR THIS RECORD" AND CARD SER. #
ADD 500 TO INDEX REG. 2
REWIND UNLOAD TAPE
ZZ ERROR ROUTINE
HALT 1112 MOUNT NEXT REEL PRESS START
SW C ON
PAGE EJECT
PRINT ROUTINE
READ RESTART CARD
COMP. CARD SER.# TO TAPE SER.#
HALT 4444 TURN SW E OFF PRESS START

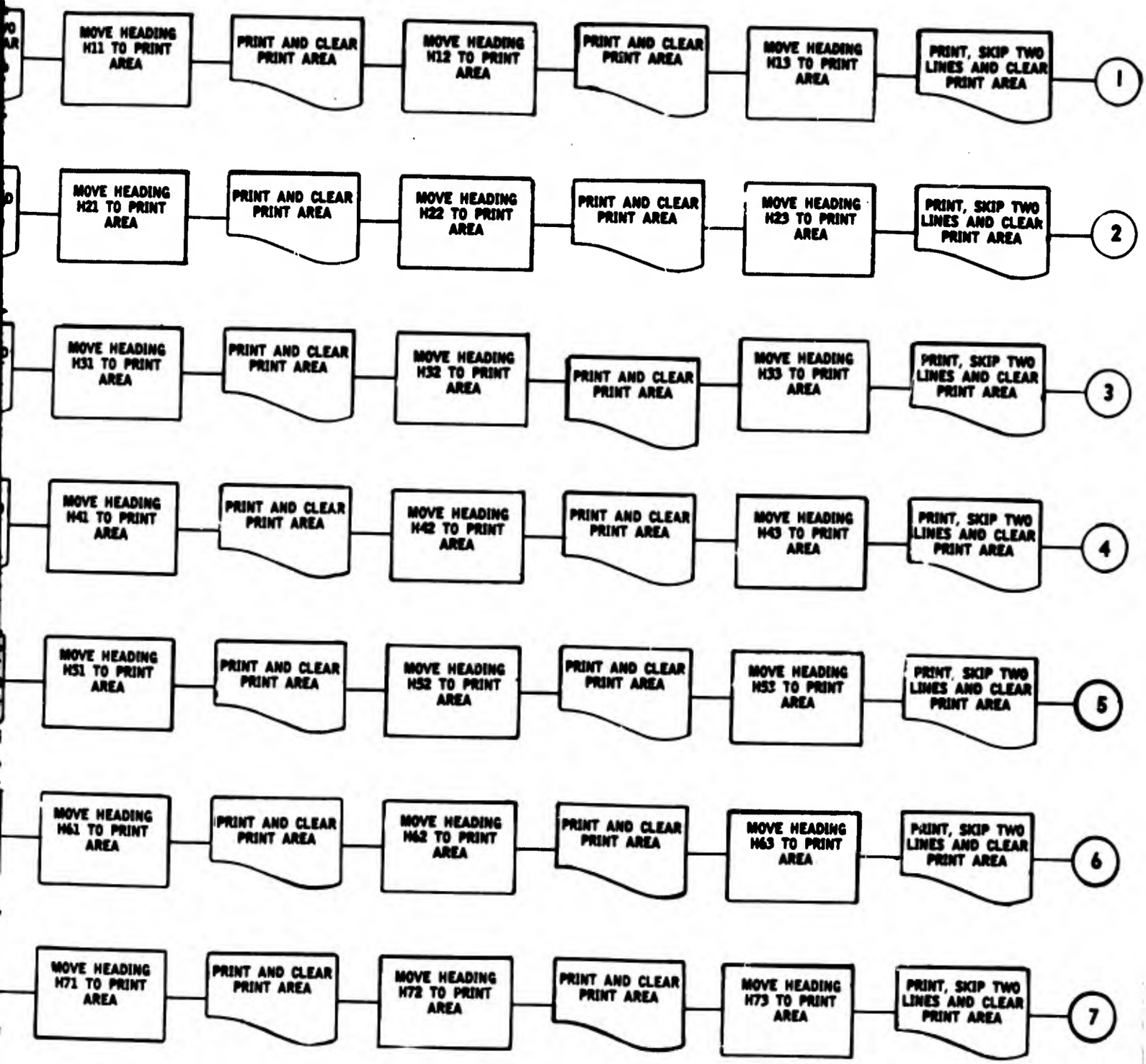


MACRO FLOW CHART		
PRINT ENLISTED TAPE		
J. A. McLaurin — March 18, 1968		
101B27.100	PS-01	1 of 1

B



MICRO FLOW CHART		
PRINT		
J. A. McLaurin — March 18,		
101B27.100	PS-01	1



MICRO FLOW CHART		
PRINT		
J. A. McLaurin — March 18, 1968		
101B27.100	PS-01	1 of 1

B

```
CLEAR STORAGE 1      ,008015,022026,030037,044,049,053053N000000N00001026
CLEAR STORAGE 2      L068116,105106,110117810I/I9R=071029C029056302G/8001/099
BOOTSTRAP            ,008015,022029,036040,047054,061068,072/061039


                                PRINT ENLISTED                    101827.100-PS-01

SEQ PG LIN  LABEL  OP    OPERANDS

101  1 01   000    JOB   PRINT ENLISTED TAPE                      101827.100-PS-01
102  1 02          CTL   5511
103  1 021         ORG   335
104  1 03   TAPE   DA    5X499,*,X2
105  1 031  ONEA         1,61
106  1 04   ONE          68,101
107  1 041  TP           8
108  1 05   TWO          102,151
109  1 06   THREEA       152,193
110  1 061  THREE        200,224
111  1 07   FOUR         225,285
112  1 08   FIVE         286,368
113  1 09   SIX          369,436
114  1 10   SEVEN        437,498
                    DC    '*'
                    DC    '*'
                    DC    '*'
                    DC    '*'
                    DC    '*'
115  1 11   GRMK   DCW   ' '
116  1 111       DCW   ' '
117  1 12        INCLD ZZERRR
118  1 13   X1     EQU   089
119  1 14   89     DCW   000
120  1 15   9%     DCW   '-00'
121  1 16   99     DCW   000
122  1 17   X2     EQU   94
123  1 18   X3     EQU   99
124  1 19   REEL   DCW   '001'
125  2 01        DCW   '*---------PRESENT RATE----------*   PROSPECTIVE RA
126  2 02   H11    DC    'TE       NAVY CLASSIFICATION'
127  2 03        DCW   'AUTH      DATE OF              TERMINAL
128  2 04   H12    DC    '    PNEC SNEC TRAP'
129  2 05        DCW   'SER  SEX   NAME                              ABBR  COD
130  2 06        DC    'E KEY CODE IND PAY GRADE ABBR  CODE    DATE   PNEC
131  2 07   H13    DC    ' SNEC KEY RATE RATE CODE'
132  2 08        DCW   '*------PROFICIENCY PAY-----* *----------------E D'
133  2 09        DC    ' U C A T I O N   A P T I T J D E----------------
134  2 10   H21    DC    '--*'
135  2 11        DCW   'RET  RET      RET AWARD          TEST *----TECH TE
136  2 12        DC    'ST----*   BASIC BATTERY   *------SPECIAL------* EV
137  2 13   H22    DC    'L  LIM  ORGIN  LANG LANG'
138  2 14        DCW   'CODE CODE DATE ERR IND  IND  YRS USAFI IND READ MA
139  2 15        DC    'TH PHYS ELEC GCT ARI MECH CLER SONAR RADIO ETST S+
140  2 16   H23    DC    'OP DISC DUTY  KEY   CODE PROF'
141  2 17        DCW   'LANG                      DOD  *-----------------
142  2 18        DC    '-------------------------S E R V I C E  D A T A---
```

```
2026,030037,044,049,053053N000000N00001026                                    1
05106,1101178101/I9R=0710290029056302G/B001/0991,001/001117104                2
2029,036040,047054,061068,072/061039                ,0010011040               3

T ENLISTED TAPE                 101827.100-PS-01        00001          PAGE    1

ANDS                                                SEK CT  LOCN  INSTRUCTION TYPE  CARD

T ENLISTED TAPE                 101827.100-PS-01

9,*,X2                                                          0335
                                                        0335    2834              4
01                                                      0395          FIELD       4
                                                        0435          FIELD       5
                                                        0342          SBFLD
151                                                     0485          FIELD       6
193                                                     0527          FIELD       7
224                                                     0558          FIELD       8
285                                                     0519          FIELD       9
368                                                     0702          FIELD       9
436                                                     0770          FIELD      10
498                                                     0832          FIELD      11
                                                    1   0834          REMARK     13
                                                    1   1334          REMARK     14
                                                    1   1834          REMARK     15
                                                    1   2334          REMARK     16
                                                    1   2834          REMARK     17
                                                    1   2835                     17
RR                                                  1   2835                     17
                                                                      MACRO
                                                        0089
                                                    3   0089                     18
                                                    3   0094                     19
                                                    3   0099                     20
                                                        0094
                                                        0099
                                                    3   2839                     21
------PRESENT RATE----------*   PROSPECTIVE RA'   50  2889                     23
      NAVY CLASSIFICATION'                          28  2917                     23
       DATE OF                  TERMINAL       '    50  2957                     25
PNEC SNEC TRAP'                                     18  2985                     25
 SEX   NAME                              ABBR  CDD'  50  3035                     27
Y CODE IND PAY GRADE ABBR  CODE    DATE   PNEC'      50  3085                     29
C KEY RATE RATE CODE'                               24  3109                     29
---PROFICIENCY PAY-----* *----------------E D'      49  3158                     31
 A T I O N   A P T I T U D E----------------'       50  3208                     33
                                                     3  3211                     33
 RET      RET AWARD          TEST *----TECH TE'     50  3261                     35
--*   BASIC BATTERY   *------SPECIAL------* EN'     50  3311                     37
IM  ORGIN  LANG LANG'                               24  3335                     37
 CODE DATE ERR IND  IND  YRS USAFI IND READ MA'     50  3385                     39
HYS ELEC GCT ARI MECH CLER SONAR RADIO ETST S+'     50  3435                     41
ISG DUTY  KEY   CODE PROF'                          29  3464                     42
                    DOD  *----------------'         50  3514                     44
--------------------S E R V I C E  D A T A---'      50  3564                     46
```

```
SEQ PG LIN  LABEL  OP    OPERANDS
143  2 19   H31    DC    '--------------------------------*'
144  2 20          DCW   'QUAL *-----SECURITY-----* LANG BRANCH TSS CURRENT
145  2 21          DC    ' ACTIVE   PAY ENTRY ACTIVE DUTY EXT RES DATE  ACT
146  2 22   H32    DC    'DUTY  EXT EXT OTH TYPE TERM MIL'
147  2 23          DCW   'DATE CID DATE CODE SOURCE ABIL CLASS  IND ENLIST
148  2 24          DC    ' DUTY     BASE DATE BASE DATE   MOS MOS LOSS EXPI
149  2 25   H33    DC    'ATION VEY OTH SER ENL  IND  OBL'
150  2 26   H41A   DCW   '*------SERVICE DATA------*'
151  2 27          DCW   'COMM  NAVY      TOUR       *------PRESENT ACTIVIT
152  2 28   H41B   DC    '------*'
153  2 29   H      DCW   'E N L I S T E D  A C T I V E  D U T Y  R E C O R
154  3 01          DCW   'NO  EXP RECALL INVOL INVOL PRIOR  BIRTH    CIT
155  3 02          DC    'TAT BIRTH DEPENDENT ROTA SHORE DIST PAMI COMP  SE
156  3 03   H42    DC    '  SPEC      PAMI   BUPERS   DIST'
157  3 04          DCW   'ENL IND   IND    IND   MOS   OFF   DATE  A23  REL
158  3 05          DC    'ES  PLACE    P S    DATE DUTY  FROM DIST DATE  DU
159  3 06   H43    DC    'Y CAT  PAMI CODE  ACTIVITY  COM'
160  3 07          DCW   '*---------------P R E S E N T   A C T I V I T Y--
161  3 08          DC    '------------* *---------------1 S T  P A S T  A C
162  3 09   H51    DC    'T I V I T Y--------------------*'
163  3 10          DCW   'S/S  HOME                        ACT  ACCT          D
164  3 11          DC    'TE      DATE   SPEC      PAMI    BUPERS  DIST S/S  H
165  3 12   H52    DC    'ME                      ACT  ACCT'
166  3 13          DCW   'CODE PORT ACTIVITY          TYPE CODE DOS TRANS REC
167  3 14          DC    'VIED   TRANS  CAT PAMI CODE  ACTIVITY COMD CODE P
168  3 15   H53    DC    'RT ACTIVITY          TYPE CODE DOS'
169  3 16          DCW   'IST PAST ACTIVITY    *---------2ND PAST ACTIVITY--
170  3 17          DC    '-------* *--------------------C A R E E R  H I S
171  3 18   H61    DC    'T O R Y--------------------*'
172  3 19          DCW   'DATE      DATE          PAMI   BUPERS  ACCT S/S    D
173  3 20          DC    'TE   MOS HOME ACT  MOS HOME ACT  MOS HOME ACT  MOS
174  3 21   H62    DC    ' HOME ACT  MOS HOME ACT'
175  3 22          DCW   'TRANS RECEIVED   TRANS  PAMI CODE  ACTIVITY CAT  C
176  3 23          DC    'ODE RECEIVED OB  PORT TYPE OB  PORT TYPE OB  PORT
177  3 24   H63    DC    'TYPE OB  PORT TYPE OB  PORT TYPE'
178  3 25          DCW   '*-------------S C H O O L  H I S T O R Y---------
179  3 26          DC    '---*                                    *----PRD A
180  3 27   H71    DC    'SSIGN----*'
181  3 28          DCW   'DATE      DATE       DATE       DATE       DATE
182  3 29          DC    'S/S DMT HIST SPEC CHG FIN SP  LOSS PAC       DIST S
183  3 30   H72    DC    'PEC  EST'
184  4 01          DCW   'SCH  COMP  SCH  COMP  SCH  COMP  SCH  COMP  SCH  C
185  4 02          DC    'OMP  IND IND IND  CAT  IND IND PRO IND IND  PAMI C
186  4 03   H73    DC    'OMD CAT   ARR'
187  4 04          DCW   '          + +                                  +    +
188  4 040  EW1A   DC    '     +  ++ ++++ ++  /  /  '
189  4 041         DCW   '        +    + /  /     '
190  4 06   EW1    DC    ' +    ++  ++  +++  +++   '
191  4 07          DCW   '+ +++ ++++  ++  ++  ++++ ++++ ++++   ++ +++  +++
192  4 08          DC    ' +++  ++       ++  ++  +++  ++++  ++++  +++  +++
```

```
                                                SEK CT  LOCN  INSTRUCTION TYPE  CARD
-------------------*'                             82  3596                      47
ECURITY-----* LANG BRANCH TSS CURRENT '           50  3646                      49
 ENTRY ACTIVE DUTY EXT RES DATE  ACT '            50  3696                      51
 DTH TYPE TERM MIL'                               31  3727                      52
 CODE SOURCE ABIL CLASS  IND ENLIST  '            50  3777                      54
E DATE BASE DATE   MOS MOS LOSS EXPIR'            50  3827                      56
 SER ENL  IND  OBL'                               31  3858                      57
E DATA------*'                                    26  3884                      58
   TOUR        *------PRESENT ACTIVITY'           50  3934                      60
                                                   7  3941                      60
 D  A C T I V E  D U T Y  R E C O R D'            50  3991                      62
L INVOL INVOL PRIOR  BIRTH    CIT   SE'           50  4041                      64
ENDENT ROTA SHORE DIST PAMI COMP  SEA'            50  4091                      66
AMI   BUPERS   DIST'                              32  4123                      67
   IND   MOS   OFF   DATE  A23  REL R'            50  4173                      69
P S    DATE DUTY  FROM DIST DATE  DUT'            50  4223                      71
ODE  ACTIVITY  COM'                               31  4254                      72
---P R E S E N T   A C T I V I T Y---'            50  4304                      74
 *---------------1 S T  P A S T  A C '            50  4354                      76
-------------------*'                             32  4386                      77
             ACT  ACCT                  DA'       50  4436                      79
 SPEC     PAMI   BUPERS  DIST S/SI  HO'           50  4486                      81
     ACT  ACCT'                                    28  4514                      81
IVITY         TYPE CODE DOS TRANS RECE'           50  4564                      83
 CAT PAMI CODE  ACTIVITY COMD CODE PO'            50  4614                      85
     TYPE CODE DOS'                               32  4646                      86
VITY    *---------2ND PAST ACTIVITY--'            50  4696                      88
----------------C A R E E R  H I S '              50  4746                      90
-------------*'                                   28  4774                      90
       PAMI   BUPERS  ACCT S/S    DA'            50  4824                      92
 ACT  MOS HOME ACT  MOS HOME ACT  MOS'            50  4874                      94
 HOME ACT'                                        23  4897                      94
   TRANS  PAMI CODE  ACTIVITY CAT  C'             50  4947                      96
B  PORT TYPE OB  PORT TYPE OB  PORT  '            50  4997                      98
 TYPE OB  PORT TYPE'                              32  5029                      99
S C H O O L   H I S T O R Y---------'             50  5079                     101
                          *----PRO A'             50  5129                     103
                                                  10  5139                     103
E       DATE        DATE        DATE  '           50  5189                     105
PEC CHG FIN SP  LOSS PAC        DIST S'           50  5239                     107
                                                   8  5247                     107
  COMP  SCH  COMP  SCH  COMP  SCH  C'             50  5297                     109
ND  CAT   IND IND PRO IND IND  PAMI C'            50  5347                     111
                                                  13  5360                     111
                          +       + '             50  5410                     113
 ++  /  /  '                                      25  5435                     113
/  /     '                                        24  5459                     114
+++  +++   '                                      25  5484                     115
+  ++  ++++ ++++ ++++   ++ +++  +++ '             50  5534                     117
  ++  ++  +++  ++++  ++++  +++  +++ '             50  5584                     119
```

B

```
SEQ PG LIN  LABEL   OP     OPERANDS

193  4 09   EW2     DC     ' ++  ++++ ++++ ++++   +++ '
194  4 10            DCW    ' /  +  /  /  ++ ++++++ ++++  ++++  ++++     / /
195  4 11   EW3A    DC     '+  /  /  +  /  /  +++  /  /  '
196  4 111           DCW    '  ++  +  /  ++  / '
197  4 12   EW3     DC     ' /  +++  ++  +   ++  +++ ++++ '
198  4 13            DCW    ' +++ ++++ ++++++ +++++  ++++ ++  /  /  + ++ +. +++
199  4 14            DC     ' +++   +++++ + +++  /  +  /  ++  +++ ++  /  +  /
200  4 15   EW4     DC     '++ +++++ ++    +          ++   '
201  4 16            DCW    ' ++++ ++                  ++   ++   ++ +++  +++  /
202  4 17            DC     '/  +  /  /  ++ +++ +++    +          +   ++ ++++
203  4 18   EW5     DC     '+                ++   ++    + '
204  4 19            DCW    '  +++  /  /  +  /  /  +++ ++    +          + ++++
205  4 20            DC     '+++  /  /  +   +++ ++   ++  +++ +++   ++  +++ ++'
206  4 21   EW6     DC     '+   ++  +++ +++   ++  +++ +++   '
207  4 22            DCW    '    +  /  +    +  /  +    +  /  +    +  /  +    +
208  4 23            DC     ' /     +++ +++ ++++ ++++ +++ +++ ++   +++ +++ +++
209  4 24   EW7     DC     '  +++ +++  /  '
210  5 01   START   B      HEAD
211  5 01           SW     1
212  5 010          BSS    RS,E
213  5 011          BSS    RDTP,C
214  5 013          MLC    ' ',ONEA
215  5 013          MLC    ONEA
216  5 02   READ    BLC    EOJ
217  5 03           R
218  5 04           C      7,PRE=7
219  5 05           BH     MESS1
220  5 06           MLC    7,PRE
221  5 07   COMP    C      TP,PRE
222  5 08           BL     MESS2
223  5 09           BH     RDTP
224  5 091  PRINT   CC     1
225  5 10           MLC    H,290
226  5 101          MLC    'D A T E',323
227  5 102          MLC    HDATE,332
228  5 103          CC     S
229  5 11           W
230  5 12           CS
231  5 13           CS
232  5 14           MLC    H11,321
233  5 15           W
234  5 16           CS
235  5 17           CS
236  5 18           MLC    H12,326
237  5 19           W
238  5 20           CS
239  5 21           CS
240  5 22           MLC    H13,326
241  5 23           CC     S
242  5 24           W
```

A

```
NDS                                                    SEK CT  LOCN  INSTRUCTION TYPE  CARD
++++ +++++ ++++   +++ '                                 27  5611                        119
  /  /  ++ ++++++ ++++  ++++  ++++     /  /  '          50  5661                        121
 /  +  /  /  +++  /  /  '                               29  5690                        122
 +  /  ++  / '                                          18  5708                        123
++  ++  +   ++  +++ ++++ '                             30  5738                        124
++++ ++++++ +++++  ++++ ++  '  /  +  ++ +. +++ '        50  5788                        126
  +++++ + +++  /  +  /  ++  +++ ++  /  +  /  '         50  5838                        128
+++ ++    +          ++  '                             31  5869                        129
 ++                ++   ++   ++ +++  +++  /  '         50  5919                        131
 /  /  ++ +++ +++    +          +   ++ ++++ +'         50  5969                        133
           ++   ++   ++ '                               30  5999                        134
  /  /  +  /  /  +++ ++    +          + ++++ '         50  6049                        136
/  /  +   +++ ++   ++  +++ +++   ++  +++ ++'           48  6097                        138
+  +++ +++   ++  +++ +++   '                           32  6129                        139
  /  +    +  /  +    +  /  +    +  /  +    +. '        50  6179                        141
  +++ +++ ++++ ++++ +++ +++ ++   +++ +++ +++ '         50  6229                        143
 +++  /  '                                             14  6243                        143
                                                        4  6244  3 Q2X                 143
                                                        4  6248  . 001                 143
                                                        5  6252  3 B6Z E               143
E4                                                      5  6257  3 R3S C               144
                                                        7  6262  4 E2T 325             144
                                                        4  6269  4 325                 144
                                                        5  6273  3 B4V A               144
                                                        1  6278  1                     144
7                                                       7  6279  C 007 E3*            144
                                                        5  6286  3 PB# U               144
                                                        7  6291  4 007 E3*            145
                                                        7  6298  C 342 E3*            145
                                                        5  6305  3 QOU T               145
                                                        5  6310  3 R3S U               145
                                                        2  6315  F 1                   145
                                                        7  6317  4 191 290            145
E',323                                                  7  6324  4 E3X 323            145
332                                                     7  6331  4 F0* 332            146
                                                        2  6338  F S                   145
                                                        1  6340  2                     146
                                                        1  6341  /                     145
                                                        1  6342  /                     146
1                                                       7  6343  4 217 321            145
                                                        1  6350  2                     147
                                                        1  6351  /                     147
                                                        1  6352  /                     147
6                                                       7  6353  4 285 325            147
                                                        1  6360  2                     147
                                                        1  6361  /                     147
                                                        1  6362  /                     147
6                                                       7  6363  4 A09 325            148
                                                        2  6370  = S                   148
                                                        1  6372  2                     148
```


B

```
SEQ  PG LIN  LABEL  OP    OPERANDS

243   5 25          CS
244   5 251         CS
245   5 252         LCA   FW1A,275
246   5 253         MCE   ONEA,275
247   6 01          LCA   EW1,326
248   6 02          MCE   ONE,326
249   6 020         MZ    ONE,326
250   6 021         CC    T
251   6 03          W
252   6 04          CS
253   6 05          CS
254   6 06          MLC   H21,302
255   6 07          W
256   6 08          CS
257   6 09          CS
258   6 10          MLC   H22,329
259   6 11          W
260   6 12          CS
261   6 13          CS
262   6 14          MLC   H23,329
263   6 141         CC    S
264   6 15          W
265   6 16          CS
266   6 17          CS
267   6 18          LCA   EW2,327
268   6 19          MCE   TWO,327
269   6 190         MZ    TWO,327
270   6 191         CC    T
271   6 20          W
272   6 21          CS
273   6 22          CS
274   6 23          MLC   H31,331
275   6 24          W
276   6 25          CS
277   6 26          CS
278   6 27          MLC   H32,331
279   6 28          W
280   6 29          CS
281   6 30          CS
282   7 01          MLC   H33,331
283   7 011         CC    S
284   7 02          W
285   7 03          CS
286   7 04          CS
287   7 041         LCA   EW3A,279
288   7 042         MCE   THREEA,279
289   7 05          LCA   EW3,330
290   7 06          MCE   THREE,330
291   7 060         MZ    THREE,330
292   7 061         CC    T
```

SEK	CT	LOCN	INSTRUCTION TYPE	CARD
	1	6373	/	148
	1	6374	/	148
	7	6375	- J3V 275	148
	7	6382	E 3R5 275	148
	7	6389	- J8U 326	149
	7	6396	E 4L5 325	149
	7	6403	Y 4L5 325	149
	2	6410	F T	149
	1	6412	2	149
	1	6413	/	149
	1	6414	/	149
	7	6415	M 311 302	150
	1	6422	2	150
	1	6423	/	150
	1	6424	/	150
	7	6425	M C35 329	150
	1	6432	2	150
	1	6433	/	150
	1	6434	/	151
	7	6435	M D54 329	151
	2	6442	F S	151
	1	6444	2	151
	1	6445	/	151
	1	6446	/	151
	7	6447	- W1/ 327	151
	7	6454	E 4Q5 327	152
	7	6461	Y 4Q5 327	152
	2	6468	F T	152
	1	6470	2	152
	1	6471	/	152
	1	6472	/	152
	7	6473	M E96 331	152
	1	6480	2	153
	1	6481	/	153
	1	6482	/	153
	7	6483	M G27 331	153
	1	6490	2	153
	1	6491	/	153
	1	6492	/	153
	7	6493	M H58 331	154
	2	6500	F S	154
	1	6502	2	154
	1	6503	/	154
	1	6504	/	154
	7	6505	- W9# 279	154
	7	6512	E 5K7 279	154
	7	6519	- X3Y 330	155
	7	6526	E 5N8 330	155
	7	6533	Y 5N8 330	155
	2	6540	F T	155

B

```
SEQ  PG LIN  LABEL  OP    OPERANDS

293   7 07          W
294   7 08          CS
295   7 09          CS
296   7 10          MLC   H41A,226
297   7 101         MLC   H41B,332
298   7 11          W
299   7 12          CS
300   7 13          CS
301   7 14          MLC   H42,332
302   7 15          W
303   7 16          CS
304   7 17          CS
305   7 18          MLC   H43,331
306   7 181         CC    S
307   7 19          W
308   7 20          CS
309   7 21          CS
310   7 22          LCA   EW4,332
311   7 23          MCE   FOUR,332
312   7 230         MZ    FOUR,332
313   7 231         CC    T
314   7 24          W
315   7 25          CS
316   7 26          CS
317   7 27          MLC   H51,332
318   7 28          W
319   7 29          CS
320   8 01          MLC   H52,328
321   8 011         CS
322   8 02          W
323   8 03          CS
324   8 04          CS
325   8 05          MLC   H53,332
326   8 051         CC    S
327   8 06          W
328   8 07          CS
329   8 08          CS
330   8 09          LCA   EW5,331
331   8 10          MCE   FIVE,331
332   8 100         MZ    FIVE,331
333   8 101         CC    T
334   8 11          W
335   8 12          CS
336   8 13          CS
337   8 14          MLC   H61,332
338   8 15          W
339   8 16          CS
340   8 17          CS
341   8 18          MLC   H62,331
342   8 19          W
```

A

SEK	CT	LOCN	INSTRUCTION	TYPE	CARD
	1	6542	2		155
	1	6543	/		155
	1	6544	/		155
	7	6545	4	484 225	156
	7	6552	4	I41 332	156
	1	6559	2		156
	1	6560	/		156
	1	6561	/		156
	7	6562	4	12T 332	156
	1	6569	2		156
	1	6570	/		157
	1	6571	/		157
	7	6572	4	25J 331	157
	2	6579	F	S	157
	1	6581	2		157
	1	6582	/		157
	1	6583	/		157
	7	6584	L	Y6Z 332	158
	7	6591	E	5J9 332	158
	7	6598	Y	5J9 332	158
	2	6605	F	T	158
	1	6607	2		158
	1	6608	/		158
	1	6609	/		158
	7	6610	4	38W 332	159
	1	6617	2		159
	1	6618	/		159
	7	6619	4	51U 328	159
	1	6625	/		159
	1	6627	2		159
	1	6628	/		159
	1	6629	/		160
	7	6630	4	64W 332	160
	2	6637	F	S	160
	1	6639	2		160
	1	6640	/		160
	1	6641	/		160
	7	6642	L	Z9Z 331	160
	7	6649	E	7-2 331	161
	7	6656	Y	7-2 331	161
	2	6663	F	T	161
	1	6665	2		161
	1	6666	/		161
	1	6667	/		161
	7	6668	4	77J 332	161
	1	6675	2		162
	1	6676	/		162
	1	6677	/		162
	7	6678	4	89X 331	162
	1	6685	2		162

B

PRINT ENLISTED TAPE

```
SEQ  PG LIN  LABEL   OP     OPERANDS

343   8 20           CS
344   8 21           CS
345   8 22           MLC    H53,332
346   8 221          CC     S
347   8 23           W
348   8 24           CS
349   8 25           CS
350   8 26           LCA    EW6,331
351   8 27           MCE    SIX,331
352   8 270          MZ     SIX,331
353   8 271          CC     T
354   8 28           W
355   8 29           CS
356   9 01           CS
357   9 02           MLC    H71,314
358   9 03           W
359   9 04           CS
360   9 05           CS
361   9 06           MLC    H72,313
362   9 07           W
363   9 08           CS
364   9 09           CS
365   9 10           MLC    H73,313
366   9 101          CC     S
367   9 11           W
368   9 12           CS
369   9 13           CS
370   9 14           LCA    EW7,314
371   9 15           MCE    SEVEN,314
372   9 151          CC     T
373   9 16           W
374   9 17           CS
375   9 18           CS
376   9 19           BSS    RDTP,C
377   9 20           B      READ
378   9 21    MESS1  MLC    'CARD OUT OF SEQUENCE',220
379   9 22           MLC    80,301
380   9 23           B      PRMESS
381   9 24    MESS2  MLC    'NO MATCH FOR THIS CARD',222
382   9 25           MLC    80,303
383   9 26    PRMESS CC     1
384   9 27           W
385   9 28           CS
386   9 29           CS
387   9 30           B      READ
388  10 01    HEAD   SBR    HDEX+3
389  10 03           RT     1,TAPE
390  10 04    CMPTP  C      TAPE+9,'E145XS W1 '
391  10 05           BU     INV
392  10 051   RLNO   C      TAPE+35,REEL
```

NDS	SFX	CT	LOCN	INSTRUCTION TYPE	CARD
		1	6686	/	152
32		1	6687	/	152
		7	6688	Y #2Z 332	163
		2	6695	F S	153
		1	6697	2	153
		1	6698	/	153
		1	6699	/	153
31		7	5700	L J2Z 331	153
31		7	5707	E 7P0 331	163
31		7	6714	Y 7P0 331	164
		2	5721	F T	164
		1	5723	2	164
		1	6724	/	154
		1	5725	/	154
4		7	5726	Y /3Z 314	154
		1	5733	2	164
		1	5734	/	155
		1	5735	/	165
3		7	6736	Y S4X 313	155
		1	5743	2	155
		1	5744	/	155
		1	5745	/	155
3		7	6746	Y T6# 313	155
		2	5753	F S	166
		1	5755	2	155
		1	5756	/	156
		1	5757	/	165
4		7	5758	L K4T 314	166
314		7	5765	E BL2 314	156
		2	5772	F T	156
		1	5774	2	157
		1	6775	/	157
		1	5776	/	167
		5	6777	3 R3S C	157
		4	5782	3 <7T	157
OUT OF SEQUENCE',220		7	5786	Y E5X 220	157
		7	5793	Y 08J 3J1	157
TCH FOR THIS CARD',222		4	6800	3 Q1Y	158
		7	5804	Y E7Z 222	158
		7	5811	Y 08J 3J3	158
		2	5818	F 1	158
		1	5820	2	158
		1	6821	/	158
		1	5822	/	158
		4	6823	3 K7T	159
		4	5827	3 R3/	159
'E145XS W1 '		8	5831	Y (U1 3L5 R	159
		7	5839	C 3M4 EBZ	159
,REEL		5	5845	3 Q8/ /	159
		7	5851	C 3P0 Q39	159

B

```
SEQ PG LIN  LABEL  OP    OPERANDS

393 10 052         BU    INV
394 10 053         MA    '001',REEL
395 10 053         MLC   TAPE+17,HDATE=8
396 10 054         B     HDEX
397 10 06   INV    BSS   HDEX,B
398 10 07          RWU   1
399 10 08          MLC   'INVALID HEADER',214
400 10 09          MLC   TAPE+79,300
401 10 091         MLC   TAPE+17,HDATE
402 10 10          CC    1
403 10 11          W
404 10 12          CS
405 10 13          CS
406 10 14          H     1111,1111     BAD HEADER
407 10 15          B     HEAD+4
408 10 16   HDEX   H     0
409 10 17   RDTP   C     X2,'-00'
410 10 18          BE    GET
411 10 19          MA    '500',X2
412 10 191         C     TAPE+19,'9999999999'
413 10 192         BE    RDTP
414 10 20          B     OUT
415 10 201  GET    MLC   '000',X2
416 10 21          RT    1,TAPE
417 10 210         NOP   0
418 10 211         BEF   EOR
419 10 22          BEP   ZZERRR
420 10 23          BER   ERR
421 10 24          BCE   WLR,GRMK,
422 10 25          MLC   ' ',GRMK
423 10 26   RSSW   BSS   RSS,E
424 10 27          BSS   INR,D
425 11 01   OUT    BSS   PRINT,C
426 11 02          B     COMP
427 11 021  ERR    MLC   '000',X2
428 11 022         CC    1
429 11 023         MLC   'TAPE ERROR',210
430 11 024         W
431 11 03   SW     SW    201
432 11 05          MLC   TAPE+99,300
433 11 051         MLC
434 11 06          W
435 11 07          MLC   TAPE+199,300
436 11 08          MLC
437 11 09          MLC
438 11 10          W
439 11 11          MLC   TAPE+299,300
440 11 12          MLC
441 11 13          MLC
442 11 14          W
```

A

```
S

EEL
,HDATE=8



D HEADER',214
,300
,HDATE




11    BAD HEADER

,

2
,'9999999999'

2

K,
K

2

RDR',210

300

,300

,300
```

SEK	CT	LOCN	INSTRUCTION TYPE	CARD
	5	6858	B Q8/ /	170
	7	6863	= E9S Q39	170
	7	6870	M 3N2 F0#	170
	4	6877	B R2Y	170
	5	6881	B R2Y B	170
	5	6886	J (U1 U	170
	7	6891	M F1U 214	171
	7	6898	M 4J4 300	171
	7	6905	M 3N2 F0#	171
	2	6912	F 1	171
	1	6914	2	171
	1	6915	/	171
	1	6916	/	171
	7	6917	. /11 /11	172
	4	6924	B Q3/	172
	4	6928	B 000	172
	7	6932	C 094 F1K	172
	5	6939	B R5K S	172
	7	6944	= F2# 094	172
	7	6951	C 3N4 F3#	173
	5	6958	B R3S S	173
	4	6963	B +2W	173
	7	6967	M F3T 094	173
	8	6974	M (J1 3L5 R	173
	4	6982	M 000	173
	5	6986	B B0V K	174
	5	6991	B C3/ L	174
	5	6996	B +3V L	174
	8	7001	B A3S Q35	174
	7	7009	M E2T Q35	174
	5	7016	B B7Y E	174
	5	7021	B C0V D	175
	5	7026	B L1V C	175
	4	7031	B K9Y	175
	7	7035	M F3T 094	175
	2	7042	F 1	175
	7	7044	M F4T 210	175
	1	7051	2	175
	4	7052	. 201	176
	7	7056	M 4L4 300	175
	1	7063	M	176
	1	7064	2	176
	7	7065	M 5L4 300	176
	1	7072	M	176
	1	7073	M	176
	1	7074	2	177
	7	7075	M 6L4 300	177
	1	7082	M	177
	1	7083	M	177
	1	7084	2	177

B

```
SEQ PG LIN  LABEL  OP    OPERANDS

443 11 15          MLC   TAPE+399,300
444 11 16          MLC
445 11 17          W
446 11 18          MLC   TAPE+499,300
447 11 19          MLC
448 11 20          W
449 11 201         CS
450 11 202         CS
451 11 21          C     '-00',X2
452 11 22          BE    ERRX
453 11 23          MA    '500',X2
454 11 24          B     SW
455 11 25  ERRX     B     RDTP
456 12 01  WLR     CC    1
457 12 02          MLC   'WRONG LENGTH RECORD',219
458 12 03          W
459 12 04          MLC   '000',X2
460 12 05  BCE     BCE   BLANK,TAPE,
461 12 06          MA    '001',X2
462 12 07          B     BCE
463 12 08  BLANK   MLC   ' ',TAPE
464 12 09          MA    '001',X2
465 12 10          C     '100',X2
466 12 11          BL    BLANK
467 12 111         MLC   '000',X2
468 12 12          B     SW
469 12 13  EOR     RT    1,TAPE
470 12 14          C     TAPE+2,'EOJ'
471 12 15          BE    EOJ
472 12 151         RWU   1
473 12 16          H     1112,1112
474 12 17          B     HEAD
475 12 18          B     RDTP
476 12 19  EOJ     RWU   1
477 12 20          CC    1
478 12 21          MLC   'END OF JOB',255
479 12 22          W
480 12 23          CC    1
481 12 24          H     1234,1234
482 12 25  RS      SW    1
483 12 26          R
484 12 27          B     GET
485 12 28  RSS     C     TP,7
486 12 29          BE    HALT
487 12 30          B     GET
488 12 31  HALT    H     4444,4444     TURN SW E OFF
489 12 32          B     RSSW
490 12 33  INR     MLC   TP,107
491 12 34          P
492 12 35          CS    180
```

A

```
DS
99,300
99,300
2
2
LENGTH RECORD',219
2
APE,
2
E
2
2
2
'EOJ'
12
JOB',255
34
44      TURN SW E OFF
```

SFX	CT	LOCN	INSTRUCTION TYPE	CARD
	7	7085	4 7L4 300	177
	1	7092	4	177
	1	7093	2	178
	7	7094	4 8L4 300	178
	1	7101	4	178
	1	7102	2	178
	1	7103	/	178
	1	7104	/	178
	7	7105	C F1X 094	178
	5	7112	3 A2Y S	179
	7	7117	=. F2# 094	179
	4	7124	B +5S	179
	4	7128	3 R3S	179
	2	7132	F 1	179
	7	7134	4 F6S 219	179
	1	7141	2	179
	7	7142	4 F3T 094	180
	8	7149	3 A6Y 3L5	180
	7	7157	= E9S 094	180
	4	7164	3 A4Z	180
	7	7168	4 E2T 3L5	180
	7	7175	= E9S 094	181
	7	7182	C F6V 094	181
	5	7189	3 A6Y T	181
	7	7194	4 F3T 094	181
	4	7201	3 +5S	181
	8	7205	4 (U1 3L5 R	181
	7	7213	C 3L7 F6Y	182
	5	7220	3 B4V S	182
	5	7225	J (U1 U	182
	7	7230	. /12 /12	182
	4	7237	3 Q2X	182
	4	7241	3 R3S	182
	5	7245	J (U1 U	182
	2	7250	F 1	183
	7	7252	4 F7Y 255	183
	1	7259	2	183
	2	7260	F 1	183
	7	7262	. S34 S34	183
	4	7269	. 001	183
	1	7273	1	183
	4	7274	3 R6X	184
	7	7278	C 3M2 007	184
	5	7285	3 B9J S	184
	4	7290	3 R6X	184
	7	7294	. 44U 44J	184
	4	7301	3 +1W	184
	7	7305	4 3M2 107	184
	1	7312	4	185
	4	7313	/ 180	185

B

```
SEQ PG LIN  LABEL   OP    OPERANDS

493 12  36          P
494 12  37          P
495 12  38          RWU   1
496 12  39          H     3333,3333
497         ZZERRR  SBR   ZZESAX+6
498                 SBR   ZZEDUM,0
499                 SBR   ZZESX1+6,0+X1
500         ZZESAX  SBR   89,0
501                 SBR   ZZERX1+3
502                 MLC   15989+X1,ZZENOP
503                 MLC
504                 MN    15981+X1,*+4
505                 BSP   0
506         ZZESX1  SBR   89,0
507         ZZEREA  DCW   =8
508         ZZENOP  DCW   =4
509                 BER   *+5
510         ZZERX1  B     0
511                 BCE   ZZERX1,ZZECNT,8
512                 MN    ZZEREA-4,*+4
513         ZZEBSP  BSP   0
514                 A     ZZEONE,ZZECNT
515                 C     ZZECNT,ZZESIX
516                 BH    ZZEREA-7
517                 BCE   *+5,ZZECNT,8
518                 B     ZZEBSP
519                 MN    ZZEREA-4,ZZEBS1+3
520                 MN    ZZEREA-4,ZZERTT+3
521                 SW    ZZEGMK
522         ZZERTT  RT    0,ZZEDUM
523                 A     ZZEONE,ZZERDT
524                 BCE   *+5,ZZERDT,3
525                 B     ZZERTT
526                 CW    ZZEGMK
527         ZZEBS1  BSP   0
528                 B     ZZEREA-7
529         ZZEONE  DCW   '1'
530         ZZESIX  DCW   '6'
531         ZZERDT  DCW   =1
532         ZZECNT  DCW   =1
533         ZZEDUM  DC    =1
534         ZZEGMK  DC    ' '
                    DCW   ' '
        218 PRE           =07
        226               'D A T E'
        378               'CARD OUT OF SEQUENCE'
        381               'NO MATCH FOR THIS CARD'
        390               'E145XS W1 '
                          '001'
        395 HDATE         =08
```

A

OPERANDS	SEK	CT	LOCN	INSTRUCTION	TYPE	CARD
		1	7317	4	GEN	185
		1	7318	4	GEN	185
3,3333		5	7319	J (U1 U	GEN	185
SAX+6		7	7324	• C33 C33	GEN	185
DUM,0		4	7331	4 C5V	GEN	185
SX1+6,0+X1		7	7335	4 E2/ 000	GEN	185
0		7	7342	4 C8W 0*0	GEN	185
RX1+3		7	7349	4 089 000	GEN	185
89+X1,ZZENDP		4	7356	4 D0X	GEN	185
		7	7360	4 IYI C9Y	GEN	185
81+X1,*+4		1	7367	4	GEN	185
		7	7368	0 IYA C7Y	GEN	187
0		5	7375	J (U0 B	GEN	187
		7	7380	4 089 000	GEN	187
		8	7394		GEN	187
		4	7398		GEN	187
		5	7399	3 D0Y L	GEN	187
X1,ZZECNT,8		4	7404	3 000	GEN	188
EA-4,*+4		8	7408	3 D0U E2* 8	GEN	188
		7	7416	0 C9* D2W	GEN	188
NE,ZZECNT		5	7423	J (U0 B	GEN	188
NT,ZZESIX		7	7428	A E1X E2*	GEN	188
EA-7		7	7435	C E2* E1Y	GEN	188
ZZECNT,8		5	7442	3 C8X U	GEN	189
SP		8	7447	3 D5Z E2* 8	GEN	189
EA-4,ZZERS1+3		4	7455	8 D2T	GEN	189
EA-4,ZZERTT+3		7	7459	0 C9* E1/	GEN	189
MK		7	7466	0 C9* D8*	GEN	189
EDUM		4	7473	• E2S	GEN	189
NE,ZZERDT		8	7477	4 (U0 E2/ 2	GEN	190
ZZERDT,3		7	7485	A E1X E1Z	GEN	190
TT		8	7492	3 E0U E1Z 3	GEN	190
MK		4	7500	8 D7X	GEN	190
		4	7504	0 E2S	GEN	190
EA-7		5	7508	J (U0 B	GEN	190
		4	7513	3 C8X	GEN	191
		1	7517		GEN	191
		1	7518		GEN	191
		1	7519		GEN	191
		1	7520		GEN	191
		1	7521		GEN	191
		1	7522		GEN	191
		1	7523		LIT	191
T E'		7	7530		AREA	191
0 OUT OF SEQUENCE'		7	7537		LIT	192
MATCH FOR THIS CARD'		20	7557		LIT	192
6XS W1 '		22	7579		LIT	193
		10	7589		LIT	193
		3	7592		LIT	193
		8	7600		AREA	194

B

```
SEQ PG LIN  LABEL   OP     OPERANDS

       399                 'INVALID HEADER'
                           '-00'
                           '500'
       412                 '9999999999'
                           '000'
       429                 'TAPE ERROR'
       457                 'WRONG LENGTH RECORD'
                           'N00'
                           'EOJ'
       478                 'END OF JOB'
535 12 25          END     START
```

ANDS	SEK. CT	LOCN	INSTRUCTION	TYPE	CARD
ALID HEADER'					
'	14	7614		LIT	194
'	3	7617		LIT	194
9999999'	3	7620		LIT	194
'	10	7630		LIT	194
F ERROR'	3	7633		LIT	195
NG LENGTH RECORD'	10	7643		LIT	195
'	19	7652		LIT	195
'	3	7665		LIT	195
OF JOB'	3	7668		LIT	195
T	10	7678		LIT	195
			/ K4U 080		197

B

Program Specification
101B27.100
PS-02

1. General

1.1 Purpose of Program Specification. The objective for writing a Program Specification for Project 101B27.100, PS-02 is to describe the program design to permit program production by the program coder with sufficient detailed information so that the design ultimately may be translated into instruction.

1.2 Project Reference. The outputs of the Officer Active Duty Master Record Print Procedure, Project 101B27.100, PS-02 will be analyzed by the Scientific Advisory Teams at COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT to determine what future application may be made of these data.

1.3 Applicable Documents.

(a) Functional Description 101B27.100, FD-01.

(b) Data Requirements Document 101B27.100, RD-01.

(c) System Specification 101B27.100, SS-01.

(d) Program Specification 101B27.100, PS-01.

(e) Program Specification 101B27.100, PS-03.

(f) Manual of the Active Duty Officer Master Magnetic Tape Record NAVPERS 15,921A May 1965.

(g) COMASWFORLANT OPORDER 71-(YR).

2. Scope.

2.1 Program Description. See System Specification 101B27.100, SS-01, paragraph 4.1.2.

2.2 Program Function. This program will fulfill the requirement to produce a detailed list of the old Active Duty Master Magnetic Tape Record file. Programs described in Program Descriptions 101B27.100, PS-01 and PS-03 will fulfill the remaining programming requirements of this system. This program meets these requirements by:

(a) A routine to check for the proper tape header label.

(b) A routine to print incorrectable read errors.

(c) A routine to check for and print wrong length record.

(d) A routine to select records by parameter cards for printing.

(e) A routine to select all records for printing.

(f) A routine to print a pertinent field within the record with descriptive headings.

(g) An interrupt and restart routine.

(h) A routine to handle blocked records.

2.3 Timing. It is anticipated that this program will print at the rate of eleven records per minute. When the complete Active Duty Officer Master Magnetic Tape Record file is printed throughput time will be approximately three hours. Maximum response time for one parameter card will be approximately ten minutes. This time will, of course, vary with the physical location of the record on the tape.

2.4 Accuracy. Not applicable.

2.5 Flexibility. See System Specification 101B27.100, SS-01, para. 2.6.

3. Environment.

3.1 Software Environment.

IBM Autocoder Compiler with ZZERRR macro.

3.2 Program Interfaces. See System Specification 101B27.100, SS-01, paragraph 3.3.

3.3 Storage.

(a) Core storage. Approximately 6,000 permanent positions.

(b) Tape storage. One tape unit.

3.4 Security. The data in this system is unclassified but should be distributed only on a "need to know" basis.

3.5 Controls. Not applicable.

4. Design Data.

4.1 Terminal Procedures. This program is similar to the program described in Program Specification 101B27.100, PS-01 and the terminal procedures are the same.

4.2 Inputs. See System Specification 101B27.100, SS-01 inputs in paragraph 4.1.2.

4.3 Outputs. See System Specification 101B27.100, SS-01 outputs in paragraph 4.1.2.

4.4 Data Environment.

(a) Title. Active Duty Officer Master Magnetic Tape Record.

(b) Description. This record contains officer history data including such items as schools, grades, rank, aircraft experience and activities.

(c) Start of file. 80 character header record.

(d) End of file. Tape mark, 80 character trailer label and tape mark.

(e) Number of Records. A maximum of approximately 2,000.

(f) Start of Record. First position is Gain/Loss indicator.

(g) End of Record. Record mark.

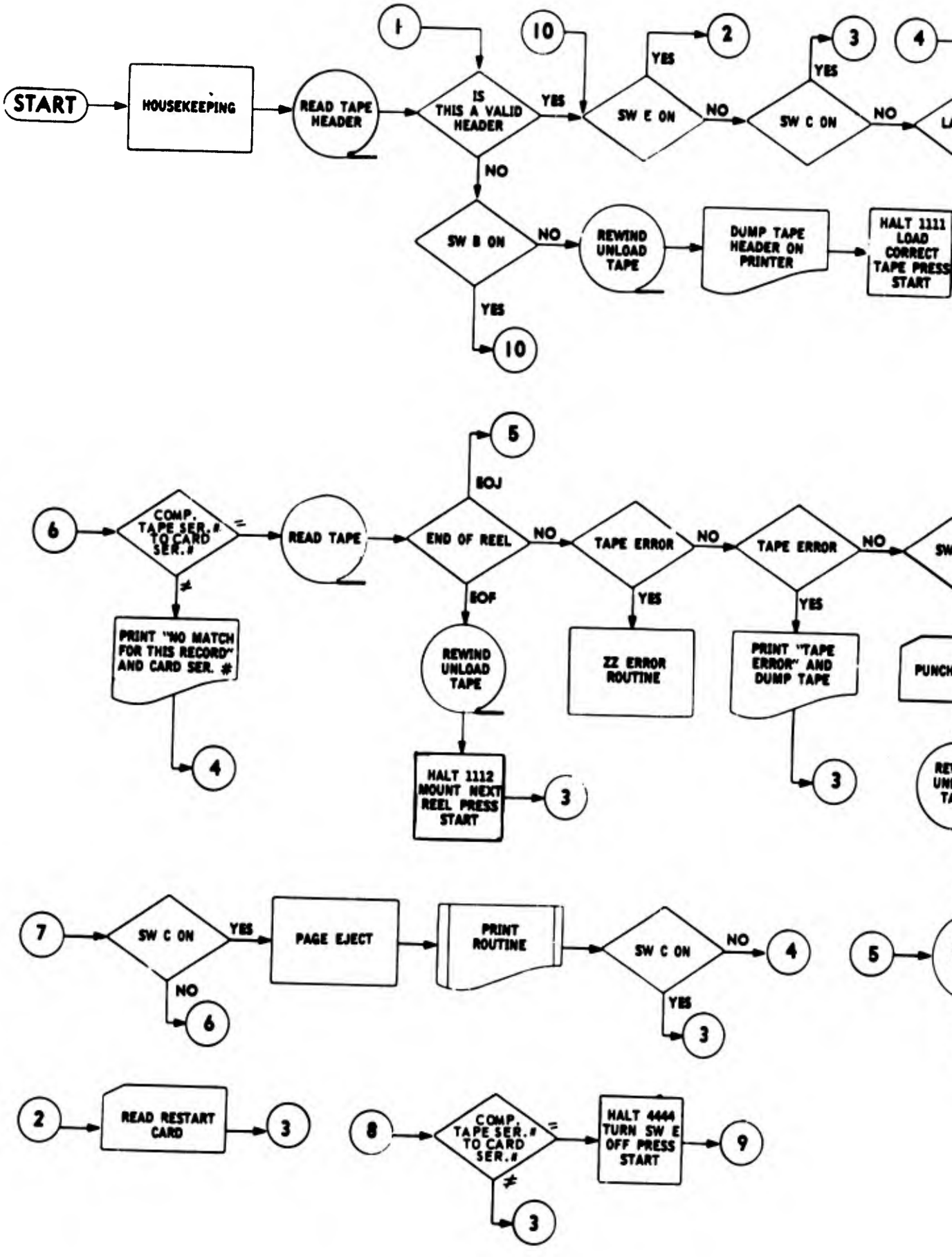
(h) Storage. Magnetic tape.

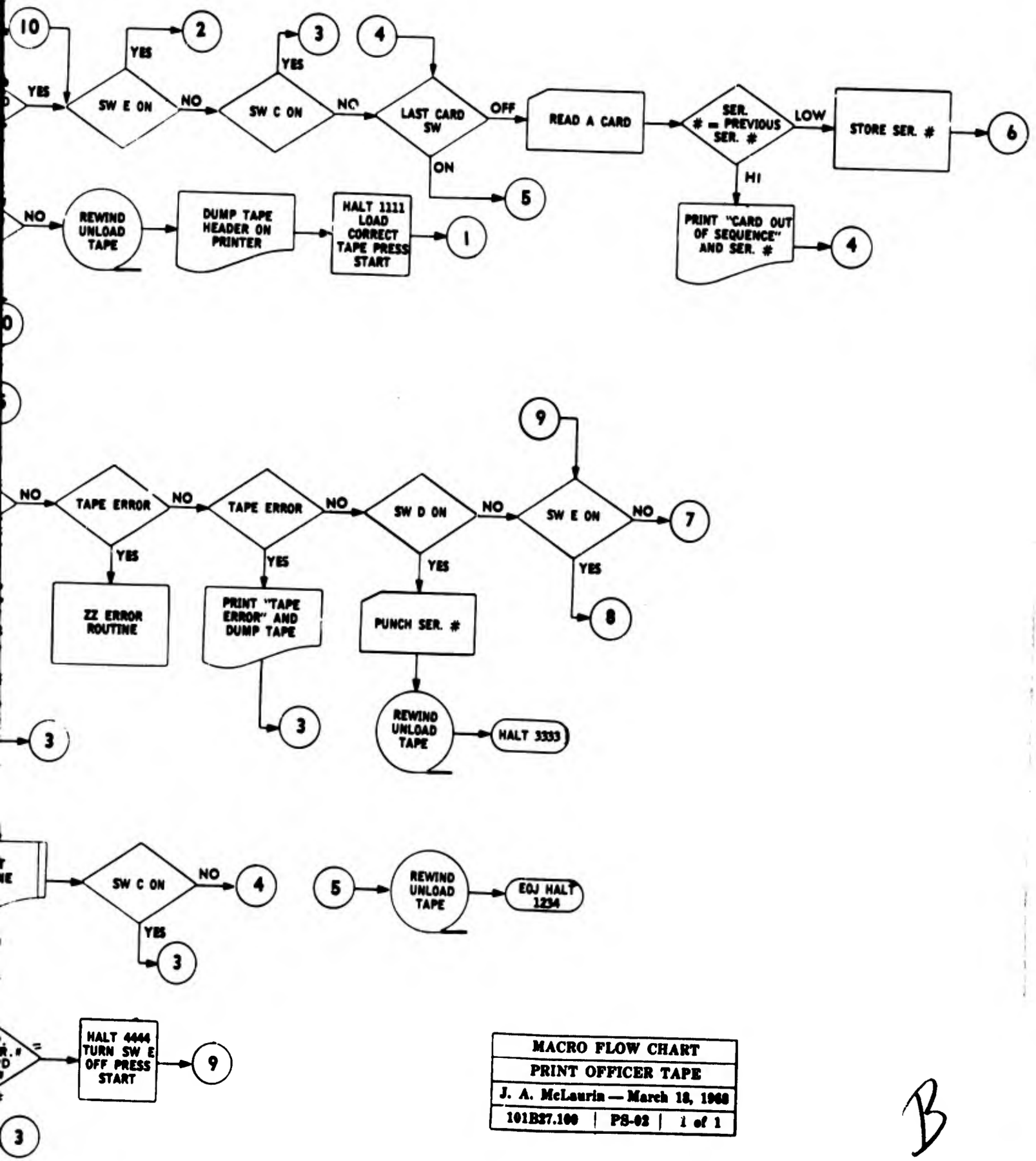
(i) Normal order of file. File number sequence.

(j) File Classification. Unclassified but handled on a "need to know" basis.

(k) Retention Cycle. Minimum of two quarters.

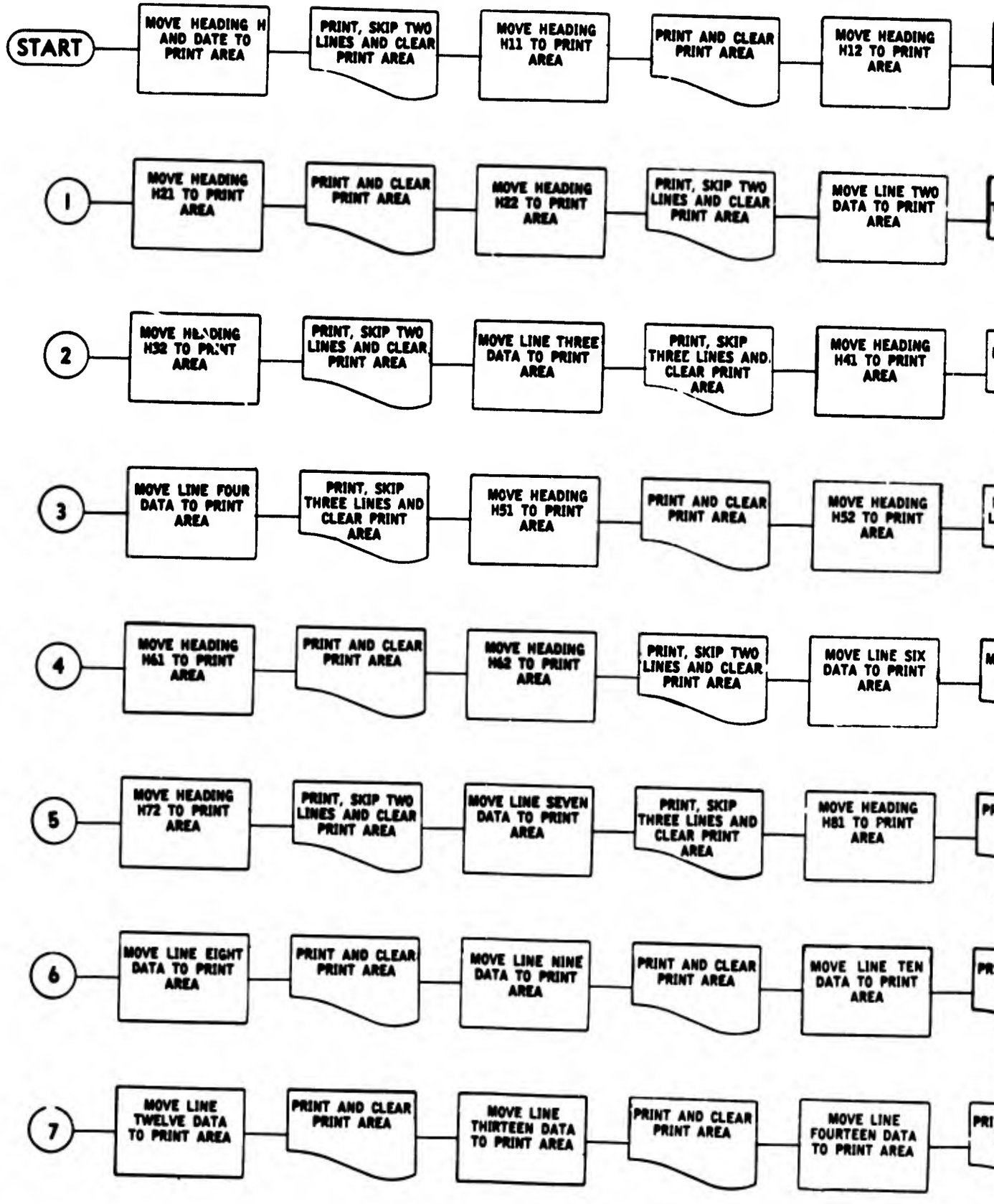
4.5 Logical Flow. See macro charts.

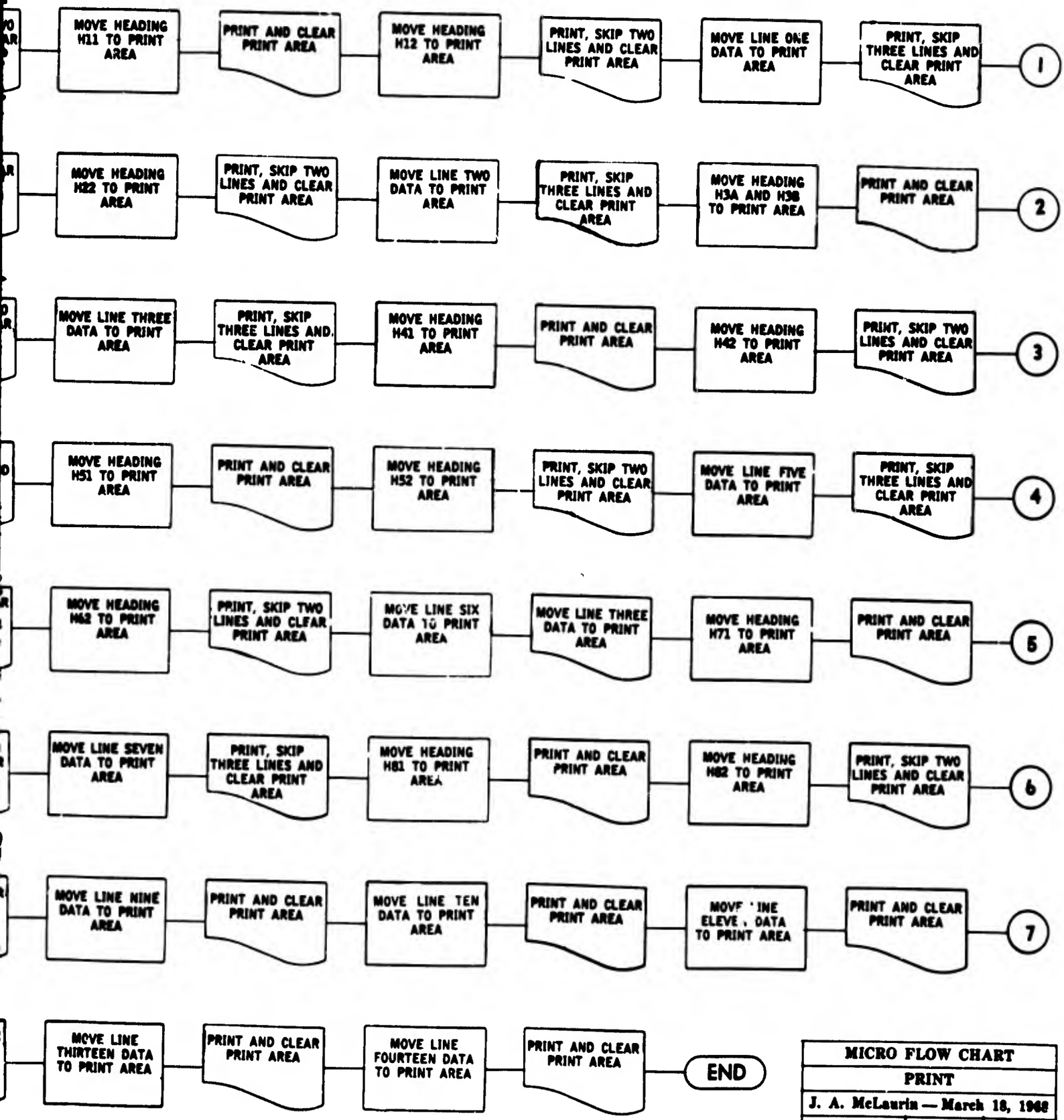

START
HOUSEKEEPING
READ TAPE HEADER
IS THIS A VALID HEADER
YES
NO
SW E ON
SW C ON
SW B ON
REWIND UNLOAD TAPE
DUMP TAPE HEADER ON PRINTER
HALT 1111 LOAD CORRECT TAPE PRESS START
COMP. TAPE SER.# TO CARD SER.#
READ TAPE
END OF REEL
TAPE ERROR
BOJ
EOF
PRINT "NO MATCH FOR THIS RECORD" AND CARD SER. #
REWIND UNLOAD TAPE
ZZ ERROR ROUTINE
PRINT "TAPE ERROR" AND DUMP TAPE
HALT 1112 MOUNT NEXT REEL PRESS START
SW C ON
PAGE EJECT
PRINT ROUTINE
READ RESTART CARD
COMP. TAPE SER.# TO CARD SER.#
HALT 4444 TURN SW E OFF PRESS START



MACRO FLOW CHART		
PRINT OFFICER TAPE		
J. A. McLaurin — March 18, 1968		
101B27.100	PS-02	1 of 1

B


START
MOVE HEADING H AND DATE TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
MOVE HEADING H11 TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE HEADING H12 TO PRINT AREA
1
MOVE HEADING H21 TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE HEADING H22 TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
MOVE LINE TWO DATA TO PRINT AREA
2
MOVE HEADING H32 TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
MOVE LINE THREE DATA TO PRINT AREA
PRINT, SKIP THREE LINES AND CLEAR PRINT AREA
MOVE HEADING H41 TO PRINT AREA
3
MOVE LINE FOUR DATA TO PRINT AREA
PRINT, SKIP THREE LINES AND CLEAR PRINT AREA
MOVE HEADING H51 TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE HEADING H52 TO PRINT AREA
4
MOVE HEADING H61 TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE HEADING H62 TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
MOVE LINE SIX DATA TO PRINT AREA
5
MOVE HEADING H72 TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
MOVE LINE SEVEN DATA TO PRINT AREA
PRINT, SKIP THREE LINES AND CLEAR PRINT AREA
MOVE HEADING H81 TO PRINT AREA
6
MOVE LINE EIGHT DATA TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE LINE NINE DATA TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE LINE TEN DATA TO PRINT AREA
7
MOVE LINE TWELVE DATA TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE LINE THIRTEEN DATA TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE LINE FOURTEEN DATA TO PRINT AREA



MICRO FLOW CHART		
PRINT		
J. A. McLaurin — March 18, 1968		
101B27.100	PS-02	1 of 1

B

```
CLEAR STORAGE 1      ,008015,022026,030037,044,049,053053N000000N0000102
CLEAR STORAGE 2      L068116,105106,1101178101/I9R=071029C029056B026/B00
BOOTSTRAP            ,008015,022029,036040,047054,061068,072/061039

                                PRINT OFFICERS ACT DUTY TAPE        101B27.100

SEQ PG LIN  LABEL  OP     OPERANDS

101  1 01   000    JOB    PRINT OFFICERS ACT DUTY TAPE        101B27.100-
102  1 02          CTL    5511
103  1 021         ORG    335
104  1 022         INCLD  ZZERRR
105  1 03          DCW    'PRES  PRO  CAT  STAFF      PER     GRADE  PRES
106  1 04   H11    DC     'SOURCE CODE LOSS CODE  YR  PRECEDENCE OVER'
107  1 05   H      DCW    'O F F I C E R  A C T I V E  D U T Y  R E C O
108  1 06          DCW    'FILE    N A M E                          GRADE
109  1 07          DC     'DESG CODE SEX GRADE PRES PER ABBR ABBR  ORG
110  1 08   H12    DC     ' BUPERS DOD GR  NUMBER      FOUR'
111  1 09          DCW    'DATE     DATE     DATE    PAY ENTRY  ACTIVE
112  1 10   H21    DC     '     CLASS SER   RETIR  PROF'
113  1 11          DCW    'CIT RACE  GAIN     RANK     BIRTH  BASE DATE
114  1 12          DC     'DATE BASE DATE YEAR  DATE  YEAR  SERVICE  WAR
115  1 13   H22    DC     ' ENSIGN   LTJG    LIEUTENANT'
116  1 14   H3A    DCW    'PRE MIL SERVICE MARP'
117  1 15   H3B    DCW    'PLC  ASSIGN ACCT ORD  PRESENT'
118  1 16          DCW    'LCDR     COMMANDER CAPTAIN  FLAG     BRAN YR M
119  1 17          DC     'N CODE BUPERS ACT  ACTIVITY TITLE  CODE  CODE
120  1 18   H32    DC     'E STAT  BILLET PRIMARY DUTIES'
121  1 19          DCW    'COLLATERAL   FUN  BILLET TRAIN  QUAL    CONUS
122  1 20          DC     'PENDENTS  O/S DEP PUBLIC ORDER  FAC  DETACH A
123  1 21   H41    DC     ' DETAIL CURRENT     LOSS'
124  1 22          DCW    'DUTIES     AREA  CODE  DUTIES DATE  DEPARTURE
125  1 23          DC     'SEC O/S DATE AR  QUTR  NUMBER CODE  DATE  COD
126  1 24   H42    DC     'ODE   DUTY    CODE   DATE'
127  1 25          DCW    'ROTA  ROTA TOUR    SECURITY      ASSIG RES DE
128  1 26          DC     'RS  SPECIAL DESIGNATION              *--------
129  1 27   H51    DC     '-E D U C A T I O N-------------*'
130  2 01          DCW    'DATE  PRO  DATE  INV AGY  DATE   RESTR EXT RE
131  2 02          DC     '     CODE SUB QUAL CODE  SUBSPECIALTY SCHOOL
132  2 03   H52    DC     'YR SPON LEVEL MAJ SPEC SCHOOL'
133  2 04          DCW    '*-------EDUCATION-------* *-----------LANGUAGE
134  2 05          DC     '---------* *-------------------S E R V I C E
135  2 06   H61    DC     ' H O O L  S-----------------*'
136  2 07          DCW    'MO YR SPON LEVEL MAJ SPEC LANG CODE TEST LANG
137  2 08          DC     ' TEST MORE SCH COMP  WKS SCH COMP  WKS SCH COM
138  2 09   H62    DC     'KS SCH COMP  WKS SCH COMP  WKS'
139  2 13          DCW    'CODE CODE STAT TRAIN EXP   AI'
140  2 14          DC     'R   QUAL     AIR  HOURS HOUR HOUR HOUR HOUR LAN
141  2 15   H72    DC     'MT GR  RATE TYPE DATE'
142  2 151         DCW    'QUALIFICATIONS    '
143  2 16          DC     'AIRCRAFT MODEL EXPERIENCE *----------P A S T
144  2 17   H81    DC     'T Y  S T A T I O N S--------*'
145  2 171         DCW    'NOBC STATION MOS KEY '
146  2 18          DC     'CRAFT HOURS CARR   IND  YR REPORT DETACH ACTIV
147  2 19   H82    DC     '       ROTA  PORT  AREA    MOS'
```

```
26,030037,044,049,053053N000000N00001026                                    1
06,1101178101/I9R=071029C029056B026/B001/0991,001/00111710+                 2
29,036040,047054,061068,072/061039          ,0010011040                     3

OFFICERS ACT DUTY TAPE        101B27.100-PS-02        00002        PAGE    1

OS                                                  SEX CT  LOCN  INSTRUCTION TYPE  CARD

OFFICERS ACT DUTY TAPE        101B27.100-PS-02

                                                            0335
                                                                        MACRO
 PRO  CAT  STAFF      PER    GRADE  PRES PER  '          50  0384                5
 E CODE LOSS CODE  YR  PRECEDENCE OVER'                  42  0426                7
 I C E R  A C T I V E  D U T Y  R E C O R D'             48  0474                9
   N A M E                          GRADE STAT '       50  0524               11
CODE SEX GRADE PRES PER ABBR ABBR  ORG   CUR  '         50  0574               13
RS DOD GR  NUMBER     FOUR'                             31  0605               14
    DATE     DATE   PAY ENTRY  ACTIVE   COMM  '        50  0655               16
LASS SER   RETIR  PROF'                                 28  0683               16
ACE  GAIN     RANK     BIRTH  BASE DATE BASE  '        50  0733               18
BASE DATE YEAR  DATE  YEAR  SERVICE  WARRANT  '        50  0783               20
GN   LTJG    LIEUTENANT'                                28  0811               20
IL SERVICE MARP'                                        20  083:               21
SSIGN ACCT ORD  PRESENT'                                29  0860               22
    COMMANDER CAPTAIN  FLAG    BRAN YR MO RAN'          50  0910               24
 BUPERS ACT  ACTIVITY TITLE  CODE  CODE  COD'           50  0960               26
  BILLET PRIMARY DUTIES'                                29  0989               27
ERAL   FUN  BILLET TRAIN  QUAL    CONUS   DE'          50  1039               29
TS  O/S DEP PUBLIC ORDER  FAC  DETACH ASSIG'            49  1088               31
L CURRENT     LOSS'                                     24  1112               31
     AREA  CODE  DUTIES DATE  DEPARTURE PRI  '          50  1162               33
S DATE AR  QUTR  NUMBER CODE  DATE  CODE   C'          50  1212               35
DUTY    CODE   DATE'                                    25  1237               35
ROTA TOUR    SECURITY      ASSIG RES DETAILE'          50  1287               37
ECIAL DESIGNATION              *-----------'            50  1337               39
 C A T I O N----------*'                                32  1369               40
PRO  DATE  INV AGY  DATE   RESTR EXT REMARKS'          50  1419               42
DE SUB QUAL CODE  SUBSPECIALTY SCHOOL    MO  '         50  1469               44
N LEVEL MAJ SPEC SCHOOL'                                29  1498               45
--EDUCATION-------* *----------LANGUAGES---'           50  1548               47
---* *-----------------S E R V I C E   S C'            50  1598               49
 L  S----------------*'                                 30  1628               50
SPON LEVEL MAJ SPEC LANG CODE TEST LANG CODE'           50  1678               52
MORE SCH COMP  WKS SCH COMP  WKS SCH COMP  W'           50  1728               54
 COMP  WKS SCH COMP  WKS'                               30  1758               55
DDE STAT TRAIN EXP   AI'                                29  1787               56
AL    AIR  HOURS HOUR HOUR HOUR HOUR LAND IO'           50  1837               58
 RATE TYPE DATE'                                        21  1858               58
ICATIONS    '                                           18  1876               59
FT MODEL EXPERIENCE *----------P A S T  D U '           50  1926               61
 T A T I O N S--------*'                                29  1955               62
TATION MOS KEY '                                        21  1976               63
HOURS CARR   IND  YR REPORT DETACH ACTIVITY '           50  2026               65
 ROTA  PORT  AREA    MOS'                               30  2056               66
```

B

SEQ	PG	LIN	LABEL	OP	OPERANDS
148	2	20		DCW	*DEC AERO FLY FLIGHT HEAVIER FLIGHT LIGHT TO
149	2	21		DC	*L 5 YR JET VH PH CARR SER INST OPNAV 3
150	2	22	H71	DC	*0*
151	3	01		DCW	
152	3	02		DC	
153	3	03	EW1	DC	
154	3	04		DCW	
155	3	05		DC	
156	3	06	EW2	DC	
157	3	07	EW3A	DCW	
158	3	071		DCW	
159	3	08		DC	
160	3	09	EW3	DC	
161	3	10		DCW	
162	3	11		DC	
163	3	12	EW4	DC	
164	3	16		DCW	
165	3	17		DC	
166	3	18	EW6	DC	
167	3	19	EWQ	DCW	
168	3	191	EWAM	DCW	
169	3	192		DCW	
170	3	193	EWPD	DC	
171	3	20	EW7A	DCW	
172	3	21		DCW	
173	3	211	EW7	DC	
174	3	22		DCW	
175	3	23		DC	
176	3	24	EW5	DC	
177	4	01	TAPE	DA	1X1000
178	4	02	ONE		7,94
179	4	03	FILE		12
180	4	04	TWO		95,168
181	4	041	THRA		169,192
182	4	05	THREE		196,262
183	4	06	FOUR		263,332
184	4	07	FIVE		333,414
185	4	08	SIX		415,489
186	4	081	SEVA		562,576
187	4	09	SEVEN		580,615
188	4	10	Q1		491,500
189	4	11	Q2		501,510
190	4	12	Q3		511,520
191	4	13	Q4		521,530
192	4	14	Q5		531,540
193	4	15	Q6		541,550
194	4	16	Q7		551,560
195	4	17	AM1		616,632
196	4	18	AM2		633,648
197	4	19	AM3		649,664

ANDS

SFX	CT	LOCN	INSTRUCTION TYPE		CARD
	50	2106			68
	50	2156			70
	1	2157			70
	50	2207			72
	50	2257			74
	30	2287			75
	50	2337			77
	50	2387			79
	26	2413			79
	35	2448			80
	14	2462			81
	50	2512			83
	15	2527			83
	50	2577			85
	50	2627			87
	31	2658			88
	50	2708			90
	50	2758			92
	30	2788			93
	19	2807			94
	28	2835			95
	20	2855			96
	32	2887			97
	37	2924			98
	50	2974			100
	11	2985			100
	50	3035			102
	50	3085			104
	32	3117			105
		3118	4117		105
		3211		FIELD	105
		3129		SBFLD	
		3285		FIELD	105
		3309		FIELD	105
		3379		FIELD	106
		3449		FIELD	106
		3531		FIELD	106
		3606		FIELD	106
		3693		FIELD	106
		3732		FIELD	106
		3617		FIELD	107
		3627		FIELD	107
		3637		FIELD	107
		3647		FIELD	107
		3657		FIELD	107
		3667		FIELD	107
		3677		FIELD	108
		3749		FIELD	108
		3765		FIELD	108
		3781		FIELD	108

B

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SEQ  PG LIN  LABEL   OP     OPERANDS

198   4 20   AM4             665,680
199   4 21   AM5             681,696
200   4 22   PD1             697,736
201   4 23   PD2             737,776
202   4 24   PD3             777,816
203   4 25   PD4             817,856
204   4 26   PD5             857,896
205   4 27   PD6             897,936
206   4 28   PD7             937,976
207   4 29   GRMK    DCW     ' '
208   4 30           DCW     ' '
209   5 01   START   B       HEAD
210   5 011          SW      1
211   5 012          BSS     RS,E
212   5 02           BSS     RDTP,C
213   5 03   READ    BLC     EOJ
214   5 04           R
215   5 05           C       6,PRE=6
216   5 06           BH      MESS1
217   5 07           MLC     6,PRE
218   5 08   COMP    C       PRE,FILE
219   5 09           BH      MESS2
220   5 10           BL      RDTP
221   5 11   PRINT   CC      1
222   5 12           MLC     H,289
223   5 13           MLC     'D A T E',323
224   5 14           MLC     HDATE,332
225   5 15           CC      S
226   5 16           W
227   5 17           CS
228   5 18           CS
229   5 19           MLC     H11,331
230   5 20           W
231   5 21           CS
232   5 22           CS
233   5 23           MLC     H12,331
234   5 24           CC      S
235   5 25           W
236   5 26           CS
237   5 27           CS
238   6 01           LCA     EW1,330
239   6 02           MCE     ONE,330
240   6 021          MZ      ONE,330
241   6 03           CC      T
242   6 04           W
243   6 05           CS
244   6 06           CS
245   6 07           MLC     H21,288
246   6 08           W
247   6 09           CS
```

A

ANDS	SFK	CT	LOCN	INSTRUCTION	TYPE	CARD
680			3797		FIELD	108
696			3813		FIELD	108
736			3863		FIELD	109
776			3893		FIELD	109
816			3933		FIELD	109
856			3973		FIELD	109
896			4013		FIELD	109
936			4053		FIELD	109
976			4093		FIELD	110
		1	4118			110
		1	4119			110
		4	4120	B 95Z		110
		4	4124	; 001		110
,C		5	4128	B U2T E		110
		5	4133	B #7X C		110
		5	4138	B T7# A		111
E=6		1	4143	1		111
1		7	4144	C 006 W3Z		111
E		5	4151	B 91Y U		111
FILE		7	4156	M 006 W3Z		111
2		7	4163	C W3Z A29		111
		5	4170	B 93W U		111
		5	4175	B #7X T		112
9		2	4180	F 1		112
T E',323		7	4182	M 474 289		112
E,332		7	4189	M W4W 323		112
		7	4196	M XOZ 332		112
		2	4203	F S		112
		1	4205	2		112
		1	4206	/		113
31		1	4207	/		113
		7	4208	M 426 331		113
		1	4215	2		113
		1	4216	/		113
31		1	4217	/		113
		7	4218	M 605 331		113
		2	4225	F S		114
		1	4227	2		114
		1	4228	/		114
30		1	4229	/		114
30		7	4230	L K87 330		114
30		7	4237	E B11 330		114
		7	4244	Y B11 330		114
		2	4251	F T		115
		1	4253	2		115
		1	4254	/		115
88		1	4255	/		115
		7	4256	M 683 288		115
		1	4263	2		115
		1	4264	/		115

B

```
SEQ  PG LIN  LABEL  OP    OPBRANDS

248   6 10          CS
249   6 11          MLC   H22,328
250   6 12          CC    S
251   6 13          W
252   6 14          CS
253   6 15          CS
254   6 16          LCA   EW2,327
255   6 17          MCE   TWO,327
256   6 18          CC    T
257   6 19          W
258   6 20          CS
259   6 21          CS
260   6 22          MLC   H3A,256
261   6 23          MLC   H3B,314
262   6 24          W
263   6 25          CS
264   6 26          CS
265   7 01          MLC   H32,329
266   7 02          CC    S
267   7 03          W
268   7 04          CS
269   7 05          CS
270   7 051         MLC   THREE,329
271   7 06          LCA   EW3,315
272   7 07          MCE   THREE-14,315
273   7 071         LCA   EW3A,235
274   7 072         MCE   THRA,235
275   7 08          CC    T
276   7 09          W
277   7 10          CS
278   7 11          CS
279   7 12          MLC   H41,325
280   7 13          W
281   7 14          CS
282   7 15          CS
283   7 16          MLC   H42,329
284   7 17          CC    S
285   7 18          W
286   7 19          CS
287   7 20          CS
288   7 21          LCA   EW4,331
289   7 22          MCE   FOUR,331
290   7 23          CC    T
291   7 24          W
292   7 25          CS
293   7 26          CS
294   8 01          MLC   H51,332
295   8 02          W
296   8 03          CS
297   8 04          CS
```

SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
	1	4285	/		116
	7	4286	M	811 328	116
	2	4293	F	S	116
	1	4295	2		116
	1	4296	/		116
	1	4297	/		116
	7	4298	L	M13 327	116
	7	4305	E	B85 327	117
	2	4312	F	T	117
	1	4314	2		117
	1	4315	/		117
	1	4316	/		117
	7	4317	M	831 256	117
	7	4324	M	860 314	117
	1	4331	2		118
	1	4332	/		118
	1	4333	/		118
	7	4334	M	989 329	118
	2	4341	F	S	118
	1	4343	2		118
	1	4344	/		118
	1	4345	/		119
9	7	4346	M	C79 329	119
.315	7	4353	L	N27 315	119
	7	4360	E	C65 315	119
	7	4367	L	M48 235	119
	7	4374	E	C09 235	119
	2	4381	F	T	119
	1	4383	2		120
	1	4384	/		120
	1	4385	/		120
	7	4386	M	/12 325	120
	1	4393	2		120
	1	4394	/		120
	1	4395	/		120
	7	4396	M	S37 329	121
	2	4403	F	S	121
	1	4405	2		121
	1	4406	/		121
	1	4407	/		121
	7	4408	L	D58 331	121
	7	4415	E	D49 331	121
	2	4422	F	T	122
	1	4424	2		122
	1	4425	/		122
	1	4426	/		122
	7	4427	M	T69 332	122
	1	4434	2		122
	1	4435	/		122
	1	4436	/		123

B

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SEQ  PG LIN  LABEL  OP    OPERANDS
298   8 05          MLC   H52,329
299   8 06          CC    S
300   8 07          W
301   8 08          CS
302   8 09          CS
303   8 10          LCA   EW5,332
304   8 11          MCE   FIVE,332
305   8 111         MZ    FIVE,332
306   8 12          CC    T
307   8 13          W
308   8 14          CS
309   8 15          CS
310   8 16          MLC   H61,330
311   8 17          W
312   8 18          CS
313   8 19          CS
314   8 20          MLC   H62,330
315   8 21          CC    S
316   8 22          W
317   8 23          CS
318   8 24          CS
319   8 25          LCA   EW6,330
320   8 26          MCE   SIX,330
321   8 27          CC    T
322   8 28          W
323   8 29          CS
324   8 30          CS
325   9 01          MLC   H71,301
326   9 02          W
327   9 03          CS
328   9 04          CS
329   9 05          MLC   H72,300
330   9 06          CC    S
331   9 07          W
332   9 08          CS
333   9 09          CS
334   9 091         LCA   EW7A,238
335   9 092         MCE   SEVA,238
336   9 10          LCA   EW7,300
337   9 11          MCE   SEVEN,300
338   9 12          CC    T
339   9 13          W
340   9 14          CS
341   9 15          CS
342   9 16          MLC   H81,301
343   9 17          W
344   9 18          CS
345   9 19          CS
346   9 20          MLC   H82,301
347   9 21          CC    S
```

A

SFK	CT	LOCN	INSTRUCTION	TYPE	CARD
	7	4417	M U98 329		123
	2	4424	F S		123
	1	4426	2		123
	1	4427	/		123
	1	4428	/		123
	7	4429	L A17 332		123
	7	4436	E E31 332		124
	7	4443	Y E31 332		124
	2	4450	F T		124
	1	4452	2		124
	1	4453	/		124
	1	4454	/		124
	7	4455	M W28 330		124
	1	4462	2		125
	1	4463	/		125
	1	4464	/		125
	7	4465	M X58 330		125
	2	4472	F S		125
	1	4474	2		125
	1	4475	/		125
	1	44			126
	7	44	P88 330		126
	7	[illegible]	F06 330		126
	2		T		126
	1	[illegible]93	2		126
	1	4494	/		126
	1	4495	/		126
	7	4496	M J57 301		127
	1	4503	2		127
	1	4504	/		127
	1	4505	/		127
	7	4506	M Y58 300		127
	2	4513	F S		127
	1	4515	2		127
	1	4516	/		128
	1	4517	/		128
	7	4518	L R24 238		128
	7	4525	E F93 238		128
	7	4532	L R85 300		128
	7	4539	E G32 300		128
	2	4546	F T		128
	1	4548	2		129
	1	4549	/		129
	1	4550	/		129
	7	4551	M Z55 301		129
	1	4558	2		129
	1	4559	/		129
	1	4560	/		129
	7	4561	M -56 301		130
	2	4568	F S		130

B

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SEQ PG LIN  LABEL  OP     OPERANDS

348  9 22          W
349  9 23          CS
350  9 24          CS
351  9 25          LCA    EWQ,219
352  9 26          MCE    Q1,219
353  9 261         MZ     Q1,219
354  9 27          LCA    EWAM,247
355  9 28          MCE    AM1,247
356  9 29          LCA    EWPD,301
357  9 30          MCE    PD1,301
358 10 01          W
359 10 02          CS
360 10 03          CS
361 10 04          LCA    EWQ,219
362 10 05          MCE    Q2,219
363 10 051         MZ     Q2,219
364 10 06          LCA    EWAM,247
365 10 07          MCE    AM2,247
366 10 08          LCA    EWPD,301
367 10 09          MCE    PD2,301
368 10 10          W
369 10 11          CS
370 10 12          CS
371 10 13          LCA    EWQ,219
372 10 14          MCE    Q3,219
373 10 141         MZ     Q3,219
374 10 15          LCA    EWAM,247
375 10 16          MCE    AM3,247
376 10 17          LCA    EWPD,301
377 10 18          MCE    PD3,301
378 10 19          W
379 10 20          CS
380 10 21          CS
381 10 22          LCA    EWQ,219
382 10 23          MCE    Q4,219
383 10 231         MZ     Q4,219
384 10 24          LCA    EWAM,247
385 10 25          MCE    AM4,247
386 10 26          LCA    EWPD,301
387 10 27          MCE    PD4,301
388 10 28          W
389 10 29          CS
390 10 30          CS
391 11 01          LCA    EWQ,219
392 11 02          MCE    Q5,219
393 11 021         MZ     Q5,219
394 11 03          LCA    EWAM,247
395 11 04          MCE    AM5,247
396 11 05          LCA    EWPD,301
397 11 06          MCE    PD5,301
```

A

OS	SFX	CT	LOCN	INSTRUCTION TYPE	CARD
		1	4570	2	130
		1	4571	/	130
		1	4572	/	130
9		7	4573	L Q07 219	130
		7	4580	E F17 219	130
		7	4587	Y F17 219	131
47		7	4594	L Q35 247	131
7		7	4601	E G49 247	131
01		7	4608	L Q87 301	131
1		7	4615	E H53 301	131
		1	4622	2	131
		1	4623	/	131
		1	4624	/	132
9		7	4625	L Q07 219	132
		7	4632	E F27 219	132
		7	4639	Y F27 219	132
47		7	4646	L Q35 247	132
7		7	4653	E G65 247	132
01		7	4660	L Q87 301	133
1		7	4667	E H93 301	133
		1	4674	2	133
		1	4675	/	133
		1	4676	/	133
9		7	4677	L Q07 219	133
		7	4684	E F37 219	133
		7	4691	Y F37 219	134
47		7	4698	L Q35 247	134
7		7	4705	E G81 247	134
01		7	4712	L Q87 301	134
1		7	4719	E I33 301	134
		1	4726	2	134
		1	4727	/	134
		1	4728	/	135
9		7	4729	L Q07 219	135
		7	4736	E F47 219	135
		7	4743	Y F47 219	135
47		7	4750	L Q35 247	135
7		7	4757	E G97 247	135
01		7	4764	L Q87 301	136
1		7	4771	E I73 301	136
		1	4778	2	136
		1	4779	/	136
		1	4780	/	136
9		7	4781	L Q07 219	136
		7	4788	E F57 219	136
		7	4795	Y F57 219	137
47		7	4802	L Q35 247	137
7		7	4809	E H13 247	137
01		7	4816	L Q87 301	137
1		7	4823	E 01T 301	137

B

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SEQ PG LIN  LABEL  OP    OPBRANDS

398 11 07          W
399 11 08          CS
400 11 09          CS
401 11 10          LCA   EWQ,219
402 11 11          MCE   Q6,.219
403 11 111         MZ    Q6,.219
404 11 12          LCA   EWPD,.301
405 11 13          MCE   PD6,301
406 11 14          W
407 11 15          CS
408 11 16          CS
409 11 17          LCA   EWQ,219
410 11 18          MCE   Q7,.219
411 11 181         MZ    Q7,.219
412 11 19          LCA   EWPD,301
413 11 20          MCE   PD7,301
414 11 21          W
415 11 22          CS
416 11 23          CS
417 11 24          CSS   RDTP,.C
418 11 25          B     READ
419 12 01  MESS1   MLC   'CARD OUT OF SEQUENCE',220
420 12 02          MLC   80,.301
421 12 03          B     PRMESS
422 12 04  MESS2   MLC   'NO MATCH FOR THIS CARD',222
423 12 05          MLC   80,.303
424 12 06  PRMESS CC     1
425 12 07          W
426 12 08          CS
427 12 09          CS
428 12 10          B     READ
429 12 11  HEAD    SBR   HDEX+3
430 12 12          RT    1,TAPE
431 12 121         CW    TAPE+6
432 12 13  CMPTP   C     TAPE+9,'E697XX W1 '
433 12 14          BU    INV
434 12 15          C     TAPE+35,REEL
435 12 16          BU    INV
436 12 17          MA    '001',REEL
437 12 171         MLC   TAPE+17,HDATE=8
438 12 172         SW    TAPE+6
439 12 18          B     HDEX
440 12 181 INV     SW    TAPE+6
441 12 19          BSS   HDEX,8
442 12 20          RWU   1
443 12 21          MLC   'INVALID HEADER',214
444 12 211         MLC   TAPE+17,HDATE
445 12 22          MLC   TAPE+79,300
446 12 222         MLC
447 12 23          CC    1
```

SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
	1	4890	2		137
	1	4891	/		137
	1	4892	/		138
	7	4893	L Q07 219		138
	7	4900	E F67 219		138
	7	4907	Y F67 219		138
	7	4914	L Q87 301		138
	7	4921	E 05T 301		138
	1	4928	2		138
	1	4929	/		139
	1	4930	/		139
	7	4931	L Q07 219		139
	7	4938	E F77 219		139
	7	4945	Y F77 219		139
	7	4952	L Q87 301		139
	7	4959	E 09T 301		139
	1	4966	2		140
	1	4967	/		140
	1	4968	/		140
	5	4969	B #7X C		140
	4	4974	B 13Y		140
	7	4978	M W6W 220		140
	7	4985	M 080 301		140
	4	4992	B 95#		141
	7	4996	M W8Y 222		141
	7	5003	M 080 303		141
	2	5010	F 1		141
	1	5012	2		141
	1	5013	/		141
	1	5014	/		141
	4	5015	B 13Y		142
	4	5019	H #7W		142
	8	5023	M (U1 A18 R		142
	4	5031	) A24		142
	7	5035	C A27 W9Y		142
	5	5042	B #2/ /		142
	7	5047	C A53 T9W		142
	5	5054	B #2/ /		143
	7	5059	* X0/ T9W		143
	7	5066	M A35 X0Z		143
	4	5073	(A24		143
	4	5077	B #7T		143
	4	5081	, A24		143
	5	5085	B #7T B		143
	5	5090	U (U1 U		144
	7	5095	M X2T 214		144
	7	5102	M A35 X0Z		144
	7	5109	M A97 300		144
	1	5116	M		144
	2	5117	F 1		144

OF SEQUENCE',220

FOR THIS CARD',222

97XX W1 '

EEL

ATE=8

EADER',214
ATE
0

B

```
SEQ PG LIN  LABEL  OP    OPERANDS

448 12 24          W
449 12 25          CS
450 12 26          CS
451 12 27          H     1111,1111    BAD HEADER
452 12 28          B     HEAD+4
453 12 29  HDEX     B     0
454 13 01  RDTP     RT    1,TAPE
455 13 011         NOP   0
456 13 02          BEF   EOR
457 13 03          BER   ZZERRR
458 13 04          BER   ERR
459 13 05          BCE   WLR,GRMK,
460 13 06          MLC   ' ',GRMK
461 13 061         BSS   INR,D
462 13 062 RSSW    BSS   RSS,E
463 13 07          BSS   PRINT,C
464 13 08          B     COMP
465 13 09  ERR     CC    1
466 13 10          MLC   'TAPE ERROR',210
467 13 11          W
468 13 12  SW      SW    201
469 13 13          MLC   TAPE+99,300
470 13 14          MLC
471 13 15          MLC
472 13 16          W
473 13 17          MLC   TAPE+199,300
474 13 18          MLC
475 13 181         MLC
476 13 19          W
477 13 20          MLC   TAPE+299,300
478 13 21          MLC
479 13 22          W
480 13 23          MLC   TAPE+399,300
481 13 24          MLC
482 13 25          W
483 13 26          MLC   TAPE+499,300
484 13 27          MLC
485 13 28          MLC
486 13 29          W
487 14 01          MLC   TAPE+599,300
488 14 02          CHAIN 7
489                MLC
490                MLC
491                MLC
492                MLC
493                MLC
494                MLC
495                MLC
496 14 03          W
497 14 04          MLC   TAPE+699,300
```

OS

11 BAD HEADER

K,
K

RROR',210

,300

,300

,300

,300

,300

,300

SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
	1	5059	2		144
	1	5060	/		145
	1	5061	/		145
	7	5062	J /11 /11		145
	4	5069	B 96T		145
	4	5073	B 000		145
	8	5077	M (U1 A18 R		145
	4	5085	N 000		145
	5	5089	B T3# K		146
	5	5094	B U5V L		146
	5	5099	B /3Y L		146
	8	5104	B S6U 11Y		146
	7	5112	M X2U 11Y		146
	5	5119	B T9X D		146
	5	5124	B U2Y E		147
	5	5129	B 18# C		147
	4	5134	B 16T		147
	2	5138	F 1		147
	7	5140	M X3U 210		147
	1	5147	2		147
	4	5148	J 201		147
	7	5152	M B17 300		148
	1	5159	M		148
	1	5160	M		148
	1	5161	2		148
	7	5162	M C17 300		148
	1	5169	M		148
	1	5170	M		148
	1	5171	2		149
	7	5172	M D17 300		149
	1	5179	M		149
	1	5180	2		149
	7	5181	M E17 300		149
	1	5188	M		149
	1	5189	2		149
	7	5190	M F17 300		150
	1	5197	M		150
	1	5198	M		150
	1	5199	2		150
	7	5200	M G17 300		150
				MACRO	
	1	5207	M	GEN	150
	1	5208	M	GEN	150
	1	5209	M	GEN	151
	1	5210	M	GEN	151
	1	5211	M	GEN	151
	1	5212	M	GEN	151
	1	5213	M	GEN	151
	1	5214	2		151
	7	5215	M H17 300		151

,300

B

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SEQ PG LIN  LABEL  OP    OPERANDS

498 14 05          CHAIN 6
499                MLC
500                MLC
501                MLC
502                MLC
503                MLC
504                MLC
505 14 06          W
506 14 07          MLC   TAPE+799,300
507 14 08          MLC
508 14 09          MLC
509 14 10          W
510 14 11          MLC   TAPE+899,300
511 14 12          MLC
512 14 13          MLC
513 14 14          W
514 14 15          MLC   TAPE+999,300
515 14 16          MLC
516 14 17          W
517 14 18          CS
518 14 19          CS
519 14 20          B     RDTP
520 14 21  WLR     CC    1
521 14 22          MLC   'WRONG LENGTH RECORD',219
522 14 23          W
523 14 24  BCE     BCE   BLANK,TAPE+X2,
524 14 25          A     *-6,X2
525 14 26          B     BCE
526 15 01  BLANK   MLC   ' ',TAPE+X2
527 15 02          A     *-6,X2
528 15 03          C     X2,'999'
529 15 04          BU    BLANK
530 15 041         MLC   '000',X2
531 15 05          B     SW
532 15 06  EOR     RT    1,TAPE
533 15 07          C     TAPE+2,'EOJ'
534 15 08          BE    EOJ
535 15 09          RWU   1
536 15 10          H     1112,1112
537 15 11          B     HEAD
538 15 12          B     RDTP
539 15 13  EOJ     RWU   1
540 15 14          CC    1
541 15 15          MLC   'END OF JOB',225
542 15 16          W
543 15 17          CC    1
544 15 18          H     1234,1234
545 15 19  X2      EQU   94
546 15 20  94      DCW   000
547 15 21  REEL    DCW   '001'
```

A

	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
					MACRO	
		1	5222	M	GEN	152
		1	5223	M	GEN	152
		1	5224	M	GEN	152
		1	5225	M	GEN	152
		1	5226	M	GEN	152
		1	5227	M	GEN	152
300		1	5228	2		152
		7	5229	M I1T 300		153
		1	5236	M		153
		1	5237	M		153
300		1	5238	2		153
		7	5239	M 01X 300		153
		1	5246	M		153
		1	5247	M		153
300		1	5248	2		154
		7	5249	M 11X 300		154
		1	5256	M		154
		1	5257	2		154
		1	5258	/		154
		1	5259	/		154
		4	5260	B #7X		154
NGTH RECORD',219		2	5264	F 1		155
		7	5266	M X5T 219		155
+X2,		1	5273	2		155
		8	5274	B S9T AJ8		155
		7	5282	A S8S 094		155
2		4	5289	B S7U		155
		7	5293	M X2U AJ8		155
		7	5300	A T0# 094		156
		7	5307	C 094 X5W		156
		5	5314	B S9T /		156
		7	5319	M X6Z 094		156
		4	5326	B /4Y		156
J'		8	5330	M (U1 A18 R		156
		7	5338	C A20 X6S		157
		5	5345	B T7# S		157
		5	5350	U (U1 U		157
		7	5355	J /12 /12		157
		4	5362	B 95Z		157
		4	5366	B #7X		157
		5	5370	U (U1 U		157
8',225		2	5375	F 1		158
		7	5377	M X7S 225		158
		1	5384	2		158
		2	5385	F 1		158
		7	5387	J S34 S34		158
			0094			
		3	0094			159
		3	5396			160

B

```
SEQ  PG LIN   LABEL   OP     OPERANDS

548  15 22    INR     MLC    FILE,106
549  15 23            P
550  15 24            CS     180
551  15 25            P
552  15 26            P
553  15 27            RWU    1
554  15 28            H      3333,3333
555  15 29    RS      R
556  15 30            B      RDTP
557  15 31    RSS     C      FILE,6
558  15 32            BE     HALT
559  15 33            B      RDTP
560  15 34    HALT    H      4444,4444     TURN SW E OFF
561  15 35            B      RSSW
562              ZZERRR  SBR    ZZESAX+6
563                      SBR    ZZEDUM,0
564                      SBR    ZZESX1+6,0+X1
565              ZZESAX  SBR    89,0
566                      SBR    ZZERX1+3
567                      LCA    15985+X1,ZZEREA
568                      MN     15981+X1,*+4
569                      BSP    0
570              ZZESX1  SBR    89,0
571              ZZEREA  DCW    =8
572                      BER    *+5
573              ZZERX1  B      0
574                      BCE    ZZERX1,ZZECNT,8
575                      MN     ZZEREA-4,*+4
576              ZZEBSP  BSP    0
577                      A      ZZEONE,ZZECNT
578                      C      ZZECNT,ZZESIX
579                      BH     ZZEREA-7
580                      BCE    *+5,ZZECNT,8
581                      B      ZZEBSP
582                      MN     ZZEREA-4,ZZEBS1+3
583                      MN     ZZEREA-4,ZZERTT+3
584              ZZERTT  RT     0,ZZEDUM
585                      A      ZZEONE,ZZERDT
586                      BCE    *+5,ZZERDT,3
587                      B      ZZERTT
588              ZZEBS1  BSP    0
589                      B      ZZEREA-7
590              ZZEONE  DCW    '1'
591              ZZESIX  DCW    '6'
592              ZZERDT  DCW    =1
593              ZZECNT  DCW    =1
594              ZZEDUM  DC     =1
595                      DCW    ' '
         215     PRE     DCW    =06
         223                    'D A T E'
```

		SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
DS							
06			7	5397	N A29 106		160
			1	5404	4		160
			4	5405	/ 180		160
			1	5409	4		160
			1	5410	4		160
333			5	5411	U (U1 U		160
			7	5416	J C33 C33		161
			1	5423	1		161
			4	5424	B *7X		161
			7	5428	C A29 006		161
			5	5435	B U4U S		161
444	TURN SW E OFF		4	5440	B *7X		161
			7	5444	J 44U 44U		161
+6			4	5451	B /2U		162
,0			4	5455	H U7Z	GEN	162
+6,0+X1			7	5459	H W3S 000	GEN	162
			7	5466	H V0Z 0*0	GEN	162
+3			7	5473	H 089 000	GEN	162
X1,ZZEREA			4	5480	H V2W	GEN	162
X1,*+4			7	5484	L IYE V1X	GEN	163
			7	5491	D IYA V0/	GEN	163
			5	5498	U (U0 B	GEN	163
			7	5503	H 089 000	GEN	163
			8	5517		GEN	163
			5	5518	B V2K L	GEN	163
,ZZECNT,8			4	5523	B 000	GEN	164
-4,,*+4			8	5527	B V2T W3/ 8	GEN	164
			7	5535	D V1T V4V	GEN	164
,ZZECNT			5	5542	U (U0 B	GEN	164
,ZZESIX			7	5547	A W2Y W3/	GEN	164
-7			7	5554	C W3/ W2Z	GEN	164
ECNT,8			5	5561	B V1* U	GEN	165
			8	5566	B V7Y W3/ 8	GEN	165
-4,,ZZEBS1+3			4	5574	B V4S	GEN	165
-4,,ZZERTT+3			7	5578	D V1T W2S	GEN	165
UM			7	5585	D V1T V9V	GEN	165
,ZZERDT			8	5592	N (U0 W3S R	GEN	165
ERDT,3			7	5600	A W2Y W3*	GEN	166
			8	5607	B W1Z W3* 3	GEN	166
			4	5615	B V9S	GEN	166
-7			5	5619	U (U0 B	GEN	166
			4	5624	B V1*	GEN	166
			1	5628		GEN	166
			1	5629		GEN	166
			1	5630		GEN	167
			1	5631		GEN	167
			1	5632		GEN	167
			1	5633		GEN	167
E'			6	5639		AREA	167
			7	5646		LIT	167

```
SEQ PG LIN  LABEL   OP     OPERANDS

        419                'CARD OUT OF SEQUENCE'
        422                'NO MATCH FOR THIS CARD'
        432                'E697XX W1 '
                           '001'
        437  HDATE         =08
        443                'INVALID HEADER'
                           ' '
        466                'TAPE ERROR'
        521                'WRONG LENGTH RECORD'
                           '999'
                           '000'
                           'EOJ'
        541                'END OF JOB'
596 15 22          END     START
```

NDS

	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
OUT OF SEQUENCE'						
TCH FOR THIS CARD'		20	5686		LIT	167
XX W1 '		22	5688		LIT	168
		10	5698		LIT	168
		3	5701		LIT	168
ID HEADER'		8	5709		AREA	169
		14	5723		LIT	169
ERROR'		1	5724		LIT	169
LENGTH RECORD'		10	5734		LIT	169
		19	5753		LIT	170
		3	5756		LIT	170
		3	5759		LIT	170
F JOB'		3	5762		LIT	170
		10	5772		LIT	170
				/ 12# 080		171

B

Program Specification
101B27.100
PS-03

1. General.

1.1 Purpose of Program Specification. The objective for writing a Program Specification for Project 101B27.100, PS-03 is to describe the program design to permit program production by the program coder with sufficient detailed information so that the design ultimately may be translated into instructions.

1.2 Project Reference. The outputs of the Officer Active Duty Master Record Print Procedure, Project 101B27.100, PS-03 will be analyzed by the Scientific Advisory Teams at COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT to determine what future application may be made of these data.

1.3 Applicable Documents.

(a) Functional Description 101B27.100, FD-01.

(b) Data Requirements Document 101B27.100, RD-01.

(c) System Specification 101B27.100, SS-01.

(d) Program Specification 101B27.100, PS-01.

(e) Program Specification 101B27.100, PS-02.

(f) BUPERS ltr Pers-N103-PA of 13 Nov 1967. Manual of Active Duty Officer Automated Record (Preliminary Revision to NAVPERS 15,921A).

(g) COMASWFORLANT OPORDER 71-(YR).

2. Scope.

2.1 Program Description. See System Specification 101B27.100, SS-01, paragraph 4.1.3.

2.2 Program Function. This program will fulfill the requirement to produce a detailed list of the new Active Duty Master Magnetic Tape Record file. Programs described in Program Descriptions 101B27.100, PS-01 and PS-02 will fulfill the remaining programming requirements of this system. This program meets these requirements by:

(a) A routine to check for the proper tape header label.

(b) A routine to print incorrectable read errors.

(c) A routine to check for and print wrong length record.

(d) A routine to select records by parameter cards for printing.

(e) A routine to select all records for printing.

(f) A routine to print a pertinent field within the record with descriptive headings.

(g) An interrupt and restart routine.

(h) A routine to handle blocked records.

2.3 Timing. It is anticipated that this program will print at the rate of eleven records per minute. When the complete Active Duty Officer Master Magnetic Tape Record file is printed throughput time will be approximately three hours. Maximum response time for one parameter card will be approximately ten minutes. This time will, of course, vary with the physical location of the record on the tape.

2.4 Accuracy. Not applicable.

2.5 Flexibility. See System Specification 101B27.100, SS-01, paragraph 2.6.

3. Environment.

3.1 Software Environment.

IBM Autocoder Compiler with ZZERRR macro.

3.2 Program Interfaces. See System Specification 101B27.100, SS-01, paragraph 3.3.

3.3 Storage.

(a) Core storage. Approximately 6,000 permanent positions.

(b) Tape storage. One tape unit.

3.5 Controls. Not applicable.

4. Design Data.

4.1 Terminal Procedures. This program is similar to the program described in Program Specification 101B27.100, SS-01 inputs in paragraph 4.1.3.

4.2 Inputs. See System Specification 101B27.100, SS-01 outputs in paragraph 4.1.3.

4.3 Outputs. See System Specification 101B27.100, SS-01 outputs in paragraph 4.1.3.

4.4. Data Environment.

(a) Title. Active Duty Officer Master Magnetic Tape Record.

(b) Description. This record contains officer history data including such items as schools, grades, rank, aircraft experience and activities.

(c) Start of file. 80 character header record.

(d) End of file. Tape mark, 80 character trailer label and tape mark.

(e) Number of records. A maximum of approximately 2,000.

(f) Start of record. First position is Gain/Loss indicator.

(g) End of record. Record mark.

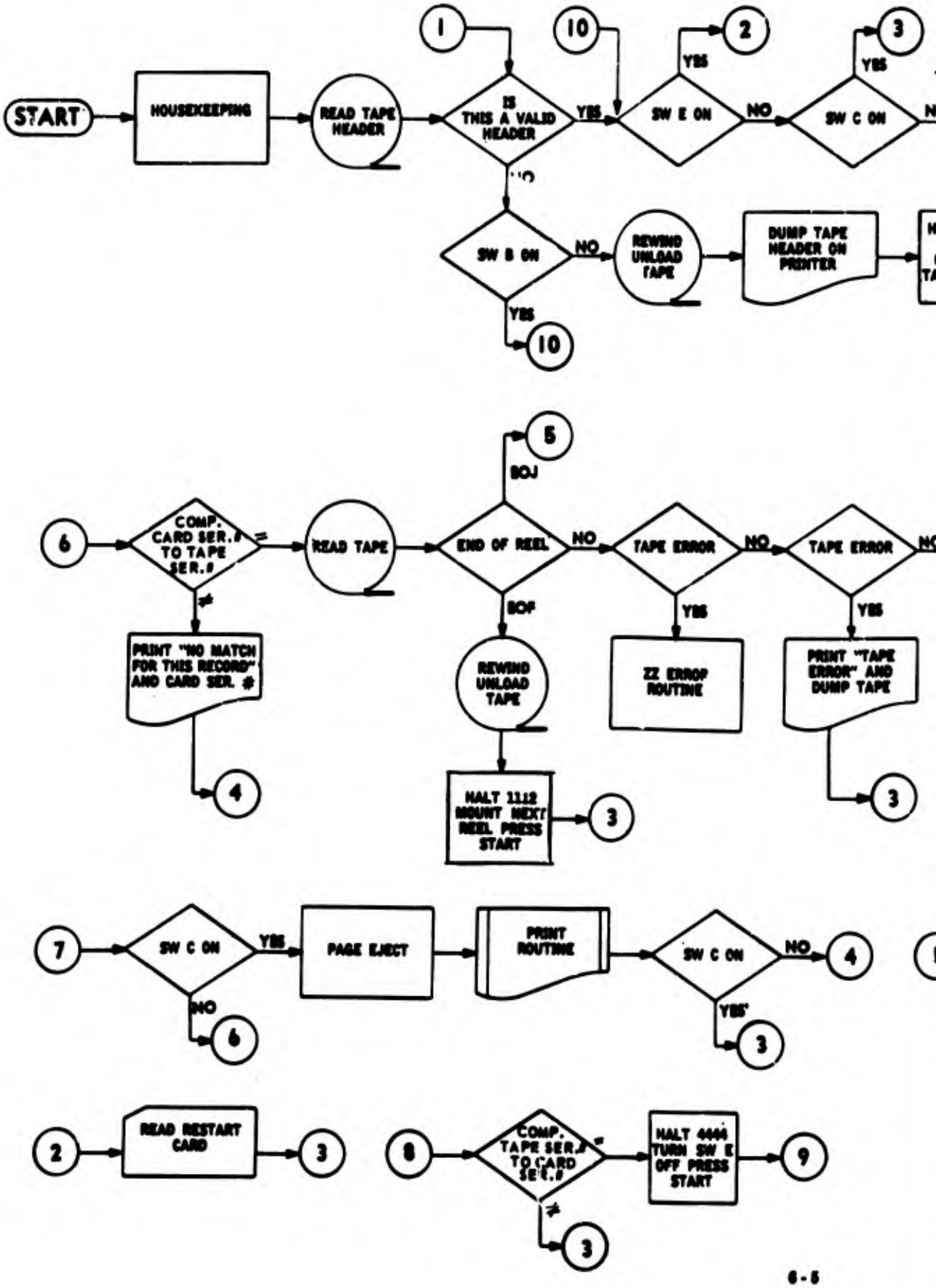
(h) Storage. Magnetic tape.

(i) Normal order of file. File number sequence.

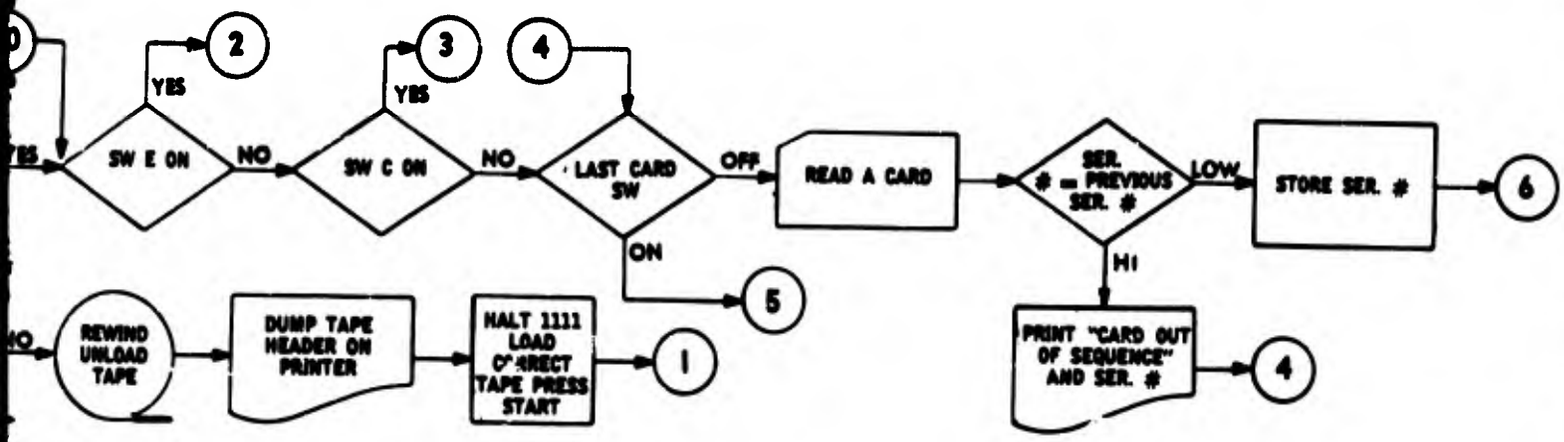
(j) File classification. Unclassified but handled on a "need to know" basis.

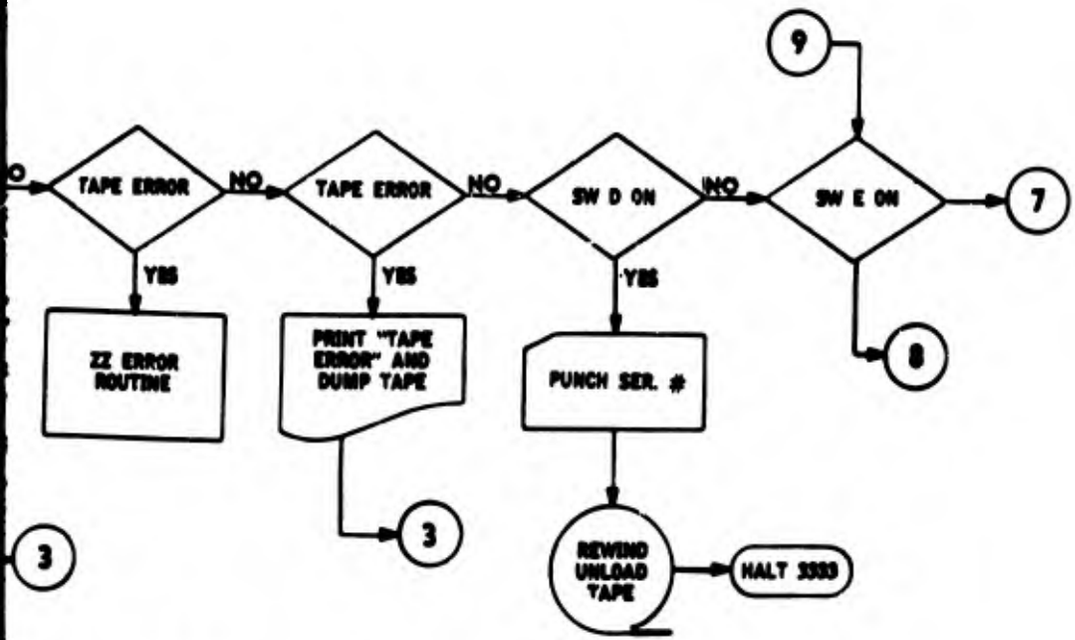
(k) Retention cycle. Minimum of two quarters.

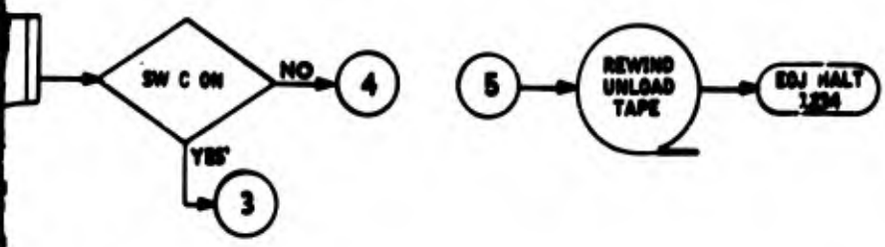
4.5 Logical Flow. See macro charts.


START
HOUSEKEEPING
READ TAPE HEADER
IS THIS A VALID HEADER
YES
SW E ON
NO
SW C ON
SW B ON
REWIND UNLOAD TAPE
DUMP TAPE HEADER ON PRINTER
COMP. CARD SER.# TO TAPE SER.#
READ TAPE
END OF REEL
TAPE ERROR
PRINT "NO MATCH FOR THIS RECORD" AND CARD SER. #
REWIND UNLOAD TAPE
ZZ ERROR ROUTINE
PRINT "TAPE ERROR" AND DUMP TAPE
HALT 1112 MOUNT NEXT REEL PRESS START
SW C ON
PAGE EJECT
PRINT ROUTINE
READ RESTART CARD
COMP. TAPE SER.# TO CARD SER.#
HALT 4444 TURN SW E OFF PRESS START

A

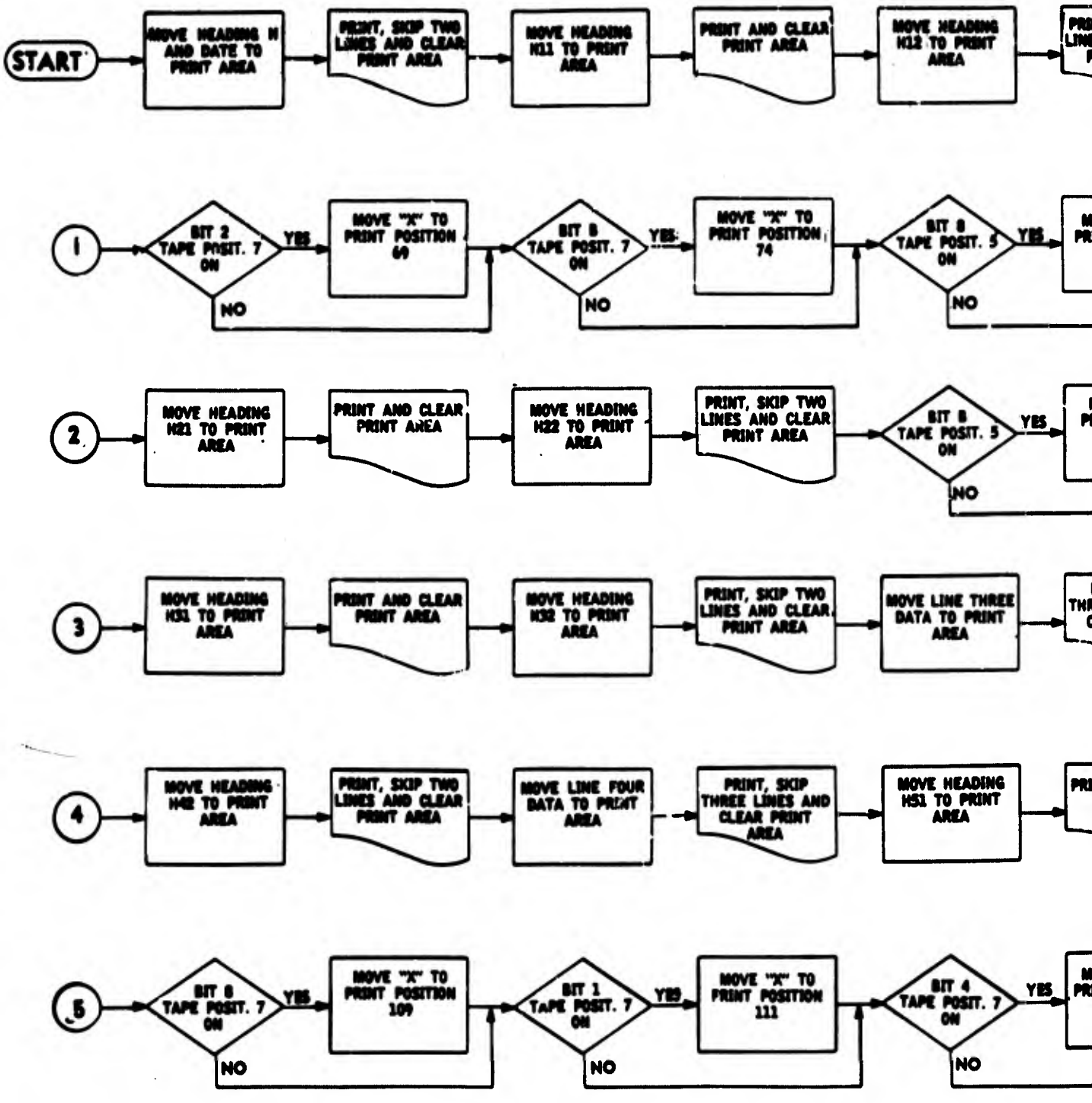




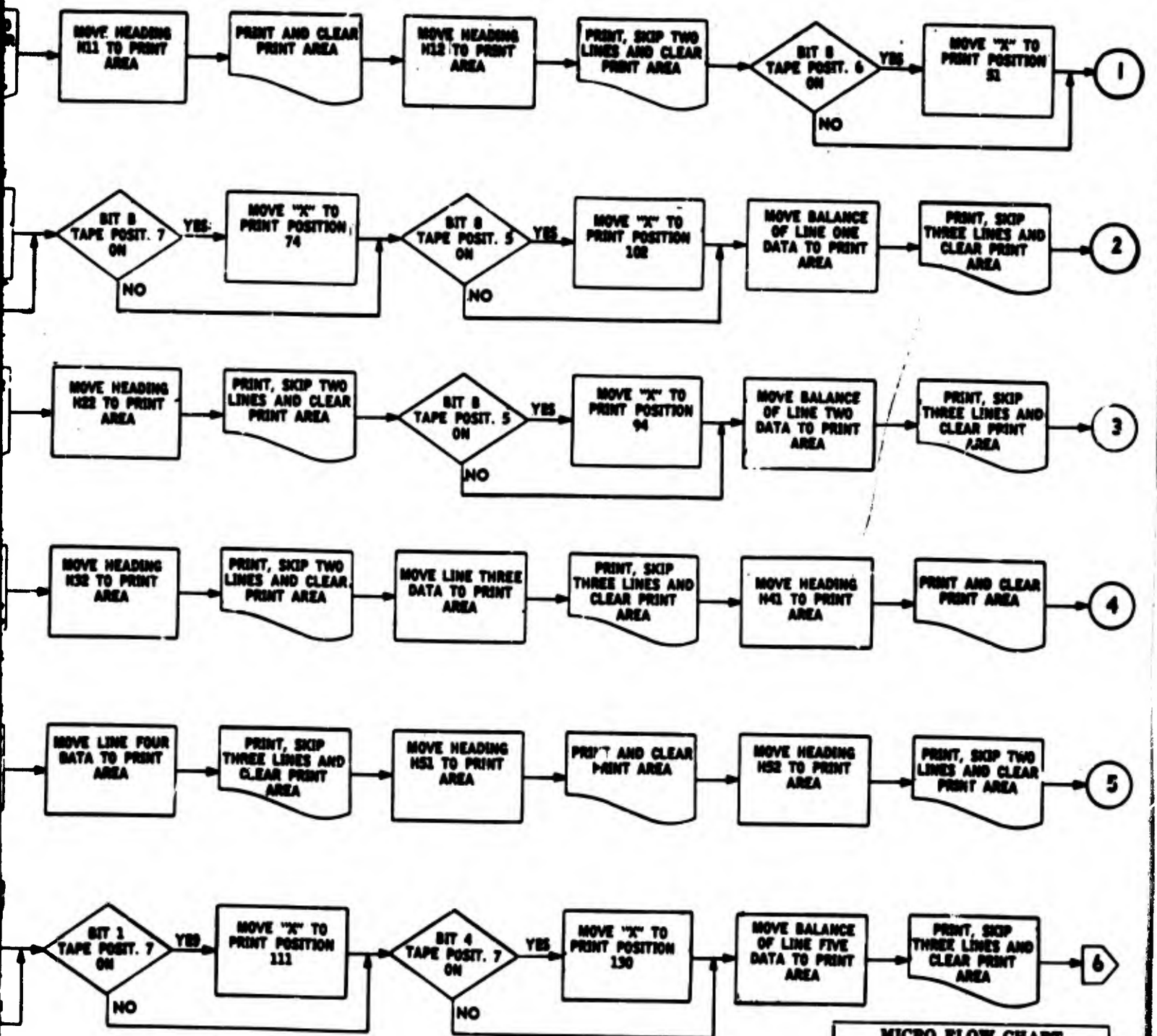


MACRO FLOW CHART		
PRINT OFFICE TAPE		
J. A. McLaurin — March 18, 1966		
101B87.100	PS-66	1 of 1

B

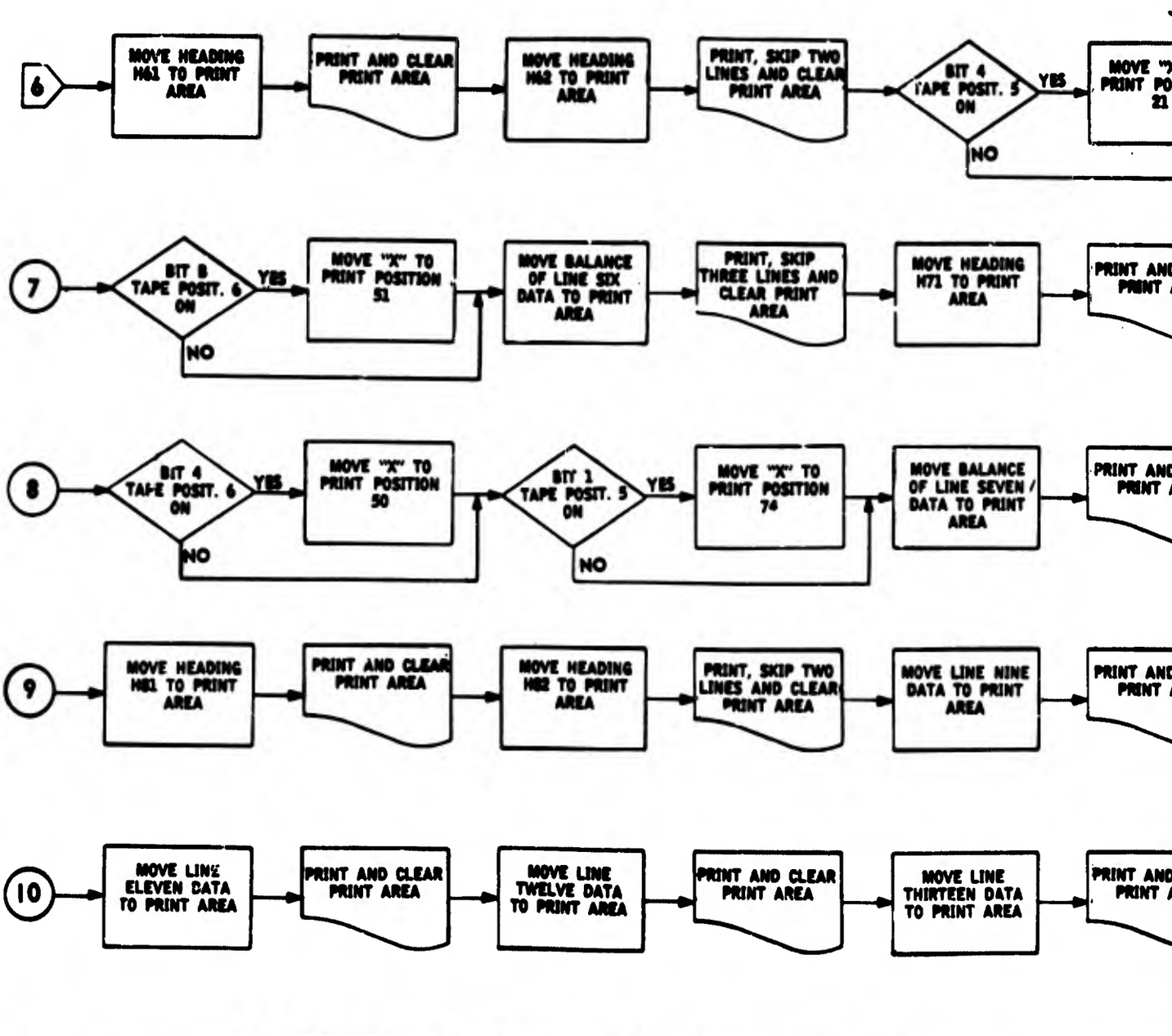

START
MOVE HEADING H AND DATE TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
MOVE HEADING H11 TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE HEADING H12 TO PRINT AREA
1
BIT 2 TAPE POSIT. 7 ON
YES
NO
MOVE "X" TO PRINT POSITION 69
BIT 8 TAPE POSIT. 7 ON
YES
NO
MOVE "X" TO PRINT POSITION 74
BIT 8 TAPE POSIT. 5 ON
YES
NO
2
MOVE HEADING H21 TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE HEADING H22 TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
BIT 8 TAPE POSIT. 5 ON
YES
NO
3
MOVE HEADING H31 TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE HEADING H32 TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
MOVE LINE THREE DATA TO PRINT AREA
4
MOVE HEADING H42 TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
MOVE LINE FOUR DATA TO PRINT AREA
PRINT, SKIP THREE LINES AND CLEAR PRINT AREA
MOVE HEADING H51 TO PRINT AREA
5
BIT 8 TAPE POSIT. 7 ON
YES
NO
MOVE "X" TO PRINT POSITION 109
BIT 1 TAPE POSIT. 7 ON
YES
NO
MOVE "X" TO PRINT POSITION 111
BIT 4 TAPE POSIT. 7 ON
YES
NO

A

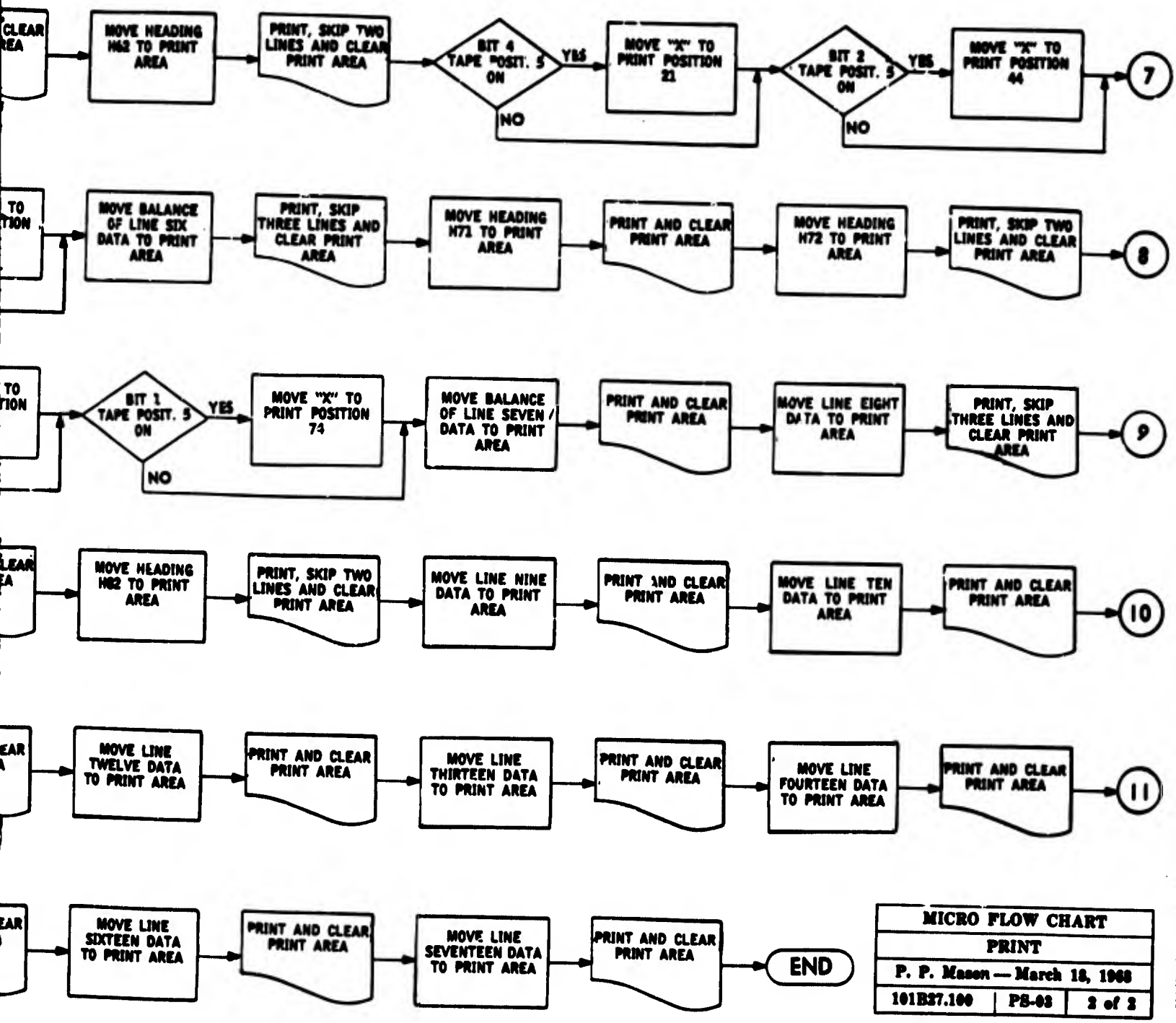


MICRO FLOW CHART		
PRINT		
P. P. Mason — March 18, 1966		
101B37.100	PS-01	1 of 2

B


6
MOVE HEADING H61 TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE HEADING H62 TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
BIT 4 TAPE POSIT. 5 ON
YES
NO
7
BIT 8 TAPE POSIT. 6 ON
YES
NO
MOVE "X" TO PRINT POSITION 51
MOVE BALANCE OF LINE SIX DATA TO PRINT AREA
PRINT, SKIP THREE LINES AND CLEAR PRINT AREA
MOVE HEADING H71 TO PRINT AREA
8
BIT 4 TAPE POSIT. 6 ON
YES
NO
MOVE "X" TO PRINT POSITION 50
BIT 1 TAPE POSIT. 5 ON
YES
NO
MOVE "X" TO PRINT POSITION 74
MOVE BALANCE OF LINE SEVEN DATA TO PRINT AREA
9
MOVE HEADING H81 TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE HEADING H82 TO PRINT AREA
PRINT, SKIP TWO LINES AND CLEAR PRINT AREA
MOVE LINE NINE DATA TO PRINT AREA
10
MOVE LINE ELEVEN DATA TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE LINE TWELVE DATA TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE LINE THIRTEEN DATA TO PRINT AREA
11
MOVE LINE FIFTEEN DATA TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE LINE SIXTEEN DATA TO PRINT AREA
PRINT AND CLEAR PRINT AREA
MOVE LINE SEVENTEEN DATA TO PRINT AREA

A



MICRO FLOW CHART		
PRINT		
P. P. Mason — March 18, 1968		
101B27.100	PS-03	2 of 2

B

```
CLEAR STORAGE 1      ,008015,022026,030037,044,049,053053N000000N00001026
CLEAR STORAGE 2      L068116,105106,11011?B101/19R=071029C029056B026/B00L
BOOTSTRAP            ,008015,022029,036040,047054,061068,072/061039

                                PRINT OFFICERS ACTIVE DUTY  REV    101827.100-

SEQ PG LIN  LABEL  OP    OPERANDS

101  1 01   000    JOB   PRINT OFFICERS ACTIVE DUTY  REV    101827.100-
102  1 02          CTL   5511
103  1 03          ORG   335
104  1 04          INCLD ZZERR
105  1 05   H      DCW   'O F F I C E R  A C T I V E  D U T Y  R E C O
106  1 06          DCW   'DATE OF  NAME FILE DEPENDENTS   O/S DEP  PUBL
107  1 07   H11    DC    'ECURITY* DECO ORDER  SER'
108  1 08          DCW   ' FILE     SSN                    NAME
109  1 09          DC    'EX RACE  BIRTH   CHG  CHG  PRI SEC O/S  DATE
110  1 10   H12    DC    'QTRS  T INV DATE CODE NUMBER GRP'
111  1 11          DCW   'PRES  PROM *DESIG-* PERM   SPOT PROM  SOURCE
112  1 12          DC    ' *LOSS CODE* YR  SERV *PRECEDENCE NUMBER* OVER
113  1 13   H21    DC    'ATE OF GAIN--* *-DATE OF RANK--*'
114  1 14          DCW   'GRADE STAT CUR PEND GRADE   GRADE I   ORG CUR
115  1 15          DC    ' BUPERS  DOD GRP DATE  ACTIVE    INACTIVE FOUR
116  1 16   H22    DC    'RENT  INITIAL  PRESENT  SPOT PRO'
117  1 17          DCW   'PAY ENTRY  ACT DUTY   ACT COMM  FIRST *-------
118  1 18          DC    '-----P R O M O T I O N A L  H I S T O R Y-----
119  1 19   H31    DC    '--------* *PREV MIL SERV* CL RET'
120  1 20          DCW   'BASE DATE  BASE DATE  BASE DATE COMM  WARRANT
121  1 21          DC    'NS      LTJG      LT      LCDR      CDR       CA
122  1 22   H32    DC    '   FLAG   BRAN YR MO RANK YR YR'
123  1 23          DCW   '  PROF   *---BUPERS UNIT IDENT CODE----* PAMI
124  1 24          DC    'AIL  ACCTG GAIN ORDER  PHASED  PRESENT *---PRI
125  1 25   H41    DC    '--* *-COLLATERAL-*  TRAIN   QUAL'
126  1 26          DCW   'SERVICE  CURRENT  PREV   PENDING  ADDU    C P
127  1 27          DC    ' P    C  P LOSS  C A  ACTIVITY BILLET      DUT
128  1 28   H42    DC    '        DUTIES      DUTIES  DATE'
129  2 01          DCW   'FUNC *BILLET SEQ CODE* *----REPORT DATE------*
130  2 02          DC    'STIMATED LOSS CODE-* *ROTA DATE* *ROTA PROJ* *
131  2 03   H51    DC    ' DATE* RESTR DETAILER ASSIG MORE'
132  2 04          DCW   'C P   CUR  PEND  ADDU  CUR DUTY  PEND  ADDU
133  2 05          DC    '   DATE    PEND DATE  CUR   PEND  CUR   PEND
134  2 06   H52    DC    '  PEND  C P  REMARKS  PEND  ADDU'
135  2 07          DCW   'DETACH  AERO DESIG *----COMBAT DUTY----* FLIGH
136  2 08          DC    'UBMARINE *CONST SERV*  *PILOT/NFO TOT FLIGHT H
137  2 09   H61    DC    'CARR INSTRUMENT  *--OPNAV 3760-*'
138  2 10          DCW   ' PEND    CUR  PEND CUR MOS TOUR DATE A/C STUDE
139  2 11          DC    'UAL DATE   IND   YR    TOTAL 5-YR JET   VH   P
140  2 12   H62    DC    'LAND   RATING    DATE       TYPE'
141  2 13          DCW   'DOD APTITUDE *----------E D U C A T I O N-----
142  2 14          DC    '-*  *-L A N G U A G E S--*  DESIG CHANGE  PILO
143  2 15   H71    DC    'SIG   NFO   PILOT  FLYING STATUS'
144  2 16          DCW   '  M    V    T  COLLEGE    MO YR SPON LEV MAJ SPE
145  2 17          DC    'RE  LANG CODE TEST YR MORE   DATE DESIG   HTA
146  2 18   H72    DC    'A    DESIG   CAT    CURRENT PEND'
147  2 19          DCW   '                SERVICE SCHOOLS *--QUALIFICATIONS-
```

A

```
26,030037,044,049,053053N000000N00001026                                    1
06,110117B101/I9R=071029C029056B026/B001/0991,001/00111710+                 2
39,036040,047054,061068,072/061039                ,J010011040               3

OFFICERS ACTIVE DUTY  REV    101B27.100-PS-03        00003          PAGE    1

OS                                                SFX CT  LOCN  INSTRUCTION TYPE  CARD

OFFICERS ACTIVE DUTY  REV    101B27.100-PS-03

                                                                  0335
                                                                        MACRO
 I C E R  A C T I V E  D U T Y  R E C O R D'          48  0382              5
F  NAME FILE DEPENDENTS   O/S DEP  PUBLIC *S'        50  0432              7
Y* DECO ORDER  SER'                                  24  0456              7
     SSN                    NAME                 S'  50  0506              9
E  BIRTH   CHG  CHG  PRI SEC O/S  DATE AR    '      50  0556             11
T INV DATE CODE NUMBER GRP'                          32  0588             12
PROM *DESIG-* PERM   SPOT PROM  SOURCE   RES'       50  0638             14
 CODE* YR  SERV *PRECEDENCE NUMBER* OVER *-D'        50  0688             16
 GAIN--* *-DATE OF RANK--*'                          32  0720             17
STAT CUR PEND GRADE   GRADE I   ORG CUR  B/U'       50  0770             19
S  DOD GRP DATE  ACTIVE    INACTIVE FOUR CUR'       50  0820             21
INITIAL  PRESENT  SPOT PRO'                          32  0852             22
TRY  ACT DUTY   ACT COMM  FIRST *----------'         50  0902             24
 R O M O T I O N A L  H I S T O R Y---------'       50  0952             26
--* *PREV MIL SERV* CL RET'                         32  0984             27
ATE  BASE DATE  BASE DATE COMM  WARRANT    E'       50  1034             29
, LTJG      LT       LCDR     CDR      CAPT  '      50  1084             31
G   BRAN YR MO RANK YR YR'                           31  1115             32
  *---BUPERS UNIT IDENT CODE----* PAMI  DET'        50  1165             34
CCTG GAIN ORDER  PHASED  PRESENT *---PRIMARY'       50  1215             36
COLLATERAL-*  TRAIN   QUAL'                         32  1247             37
E  CURRENT  PREV   PENDING  ADDU    C P   C  '      50  1297             39
C  P LOSS  C A  ACTIVITY BILLET      DUTIES '       50  1347             41
  DUTIES      DUTIES  DATE'                         32  1379             42
BILLET SEQ CODE* *----REPORT DATE------* *-E'       50  1429             44
ED LOSS CODE-* *ROTA DATE* *ROTA PROJ* *TOUR'       50  1479             46
 RESTR DETAILER ASSIG MORE'                         32  1511             47
CUR  PEND  ADDU  CUR DUTY  PEND  ADDU    CUR'       50  1561             49
     PEND DATE  CUR   PEND  CUR   PEND  CUR  '      50  1611             51
  C P  REMARKS  PEND  ADDU'                         32  1643             52
  AERO DESIG *----COMBAT DUTY----* FLIGHT  S'       50  1693             54
IE *CONST SERV*  *PILOT/NFO TOT FLIGHT HR*   '      50  1743             56
ISTRUMENT  *--OPNAV 3760-*'                         32  1775             57
  CUR  PEND CUR MOS TOUR DATE A/C STUDENT Q'        50  1825             59
E   IND   YR    TOTAL 5-YR JET   VH   PC   '       50  1875             61
RATING    DATE       TYPE'                          32  1907             62
ITUDE *----------E D U C A T I O N---------'       50  1957             64
  A N G U A G E S--*  DESIG CHANGE  PILOT DE'       50  2007             66
FO   PILOT  FLYING STATUS'                          32  2039             67
V   T  COLLEGE    MO YR SPON LEV MAJ SPEC MO'       50  2089             69
G CODE TEST YR MORE   DATE DESIG   HTA   LT'       50  2139             71
SIG   CAT    CURRENT PEND'                          32  2171             72
      SERVICE SCHOOLS *--QUALIFICATIONS--*  '       50  2221             74
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B

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SEQ PG LIN  LABEL   OP    OPERANDS

148  2 20           DC    'AIRCRAFT MODEL EXPERIENCE *------P A S T  D
149  2 21   H81     DC    ' S T A T I O N S------*  SPECIAL'
150  2 22           DCW   'SUBSPECIALTY SCH  COMP   WKS NOBC STATION MO
151  2 23           DC    'MODEL HRS  CARR DESIG YR  REPORT DETACH
152  2 24   H82     DC    'TY      TYPE HOME PT MOS   DESIG'
153  3 01   TAPE    DA    1X1121
154  3 02   YN1           5,6
155  3 03   YN2           7,7
156  3 04   PAMI          9,9
157  3 05   COMMOS        21,22
158  3 06   BLDUP         23,23
159  3 07   DECOR         24,24
160  3 08   GLI           25,25
161  3 09   FILE          26,31
162  3 10   NAME          32,62
163  3 11   GRADE         63,63
164  3 12   PROM          64,67
165  3 13   PRMGR         68,68
166  3 14   SPGRD         69,69
167  3 15   SPDTI         70,70
168  3 16   PRECN         71,79
169  3 17   YRGRP         80,82
170  3 18   DESIG         83,86
171  3 19   OSC           87,89
172  3 20   CSC           90,92
173  3 21   RACE          93,93
174  3 22   DOB           94,99
175  3 23   PCAT          100,100
176  3 24   SGC           101,101
177  3 25   PAD           102,102
178  3 26   FSC           103,103
179  3 27   LOSS          104,106
180  3 28   ELC           107,107
181  3 29   ELD           108,113
182  3 30   BUIC          114,120
183  4 01   DTRPT         121,126
184  4 02   PRD           127,130
185  4 03   TOUR          131,134
186  4 04   FAC           135,135
187  4 05   COG           136,137
188  4 06   ORDST         138,138
189  4 07   RP            139,140
190  4 08   CAT           141,143
191  4 09   DEPPR         144,144
192  4 10   DEPSC         145,145
193  4 12   SECBG         146,146
194  4 13   SSN           147,155
195  4 14   PEBD          168,173
196  4 15   ADBD          174,179
197  4 16   ACBD          180,185
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A

NDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
RAFT MODEL EXPERIENCE *------P A S T D U T Y '		50	2271			76
A T I O N S------* SPECIAL'		32	2303			77
ECIALTY SCH COMP WKS NOBC STATION MOS KEY '		50	2353			79
HRS CARR DESIG YR REPORT DETACH ACTIVI.'		50	2403			81
TYPE HOME PT MOS DESIG'		31	2434			82
			2435	3555		82
			2440		FIELD	82
			2441		FIELD	82
			2443		FIELD	82
			2456		FIELD	83
			2457		FIELD	83
			2458		FIELD	83
			2459		FIELD	83
			2465		FIELD	83
			2496		FIELD	83
			2497		FIELD	84
			2501		FIELD	84
			2502		FIELD	84
			2503		FIELD	84
			2504		FIELD	84
			2513		FIELD	84
			2516		FIELD	85
			2520		FIELD	85
			2523		FIELD	85
			2526		FIELD	85
			2527		FIELD	85
			2533		FIELD	85
			2534		FIELD	86
			2535		FIELD	86
			2536		FIELD	86
			2537		FIELD	86
			2540		FIELD	86
			2541		FIELD	86
			2547		FIELD	87
			2554		FIELD	87
			2560		FIELD	87
			2564		FIELD	87
			2568		FIELD	87
			2569		FIELD	87
			2571		FIELD	88
			2572		FIELD	88
			2574		FIELD	88
			2577		FIELD	88
			2578		FIELD	88
			2579		FIELD	88
			2580		FIELD	89
			2589		FIELD	89
			2607		FIELD	89
			2613		FIELD	89
			2619		FIELD	89

B

SEQ	PG	LIN	LABEL	OP	OPERANDS
198	4	17	IGAIN		186,191
199	4	18	RGAIN		192,197
200	4	19	COMM		198,201
201	4	20	DOR		202,207
202	4	21	SPDOR		208,213
203	4	22	SECDT		214,219
204	4	23	YFER		220,221
205	4	24	PCN		222,227
206	4	25	COMBTR		245,245
207	4	26	DTRMK		258,261
208	4	27	COMBAT		262,264
209	4	28	COMAC		265,265
210	4	29	HTA		266,269
211	4	30	LTA		270,273
212	5	01	NFODT		274,277
213	5	02	SUBOT		278,281
214	5	03	CLYR		282,283
215	5	04	SRVDT		284,285
216	5	05	PSD		286,291
217	5	06	DOS		292,292
218	5	07	DOSDT		293,296
219	5	08	DUTR		297,301
220	5	09	DUTRQ		302,305
221	5	10	BILDT		306,309
222	5	11	PRIDU		310,323
223	5	12	BSC		324,328
224	5	13	COLDU		329,342
225	5	14	LOSSD		343,345
226	5	15	BUICL		346,352
227	5	16	ACTVY		353,360
228	5	17	PMSBR		361,361
229	5	18	PMSFR		365,366
230	5	19	PMSMO		367,368
231	5	20	PMSHR		369,372
232	5	21	PH		373,420
233	5	22	DESCH1		421,428
234	5	23	DESCH2		429,436
235	5	24	DORE		437,443
236	5	25	CNSRVI		452,452
237	5	26	CONSRV		453,454
238	5	27	PRECI		455,462
239	5	28	ED1		463,482
240	5	29	ED2		483,502
241	5	30	LANG1		503,506
242	6	01	LNGP1		507,507
243	6	02	LNGPR1		508,508
244	6	03	LNGDT1		512,513
245	6	04	LANG2		514,517
246	6	05	LNGP2		518,518
247	6	06	LNGPR2		519,519

A

NDS	SFX	CT	LOCN	INSTRUCTION TYPE	CARD
91			2625	FIELD	89
97			2631	FIELD	90
01			2635	FIELD	90
07			2641	FIELD	90
13			2647	FIELD	90
19			2653	FIELD	90
21			2655	FIELD	90
27			2661	FIELD	91
45			2679	FIELD	91
61			2695	FIELD	91
64			2698	FIELD	91
65			2699	FIELD	91
69			2703	FIELD	91
73			2707	FIELD	92
77			2711	FIELD	92
81			2715	FIELD	92
83			2717	FIELD	92
85			2719	FIELD	92
91			2725	FIELD	92
92			2726	FIELD	93
96			2730	FIELD	93
01			2735	FIELD	93
05			2739	FIELD	93
09			2743	FIELD	93
13			2757	FIELD	93
18			2762	FIELD	94
2			2776	FIELD	94
5			2779	FIELD	94
2			2786	FIELD	94
0			2794	FIELD	94
1			2795	FIELD	94
6			2800	FIELD	95
8			2802	FIELD	95
2			2806	FIELD	95
0			2854	FIELD	95
8			2862	FIELD	95
6			2870	FIELD	95
3			2877	FIELD	96
2			2886	FIELD	96
4			2888	FIELD	96
2			2896	FIELD	96
2			2916	FIELD	96
2			2936	FIELD	96
6			2940	FIELD	97
7			2941	FIELD	97
8			2942	FIELD	97
3			2947	FIELD	97
7			2951	FIELD	97
8			2952	FIELD	97
9			2953	FIELD	98

B

SEQ	PG	LIN	LABEL	OP	OPERANDS
248	6	07	LNGDT2		523,524
249	6	08	SUBSP1		525,529
250	6	09	SUBSP2		530,534
251	6	10	D3760		535,538
252	6	11	T3760		539,539
253	6	12	PLTHR		540,544
254	6	13	P15YR		545,548
255	6	14	JTHRS		549,552
256	6	15	VHHRS		553,556
257	6	16	PCTOT		557,560
258	6	17	CLTOT		561,563
259	6	18	INST		567,567
260	6	19	ACMOD1		570,585
261	6	20	ACMOD2		586,601
262	6	21	ACMOD3		602,617
263	6	22	ACMOD4		618,633
264	6	23	ACMOD5		634,649
265	6	24	SPDES1		650,652
266	6	25	SPDES2		653,655
267	6	26	SPDES3		656,658
268	6	27	SPDES4		659,661
269	6	28	SPDES5		662,664
270	6	29	SPDES6		665,667
271	6	30	SPDES7		668,670
272	7	01	SPDES8		671,673
273	7	02	SPDES9		674,676
274	7	03	SCH1		677,685
275	7	04	SCH2		686,694
276	7	05	SCH3		695,703
277	7	06	SCH4		704,712
278	7	07	SCH5		713,721
279	7	08	QL1		722,731
280	7	09	QL2		732,741
281	7	10	QL3		742,751
282	7	11	QL4		752,761
283	7	12	QL5		762,771
284	7	13	QL6		772,781
285	7	14	QL7		782,791
286	7	15	PDS1		792,824
287	7	16	PDS2		825,857
288	7	17	PDS3		858,890
289	7	18	PDS4		891,923
290	7	19	PDS5		924,956
291	7	20	PDS6		957,989
292	7	21	PDS7		990,1022
293	7	22	PDS8		1023,1055
294	7	23	CATP		1056,1056
295	7	24	COGP		1057,1058
296	7	25	PADP		1059,1059
297	7	26	FSCP		1060,1060

DS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
4						
9			2958		FIELD	98
4			2963		FIELD	98
8			2968		FIELD	98
9			2972		FIELD	98
4			2973		FIELD	98
8			2978		FIELD	99
2			2982		FIELD	99
6			2986		FIELD	99
0			2990		FIELD	99
3			2994		FIELD	99
7			2997		FIELD	99
5			3001		FIELD	100
1			3019		FIELD	100
7			3035		FIELD	100
3			3051		FIELD	100
9			3067		FIELD	100
2			3083		FIELD	100
5			3086		FIELD	101
8			3089		FIELD	101
1			3092		FIELD	101
4			3095		FIELD	101
7			3098		FIELD	101
0			3101		FIELD	101
3			3104		FIELD	102
6			3107		FIELD	102
9			3110		FIELD	102
4			3119		FIELD	102
8			3128		FIELD	102
2			3137		FIELD	102
			3146		FIELD	103
			3155		FIELD	103
			3165		FIELD	103
			3175		FIELD	103
			3185		FIELD	103
			3195		FIELD	103
			3205		FIELD	104
			3215		FIELD	104
			3225		FIELD	104
			3258		FIELD	104
			3291		FIELD	104
			3324		FIELD	104
			3357		FIELD	105
			3390		FIELD	105
2			3423		FIELD	105
55			3456		FIELD	105
56			3489		FIELD	105
58			3490		FIELD	105
59			3492		FIELD	106
60			3493		FIELD	106
			3494		FIELD	106

B

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SEQ  PG LIN  LABEL   OP     OPERANDS

298   7 27   FACP           1061,1061
299   7 28   RPP            1062,1063
300   7 29   ELCP           1064,1064
301   7 30   ELDP           1065,1068
302   8 01   PAMIP          1069,1069
303   8 02   PRDP           1070,1073
304   8 03   TOURP          1074,1077
305   8 04   EDAP           1078,1081
306   8 05   EDD            1082,1085
307   8 06   BUICP          1086,1092
308   8 07   BSCP           1093,1097
309   8 08   TYPEAP         1098,1098
310   8 09   DESIGP         1099,1101
311   8 10   ORSTA          1102,1102
312   8 11   BUICA          1103,1109
313   8 12   BSCA           1110,1114
314   8 13   DRPTA          1115,1120
315   8 14   GRMK   DCW     ' '
316   8 15          DCW     ' '
317   8 16   EWDT1  DCW     '  /  / 0'
318   8 17   EWDT2  DCW     '  / 0'
319   8 18   EWDT3  DCW     ' / 0'
320   8 19          DCW     '  /  /  +  /  /  +  /  /  +  /  /  +  /  /  +
321   8 20   EWPH   DC      '/  +  /  /  +  /  /  '
322   8 21   EWDORE DCW     '   +++   ++ '
323   8 22   EWED   DCW     '          +  +  ++ ++++ ++  +++  '
324   8 23   EWAC   DCW     '    ++    ++   ++   ++  '
325   8 24   EWSCH  DCW     '   ++  /  ++  '
326   8 25   EWQL   DCW     '    +++   ++++  ++ '
327   8 26   EWPDS  DCW     '  /  ++  /  +                ++ +++      +++  '
328   8 27   EWDES  DCW     '  /  ++    '
329   8 28   TPH    DCW     =1
330   8 29          DC      =49
331   8 30          DC      =31
332   9 01   START  B       HEAD
333   9 02          SW      1
334   9 03          BSS     RS,E
335   9 04          BSS     RDTP,C
336   9 05   READ   BLC     EOJ
337   9 06          R
338   9 07          C       6,PRE=6
339   9 08          BH      MESS1
340   9 09          MLC     6,PRE
341   9 10   COMP   C       PRE,FILE
342   9 11          BH      MESS2
343   9 12          BL      RDTP
344  10 01   PRINT  CC      1
345  10 02          MLC     H,289
346  10 03          MLC     'D A T E',323
347  10 04          MLC     HDATE=8,332
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SFX	CT	LOCN	INSTRUCTION			TYPE	CARD
		3495				FIELD	106
		3497				FIELD	106
		3498				FIELD	106
		3502				FIELD	107
		3503				FIELD	107
		3507				FIELD	107
		3511				FIELD	107
		3515				FIELD	107
		3519				FIELD	107
		3526				FIELD	108
		3531				FIELD	108
		3532				FIELD	108
		3535				FIELD	108
		3536				FIELD	108
		3543				FIELD	108
		3548				FIELD	109
		3554				FIELD	109
	1	3556					109
	1	3557					109
	8	3565					109
	5	3570					109
	4	3574					109
	50	3624					111
	21	3645					111
	12	3657					112
	33	3690					113
	24	3714					114
	14	3728					114
	19	3747					115
	46	3793					117
	11	3804					117
	1	3805					117
	49	3854					119
	31	3885					120
	4	3886	B	J2S			120
	4	3890	,	001			120
	5	3894	B	Q5X	E		121
	5	3899	B	K2X	C		121
	5	3904	B	QOU	A		121
	1	3909	1				121
	7	3910	C	006	+7T		121
	5	3917	B	-8/	U		121
	7	3922	M	006	+7T		121
	7	3929	C	+7T	M65		122
	5	3936	B	-9Z	U		122
	5	3941	B	K2X	T		122
	2	3946	F	1			122
	7	3948	M	382	289		122
	7	3955	M	+8+	323		122
	7	3962	M	+8Y	332		123

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SEQ PG LIN  LABEL   OP    OPERANDS

348 10 05           CC    S
349 10 06           W
350 10 07           CS
351 10 08           CS
352 10 09           MLC   H11,332
353 10 10           W
354 10 101          CS
355 10 102          CS
356 10 11           MLC   H12,332
357 10 12           CC    S
358 10 13           W
359 10 14           CS
360 10 15           CS
361 10 16           MLC   FILE,206
362 10 17           MLC   SSN,216
363 10 18           MLC   NAME,248
364 10 19           BBE   MOV1,YN1,8
365 10 20           B     PRACE
366 10 21    MOV1   MLC   'X',251
367 10 22    PRACE  MLC   RACE,255
368 10 23           LCA   EWDT1,266
369 10 24           MCE   DOB,266
370 10 25           BBE   MOV2,YN2,2
371 10 26           B     CK1
372 10 27    MOV2   MLC   'X',269
373 10 28    CK1    BBE   MOV3,YN2,-
374 10 29           B     DEP
375 10 30    MOV3   MLC   'X',274
376 11 01    DEP    MLC   DEPPR,279
377 11 02           MLC   DEPSC,283
378 11 03           MLC   DOS,287
379 11 04           LCA   EWDT2,296
380 11 05           MCE   DOSDT,296
381 11 06           BBE   MOV4,YN1-1,8
382 11 07           B     SEC
383 11 08    MOV4   MLC   'X',302
384 11 09    SEC    MLC   SECBG,307
385 11 10           LCA   EWDT1,316
386 11 11           MCE   SECDT,316
387 11 12           MLC   DECOR,319
388 11 13           MLC   PCN,328
389 11 14           MLC   SGC,331
390 11 15           CC    T
391 11 16           W
392 11 17           CS
393 11 18           CS
394 11 19           MLC   H21,332
395 11 20           W
396 11 201          CS
397 11 202          CS
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A

	SFX	CT	LOCN	INSTRUCTION TYPE	CARD
		2	3969	F S	123
		1	3971	2	123
		1	3972	/	123
		1	3973	/	123
		7	3974	M 456 332	123
		1	3981	2	123
		1	3982	/	124
		1	3983	/	124
		7	3984	M 588 332	124
		2	3991	F S	124
		1	3993	2	124
		1	3994	/	124
		1	3995	/	124
		7	3996	M M65 206	125
		7	4003	M N89 216	125
,8		7	4010	M M96 248	125
		8	4017	W 02Z M40 8	125
		4	4025	B 03W	125
		7	4029	M +8Z 251	126
6		7	4036	M N27 255	126
		7	4043	L E65 266	126
,2		7	4050	E N33 266	126
		8	4057	W 06Z M41 2	126
		4	4065	B 07W	127
-		7	4069	M +8Z 269	127
		8	4076	W 08Y M41 -	127
		4	4084	B 09V	127
9		7	4088	M +8Z 274	127
		7	4095	M N78 279	127
		7	4102	M N79 283	128
		7	4109	M P26 287	128
		7	4116	L E70 294	128
1,8		7	4123	E P30 296	128
		8	4130	W 14S M39 8	128
		4	4138	B 14Z	129
		7	4142	M +8Z 302	129
		7	4149	M N80 307	129
		7	4156	L E65 316	129
		7	4163	E 053 316	129
		7	4170	M M58 319	129
		7	4177	M 061 328	130
		7	4184	M N35 331	130
		2	4191	F T	130
		1	4193	2	130
		1	4194	/	130
		1	4195	/	130
		7	4196	M 720 332	130
		1	4203	2	131
		1	4204	/	131
		1	4205	/	131

B

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SEQ  PG  LIN  LABEL  OP    OPERANDS

398  11  21          MLC   H22,332
399  11  22          CC    S
400  11  23          W
401  11  231         CS
402  11  232         CS
403  11  24          MLC   GRADE,203
404  11  25          MLC   PROM,210
405  11  26          MLC   DESIG,215
406  11  27          MLC   DESIGP,219
407  11  28          MLC   PRMGR,223
408  11  29          MLC   SPGRD,231
409  11  30          MLC   SPOTI,235
410  12  01          MLC   OSC,241
411  12  02          MLC   CSC,245
412  12  03          MLC   BLDUP,249
413  12  04          MLC   LOSS,256
414  12  05          MLC   LOSSD,262
415  12  06          MLC   YRGRP,266
416  12  07          MLC   SRVDT,270
417  12  08          MLC   PRECN,281
418  12  09          MLC   PRECI,291
419  12  10          BBE   MOV5,YN1-1,-
420  12  11          B     GAIN
421  12  12  MOV5    MLC   'X',294
422  12  13  GAIN    LCA   EWDT1,305
423  12  14          MCE   RGAIN,305
424  12  15          LCA   EWDT1,314
425  12  16          MCE   IGAIN,314
426  12  17          LCA   EWDT1,323
427  12  18          MCE   DOR,323
428  12  19          LCA   EWDT1,332
429  12  20          MCE   SPDOR,332
430  12  21          CC    T
431  12  22          W
432  12  221         CS
433  12  222         CS
434  12  23          MLC   H31,332
435  12  24          W
436  12  25          CS
437  12  26          CS
438  12  27          MLC   H32,331
439  12  28          CC    S
440  12  29          W
441  13  01          CS
442  13  02          CS
443  13  03          LCA   EWDT1,208
444  13  04          MCE   PEBD,208
445  13  05          LCA   EWDT1,219
446  13  06          MCE   ADBD,219
447  13  07          LCA   EWDT1,230
```

SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
	7	4206	M 852 332		131
	2	4213	F S		131
	1	4215	2		131
	1	4216	/		131
	1	4217	/		132
	7	4218	M M97 203		132
	7	4225	M N01 210		132
	7	4232	M. N20 215		132
	7	4239	M E35 219		132
	7	4246	M N02 223		132
	7	4253	M N03 231		133
	7	4260	M N04 235		133
	7	4267	M N23 241		133
	7	4274	M N26 245		133
	7	4281	M M57 249		133
	7	4288	M N40 256		134
	7	4295	M P79 262		134
	7	4302	M N16 266		134
	7	4309	M P19 270		134
	7	4316	M N13 281		134
	7	4323	M Q96 291		135
	8	4330	W 34S M39 -		135
	4	4338	B 34Z		135
	7	4342	M +8Z 294		135
	7	4349	L E65 305		135
	7	4356	E 031 305		136
	7	4363	L E65 314		136
	7	4370	E 025 314		136
	7	4377	L E65 323		136
	7	4384	E 041 323		136
	7	4391	L E65 332		137
	7	4398	E 047 332		137
	2	4405	F T		137
	1	4407	2		137
	1	4408	/		137
	1	4409	/		137
	7	4410	M 984 332		137
	1	4417	2		138
	1	4418	/		138
	1	4419	/		138
	7	4420	M /15 331		138
	2	4427	F S		138
	1	4429	2		138
	1	4430	/		138
	1	4431	/		139
	7	4432	L E65 208		139
	7	4439	E 007 208		139
	7	4446	L E65 219		139
	7	4453	E 013 219		139
	7	4460	L E65 230		139

B

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SEQ PG LIN  LABEL  OP    OPERANDS

448 13 08          MCE   ACBD,230
449 13 09          LCA   EWDT2,237
450 13 10          MCE   COMM,237
451 13 11          LCA   EWPH,309
452 13 12          MCE   PH,309
453 13 13          MLC   PMSBR,313
454 13 14          MLC   PMSFR,317
455 13 15          MLC   PMSMO,320
456 13 16          MLC   PMSHR,325
457 13 17          MLC   CLYR,328
458 13 18          MLC   YFER,331
459 13 19          CC    T
460 13 20          W
461 13 21          CS
462 13 22          CS
463 13 23          MLC   H41,332
464 13 24          W
465 13 25          CS
466 13 26          CS
467 13 27          MLC   H42,332
468 13 28          CC    S
469 13 29          W
470 13 30          CS
471 14 01          CS
472 14 02          LCA   EWDT1,208
473 14 03          MCE   PSD,208
474 14 04          MLC   BUIC,216
475 14 05          MLC   BUICL,224
476 14 06          MLC   BUICP,232
477 14 07          MLC   BUICA,240
478 14 08          MLC   PAMI,243
479 14 09          MLC   PAMIP,245
480 14 10          MLC   COG,249
481 14 11          MLC   COGP,253
482 14 12          MLC   CAT,258
483 14 13          MLC   CATP,260
484 14 14          MLC   GLI,263
485 14 15          MLC   ORDST,268
486 14 16          MLC   ORSTA,270
487 14 17          MLC   ACTVY,280
488 14 18          LCA   EWDT2,287
489 14 19          MCE   BILDT,287
490 14 20          MLC   PRIDU,303
491 14 21          MLC   COLDU,318
492 14 22          MLC   DUTR,325
493 14 23          LCA   EWDT2,332
494 14 24          MCE   DUTRQ,332
495 14 25          CC    T
496 14 26          W
497 14 27          CS
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A

SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
	7	4467	E D19 230		140
	7	4474	L E70 237		140
	7	4481	E D35 237		140
	7	4488	L F45 309		140
	7	4495	E Q54 309		140
	7	4502	M P95 313		141
	7	4509	M Q00 317		141
	7	4516	M Q02 320		141
	7	4523	M Q06 325		141
	7	4530	M P17 328		141
	7	4537	M D55 331		142
	2	4544	F T		142
	1	4546	2		142
	1	4547	/		142
	1	4548	/		142
	7	4549	M S47 332		142
	1	4556	2		142
	1	4557	/		143
	1	4558	/		143
	7	4559	M T79 332		143
	2	4566	F S		143
	1	4568	2		143
	1	4569	/		143
	1	4570	/		143
	7	4571	L E65 208		144
	7	4578	E P25 208		144
	7	4585	M N54 216		144
	7	4592	M P86 224		144
	7	4599	M E26 232		144
	7	4606	M E43 240		145
	7	4613	M M43 243		145
	7	4620	M E03 245		145
	7	4627	M N71 249		145
	7	4634	M D92 253		145
	7	4641	M N77 258		146
	7	4648	M D90 260		146
	7	4655	M M59 263		146
	7	4662	M N72 268		146
	7	4669	M E36 270		146
	7	4676	M P94 280		147
	7	4683	L E70 287		147
	7	4690	E P43 287		147
	7	4697	M P57 303		147
	7	4704	M P76 318		147
	7	4711	M P35 325		148
	7	4718	L E70 332		148
	7	4725	E P39 332		148
	2	4732	F T		148
	1	4734	2		148
	1	4735	/		148

B

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SEQ PG LIN  LABEL   OP    OPERANDS

498 14 28           CS
499 15 01           MLC   H51,332
500 15 02           W
501 15 03           CS
502 15 04           CS
503 15 05           MLC   H52,332
504 15 06           CC    S
505 15 07           W
506 15 08           CS
507 15 09           CS
508 15 10           MLC   FAC,201
509 15 11           MLC   FACP,203
510 15 12           MLC   BSC,210
511 15 13           MLC   BSCP,216
512 15 14           MLC   BSCA,222
513 15 15           LCA   EWDT1,231
514 15 16           MCE   DTRPT,231
515 15 17           LCA   EWDT2,237
516 15 18           MCE   EDAP,237
517 15 19           LCA   EWDT1,246
518 15 20           MCE   DRPTA,246
519 15 21           MLC   ELC,249
520 15 22           LCA   EWDT1,259
521 15 23           MCE   ELD,259
522 15 24           MLC   ELCP,263
523 15 25           LCA   EWDT2,270
524 15 26           MCE   ELDP,270
525 15 27           LCA   EWDT2,276
526 15 28           MCE   PRD,276
527 15 29           LCA   EWDT2,282
528 15 30           MCE   PRDP,282
529 16 02           MLC   RP,287
530 16 04           MLC   RPP,293
531 16 05           LCA   EWDT2,300
532 16 06           MCE   TOUR,300
533 16 07           LCA   EWDT2,306
534 16 08           MCE   TOURP,306
535 16 09           BBE   MOV6,YN2,8
536 16 10           B     CK2
537 16 11  MOV6     MLC   'X',309
538 16 12  CK2      BBE   MOV7,YN2,1
539 16 13           B     DTRMKS
540 16 14  MOV7     MLC   'X',311
541 16 15  DTRMKS   MLC   DTRMK,319
542 16 16           MLC   TYPEAP,325
543 16 17           BBE   MOV,YN2,4
544 16 18           B     CCT
545 16 19  MOV      MLC   'X',330
546 16 20  CCT      CC    T
547 16 21           W
```

A

NDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
		1	4736	/		148
32		7	4737	M V11 332		149
		1	4744	2		149
		1	4745	/		149
		1	4746	/		149
32		7	4747	M W43 332		149
		2	4754	F S		149
		1	4756	2		149
		1	4757	/		150
		1	4758	/		150
91		7	4759	M N69 201		150
203		7	4766	M D95 203		150
10		7	4773	M P62 210		150
216		7	4780	M E31 216		150
222		7	4787	M E48 222		150
,231		7	4794	L E65 231		151
,231		7	4801	E N60 231		151
,237		7	4808	L E70 237		151
237		7	4815	E E15 237		151
,246		7	4822	L E65 246		151
,246		7	4829	E E54 246		152
49		7	4836	M N41 249		152
,259		7	4843	L E65 259		152
59		7	4850	E N47 259		152
263		7	4857	M D98 263		152
,270		7	4864	L E70 270		153
270		7	4871	E E02 270		153
,276		7	4878	L E70 276		153
76		7	4885	E N64 276		153
,282		7	4892	L E70 282		153
282		7	4899	E B07 282		154
		7	4906	M N74 287		154
93		7	4913	M D97 293		154
,300		7	4920	L E70 300		154
300		7	4927	E N68 300		154
,306		7	4934	L E70 306		155
306		7	4941	E B11 306		155
N2,8		8	4948	W 96# M41 8		155
		4	4956	B 96X		155
09		7	4960	M +8Z 309		155
N2,1		8	4967	W 97Z M41 1		156
S		4	4975	B 98W		156
11		7	4979	M +8Z 311		156
319		7	4986	M 095 319		156
,325		7	4993	M E32 325		156
N2,4		8	5000	W #1S M41 4		157
		4	5008	B #1Z		157
30		7	5012	M +8Z 330		157
		2	5019	F T		157
		1	5021	2		157

B

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SEQ PG LIN  LABEL   OP    OPERANDS

548 16 22           CS
549 16 23           CS
550 16 24           MLC   H61,332
551 16 25           W
552 16 26           CS
553 16 27           CS
554 16 28           MLC   H62,332
555 16 29           CC    S
556 16 30           W
557 17 01           CS
558 17 02           CS
559 17 03           LCA   EWDT2,205
560 17 04           MCE   EDD,205
561 17 05           MLC   PAD,211
562 17 06           MLC   PADP,216
563 17 07           BBE   MOV8,YN1-1,4
564 17 08           B     COMMO
565 17 09   MOV8    MLC   'X',221
566 17 10   COMMO   MLC   COMMOS,225
567 17 11           MLC   COMBTR,229
568 17 12           LCA   EWDT3,236
569 17 13           MCE   COMBAT,236
570 17 14           MLC   COMAC,239
571 17 15           BBE   MOV9,YN1-1,2
572 17 16           B     CK3
573 17 17   MOV9    MLC   'X',244
574 17 18   CK3     BBE   MOV10,YN1,-
575 17 19           B     SUB
576 17 20   MOV10   MLC   'X',251
577 17 21   SUB     LCA   EWDT2,258
578 17 22           MCE   SUBOT,258
579 17 23           MLC   CNSRVI,263
580 17 24           MLC   CONSRV,269
581 17 25           MLC   PLTHR,278
582 17 26           MLC   P15YR,283
583 17 27           MLC   JTHRS,288
584 17 28           MLC   VHHRS,293
585 17 29           MLC   PCTOT,298
586 17 30           MLC   CLTOT,304
587 18 01           MLC   INST,310
588 18 02           LCA   EWDT2,322
589 18 03           MCE   D3760,322
590 18 04           MLC   T3760,330
591 18 05           CC    T
592 18 06           W
593 18 07           CS
594 18 08           CS
595 18 09           MLC   H71,332
596 18 10           W
597 18 11           CS
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A

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DS                                SFX CT  LOCN  INSTRUCTION TYPE  CARD

                                     1  5022  /                    157
                                     1  5023  /                    157
2                                    7  5024  M X75 332            158
                                     1  5031  2                    158
                                     1  5032  /                    158
                                     1  5033  /                    158
2                                    7  5034  M Z07 332            158
                                     2  5041  F S                  158
                                     1  5043  2                    158
                                     1  5044  /                    159
                                     1  5045  /                    159
205                                  7  5046  L E70 205            159
5                                    7  5053  E E19 205            159
1                                    7  5060  M N36 211            159
16                                   7  5067  M D93 216            159
N1-1,4                               8  5074  W *8W M39 4          159
                                     4  5082  B *9T                160
1                                    7  5086  M +8Z 221            160
,225                                 7  5093  M M56 225            160
,229                                 7  5100  M 079 229            160
236                                  7  5107  L E74 236            160
,236                                 7  5114  E 098 236            160
239                                  7  5121  M 099 239            161
N1-1,2                               8  5128  W /4* M39 2          161
                                     4  5136  B /4X                161
*                                    7  5140  M +8Z 244            161
YN1,-                                8  5147  W /5Z M40 -          161
                                     4  5155  B /6W                161
1                                    7  5159  M +8Z 251            162
258                                  7  5166  L E70 258            162
258                                  7  5173  E P15 258            162
,263                                 7  5180  M Q86 263            162
,269                                 7  5187  M Q88 269            162
278                                  7  5194  M R78 278            163
283                                  7  5201  M R82 283            163
288                                  7  5208  M R86 288            163
293                                  7  5215  M R90 293            163
298                                  7  5222  M R94 298            163
304                                  7  5229  M R97 304            164
10                                   7  5236  M +01 310            164
322                                  7  5243  L E70 322            164
322                                  7  5250  E R72 322            164
330                                  7  5257  M R73 330            164
                                     2  5264  F T                  164
                                     1  5266  2                    164
                                     1  5267  /                    165
                                     1  5268  /                    165
2                                    7  5269  M -39 332            165
                                     1  5276  2                    165
                                     1  5277  /                    165
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B

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SEQ PG LIN  LABEL   OP    OPERANDS

598 18 12           CS
599 18 13           MLC   H72,332
600 18 14           CC    S
601 18 15           W
602 18 16           CS
603 18 17           CS
604 18 18           LCA   EWDORE,212
605 18 19           MCE   DORE,212
606 18 191          MZ    DORE,212
607 18 20           LCA   EWED,246
608 18 21           MCE   ED1,246
609 18 211          MZ    ED1,246
610 18 22           BBE   MOV11,YN1,4
611 18 23           B     LANG
612 18 24   MOV11   MLC   'X',250
613 18 25   LANG    MLC   LANG1,258
614 18 26           MLC   LNGP1,261
615 18 27           MLC   LNGPR1,266
616 18 28           MLC   LNGDT1,271
617 19 01           BBE   MOV12,YN1-1,1
618 19 02           B     DESCH
619 19 03   MOV12   MLC   'X',274
620 19 04   DESCH   LCA   EWDES,289
621 19 05           MCE   DESCH1,289
622 19 06           LCA   EWDT2,296
623 19 07           MCE   HTA,296
624 19 08           LCA   EWDT2,302
625 19 09           MCE   LTA,302
626 19 10           LCA   EWDT2,310
627 19 11           MCE   NFODT,310
628 19 12           MLC   PCAT,315
629 19 13           MLC   FSC,324
630 19 14           MLC   FSCP,330
631 19 15           W
632 19 16           CS
633 19 17           CS
634 19 18           LCA   EWED,246
635 19 19           MCE   ED2,246
636 19 191          MZ    ED2,246
637 19 20           MLC   LANG2,258
638 19 21           MLC   LNGP2,261
639 19 22           MLC   LNGPR2,266
640 19 23           MLC   LNGDT2,271
641 19 24           LCA   EWDES,289
642 19 25           MCE   DESCH2,289
643 19 251          CC    T
644 19 26           W
645 19 27           CS
646 19 28           CS
647 20 01           MLC   H81,332
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OPERANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
		1	5278	/		165
,332		7	5279	M J71	332	165
		2	5286	F S		166
		1	5288	2		166
		1	5289	/		166
		1	5290	/		166
DRE,212		7	5291	L F57	212	166
E,212		7	5298	E Q77	212	166
E,212		7	5305	Y Q77	212	166
D,246		7	5312	L F90	246	167
,246		7	5319	E R16	246	167
,246		7	5326	Y R16	246	167
1,YN1,4		8	5333	W T4V M40	4	167
G		4	5341	B T5S		167
,250		7	5345	M +8Z	250	168
G1,258		7	5352	M R40	258	168
P1,261		7	5359	M R41	261	168
PR1,266		7	5366	M R42	266	168
DT1,271		7	5373	M R47	271	168
2,YN1-1,1		8	5380	W T9S M39	1	169
CH		4	5388	B T9Z		169
,274		7	5392	M +8Z	274	169
ES,289		7	5399	L H04	289	169
CH1,289		7	5406	E Q62	289	169
2,296		7	5413	L E70	296	170
,296		7	5420	E P03	296	170
2,302		7	5427	L E70	302	170
,302		7	5434	E P07	302	170
2,310		7	5441	L E70	310	170
T,310		7	5448	E P11	310	171
,315		7	5455	M N34	315	171
,324		7	5462	M N37	324	171
,330		7	5469	M D94	330	171
		1	5476	2		171
		1	5477	/		171
		1	5478	/		[illegible]
,246		7	5479	L F90	246	
,246		7	5486	E R36	246	[illegible]2
,246		7	5493	Y R36	246	172
2,258		7	5500	M R51	258	172
2,261		7	5507	M R52	261	172
R2,266		7	5514	M R53	266	173
T2,271		7	5521	M R58	271	173
S,289		7	5528	L H04	289	173
H2,289		7	5535	E Q70	289	173
		2	5 [illegible]	F T		173
		1	5544	2		173
		1	5545	/		173
		1	5546	/		174
,332		7	5547	M L03	332	174

B

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SEQ PG LIN  LABEL  OP    OPERANDS

648 20 02          W
649 20 03          CS
650 20 04          CS
651 20 05          MLC   H82,331
652 20 06          CC    S
653 20 07          W
654 20 08          CS
655 20 09          CS
656 20 10          MLC   SUBSP1,208
657 20 11          LCA   EWSCH,227
658 20 12          MCE   SCH1,227
659 20 13          LCA   EWQL,248
660 20 14          MCE   QL1,248
661 20 141         MZ    QL1,248
662 20 15          LCA   EWAC,274
663 20 16          MCE   ACMOD1,274
664 20 17          LCA   EWPDS,323
665 20 18          MCE   PDS1,323
666 20 19          MLC   SPDES1,330
667 20 20          W
668 20 21          CS
669 20 22          CS
670 20 23          MLC   SUBSP2,208
671 20 24          LCA   EWSCH,227
672 20 25          MCE   SCH2,227
673 20 26          LCA   EWQL,248
674 20 27          MCE   QL2,248
675 20 271         MZ    QL2,248
676 20 28          LCA   EWAC,274
677 20 29          MCE   ACMOD2,274
678 21 01          LCA   EWPDS,323
679 21 02          MCE   PDS2,323
680 21 03          MLC   SPDES2,330
681 21 04          W
682 21 05          CS
683 21 06          CS
684 21 07          LCA   EWSCH,227
685 21 08          MCE   SCH3,227
686 21 09          LCA   EWQL,248
687 21 10          MCE   QL3,248
688 21 101         MZ    QL3,248
689 21 11          LCA   EWAC,274
690 21 12          MCE   ACMOD3,274
691 21 13          LCA   EWPDS,323
692 21 14          MCE   PDS3,323
693 21 15          MLC   SPDES3,330
694 21 16          W
695 21 17          CS
696 21 18          CS
697 21 19          LCA   EWSCH,227
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A

SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
	1	5554	2		174
	1	5565	/		174
	1	5556	/		174
	7	5557	M	M34 331	174
	2	5564	F	S	174
	1	5566	2		175
	1	5567	/		175
08	1	5568	/		175
7	7	5569	M	R63 208	175
	7	5576	L	G28 227	175
	7	5583	E	A19 227	175
	7	5590	L	G47 248	175
	7	5597	E	A65 248	176
	7	5604	Y	A65 248	176
74	7	5611	L	G14 274	176
	7	5618	E	+19 274	176
	7	5625	L	G93 323	176
30	7	5632	E	B58 323	177
	7	5639	M	+86 330	177
	1	5646	2		177
	1	5647	/		177
38	1	5648	/		177
	7	5649	M	R68 208	177
	7	5656	L	G28 227	177
	7	5663	E	A28 227	178
	7	5670	L	G47 248	178
	7	5677	E	A75 248	178
	7	5684	Y	A75 248	178
4	7	5691	L	G14 274	178
	7	5698	E	+35 274	179
	7	5705	L	G93 323	179
0	7	5712	E	B91 323	179
	7	5719	M	+89 330	179
	1	5726	2		179
	1	5727	/		179
	1	5728	/		179
	7	5729	L	G28 227	180
	7	5736	E	A37 227	180
	7	5743	L	G47 248	180
	7	5750	E	A85 248	180
	7	5757	Y	A85 248	180
	7	5764	L	G14 274	181
	7	5771	E	+51 274	181
	7	5778	L	G93 323	181
9	7	5785	E	C24 323	181
	7	5792	M	+92 330	181
	1	5799	2		181
	1	5800	/		181
	1	5801	/		182
	7	5802	L	G28 227	182

B

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SEQ  PG LIN  LABEL  OP     OPERANDS

698  21 20          MCE    SCH4,227
699  21 21          LCA    EWQL,248
700  21 22          MCE    QL4,248
701  21 221         MZ     QL4,248
702  21 23          LCA    EWAC,274
703  21 24          MCE    ACMOD4,274
704  21 25          LCA    EWPDS,323
705  21 26          MCE    PDS4,323
706  21 27          MLC    SPDES4,330
707  21 28          W
708  22 01          CS
709  22 02          CS
710  22 03          LCA    EWSCH,227
711  22 04          MCE    SCH5,227
712  22 05          LCA    EWQL,248
713  22 06          MCE    QL5,248
714  22 061         MZ     QL5,248
715  22 07          LCA    EWAC,274
716  22 08          MCE    ACMOD5,274
717  22 09          LCA    EWPDS,323
718  22 10          MCE    PDS5,323
719  22 11          MLC    SPDES5,330
720  22 12          W
721  22 13          CS
722  22 14          CS
723  22 15          LCA    EWQL,248
724  22 16          MCE    QL6,248
725  22 161         MZ     QL6,248
726  22 17          LCA    EWPDS,323
727  22 18          MCE    PDS6,323
728  22 19          MLC    SPDES6,330
729  22 20          W
730  22 21          CS
731  22 22          CS
732  22 23          LCA    EWQL,248
733  22 24          MCE    QL7,248
734  22 241         MZ     QL7,248
735  22 25          LCA    EWPDS,323
736  22 26          MCE    PDS7,323
737  22 27          MLC    SPDES7,330
738  22 28          W
739  23 01          CS
740  23 02          CS
741  23 03          LCA    EWPDS,323
742  23 04          MCE    PDS8,323
743  23 05          MLC    SPDES8,330
744  23 06          W
745  23 07          CS
746  23 08          CS
747  23 09          MLC    SPDES9,330
```

A

RANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
,227		7	5809	E A46 227		182
,248		7	5816	L G47 248		182
248		7	5823	E A95 248		182
248		7	5830	Y A95 248		182
274		7	5837	L G14 274		183
04,274		7	5844	E +67 274		183
S,323		7	5851	L G93 323		183
,323		7	5858	E C57 323		183
S4,330		7	5865	M +95 330		183
		1	5872	2		183
		1	5873	/		183
		1	5874	/		184
H,227		7	5875	L G28 227		184
,227		7	5882	E A55 227		184
,248		7	5889	L G47 248		184
248		7	5896	E B05 248		184
248		7	5903	Y B05 248		184
,274		7	5910	L G14 274		185
D5,274		7	5917	E +83 274		185
S,323		7	5924	L G93 323		185
,323		7	5931	E C90 323		185
S5,330		7	5938	M +98 330		185
		1	5945	2		185
		1	5946	/		185
		1	5947	/		186
,248		7	5948	L G47 248		186
248		7	5955	E B15 248		186
248		7	5962	Y B15 248		186
S,323		7	5969	L G93 323		186
,323		7	5976	E D23 323		186
S6,330		7	5983	M A01 330		187
		1	5990	2		187
		1	5991	/		187
		1	5992	/		187
,248		7	5993	L G47 248		187
248		7	6000	E B25 248		187
248		7	6007	Y B25 248		187
,323		7	6014	L G93 323		188
323		7	6021	E D56 323		188
7,330		7	6028	M A04 330		188
		1	6035	2		188
		1	6036	/		188
		1	6037	/		188
,323		7	6038	L G93 323		188
323		7	6045	E D89 323		189
8,330		7	6052	M A07 330		189
		1	6059	2		189
		1	6060	/		189
		1	6061	/		189
9,330		7	6062	M A10 330		189

B

```
SEQ  PG LIN  LABEL   OP    OPERANDS

748 23 10           W
749 23 11           CS
750 23 12           CS
751 23 13           BSS   RDTP,C
752 23 14           B     READ
753 23 15   MESS1   MLC   'CARD OUT OF SEQUENCE',220
754 23 16           MLC   80,301
755 23 17           B     PRMESS
756 23 18   MESS2   MLC   'NO MATCH FOR THIS CARD',222
757 23 19           MLC   80,303
758 23 20   PRMESS  CC    1
759 23 21           W
760 23 22           CS
761 23 23           CS
762 23 24           B     READ
763 23 25   HEAD    SBR   HDEX+3
764 23 26           RT    1,TPH
765 23 27           C     TPH+9,'E697XX W1 '
766 23 28           BU    INV
767 23 29           C     TPH+35,REEL
768 24 01           BU    INV
769 24 02           MA    '001',REEL
770 24 03           MLC   TPH+17,HDATE
771 24 05           B     HDEX
772 24 07   INV     BSS   HDEX,B
773 24 08           RWU   1
774 24 09           MLC   'INVALID HEADER',214
775 24 10           MLC   TPH+17,HDATE
776 24 11           MLC   TPH+79,300
777 24 12           CC    1
778 24 13           W
779 24 14           CS
780 24 15           CS
781 24 16           H     1111,1111     BAD HEADER
782 24 17           B     HEAD+4
783 24 18   HDEX    B     0
784 24 19   RDTP    RT    1,TAPE
785 24 20           NOP   0
786 24 21           BEF   EOR
787 24 22           BER   ZZERRR
788 24 23           BER   ERR
789 24 24           BCE   WLR,GRMK,
790 24 25           MLC   ' ',GRMK
791 24 26           BSS   INR,D
792 24 27   RSSW    BSS   RSS,E
793 24 28           BSS   PRINT,C
794 24 29           B     COMP
795 25 01   ERR     CC    1
796 25 02           MLC   'TAPE ERROR',210
797 25 03           W
```

A

RANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
		1	6069	2		189
		1	6070	/		190
P,C		1	6071	/		190
D		5	6072	B	K2X C	190
RD OUT OF SEQUENCE',220		4	6077	B	I04	190
301		7	6081	M	A0Z 220	190
ESS		7	6088	M	080 301	190
MATCH FOR THIS CARD',222		4	6095	B	J1T	190
303		7	6099	M	A3/ 222	191
		7	6106	M	080 303	191
		2	6113	F	1	191
		1	6115	2		191
		1	6116	/		191
D		1	6117	/		191
K+3		4	6118	B	I04	191
H		4	6122	H	K2W	192
9,'E697XX W1 '		8	6126	M	(U1 H05 R	192
		7	6134	C	H14 A4/	192
35,REEL		5	6141	B	J7W /	192
		7	6146	C	H40 Q3*	192
',REEL		5	6153	B	J7W /	192
17,HDATE		7	6158	*	A4U Q3*	193
		7	6165	M	H22 *8Y	193
,B		4	6172	B	K2T	193
		5	6176	B	K2T B	193
ALID HEADER',214		5	6181	U	(U1 U	193
17,HDATE		7	6186	M	A5Y 214	193
79,300		7	6193	M	H22 *8Y	194
		7	6200	M	H84 300	194
		2	6207	F	1	194
		1	6209	2		194
		1	6210	/		194
,1111 BAD HEADER		1	6211	/		194
+4		7	6212	*	/11 /11	194
		4	6219	B	J2W	195
PE		4	6223	B	000	195
		8	6227	M	(U1 M35 R	195
		4	6235	N	000	195
RR		5	6239	B	P6U K	195
		5	6244	B	Q8Z L	195
GRMK,		5	6249	B	K8Y L	195
GRMK		8	6254	B	O9Y E56	196
D		7	6262	M	A5Z E56	196
E		5	6269	B	Q3/ D	196
T,C		5	6274	B	Q6S E	196
		5	6279	B	I46 C	196
		4	6284	B	I29	196
E ERROR',210		2	6288	F	1	196
		7	6290	M	A6Z 210	197
		1	6297	2		197

B

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SEQ PG LIN  LABEL  OP     OPERANDS

798 25 04   SW     SW     201
799 25 05          MLC    TAPE+100,HLD=1
800 25 06          LCA    ' ',TAPE+100
801 25 07          MRCM   TAPE,201
802 25 08          W
803 25 09          CS
804 25 10          CS
805 25 101         MLC    HLD,TAPE+100
806 25 11          MLC    TAPE+200,HLD
807 25 12          LCA    ' ',TAPE+200
808 25 13          MRCM   TAPE+100,201
809 25 14          W
810 25 15          CS
811 25 16          CS
812 25 17          MLC    HLD,TAPE+200
813 25 18          CW     TAPE+200
814 25 19          MLC    TAPE+300,HLD
815 25 20          LCA    ' ',TAPE+300
816 25 21          MRCM   TAPE+200,201
817 25 22          W
818 25 23          CS
819 25 24          CS
820 25 25          MLC    HLD,TAPE+300
821 25 26          CW     TAPE+300
822 26 01          MLC    TAPE+400,HLD
823 26 02          LCA    ' ',TAPE+400
824 26 03          MRCM   TAPE+300,201
825 26 04          W
826 26 05          CS
827 26 06          CS
828 26 07          MLC    HLD,TAPE+400
829 26 08          CW     TAPE+400
830 26 09          MLC    TAPE+500,HLD
831 26 10          LCA    ' ',TAPE+500
832 26 11          MRCM   TAPE+400,201
833 26 12          W
834 26 13          CS
835 26 14          CS
836 26 15          MLC    HLD,TAPE+500
837 26 16          CW     TAPE+500
838 26 17          MLC    TAPE+600,HLD
839 26 18          LCA    ' ',TAPE+600
840 26 19          MRCM   TAPE+500,201
841 26 20          W
842 26 21          CS
843 26 22          CS
844 26 23          MLC    HLD,TAPE+600
845 26 24          CW     TAPE+600
846 26 25          MLC    TAPE+700,HLD
847 26 26          LCA    ' ',TAPE+700
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RANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
		4	6298	* 201		197
E+100,HLD=1		7	6302	M N35 A7*		197
,TAPE+100		7	6309	L A7/ N35		197
E,201		7	6316	P M35 201		197
		1	6323	2		197
		1	6324	/		198
,TAPE+100		1	6325	/		198
E+200,HLD		7	6326	M A7* N35		198
,TAPE+200		7	6333	M O35 A7*		198
E+100,201		7	6340	L A7/ O35		198
		7	6347	P N35 201		198
		1	6354	2		198
		1	6355	/		199
,TAPE+200		1	6356	/		199
E+200		7	6357	M A7* O35		199
E+300,HLD		4	6364	) O35		199
,TAPE+300		7	6368	M P35 A7*		199
E+200,201		7	6375	L A7/ P35		199
		7	6382	P O35 201		199
		1	6389	2		200
		1	6390	/		200
,TAPE+300		1	6391	/		200
E+300		7	6392	M A7* P35		200
E+400,HLD		4	6399	) P35		200
,TAPE+400		7	6403	M Q35 A7*		200
E+300,201		7	6410	L A7/ Q35		200
		7	6417	P P35 201		201
		1	6424	2		201
		1	6425	/		201
,TAPE+400		1	6426	/		201
E+400		7	6427	M A7* Q35		201
E+500,HLD		4	6434	) Q35		201
,TAPE+500		7	6438	M R35 A7*		201
E+400,201		7	6445	L A7/ R35		202
		7	6452	P Q35 201		202
		1	6459	2		202
		1	6460	/		202
TAPE+500		1	6461	/		202
+500		7	6462	M A7* R35		202
+600,HLD		4	6469	) R35		202
TAPE+600		7	6473	M +35 A7*		203
+500,201		7	6480	L A7/ +35		203
		7	6487	P R35 201		203
		1	6494	2		203
		1	6495	/		203
TAPE+600		1	6496	/		203
+600		7	6497	M A7* +35		203
+700,HLD		4	6504	) +35		204
TAPE+700		7	6508	M A35 A7*		204
		7	6515	L A7/ A35		204

B

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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX

848 26 27          MRCM  TAPE+600,201
849 26 28          W
850 27 01          CS
851 27 02          CS
852 27 03          MLC   HLD,TAPE+700
853 27 04          CW    TAPE+700
854 27 05          MLC   TAPE+800,HLD
855 27 06          LCA   ' ',TAPE+800
856 27 07          MRCM  TAPE+700,201
857 27 08          W
858 27 09          CS
859 27 10          CS
860 27 11          MLC   HLD,TAPE+800
861 27 12          CW    TAPE+800
862 27 13          MLC   TAPE+900,HLD
863 27 14          LCA   ' ',TAPE+900
864 27 15          MRCM  TAPE+800,201
865 27 16          W
866 27 17          CS
867 27 18          CS
868 27 19          MLC   HLD,TAPE+900
869 27 20          CW    TAPE+900
870 27 21          MLC   PDS7-21,HLD
871 27 22          LCA   ' ',PDS7-21
872 27 23          MRCM  TAPE+900,201
873 27 24          W
874 27 25          CS
875 27 26          CS
876 27 27          MLC   HLD,PDS7-21
877 27 28          CW    PDS7-21
878 28 01          MLC   DESIGP,HLD
879 28 02          LCA   ' ',DESIGP
880 28 03          MRCM  PDS7-21,201
881 28 04          W
882 28 05          CS
883 28 06          CS
884 28 07          MLC   HLD,DESIGP,
885 28 08          CW    DESIGP
886 28 10          MRCM  DESIGP,201
887 28 11          W
888 28 12          CS
889 28 13          CS
890 28 15          B     RDTP
891 28 16  WLR     CC    1
892 28 17          MLC   'WRONG LENGTH RECORD',219
893 28 18          W
894 28 19  BCE     BCE   BLANK,TAPE+X2,
895 28 20          MA    '001',X2
896 28 21          B     BCE
897 28 22  BLANK   MLC   ' ',TAPE+X2
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	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
201		7	6522	P +35 201		204
		1	6529	2		204
		1	6530	/		204
		1	6531	/		204
700		7	6532	M A7# A35		205
		4	6539	) A35		205
HLD		7	6543	M B35 A7#		205
800		7	6550	L A7/ B35		205
201		7	6557	P A35 201		205
		1	6564	2		205
		1	6565	/		205
		1	6566	/		206
800		7	6567	M A7# B35		206
		4	6574	) B35		206
HLD		7	6578	M C35 A7#		206
900		7	6585	L A7/ C35		206
201		7	6592	P B35 201		206
		1	6599	2		206
		1	6600	/		207
		1	6601	/		207
900		7	6602	M A7# C35		207
		4	6609	) C35		207
D		7	6613	M D35 A7#		207
1		7	6620	L A7/ D35		207
01		7	6627	P C35 201		207
		1	6634	2		208
		1	6635	/		208
		1	6636	/		208
1		7	6637	M A7# D35		208
		4	6644	) D35		208
		7	6648	M E35 A7#		208
		7	6655	L A7/ E35		208
1		7	6662	P D35 201		209
		1	6669	2		209
		1	6670	/		209
		1	6671	/		209
'		8	6672	M A7# E35		209
		4	6680	) E35		209
		7	6684	P E35 201		209
		1	6691	2		210
		1	6692	/		210
		1	6693	/		210
		4	6694	B K2X		210
		2	6698	F 1		210
GTH RECORD',219		7	6700	M A9# 219		210
+X2,		1	6707	2		210
		8	6708	B P2X ML5		211
		7	6716	# A4U 094		211
2		4	6723	B POY		211
		7	6727	M A5Z ML5		211

B

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SEQ PG LIN  LABEL   OP    OPERANDS

898 28 23           MA    '001',X2
899 28 24           C     X2,'120'
900 28 25           BU    BLANK
901 28 26           MLC   '000',X2
902 28 27           B     SW
903 29 01   EOR     RT    1,TAPE
904 29 02           C     TAPE+2,'EOJ'
905 29 03           BE    EOJ
906 29 04           RWU   1
907 29 05           H     1112,1112
908 29 06           B     HEAD
909 29 07           B     RDTP
910 29 08   EOJ     RWU   1
911 29 09           CC    1
912 29 10           MLC   'END OF JOB',225
913 29 11           W
914 29 12           CC    1
915 29 13           H     1234,1234
916 29 14   X2      EQU   94
917 29 15   94      DCW   000
918 29 16   REEL    DCW   '001'
919 29 17   INR     MLC   FILE,106
920 29 18           P
921 29 19           CS    180
922 29 20           P
923 29 21           P
924 29 22           RWU   1
925 29 23           H     3333,3333
926 29 24   RS      R
927 29 25           B     RDTP
928 29 26   RSS     C     FILE,6
929 29 27           BE    HALT
930 29 28           B     RDTP
931 29 29   HALT    H     4444,4444     TURN SW E OFF
932 29 30           B     RSSW
933         ZZERRR  SBR   ZZESAX+6
934                 SBR   ZZEDUM,0
935                 SBR   ZZESX1+6,0+X1
936         ZZESAX  SBR   89,0
937                 SBR   ZZERX1+3
938                 LCA   15985+X1,ZZEREA
939                 MN    15981+X1,*+4
940                 BSP   0
941         ZZESX1  SBR   89,0
942         ZZEREA  DCW   =8
943                 BER   *+5
944         ZZERX1  B     0
945                 BCE   ZZERX1,ZZECNT,8
946                 MN    ZZEREA-4,*+4
947         ZZEBSP  BSP   0
```

A

RANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
',X2		7	6734	* A4U 094		211
120'		7	6741	C 094 A9T		212
NK		5	6748	B P2X /		212
',X2		7	6753	M A9W 094		212
		4	6760	B K9Y		212
PE		8	6764	M (U1 M35 R		212
+2,'EOJ'		7	6772	C M37 A9Z		212
		5	6779	B Q0U S		213
,1112		5	6784	U (U1 U		213
		7	6789	. /12 /12		213
		4	6796	B J2S		213
		4	6800	B K2X		213
		5	6804	U (U1 U		213
OF JOB',225		2	6809	F 1		213
		7	6811	M B0Z 225		214
		1	6818	2		214
,1234		2	6819	F 1		214
		7	6821	. S34 S34		214
			0094			
'		3	0094			215
,106		3	6830			216
		7	6831	M M65 106		216
		1	6838	4		216
		4	6839	/ 180		216
		1	6843	4		216
		1	6844	4		216
,3333		5	6845	U (U1 U		216
		7	6850	. C33 C33		217
		1	6857	1		217
,6		4	6858	B K2X		217
		7	6862	C M65 006		217
		5	6869	B Q7Y S		217
,4444 TURN SW E OFF		4	6874	B K2X		217
		7	6878	. 44U 44U		217
X+6		4	6885	B K7U		218
M,0		4	6889	H R1T	GEN	218
1+6,0+X1		7	6893	H +6W 000	GEN	218
		7	6900	H R4T 0+0	GEN	218
1+3		7	6907	H 089 000	GEN	218
+X1,ZZEREA		4	6914	H R6*	GEN	218
+X1,*+4		7	6918	L IYE R5/	GEN	219
		7	6925	D IYA R3V	GEN	219
		5	6932	U (U0 B	GEN	219
		7	6937	H 089 000	GEN	219
		8	6951		GEN	219
		5	6952	B R6/ L	GEN	219
1,ZZECNT,8		4	6957	B 000	GEN	220
A-4,*+4		8	6961	B R5X +6V 8	GEN	220
		7	6969	D R4X R7Z	GEN	220
		5	6976	U (U0 B	GEN	220

B

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SEQ PG LIN  LABEL   OP    OPERANDS

948                 A     ZZEONE,ZZECNT
949                 C     ZZECNT,ZZESIX
950                 BH    ZZEREA-7
951                 BCE   *+5,ZZECNT,8
952                 B     ZZEBSP
953                 MN    ZZEREA-4,ZZEBS1+3
954                 MN    ZZEREA-4,ZZERTT+3
955         ZZERTT  RT    0,ZZEDUM
956                 A     ZZEONE,ZZERDT
957                 BCE   *+5,ZZERDT,3
958                 B     ZZERTT
959         ZZEBS1  BSP   0
960                 B     ZZEREA-7
961         ZZEONE  DCW   '1'
962         ZZESIX  DCW   '6'
963         ZZERDT  DCW   =1
964         ZZECNT  DCW   =1
965         ZZEDUM  DC    =1
966                 DCW   ' '
        338 PRE     DCW   =06
        346                'D A T E'
        347 HDATE          =08
                           'X'
        753                'CARD OUT OF SEQUENCE'
        756                'NO MATCH FOR THIS CARD'
        765                'E697XX W1 '
                           '001'
        774                'INVALID HEADER'
                           ' '
        796                'TAPE ERROR'
        799 HLD            =01
                           ' '
        892                'WRONG LENGTH RECORD'
                           '120'
                           '000'
                           'EOJ'
        912                'END OF JOB'
967 30 01           END    START
```

A

ANDS	SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
NE,ZZECNT		7	6981	A +6S +6V	GEN	220
NT,ZZESIX		7	6988	C +6V +6T	GEN	220
EA-7		5	6995	B R4U U	GEN	221
ZZECNT,8		8	7000	B +1S +6V 8	GEN	221
SP		4	7008	B R7W	GEN	221
EA-4,ZZEBS1+3		7	7012	D R4X +5W	GEN	221
EA-4,ZZERTT+3		7	7019	D R4X +2Z	GEN	221
EDUM		8	7026	M (U0 +6W R	GEN	221
NE,ZZERDT		7	7034	A +6S +6U	GEN	222
ZZERDT,3		8	7041	B +5T +6U 3	GEN	222
TT		4	7049	B +2W	GEN	222
		5	7053	U (U0 B	GEN	222
EA-7		4	7058	B R4U	GEN	222
		1	7062		GEN	222
		1	7063		GEN	222
		1	7064		GEN	223
		1	7065		GEN	223
		1	7066		GEN	223
		1	7067		GEN	223
		6	7073		AREA	223
T E'		7	7080		LIT	223
		8	7088		AREA	223
		1	7089		LIT	223
) OUT OF SEQUENCE'		20	7109		LIT	224
MATCH FOR THIS CARD'		22	7131		LIT	225
XX W1 '		10	7141		LIT	225
		3	7144		LIT	225
LID HEADER'		14	7158		LIT	226
		1	7159		LIT	226
ERROR'		10	7169		LIT	226
		1	7170		AREA	226
		1	7171		LIT	226
G LENGTH RECORD'		19	7190		LIT	227
		3	7193		LIT	227
		3	7196		LIT	227
		3	7199		LIT	227
OF JOB'		10	7209		LIT	227
				/ H86 080		228

Operations Manual
101B27.100
OM-01

1. General.

1.1 Purpose of Operations Manual. The objective of writing an Operations Manual for Project 101B27.100 (OM-01) is to provide control and operator personnel with a general description of the system and its associated environment with which they will be concerned during the performance of their duties.

1.2 System Application. The Active Duty Enlisted/Officer Master Magnetic Tape Record Print Procedure, Project 101B27.100, is designed to acquire from BUPERS a tape file containing the Active Duty Enlisted/Officer Master Magnetic tape record for each enlisted person and officer in the commands of COMHUKFORLANT, COMFAIRWINGSLANT and COMOCEANSYSLANT.

1.3 System Operation. See ADP Flow Chart.

1.4 Program Inventory.

(a) Keypunch and verify Crew Data Cards. Six to twelve hours per command named in paragraph 1.2.

(b) Sort Crew Data Cards into service number sequence. Approximately 3 hours.

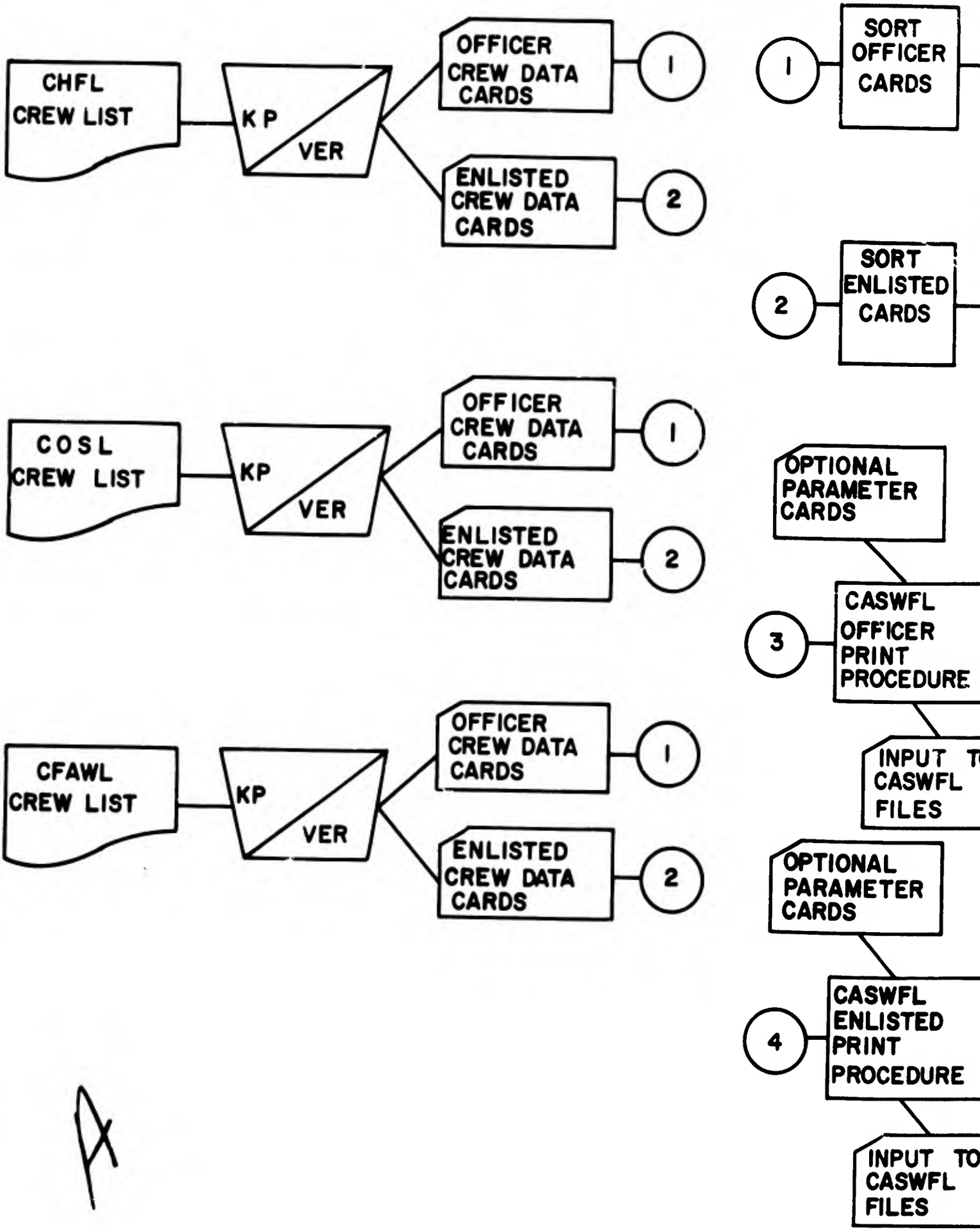
(c) Forward Crew Data Cards to BUPERS.

(d) Upon receipt of the Active Duty Enlisted/Officer Master Magnetic Tape Record files program PS-01, PS-02 and PS-03 will be run as follows:

(1) PS-01 will print the enlisted tape. Run time approximately 17 hours.

(2) PS-02 will print the Officer tape in the old format. (Tape prior to March 1968). Run time approximately 3 hours.

(3) PS-03 will print the Officer tape in the new format. (Tapes after March 1968). Run time approximately 3 hours.


CHFL
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1
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CARDS
2
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COSL
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KP
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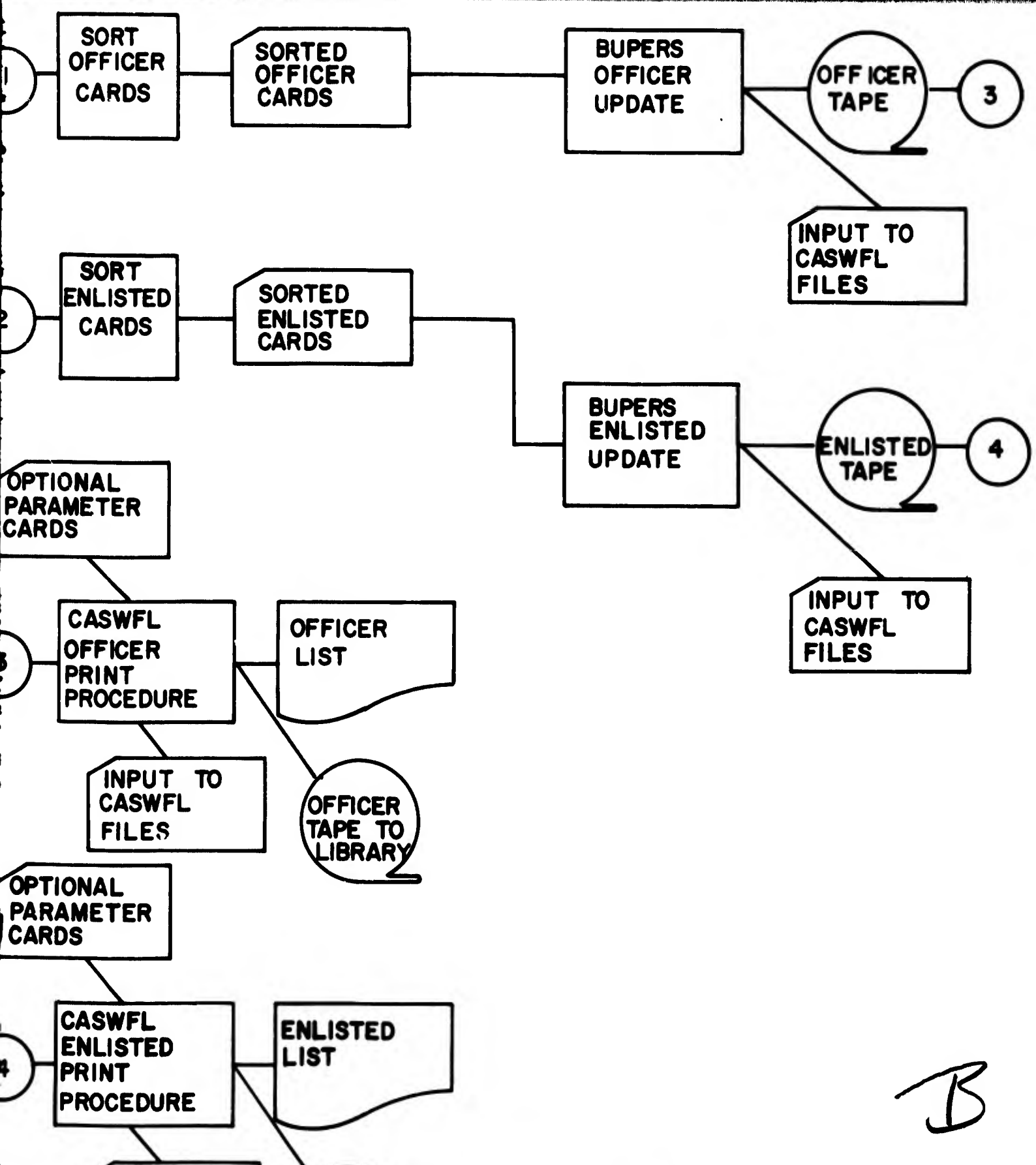

B

INTEGRATED ADP FLOW CHART

2. System Control.

2.1 Control Requirements. Crew data cards will be prepared by the commands named in paragraph 1.2 and sent to COMASWFORLANT. These cards will then be sorted by service number and sent to BUPERS. BUPERS will create a tape file containing the Active Duty Enlisted/Officer Master Magnetic Tape Records that match the Crew Data Cards. This file will be sent to COMASWFORLANT where a detailed list will be prepared and sent to the appropriate command. All input data records pertaining to this system will be stored by COMASWFORLANT (NOTE: Enlisted and Officer data will be kept in separate files at all times).

2.2 Control Forms. Not applicable.

2.3 Phasing (ADP). This system has three logical phases.

(a) The preparation of the Crew Data Cards which should be accomplished within one week's time.

(b) The processing of the Crew Data Cards by BUPERS. A minimum of two weeks should be allowed for this phase.

(c) The detail listing of this data. If all commands are to be processed at the same time this phase will require approximately 20 hours of computer time.

2.4 Card Deck Sequence.

(a) When selective printing is desired the card deck sequences is object program first followed by parameter cards.

(b) When a printout of all records is desired only the object program is used.

(c) When restarting a selective printout the card deck sequence is as in line (a).

(d) When restarting a printout of all records the card deck sequence is object program followed by the restart card. See Figure 1.

2.5 Graphic Processing Chart (ADP). Not applicable.

2.6 Tape Retention Schedules (ADP). A minimum of two quarters.

2.7 File Query Procedures. This system has a limited query capability. Any record or records within the file may be printed without printing the rest of the file by use of parameter cards with the service number in Columns 1-7 for enlisted data and Columns 1-6 for officer data. (NOTE: Crew data cards may be used in place of parameter cards as the control fields are in the same columns).

3. Operating Procedures.

3.1 EAM Task.

(a) Keypunch and verify Crew Data Cards from crew list. The format is as follows:

Column	Enlisted Personnel	Column	Officer
1-7	Service no.	1-6	File no.
8	Blank	7-38	Blank
9-13	99999	39-56	Last, first & middle name
14-29	Blank		
3-32	"INQ"	57-80	Blank
33-38	Blank		
39-56	Last, first & middle name		
57-62	Blank		
63-67	"E145*"		
68-73	999999		
74-80	Blank		

Enlisted and Officer Crew Data cards are kept separate and labeled. Forward Crew Data Cards to COMASWFORLANT, Scientific Advisory Team, Code 714.

(b) Sort Crew Data Cards.

Enlisted Crew Data Cards Col. 1-7.
Officer Crew Data Cards Col. 1-6.

Forward sorted Crew Data Cards to BUPERS with a minimum of two blank tapes on which BUPERS will create the Active Duty Enlisted/Officer Master Magnetic Tape Record file.

3.2 Equipment Configuration.

(a) EAM keypunching of crew data cards:

Three 029 keypunches (one at each command)
Three 059 verifiers (one at each command)

(b) EAM sorting of crew data cards:

One 084 sorter

(c) EDP processing at BUPERS:

Equipment configuration not applicable.

(d) EDP print of Active Duty Enlisted/Officer Master Magnetic Tape Record file:

One 1401 CPU
One 1403 printer
One 1402 card read/punch
One 7330 tape unit

3.3 EDP Tasks. There are three EDP tasks included in this system, the following instructions apply to all three tasks:

(a) Input Material.

(1) Program 101B27.100, PD-01. Active Duty Enlisted Master Magnetic Tape Record file.

(2) Program 101B27.100, PD-02. Old Active Duty Officer Master Magnetic Tape Record file.

(3) Program 101B27.100, PD-03. New Active Duty Officer Master Magnetic Tape Record file.

(4) Parameter Cards. (NOTE: The Crew Data cards may use parameter cards as the service number fields are the same).

(b) Outputs. A detailed printout of the Active Duty Enlisted/ Officer Master Magnetic Tape Record file.

(c) Procedures.

(1) Setup.

(a) Mount Active Duty Enlisted/Officer Master Magnetic Tape Record file on unit one.

(b) Put 11 1/2 x 14 paper of the requested ply in 1403 printer.

(c) Place object program in reader. If the option to print only those records requested by parameter cards is being utilized place parameter cards in reader after object deck.

(d) Turn on appropriate sense switch.

(1) I/O always on.
(2) A always on.
(3) B on to bypass tape header check.
(4) C on to print all tape records with no selection.
(5) D on for program interrupt when program is utilizing sense switch C.
(6) E on for restart when program is utilizing sense switch C.

(e) Press load button on reader.

(2) Operation.

(a) Halts are identified by a number in the B address register and are as follows:

B address register	Description
1111	Incorrect tape header label. If wrong tape is mounted on unit one, mount correct tape and rental job. If correct tape is mounted on unit

B address register	Description
	one, but has an invalid tape header label, reload tape, turn sense switch B on and press start.
1112	End of reel. Mount next sequenced reel and press start.
1234	End of job.
3333	Job has been interrupted. Check punch hopper for restart card. Save this card for restart procedure.
4444	Input tape has been repositioned during a restart operation. Turn sense switch E off and press start to continue processing.

4. Non-Routine Operations.

(a) Interrupt while printing all records. When it is desired to interrupt turn on sense switch D. Upon complete processing of the next record or block of records a restart card will be punched on the 1402 read/punch and the program will halt at halt 3333. Dismount input tape and output listing, save restart card.

(b) Interrupt when print only those records selected by parameter cards. Remove unprocessed parameter cards from the 1402 read/punch. Program will halt upon completion of the record that is currently being processed.

(c) Restarting when printing all records. Obtain the restart card that was punched at the time of interrupt. Machine setup is the same as during normal processing except place restart card after object program and turn on sense switch E.

(d) Restart when printing only those records selected by parameter cards. Set up instructions are the same as those for normal processing except only those parameter cards which have not been printed are placed after the object deck.

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13. ABSTRACT

Each section of this paper is designed to be informative at different levels.

The Functional Description reflects the initial analysis of the system and defines the operational capability to be developed without going into the details of each individual operation.

The Data Requirements Document defines the data elements used within the system.

The System Specification is a more detailed documentation of the entire system.

The Program Specification describes program design so as to permit program production. Each program within the system is defined in a separate Program Specification and only information pertaining to that program and how it relates to other operations within the system is presented in these sections. Program listings are included in this section.

The Operations Manual documents the operating procedures necessary to operate each function within this system. Instructions are given for initiating, running, terminating, interrupting and restarting each function within the system.

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