

SOFTWARE UPDATE

**NOTICE**  
**9200/9200 II**  
**9300/9300 II**

RELEASE MEMO # 129

DATE JULY 23, 1973

**PRODUCT:**  
9200/9200II/9300/9300II TO 400/1100  
SERIES COMMUNICATIONS (REMI PACKAGE)

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DISTRIBUTION

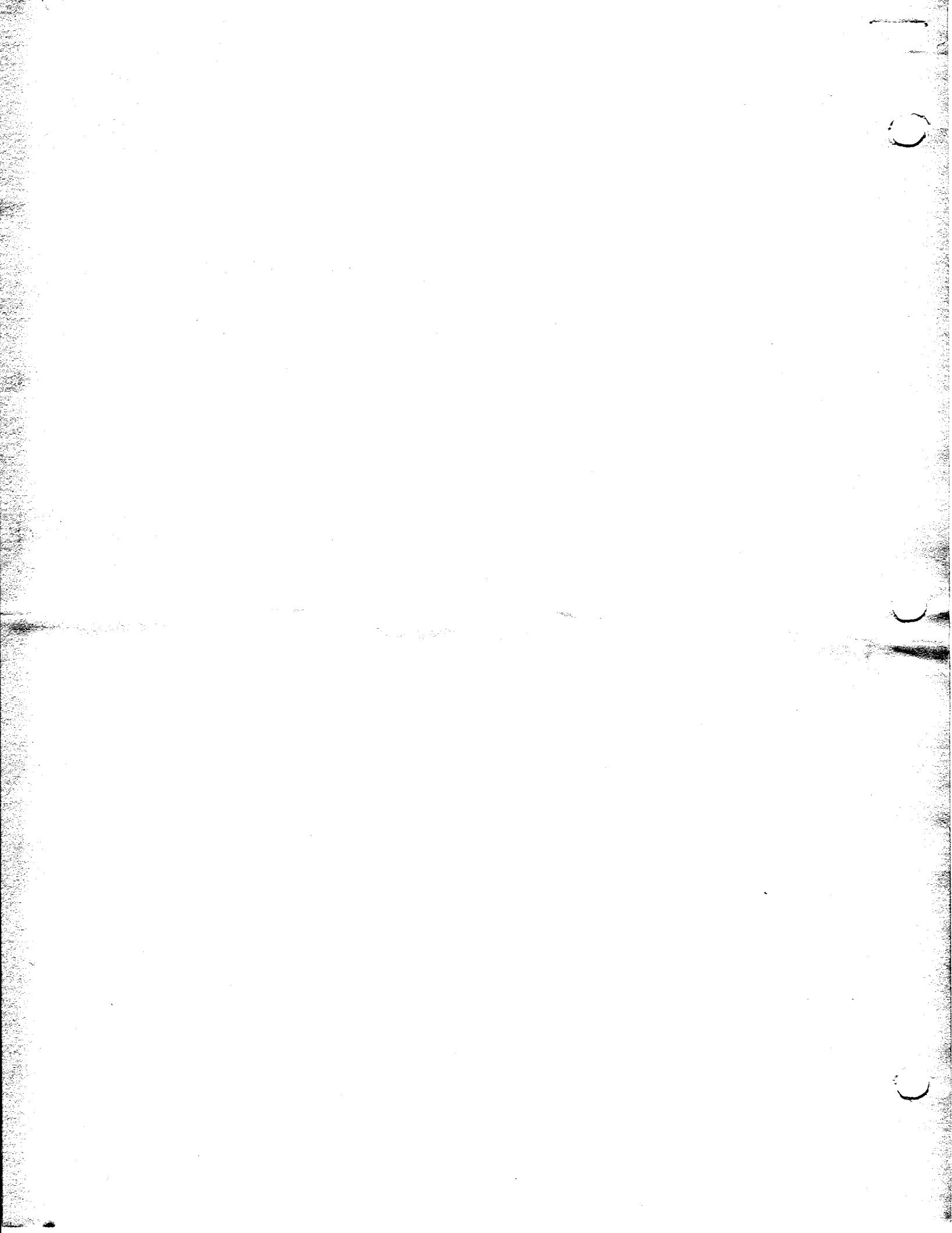
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To Lists RM, RS, SA, UA, UB, 196 - Memo and Attachment.

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PHILADELPHIA DEVELOPMENT CENTER  
SOFTWARE DEVELOPMENT SUPPORT  
BLUE BELL, PA

**SPERRY**  **UNIVAC**  
COMPUTER SYSTEMS



A. SOFTWARE UNIT:

<u>Ident.</u>	<u>Rev.</u>	<u>Card Count</u>
REM1A (Macro Library)	Ø	41
REM1B (Macro Library)	Ø	42
REM1C (Macro Library)	Ø	41
TBP8 (Relocatable)	Ø	8
G?XX (Relocatable)	Ø	11

B. REASON FOR RELEASE:

1. To correct the following problems in REM1:
  - a. A "READY" (X'Ø5') keyin would be ignored after a special forms message from the 1108.
  - b. It was difficult or impossible to execute subsequent programs without rebooting the Operating System after running REM1.
  - c. REM1 was incapable of operating the printer at more than half of rated print speed, regardless of modem speed or print line size.
  - d. Certain characters in the card input to REM1 were erroneously translated as EOM characters, leading to unrecoverable errors.
2. To implement the following enhancements to REM1:
  - a. It is now possible to generate and assemble REM1 on an 8-K machine (standard reader plus either serial or row punch).
  - b. It is now possible to specify that card image input or output will be accomplished by means of user-supplied routines, thus permitting input/output of tape, disc, paper tape, or other kinds of files.
  - c. Issuance of CNTRL macros to achieve maximum possible punch speed if card output is to the serial punch.

C. SOFTWARE RESTRICTIONS:

None.

D. HARDWARE CONFIGURATION:

1. 9200/9300 with 8-K memory.
2. Card Reader.
3. Serial Punch or Row Punch.
4. Bar Printer.
5. DCS-1 or DCS-4.

E. SPECIAL NOTES:

1. Since the majority of REM1 users operate 8-K card system terminals, the REM1 macro library was broken into three smaller macro libraries so as to facilitate generation on the same machine as REM1 will be operated upon. To generate the REM1 source deck, it is necessary to operate the Macro Generator once with each library (REM1A, REM1B, and REM1C). The macro calls REM1A, REM1B, REM1C, are used with the respective libraries along with the same keyword parameters and specifications for each call as were formerly used in generating REM1 (see 3 to 5 below for new parameters). The label which is punched in the REM1A macro call card is generated into the START line to permit distinguishing between different versions of the REM1 main program. The END card which is punched by each of the first two preassembly macro passes must be discarded; the END card for REM1C must read "END G?Z"; the source decks punched by the macro generator must be submitted to the Assembler in REM1A - B - C order. If assembly is done on an 8-K machine, a "CTL ,8191" statement must precede the REM1 source deck in the Assembler's input. See Appendix A for diagram of generation procedures.

2. The EBCDIC-to-compressed translate table, TBP8, has been made a separate relocatable element. It must be included in the linker run which produces the loadable REM1 object deck whenever OUT=OWNCD is not specified and/or IN=OWNCD is specified. The compressed-to-XS3 translate table, G?CX, and the XS3-to-EBCDIC translate table, G?XE, have been combined into a separate relocatable element, G?XX. It must always be included in the input to the linker when producing a loadable REM1.
3. The unnecessary keyword parameter "DEVA" has been deleted. REM1 does not, and has never, inspected or altered logical/physical unit tables.
4. Two new parameters may be specified, "IN" and "OUT". Possible specifications are as follows:
  - a. IN=OWNCD, if the programmer provides his own routine to replace the normal card input routine.
  - b. OUT=OWNCD, if the programmer provides his own routine to replace the normal card output routine.
  - c. OUT=SERP, if card output is to the serial punch. The serial punch IOCS which is generated for linkage to REM1 must include the specification CNTRL=YES if OUT=SERP is specified, since REM1 will issue CNTRL macros to the punch IOCS to limit the number of columns punched.
5. If the operating system under whose control REM1 is to be executed is of NCOS or higher level, SYST=TAPE must be specified, regardless of whether that system is tape- or disc-resident.
6. If IN=OWNCD is specified, REM1 will assume that its input will be in EBCDIC and will consist of images that would make up a normal 1108 run deck. The input file must be assigned the label G?CI; REM1 issues 3 macro instructions to this file, OPEN, GET, and CLOSE. If the complexity of the input data is such that REM1 should not attempt to reference the actual input file directly, the programmer should be aware that the assembler generates the following calling sequences for the various macro instructions:

```

OPEN      BAL    14,filename
CLOSE     BAL    14,filename+4
GET       BAL    14,filename+8
          DC     Y(workarea address)
PUT       BAL    14,filename+16
          DC     Y(workarea address)

```

If the user programmer wished to cause the reading of 100-byte tape records for transmission to the 1108, the following "OWNCD" input routine would probably suffice:

```

INPT      START  Ø
TPIN      DTFMT  DEVA=2,BKSZ=4ØØ,RCSZ=1ØØ,WORK=YES, etc., etc.
HDLR      DMTIO  WORK=YES, etc., etc.
          ENTRY  G?CI
G?CI      BC     15,OPEN
          BC     15,CLOS
GET       BC     Ø,PAR2           BC 15 IF 2ND HALF OF RECORD
          STH    14,GETX+2       SAVE RETURN
          GET    TPIN,W1ØØ       READ TAPE RECORD
          CLI    W1ØØ,C'@'       11Ø8 CONTROL CARD ?
          BC     8,*+8           SKIP NEXT LINE IF SO
          MVI    GET+1,X'FØ'     SET PART-TWO SWITCH
          LH     14,GETX+2
          LH     15,Ø(,14)       LOCATE REM1'S WORKAREA
          MVC    Ø(8Ø,15),W1ØØ   MOVE 1ST 8Ø BYTES OF TAPE RECORD
          AI     GETX+2,2        ADJUST RETURN
GETX      BC     15,Ø           RETURN
PAR2      MVI    GET+1,Ø        RESET PART-2 SWITCH

```

	LH	15,Ø(,14)	FIND REM1 WORKAREA
	MVC	Ø(2Ø,15),W1ØØ+8Ø	MOVE REMAINDER OF TAPE RECORD
	MVI	2Ø(15),C' '	BLANK-FILL REST
	MVC	21(59,15),2Ø(15)	OF REM1 WORKAREA
	BC	15,2(,14)	RETURN
OPEN	STH	14,*+1Ø	
	OPEN	TPIN	OPEN TAPE FILE
	BC	15,Ø	
CLOS	STH	14,*+1Ø	
	CLOSE	TPIN	CLOSE TAPE FILE
	BC	15,Ø	
W1ØØ	DS	CL1ØØ	TAPE WORKAREA
	END		

If an actual 1108 run deck is being read from tape, REM1 will never cause the tape IOCS' EOF A routine to be entered. A halt or error recovery routine could be placed at the label which is assigned to the EOF A parameter. The OWNCD routine must store and reload any registers other than 14 and 15 which it uses.

7. If OUT=OWNCD is specified, REM1 will assume that its output will be in EBCDIC and will deliver those images which are transmitted to it by the 1108 for punching. The output file must be assigned the label G?CO; REM1 issues 3 macro instructions to the output file, OPEN, PUT, and CLOSE. See the input own-code example above for typical coding where the complexity of the data being transferred does not permit REM1 to reference the actual I/O routine. NOTE - if the only deviation from normal card output is to be translation to other card codes, this may be accomplished by substituting the desired EBCDIC-to-compressed translate table for TBP8 and by equating "TBP8" to the name of the user-supplied table in the linker run.
8. When REM1 is executed, it does not open its reader file until such time as a "READY" (X'Ø5') keyin is made. When a "READ CARDS" (X'Ø6') keyin is made, it ignores all card input until a card with "@RUN" in columns 1-4 is encountered; this is the first card to be transmitted to the 1108. Then, when a card with "@@" in columns 1-2 is read, it stops reading cards. If no cards are to be transmitted to the 1108, sufficient cards must be in the reader so as to prevent a hopper-empty halt; under NCOS, a "DATA C" card, followed by "/\*", followed by valid control stream cards must be present.
9. REM1 does not go to its End-of-Job routine until an "OFFLINE" (X'ØC') keyin is made. Its execution must be terminated by this keyin to insure proper closing of all files. The unnecessary X'66Ø6' halt has been eliminated; under MOS, REM1 will cause the Supervisor's X'41EF' halt to occur upon normal completion; under NCOS, Job Control will be loaded and the remainder of the 9300 Control Stream will be processed.
10. A new REM1 macro library and the TBP8 and G?XX relocatables will be included in the next tape and 8411/8414 disc software updates. REM1 will continue to be distributed as a single macro to recipients of tape and disc software.

F. ORDERING PROCEDURES:

The REM1 software package described herein is available upon request in card format. It may be ordered by forwarding the attached "Software System Support Request" directly to Software Order Services.

Sperry UNIVAC 9200/9300 Software Coordinator  
 Sperry UNIVAC - Software Order Services  
 P. O. Box 500  
 Jolly Road & Township Line Road  
 Blue Bell, Pennsylvania 19422

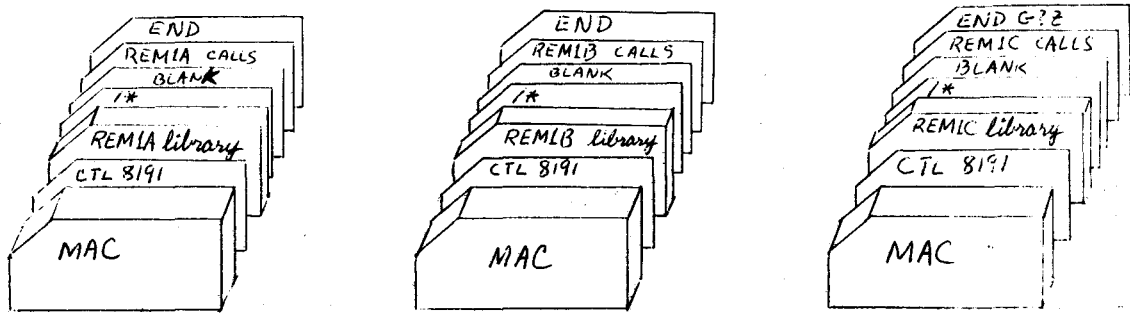
Note: All users outside the United States should check with their local UNIVAC subsidiary office for distribution procedures. The above applies to United States customers only.

G. DESTRUCTION:

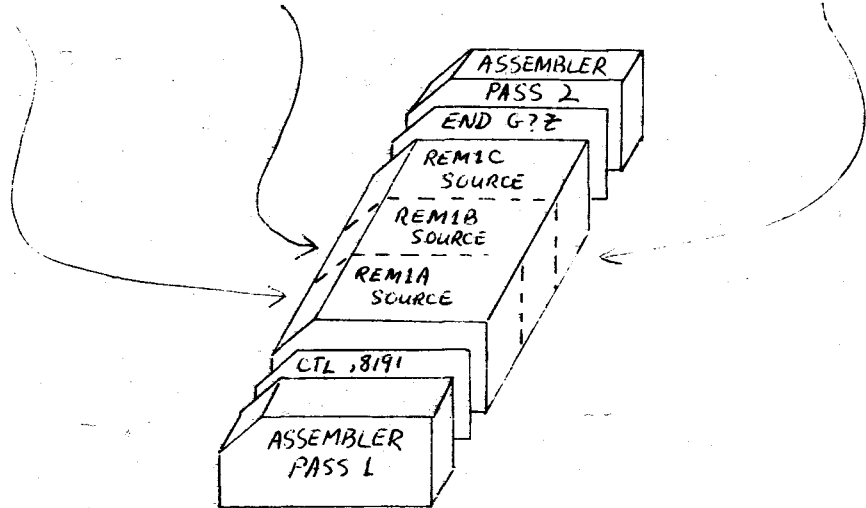
This memo supersedes and orders the destruction of 9300 Release Memo #83 dated January 8, 1971, as well as the former REM1 Macro Library (Rev. 5) distributed with that memo.

APPENDIX A. Diagram of REM1 Generation Procedures.

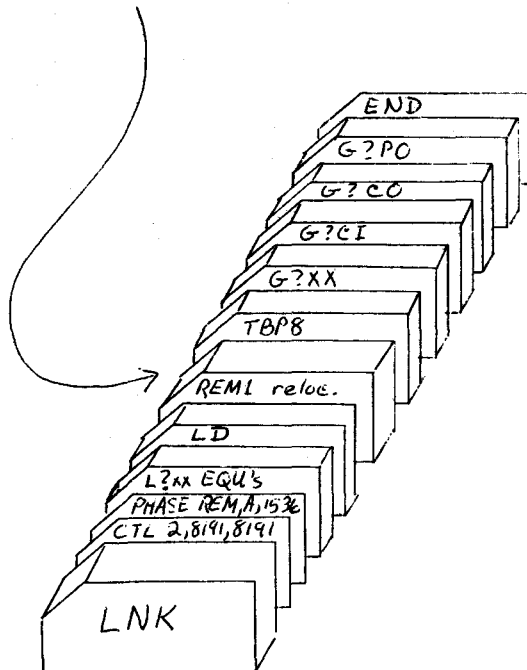
1. Pre-Assembly Macro Pass.

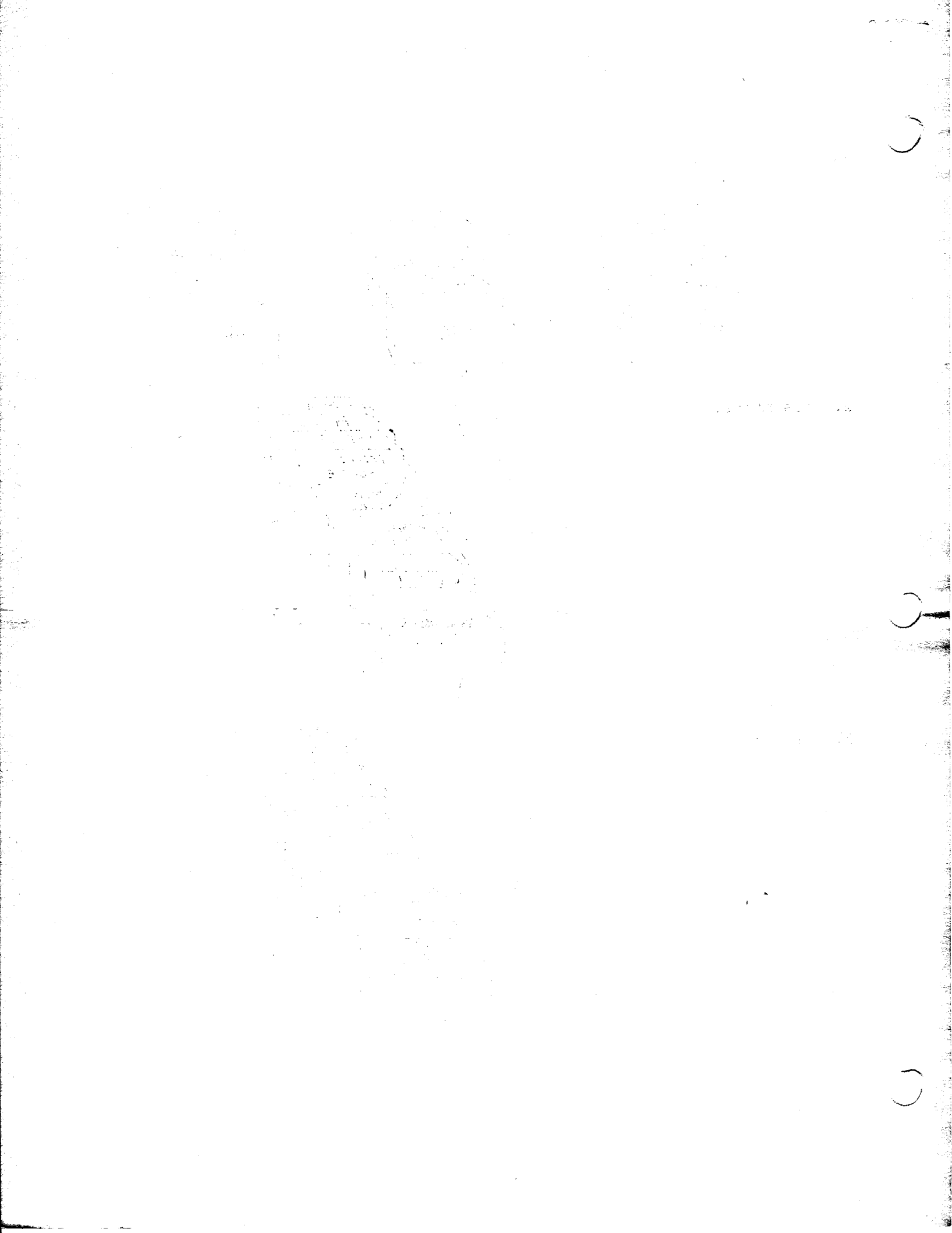


2. Assembler.



3. Linker.







P O BOX 500  
BLUE BELL, PENNSYLVANIA 19422  
TELEPHONE (215) 542-4011

SOFTWARE ORDER SERVICES  
(215) 542-3421

SOFTWARE SYSTEM SUPPORT REQUEST  
DIV.      MKT.      ORGN.      ASSIGN.

<u>SOFTWARE REQUESTED</u>	<u>MEMO #</u>	<u>DATE</u>	<u>MEDIA REQUIRED</u>
<input type="checkbox"/> REMI (PACKAGE) DECK	129	7-23-73	
<input type="checkbox"/>			
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**\*\* CHECK BOX FOR SOFTWARE REQUIRED.**

REQUESTED BY:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ATTN: \_\_\_\_\_

SIGNATURE APPROVED  
USER D. P. MGR/LOCAL S. A. MGR.

SPECIAL INSTRUCTIONS:

SEE ORDERING PROCEDURES PAGE 3 of 4.

REMARKS AND/OR ADDRESS CORRECTION

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SEND REQUEST FORM TO:  
SPERRY UNIVAC  
SOFTWARE ORDER SERVICES  
TOWNSHIP LINE AND JOLLY RD.  
BLUE BELL, PA. 19422

**NOTE:** ALL USERS OUTSIDE THE UNITED STATES SHOULD CHECK WITH THEIR LOCAL UNIVAC SUBSIDIARY OFFICE FOR DISTRIBUTION PROCEDURES.