

\* THIS IS A COPY OF NMSW0 CREATED ON 11/20 AT 14:00. DURING THE NEXT  
 \* TWO WEEKS OR SO D.C. WILL BE ADDING COMMENTS TO IT.  
 \* THE CHANGES OF 11/25, TO INSERT THE BPT2 OPTION  
 \* AND TO PRINT HDA AND HDA/2\*\*13 ARE INCORPORATED  
 \* NOV. 15, 14:00. RADP2 CHANGED TO POINT TO BAND 11D, PAGE 2.

MSW0 IDENT H18 2/13/68

\* MONITOR MODULE 0  
 ENTRY RCVRA

DST ZRO  
 BRM DTS  
 SKN NDCL  
 BRU \*-1  
 SKN DRMTRY  
 BRR DST  
 MIN DST  
 BRR DST

*/COMMENTS/  
 142 MONIT.  
 Have ~ 1/3*

\* THIS ROUTINE INITIALIZES THE DRUM I/O

DRMSET ZRO 0  
 LDA =-1  
 STA NDCL  
 STA DTXS1  
 STA DSCFLG  
 LDA =DRQ  
 STA EDCL  
 STA IDCL  
 CLA  
 STA DSCINT  
 BRR DRMSET

\* 'IOPSET' 9/27/65

\* THIS ROUTINE INITIALIZES THE FILE CONTROL TABLE AND ALL  
 \* NON-TELETYPE I/O.

IOPSET ZRO  
 LDA =40000003B  
 LDX =-NFILE+3  
 ISET1 ADD =1  
 STA EFA,2  
 BRX ISET1  
 LDA =3  
 STA FFLST  
 LDX =LADIU  
 LDB =40000000B  
 STB EFA1  
 LDB =-1  
 ISET2 STB EDIU,2  
 BRX ISET2  
 LDX =NNDEV  
 ISET3 LDA EBUFS,2  
 SKA =40000B  
 BRU \*\*2  
 STB ADIU,2

```

ISET5 BRX ISET3
      CXA
      SKE =NTAPE
      BRU **2
      BRU ISET4
      STB TJNO,2
      CLA
      STA TSTATE,2
      STB TAPREL,2
      STA TDIBA,2
      STA TDFNO,2
      EAX 1,2
      BRU ISET5
ISET4 CLA
      STA BLK31
      BRR IOPSET

```

\* 'TTYSET' 9/26/65

\*

\* THIS ROUTINE INITIALIZES THE TELETYPE HARDWARE AND TABLES

\* IT IS CALLED WITH -1 OR 0 DEPENDING ON WHETHER TTYASG, TTYTBL AND LINK

\* WORDS ARE TO BE RESET OR NOT

\*

```

TTYSET ZRO 0
      STA SRFLG
      LDB =TTYBUF
      LDA =NTTB-1
      STA T
      CLX
TSET1 STB TIS4,2
      STB TIS5,2
      STB TOS4,2
      STB TOS5,2
      SKN SRFLG
      BRU TSET3
      LDA =ITTBL
      STA TTYTBL,2
      LDA ADMASK
      STA TTYASG,2
      LDA =NTTB+40000000B
      STA LCW,2
TSET3 CLA
      STA TIS2,2
      STA TTYTIM,2
      LDA TOS5,2
      ADD =NTTYC
      COPY AB
      LDA =-1
      STA TOS2,2
      STA TOS3,2
      EAX 1,2
      SKR T
      BRU TSET1
      LDA =NTTB+40000000B
      STA LCW,2

```

```

LDA      == 1
STA      ATIS2
LDA      =ATTBUF
STA      ATIS4
STA      ATIS5
SKN      SRFLG
BRR      TTYSET
LDX      =-NJOB+2
STX      ETTNO
TSET2    CXA
ADD      =NJOB
STA      ETTNO,2
BRX      TSET2
LDA      =1
STA      FULST
BRR      TTYSET
SRFLG    ZRO      0

```

```

*
*      SYSTEM INITIALIZE ROUTINE
*

```

```

* RESET SYSTEM

```

```

SSET     ZRO
BRM      DRMSET
LDA      =WR4; MUL =3; LSH 23; SUB =1
STA      WR4X3; SUB =34000B*3; STA XWR4X3
LDX      =-NPAC*NPPAR
STX      CLOCK3
CLB
SET1     LDA      =700000B
STA      PTEST,2
CXA
ADD      =PPTR
ADD      =NPPAR
STA      PPTR,2
EAX      NPPAR-1,6
BRX      SET1
LDA      =PPTR2
STA      FPLST
STB      PPTRU
STB      PUCTR
LDX      NLQ
SET6     LDA      Q1E,2
STA      Q1,2
SUB      =PNEXT
SUB      =3
STA      Q1N,2
EAX      2,6
BRX      SET6
SUB      NLQ
LDX      =-3
STA      Q1N,2
LDX      =-NPUQ*3
SET3     CXA

```

```

ADD      =EPUCT3
STA      EPUCT,2
EAX      2,6
BRX      SET3
CLB
STB      EPUCM3
LDA      =PUCT
STA      FPULST
LDA      =PUBPTR
STA      PUBPTR
STA      PUEPTR
LDA      =25
LDX      =-NSMEM
STA      ESRMC,2
BRX      *-1
LDA      =-1
CLB
LDX      =NSMEM-NMEM
STA      ERMCM,2
STB      ERMT,2; STB ERMA,2
BRX      *-3

```

```

LDX      =-NDRAT*NSEC; LDA =-1; STA EDRAT,2; BRX *-1
LDX      =-NJOB
CLA
STA      EPMTP,2
BRX      *-1

```

```

LDA      BST
LDX      =-100B+NPOP
STA      200B-NPOP,2
BRX      *-1
STA      177B
BRM      IOPSET
LDA      =-1
BRM      TTYSET
BRR      SSET

```

```

WDSU     ZRO; LDA =FF; SUB =30000B; CAX; LDA WDSU1
          STA 30000B,2; BRX *-1
          LDA =FP; SUB =4000B; COPY AX,BA; LDA WDSU1; STA 4000B,2; BRX *-1
          LDX =-77B; STA 100B,2; BRX *-1
          LDX =WDTB-WDTE
          LDA WDTE,2; BRX **1; STA* WDTE,2; BRX *-3; BRR WDSU
WDSU1    BRM RCVR

```

```

WDTB     EQU      *
          BRU SETSET; 0 24B
          BRM CNT; 0 27B
          BRU LOAD; 0 30B
WDPI T   BRM      TRAPI
          0        40B

```

WDIMT	BRM	TRAPM
	Ø	41B
WDRMT	BRM	TRAPR
	Ø	43B
WDUMT	BRM	TRAPT
	Ø	44B
WD31	BRM	INT31
	Ø	31B
WD33	BRM	INT33
	Ø	33B
WDPWFI	BRM	PWFI
	Ø	37B
CLOCK1	BRM	CLINT
	Ø	74B
CLOCK2	SKR	CLOCK3
	Ø	75B
WDTI	BRM	TII
	Ø	200B
WDTO	BRM	TOI
	Ø	201B
WDTN	BRM	TNI
	Ø	202B
WDTF	BRM	TFI
	Ø	203B
WDIRM	BRM	IRER
	Ø	65B
	BRM	IRM
	Ø	64B
	IF	ARMF
WDATI	BRM	ATII
	Ø	204B
	ENDF	
WDTE	EQU	*

\* SCAN THROUGH USER T.S. BLOCKS

TSCN	ZRO	
	LDX	--NJOB
TSCN1	STX	TSCNS1
	LDA	EPMTP, 2
	SKG	=Ø
	BRU	TSCN2
	CAX	
	SKN	Ø, 2
	BRU	TSCN5
	LDA	Ø, 2
	LSH	5
	ETR	=3774000B
	STA	T
TSCN3	LDA	T
	LDB	=34000B
	BRM	GDBC
	BRU	TSCN3

```

LDA      =MBOX
STA      FBWRD
LDX      =34000B
LDA      =-1
STA      MAGT,2
IF -1
STA      SMIFIL
STA      SMOFIL
ENDF
TSCN4 LDA      T
LDB      =40034000B
BRM      GDBC
BRU      TSCN4
TSCN2 LDX      TSCNS1
BRX      TSCN1
BRR      TSCN
TSCN5 EQU      TSCN2
TSCNS1 ZRO

```

\* COPY OUT TABLE FOR CRASH RECOVERY

```

RCT      ZRO
STB      RCT1
CAB
SKR      RCT1
RCT2    XXB
LDA      0,2
EAX      1,2
XXB
STA      0,2
EAX      1,2
SKR      RCT1
BRU      RCT2
CBA
BRR      RCT
RCT1    ZRO

```

\*  
\* CRASH RECOVERY PROGRAM

```

*
RCVRA LDA      =RCVT
LDB      =NRCVT
LDX      =34000B
BRM      RCT
LDA      =TTNO
LDB      =NJOB
BRM      RCT
LDA      =DRAT
LDB      =NDRAT*NSEC
BRM      RCT
LDA =TABLE; LDB =LTABLE; BRM RCT
LDA =PMT; LDB =NUMEM*NJOB; BRM RCT
LDA =FFLST; LDB =4*NFILE+1; BRM RCT

```

\* WRITE OUT PAGES IN CORE

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LDX      =NMEM-1

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```

RES11 STX RCT
      LDA RMT,2; SKG =0; BRU RES12
      LDA* RMT,2; SKA =X4; BRU RES12
      LSH 5
      ETR =3774000B
      STA RCT1
RES13 LDA RCT
      SKG =7
      ADD =10B-NSMEM
      CLB
      LSH 11
      MRG DCWBIT
      CAB
      LDA RCT1
      BRM GDBC
      BRU RES13
RES12 LDA RCT
      SKE =10B
      BRU RES14
RES15 LDA =DMPBND*20000B+NSMEM*4000B
      LDB =40000B
      LDX =40000B-NSMEM*4000B
      BRM GDAC
      BRU RES15
RES14 LDA RCT
      SUB =1
      CAX
      SKE =NSMEM-1
      BRU RES11
* READ IN NEW COPY OF SYSTEM
      BPT4
      BRU *-1
      READ 6*4000B,0,10*20000B
      BRM SSET
* RESTORE CRITICAL TABLES
      LDA =34000B
      LDB =NRCVT
      LDX =RCVT
      BRM RCT
      LDX =TTNO
      LDB =NJOB
      BRM RCT
      LDX =DRAT
      LDB =NDRAT*NSEC
      BRM RCT
      LDX =TABLE; LDB =LTABLE; BRM RCT
      LDX =PMT; LDB =NUMEM*NJOB; BRM RCT
      LDX =FFLST; LDB =4*NFILE+1; BRM RCT
* MARK ALL MEMORY 'ON DRUM'
      LDX =PMT
RES22 LDA 0,2
      ETR =177740B
      SKA =77700B
      MRG X4

```

```

    STA      0,2
    EAX      1,2
    CXA
    SKE      =EPMT
    BRU      RES22
* SET UP ALL JOBS WITH PAC SLOT
    CLA
    STA      JOB
RES20 LDA     JOB
    LDA     PMTP,2
    SKG     =0
    BRU     RES21
    LDA     TTNO,2
    STA     FILE
    BRM     GFK
    HLT
    STX     PUPAC
    BRM     SETPAC
    LDA     EXECRS
    STA     PL,2
RES21 MIN     JOB
    LDA     JOB
    SKE     =NJOB
    BRU     RES20
    IF -1
    BRM     TSCN
    ENDF
    BRM     DRMSET
    ARMI    AIRWD
    BRU     TTYGO
EXECRS ZRO     EXECR,4
$CONTA READ 6*4000B,0,10*20000B
    BRU 24B

```

```

*READ CHARACTER FROM CONSOLE TYPEWRITER.
*LEAVES CHARACTER IN SDS CODE, RIGHT JUSTIFIED IN A.
RDCCT ZRO; DIR; SKS 14000B; BRU *-1
    EOM 2001B; WIM RDCCT1; DISW
    SKS 14000B; BRU *-1; EIR
    LDA RDCCT1; ETR =77B; BRR RDCCT
RDCCT1 ZRO

```

```

*READ UNSIGNED DECIMAL NUMBER FROM CONSOLE TYPEWRITER.
*TERMINATES ON ANY NON-NUMERIC CHARACTER, WITH TERMINATOR IN B.
RDDCT ZRO; CLA; STA RDDCT1
RDDCT2 BRM RDCCT; SKG =9; BRU **4; CAB; LDA RDDCT1; BRR RDDCT
    XMA RDDCT1; MUL =5; CBA; ADM RDDCT1; BRU RDDCT2
RDDCT1 ZRO

```

```

*PRINT CHARACTER ON CONSOLE TYPEWRITER.
*TAKES CHARACTER RIGHT JUSTIFIED IN A. DESTROYS REGISTERS
PRCCT ZRO; BRM CASDS; LCY 18; STA RDCCT1
    DIR; SKS 14000B; BRU *-1

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