


```

NN      NN  PPPPPPPP  AAAAAA  MM      MM  AAAAAA  CCCCCCCC
NN      NN  PPPPPPPP  AAAAAA  MM      MM  AAAAAA  CCCCCCCC
NN      NN  PP        PP  AA      AA  MMMM   MMMM  AA      AA  CC
NN      NN  PP        PP  AA      AA  MMMM   MMMM  AA      AA  CC
NNNN    NN  PP        PP  AA      AA  MM      MM  AA      AA  CC
NNNN    NN  PP        PP  AA      AA  MM      MM  AA      AA  CC
NN  NN  NN  PPPPPPPP  AA      AA  MM      MM  AA      AA  CC
NN  NN  NN  PPPPPPPP  AA      AA  MM      MM  AA      AA  CC
NN      NNNN PP        AAAAAAAAAA MM      MM  AAAAAAAAAA  CC
NN      NNNN PP        AAAAAAAAAA MM      MM  AAAAAAAAAA  CC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CCCCCCCC
NN      NN  PP        AA      AA  MM      MM  AA      AA  CCCCCCCC

```

```

MM      MM  AAAAAA  RRRRRRRR
MM      MM  AAAAAA  RRRRRRRR
MMMM   MMMM AA      AA  RR      RR
MMMM   MMMM AA      AA  RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RRRRRRRR
MM      MM  AA      AA  RRRRRRRR
MM      MM  AAAAAAAAAA RR      RR
MM      MM  AAAAAAAAAA RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RR      RR
MM      MM  AA      AA  RR      RR

```



```

      NPASM_MSKADR   = ^X20
      NPASM_OFFSET  = ^X40
      NPASM_LAST    = ^X8000
.ENDM
.MACRO NPADFS
      IMSGS STTBL DEBUG
      .PSECT NPASSTATE,NOWRT,NOEXE,BYTE
STTBL::
      .IF IDENTICAL <DEBUG>,<$DEBUG>
      .MACRO DBGTP$
      .LIST
      .NLIST
      .ENDM
      .IF FALSE
      .MACRO DBGTP$
      .ENDM
      .ENDC
      NPADFS
      FLG$$$ = -1
      NXT$$$ = 0
      .PSECT
      IMSGS
      .MACRO FIELDS,LABEL
      .PSECT NPASSTATE
      FLG$$$ = FLG$$$!NPASM_LAST
      NTRANS
      .IF NOT_BLANK <LABEL>
      .ENDC
      FLG$$$ = -1
      .PSECT
      FIELDS
      NTRANS
      .PSECT NPASSTATE
      .IF EQUAL FLG$$$+1
      FLG$$$ = 0
      .MEXIT
      .ENDC
      TYP$$$
      .WORD FLG$$$
      .IF NOT_EQUAL FLG$$$&NPASM_EXT
      EXT$$$
      .ENDC
      .IF NOT_EQUAL FLG$$$&NPASM_PARAM
      PRM$$$
      .ENDC
      .IF NOT_EQUAL FLG$$$&NPASM_ACTION
      ACT$$$
      .ENDC
      .IF NOT_EQUAL FLG$$$&NPASM_MASK
      BIT$$$
      .ENDC
      .IF NOT_EQUAL FLG$$$&NPASM_STATE
      STAS$$
      .IF_FALSE

```

```

      .IF      EQUAL      FLG$$$&NPASM_LAST
      .IF      EQUAL      NXT$$$
      .ERROR   ; BAD DEFAULT TRANSITION
      .ENDC
      .ENDC
      .ENDC
      FLG$$$ = 0
      NXT$$$ = 0
.ENDM
.MACRO
NTRANS,LABEL,ACTION,MASK,ADDR,PARAM
      .IF      NOT BLANK      <PARAM>
      FLG$$$ = FLG$$$!NPASM_PARAM
      .MACRO   PRM$$$
      .ADDRESS PARAM
      .ENDM   PRM$$$
      .ENDC
      .IF      NOT BLANK      <ACTION>
      FLG$$$ = FLG$$$!NPASM_ACTION
      .MACRO   ACT$$$
      .ADDRESS ACTION
      .ENDM   ACT$$$
      .ENDC
      .IF      NOT BLANK      <MASK>
      FLG$$$ = FLG$$$!NPASM_MASK!NPASM_MSKADR
      .IF      BLANK      <ADDR>
      .ERROR   ; MASK ADDRESS NOT PRESENT
      .ENDC
      .MACRO   BIT$$$
      .LONG   MASK
      .ADDRESS ADDR
      .ENDM   BIT$$$
      .ENDC
      .IF      NOT BLANK      <LABEL>
      FLG$$$ = FLG$$$!NPASM_STATE
      .MACRO   STAS$$
      .ADDRESS LABEL
      .ENDM   STAS$$
      .ENDC
.ENDM
.MACRO
$IMAGE,SIZE,LABEL,ACTION,MASK,ADDR,PARAM
      .PSECT  NPAS$STATE
      NTRANS
      DBGTP$
      .MACRO  TYP$$$
      .WORD  NPAS_IMAGE
      .ENDM  TYP$$$
      .MACRO  EXT$$$
      .LONG  SIZE
      .ENDM  EXT$$$
      FLG$$$ = FLG$$$!NPASM_EXT
      ITRANS LABEL,ACTION,MASK,ADDR,PARAM
      .PSECT
.ENDM
.MACRO
$WORD,VALUE,LABEL,ACTION,MASK,ADDR,PARAM
      .PSECT  NPAS$STATE
      NTRANS

```

```

DBGTPS
.MACRO TYPSS$
.WORD NPAS WORD
.ENDM TYPSS$
.MACRO EXTSS$
.ADDRESS VALUE
.ENDM EXTSS$
FLGSS$ = FLGSS$!NPASM EXT
ITRANS LABEL, ACTION, MASK, ADDR, PARAM
.PSECT
.ENDM
.MACRO $WORD
$BYTE, VALUE, LABEL, ACTION, MASK, ADDR, PARAM
.PSECT NPAS$STATE
NTRANS
DBGTPS
.MACRO TYPSS$
.WORD NPAS BYTE
.ENDM TYPSS$
.MACRO EXTSS$
.ADDRESS VALUE
.ENDM EXTSS$
FLGSS$ = FLGSS$!NPASM EXT
ITRANS LABEL, ACTION, MASK, ADDR, PARAM
.PSECT
.ENDM
.MACRO $BYTE
$EOM, DUMMY, LABEL, ACTION, MASK, ADDR, PARAM
.PSECT NPAS$STATE
NTRANS
DBGTPS
.MACRO TYPSS$
.WORD NPAS EOM
.ENDM TYPSS$
ITRANS LABEL, ACTION, MASK, ADDR, PARAM
.PSECT
.ENDM
.MACRO $EOM
$MASK, BITMSK, LABEL, ACTION, MASK, ADDR, PARAM
.PSECT NPAS$STATE
NTRANS
DBGTPS
.MACRO TYPSS$
.WORD NPAS MASK
.ENDM TYPSS$
.MACRO EXTSS$
.LONG BITMSK
.ENDM EXTSS$
FLGSS$ = FLGSS$!NPASM EXT
ITRANS LABEL, ACTION, MASK, ADDR, PARAM
.PSECT
.ENDM
.MACRO $MASK
$SBEXP, RTN, LABEL, ACTION, MASK, ADDR, PARAM
.PSECT NPAS$STATE
NTRANS
DBGTPS
.MACRO TYPSS$
.WORD NPAS SBEXP
.ENDM TYPSS$

```

```

.MACRO EXT$$$
.ADDRESS      RTN
.ENDM
.ENDM
.MACRO
$SBEXP
$NULL, DUMMY, LABEL, ACTION, MASK, ADDR, PARAM
.PSECT      NPAS$STATE
NTRANS
DBGTP$
.MACRO      TYP$$$
.WORD      NPAS NULL
.ENDM
ITRANS      LABEL, ACTION, MASK, ADDR, PARAM
.PSECT
.ENDM
.MACRO
$NULL
$LOOK, VALUE, LABEL, ACTION, MASK, ADDR, PARAM
.PSECT      NPAS$STATE
NTRANS
DBGTP$
.MACRO      TYP$$$
.WORD      NPAS LOOK
.ENDM
.IF      NOT BLANK      <VALUE>
.MACRO      EXT$$$
.LONG      VALUE
.ENDM
ITRANS      LABEL, ACTION, MASK, ADDR, PARAM
.PSECT
.ENDM
.MACRO
$EXTZV, FLD, LABEL, ACTION, MASK, ADDR, PARAM
.PSECT      NPAS$STATE
NTRANS
DBGTP$
.MACRO      TYP$$$
.WORD      NPAS EXTZV
.ENDM
LIST$      FLD
ITRANS      LABEL, ACTION, MASK, ADDR, PARAM
.PSECT
.ENDM
.MACRO
LIST$, VAL, POS, SIZ, FLG
.MACRO      EXT$$$
.IF      NOT BLANK      VAL
.BYTE      VAL      ; Field value
.IF FALSE
.ERROR      ; $EXTZV - FIELD VALUE NOT SPECIFIED
.ENDC
.IF      NOT BLANK      POS
.BYTE      POS      ; Field position
.IF FALSE
.ERROR      ; $EXTZV - FIELD POSITION NOT SPECIFIED

```

```

.ENDC
  .IF NOT_BLANK SIZ
  .BYTE SIZ ; Field size
  .IF FALSE
  .ERROR ; $EXTZV - FIELD SIZE NOT SPECIFIED
  .ENDC
  .IF NOT_BLANK FLG
  .BYTE FLG ; Flags
  .IF FALSE
  .BYTE 0 ; No flags
  .ENDC
.ENDM EXTSS$
.ENDM
.MACRO
  LIST$
  $ERROR,ERR,LABEL,ACTION,MASK,ADDR,PARAM
  .PSECT NPAS$STATE
  NTRANS
  DBGTP$
  .MACRO TYPSS$
  .WORD NPAS_ERROR
  .ENDM TYPSS$
  .MACRO EXTSS$
  .LONG ERR
  .ENDM EXTSS$
  FLGSS$ = FLGSS$!NPASM_EXT
  ITRANS NPAS_FAIL,ACTION,MASK,ADDR,PARAM
  .PSECT
.ENDM
.MACRO
  $ERROR
  $MATCH,NBR,LABEL,ACTION,MASK,ADDR,PARAM
  .PSECT NPAS$STATE
  NTRANS
  DBGTP$
  .MACRO TYPSS$
  .WORD NPAS_MATCH
  .ENDM TYPSS$
  .MACRO EXTSS$
  .LONG NBR
  .ENDM EXTSS$
  FLGSS$ = FLGSS$!NPASM_EXT
  ITRANS LABEL,ACTION,MASK,ADDR,PARAM
  .PSECT
.ENDM
.MACRO
  $MATCH
  $NEXT
  NXTSS$ = -1
  NTRANS
  DBGTP$
  FLGSS$ = -1
.ENDM
.ENDM
  $NEXT

```


