

```
CCCCCCCCCCCCC RRRRRRRRRRR FFFFFFFFFFFFFFFF
CCCCCCCCCCCCC RRRRRRRRRRR FFFFFFFFFFFFFFFF
CCCCCCCCCCCCC RRRRRRRRRRR FFFFFFFFFFFFFFFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCC           RRR           RRR FFF
CCCCCCCCCCCCC RRR           RRR FFF
CCCCCCCCCCCCC RRR           RRR FFF
CCCCCCCCCCCCC RRR           RRR FFF
```

```
CCCCCCCC RRRRRRRR FFFFFFFF MM MM AAAAAA CCCCCCCC
CCCCCCCC RRRRRRRR FFFFFFFF MM MM AAAAAA CCCCCCCC
CC RR RR FF MMMM MMMM AA AA CC
CC RR RR FF MMMM MMMM AA AA CC
CC RR RR FF MM MM AA AA CC
CC RR RR FF MM MM AA AA CC
CC RRRRRRRR FFFFFFFF MM MM AA AA CC
CC RRRRRRRR FFFFFFFF MM MM AA AA CC
CC RR RR FF MM MM AAAAAAAAAA CC
CC RR RR FF MM MM AAAAAAAAAA CC
CC RR RR FF MM MM AA AA CC
CC RR RR FF MM MM AA AA CC
CCCCCCCC RR RR FF MM MM AA AA CCCCCCCC
CCCCCCCC RR RR FF MM MM AA AA CCCCCCCC
```

```
RRRRRRR EEEEEEEEE QQQQQQ
RRRRRRR EEEEEEEEE QQQQQQ
RR RR EE QQ QQ
RR RR EE QQ QQ
RR RR EE QQ QQ
RR RR EE QQ QQ
RRRRRRR EEEEEEEEE QQ QQ
RRRRRRR EEEEEEEEE QQ QQ
RR RR EE QQ QQ
RR RR EE QQ QQ
RR RR EE QQ QQ
RR RR EE QQ QQ
RR RR EE QQ QQ
RR RR EEEEEEEEE QQQQ QQ
RR RR EEEEEEEEE QQQQ QQ
```

```

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Version 'V03-000'

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MODULE: CRFMAC.REQ

FACILITY: CROSS REFERENCE UTILITY INTERFACE

ABSTRACT: REQUIRE FILE WHICH DEFINES THE CRF INTERFACING MACROS  
I.E. THOSE WHICH INITIALIZE THE FORMAT DESCRIPTION TABLES

HISTORY:

VERSION: 'V04-000'

AUTHOR: T.J. PORTER 24-MAY-77

MODIFICATIONS:

NO.	DATE	PROGRAMMER	PURPOSE
001	24-JUN-77	T.J. PORTER	CROSS REFERENCE KEY TYPES IN MACROS.
002	11-JUL-77	T.J. PORTER	ADD ERROR AND OUTPUT ROUTINE ADDRESSES TO CONTROL TABLE. INITIALIZE ENTRY AND NODE SIZES IN TABLE.
003	29-OCT-79	B.L. SCHREIBER	KEY TYPES ARE NOW EXTERNAL. DEFINE ALL LITERALS SO IT CAN GO INTO SYSTEM LIBRARIES.

! 004 11-DEC-79

B.L. SCHREIBER EXPAND CONTROL TABLE

! --

++

## FUNCTIONAL DESCRIPTION:

THIS REQUIRE FILE DEFINES THE BLISS MACROS TO BE USED BY A UTILITY WHICH USES THE CROSS REFERENCE UTILITY. THESE KEYWORD MACROS ARE THOSE FOR INITIALIZING THE TABLES REQUIRED BY CROSS REFERENCE FOR DESCRIPTION OF THE OUTPUT LINE FORMATS.

---  
 DECLARE TABLE AND ENTRY SIZES \*\*NOTE\*\* MUST CHANGE IF CRF CHANGES \*\*\*

## LITERAL

```

CRFSK_TBLSIZE = 96,           ! SIZE OF LINE TABLE (BYTES)
CRFSK_FIELDSIZE = 12,        ! FIELD TABLE ENTRY SIZE (BYTES)

CRFSK_ASCIC = 0,             ! ASCII COUNTED STRING KEYS
CRFSK_BIN_U32 = 1,          ! 32 BIT UNSIGNED BINARY KEYS

CRFSK_VALUES = 0,           ! CROSS REFERENCE WITH VALUES
CRFSK_VALS_REFS = 1,        ! JUST REFERENCES
CRFSK_DEFS_REFS = 2,        ! FULL CROSS REFERENCE
CRFSK_DELETE = 0,           ! INDICATOR TO DELETE THE TABLES
CRFSK_SAVE = 1,             ! INDICATOR TO SAVE THE TABLES
CRFSK_REF = 0,              ! REFERENCE TO A SYMBOL
CRFSK_DEF = 1;              ! DEFINITION OF SYMBOL

```

GENERATE THE CROSS REFERENCE CONTROL TABLE

## KEYWORDMACRO

```

$CRFCTLTABLE(KEYTYPE=ASCIC,ERROR=0,OUTPUT=0,
MEMEXP=50,
KEY1TABLE=0, KEY2TABLE=0,
VAL1TABLE=0, VAL2TABLE=0,
REF1TABLE=0, REF2TABLE=0)=
BLOCK[CRFSK_TBLSIZE, BYTE] ALIGN(0)
INITIAL(0,
LONG(0),
BYTE(%NAME('CRFSK_', KEYTYPE), ! TYPE OF KEY
0,0,0),
THREE BYTES RESERVED
LONG(0),
NUMBER OF ENTRIES IN CROSS REFERENCE
LONG(0,0),
LIST HEAD FOR VIRTUAL MEMORY ALLOCATED
LONG(MEMEXP*512),
SIZE IN BYTES OF VA TO ALLOCATE
LONG(MEMEXP),
SIZE IN PAGES OF VA TO ALLOCATE
LONG(0,0,0,0,0,0,0,0), ! RESERVED FOR EXPANSION
ERROR,
ERROR ROUTINE ADDRESS
OUTPUT,
OUTPUT ROUTINE ADDRESS
KEY1TABLE,
POINTER TO PRIMARY KEY FIELD DESCRIPTION TABLE
KEY2TABLE,
POINTER TO SECOND KEY FIELD DESCRIPTION TABLE
VAL1TABLE,
POINTER TO TABLE DESCRIBING
VAL2TABLE,
THE KEY VALUE FIELD
POINTER TO SECONDARY
VALUE FIELD DESCRIPTION TABLE

```

```
REF1TABLE,      ! POINTER TO PRIMARY  
REF2TABLE)%,   ! REFERENCE FIELD DESCRIPTION TABLE  
               ! POINTER TO SECONDARY REFERENCE  
               ! FIELD DESCRIPTION TABLE
```

```
! GENERATE AN ENTRY IN A TABLE DESCRIBING FORMATS OF A PARTICULAR  
! FIELD OF THE LINE
```

```
$CRFFIELD(BIT_MASK=0,FAO_STRING,SET_CLEAR=1,FIELD_WIDTH)=  
BLOCK[CRFSK_FIELDSIZE,BYTE]  
  INITIAL(WORD(BIT_MASK OR %'8000'),      ! BIT PATTERN FOR MATCH  
          BYTE(SET_CLEAR),                ! MATCH ON SET OR CLEAR  
          BYTE(FIELD_WIDTH),              ! WIDTH OF FIELD  
          LONG(%CHARCOUNT(FAO_STRING)),  ! LENGTH OF FAO STRING  
          LONG(UPLIT(FAO_STRING)))%,      ! ADDRESS OF TEXT STRING
```

```
! GENERATE A FIELD TABLE END INDICATOR
```

```
$CRFFIELDEND = WORD INITIAL(0)%;
```

CRFOR LIS	CLITABDEF SCL
CRFMEM LIS	DCLDEF MDL
CRFMACROS MAR	CRFTRVEC LIS
CRFMDL MDL	CRFERRMSG LIS
CRF LIS	CRFSUB LIS
CRF SCL	CRFGLOBAL LIS
CRF	DCL
CRFSHR MAP	DCL MAP
CRFMAC REQ	