

```
//      JOB E1235JS,TIME=2,LINES=10000,J STRAWN
//SYS002 ACCESS MUTPC355,WRITE=YES,NOLABEL
// EXECUTE FORTRAN(LINK,MAP)
```

```
FORTRAN IV      MODEL 44  PS      VERSION 3,  LEVEL 4      DATE  73067
```

```
      C      A PROGRAM TO GENERATE AN AUDIO WAVE OF VARYING FREQUENCY AND
      C      AMPLITUDE USING A STORED FUNCTION
      C      VERSION FOR TAPE OUTPUT
```

```
0001      COMMON/INOUT/JTAPE,JREAD,JPRINT
0002      COMMON/SINWAV/SINS(500)
0003      COMMON/WAVE/WAVSAM(500)
0004      DIMENSION RATHAR(10)
0005      DATA TWOPI/6.28318/
0006      INTEGER DURAT,SAMRAT/10000/
0007      INTEGER NOTENO/0/
0008      INTEGER SILENT
0009      REAL FREFAZ/1.0/
0010      CALL GENSIN
0011      5 READ (JREAD,1,END=6) ANTIME,FREQ,KLASSF,HARNO,AMPL
0012      1 FORMAT(F10.0,F9.0,I1,2F10.0)
0013      NOTENO = NOTENO + 1
0014      WRITE(6,70) NOTENO
0015      70 FORMAT ('NOTE NUMBER',I10,//////)
0016      IF (FREQ .EQ. 0.0) GOTO 10
0017      IF (HARNO .EQ. 0.0) GOTO 8
0018      NUMHAR = IFIX(HARNO)
0019      READ (JREAD,2) (RATHAR(KOUNT),KOUNT=1,NUMHAR)
0020      2 FORMAT (10F8.0)
0021      WRITE(JPRINT,7) (RATHAR(KOUNT),KOUNT=1,NUMHAR)
0022      7 FORMAT ('HARMONIC RATIOS',10F8.4)
0023      CALL WAVER (RATHAR,NUMHAR)
0024      8 NOSAMP = 10000*ANTIME
0025      IF (KLASSF .EQ. 1) FREQ = CONVRT(FREQ)
0026      FREINC = 500.*FREQ/SAMRAT
0027      WRITE (6,20) FREQ,ANTIME,HARNO,FREINC,AMPL
0028      20 FORMAT (' FREQUENCY', F20.5,/ ' ANTIME', F20.5,/
      C ' HARNO', F20.5,/ ' FREQ INC', F20.5,/
      C ' AMPLITUDE', F20.5//)
0029      DO 3 DURAT = 1, NOSAMP
0030      SAMPLE = OSCIL(FREFAZ) * AMPL
0031      WRITE (6,50) SAMPLE, FREFAZ
0032      50 FORMAT (1X,2F20.7)
0033      FREFAZ = FREFAZ + FREINC
0034      CALL SAMOUT (SAMPLE)
0035      3 IF (FREFAZ .GT. 500.) FREFAZ = FREFAZ - 499.
0036      GOTO 5
0037      10 NOSAMP = 10000*ANTIME
      C      GENERATE THE REQUIRED SILENCE
0038      WRITE (JPRINT,40) NOSAMP
0039      40 FORMAT (I15, ' SAMPLES SILENCE GENERATED')
0040      DO 30 SILENT = 1, NOSAMP
0041      SAMPLE = 0.0
0042      30 CALL SAMOUT (SAMPLE)
```

FORTTRAN IV MODEL 44 PS VERSION 3, LEVEL 4 DATE 73067

0043 GOTO 5
0044 6 CALL SAMEND
0045 CALL EXIT
0046 END

COMMON BLOCK / INOUT / MAP SIZE 00000C

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
JTAPE	000000	JREAD	000004	JPRINT	000008		

COMMON BLOCK / SINWAV / MAP SIZE 0007D0

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
SINS	000000						

COMMON BLOCK / WAVE / MAP SIZE 0007D0

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
WAVSAM	000000						

SCALAR MAP

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
TWOPI	0000E8	SAMRAT	0000EC	NOTEND	0000F0	FREFAZ	0000F8
FREQ	0000FC	KLASSF	000100	HARND	000104	AMPL	000108
KOUNT	000110	NOSAMP	000114	FREINC	000118	DURAT	000122
SILENT	000124						

ARRAY MAP

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
RATHAR	000128						

SUBPROGRAMS CALLED

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION
GENSIN	000150	IBCOM#	000154	WAVR	000158	CONVRT	000162
SAMCUT	000164	SAMEND	000168	EXIT	00016C		

LABEL MAP

LABEL	LOCATION	LABEL	LOCATION	LABEL	LOCATION	LABEL	LOCATION
5	0001A4	1	0001E8	70	00022C	2	000230
8	00034C	20	000400	50	000494	3	000498
40	000540	30	00057E	6	0005A0		

TOTAL MEMORY REQUIREMENTS 0005F8 BYTES

COMPILER HIGHEST SEVERITY CODE WAS 0


```
0001      FUNCTION CONVRT(CLASS)
           C      TO CONVERT 8.OCTAVE-PITCH CLASS TO HERZ
0002      RATIO = 1.059463
0003      KCLASS = INT(CLASS)
0004      REAL LOWNOT/32.7032/
0005      CONVRT=KCLASS*LOWNOT+RATIO**INT((CLASS-KCLASS)*100)
0006      WRITE (6,10) CLASS,CONVRT
0007      10 FORMAT('-PITCH', F6.2, ' CONVERTED TO', F15.5)
0008      RETURN
0009      END
```

EQUIVALENCE DATA MAP

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL
CONVRT	000098					

SCALAR MAP

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL
RATIO	00009C	KCLASS	0000A0	CLASS	0000A4	LOWNOT

SUBPROGRAMS CALLED

SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL	LOCATION	SYMBOL
IBCOM#	0000AC	FRXPI#	0000B0			

LABEL MAP

LABEL	LOCATION	LABEL	LOCATION	LABEL	LOCATION	LABEL
10	0001D8					

TOTAL MEMORY REQUIREMENTS 000240 BYTES

COMPILER HIGHEST SEVERITY CODE WAS 0