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This form should be completed and submitted with the program package to the SHARE Program Library Agency at the address shown above. Standards and instructions for submitting programs are in the "SHARE Reference Manual"

- (1) Program Number (to be filled in by SPLA)..... 360D-16.0.003
- (2) System Type (machine)..... IBM 360/370
- (3) Search Key..... NOISE MODEL PROGRAM
AIRCRAFT NOISE EXPOSURE
- (4) Programming Systems/Languages..... PL/I, CALCOMP PLOTTER SOFTWARE
- (5) Author's Name and Address..... Dr. Peter A. Mansbach
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(if different than Author) The MITRE Corporation
METREK Division
1820 Dolley Madison Blvd, McLean, VA. 22101
- (7) Title of Program..... FAA Integrated Noise Model
Program Package (Version 2)
- (8) Submitter's Installation Membership Code..... MTW
- (9) Submitter's Own Program Identification and Suffix(Optional)..... INMPROG
- (10) Primary Subject Code..... 16.0
- (11) Minimum System Requirements CMS/OS/IBM/360/370, Direct Access Storage and at least
400 K BYTES of Storage
- (12) New or Revision Code (if revision, show prior Program Number in Item 1) N
- (13) Year Completed..... 76
- (14) Date of Submittal..... 8/25/76
- (15) Documentation (number of original pages submitted)..... 17
- (16) Abstract (should contain sufficient information for a reader to determine the value of the program). Listed on the reverse side of this form are subjects which may serve as a guide for a descriptive abstract.

SHARE PROGRAM LIBRARY SUBMITTAL FORM

Subject Guide:

- a. Purpose
- b. Programming Language used
- c. Version and modification level or release number
- d. Field of application
- e. Type of routine (main program, subroutine, etc.)
- f. Specific description of machine requirements

ABSTRACT

The FAA Integrated Noise Model Program Package INMPROG provides the capability to compute aircraft noise indices as required by the Integrated Noise Model. Tabular output includes L_{dn} , L_{eq} , and durations of exposure above various dB(A) thresholds. Plotter output is also generated. The package includes its own data base.

The Programs are written in PL/I, and require preprocessor and REGIONAL (1) I/O capability. 5 main programs, 22 subprograms, and 5 macro files comprise the program. The required standard noise library and an acoustic data library are also supplied; however these are in IBM 360/370 machine readable data formats.

The programs were developed on an IBM 370/145 under CMS, using a virtual machine size of 512K. They are expected to run on any IBM 360 or 370, either CMS or OS, with 400K or more of memory, real or virtual. The plotter program requires the basic CALCOMP subroutines with FORTRAN linkages. Users should obtain the "FAA Integrated Noise Model-User's Guide", FAA-EQ-76-2, from the National Technical Information Service (NTIS), Springfield, Virginia 22151. A programmer's guide and data base description are being prepared.

(Please attach additional pages if necessary).....Total pages attached

Permission to Publish

"I hereby give the SHARE Program Library Agency permission to reprint, reproduce, and distribute this program."

- (17) Signature of Submitter and Date Ronald G Gado 9/10/76
- (18) Signature of Installation Addressee Rutha H. Snow 9/22/76

Abbreviated Documentation for INMPROG

The "FAA Integrated Noise Model - User's Guide", P. A. Mansbach and F. X. Maginnis, FAA-EQ-76-2, is available from the National Technical Information Service (NTIS), Springfield, Virginia 22151, and is normally required for the user of this program. The Introduction, and Appendices D and E, are reproduced on the following pages.

Companion documents "FAA Integrated Noise Model - Data Base" and "FAA Integrated Noise Model - Programmer's Guide" are being prepared.

TABLE OF CONTENTS

| | <u>Page</u> |
|-----------------------------------|-------------|
| INTRODUCTION | 1 |
| System Requirements | 3 |
| Procedure for Bringing up Program | 5 |
| List of Main - and sub-programs | 6 |
| List of Files | 8 |
| INM EXEC | 10 |
| Listing of Files on Tape | 13 |
| Update Request Form | 16 |

1. INTRODUCTION

The FAA Integrated Noise Model (INM) provides a conceptually simple method for characterizing aircraft noise near airports. It includes a determination of the total time that the sound level exceeds certain thresholds, and also the equivalent A-weighted sound level, L_{eq} , and the day-night average sound level, L_{dn} , at a number of points surrounding a particular airport. Thus, several methodologies are integrated into a single model which provides a very complete picture of the noise environment.

The computer program INMPROG is available to provide all of the information required. Times-above-threshold are computed using six different thresholds, from 65 dBA to 115 dBA in 10 dBA increments. In addition to the total exposure per day, the exposures occurring during the more sensitive evening hours (7 P.M. - 10 P.M.) and night hours (10 P.M. - 7 A.M.) are presented separately. The equivalent A-weighted sound level L_{eq} , and the day-night average sound level L_{dn} , are also computed. These are defined in Appendix A.

In addition to this tabular information, a graphical plot is provided. This plot presents the contours of equal exposure duration at levels above 85 dBA. Contours depicting the entire area which may receive 85 dBA exposure, and the areas receiving more than 2 minutes and more than 15 minutes per day in excess of 85 dBA, are normally provided. Other time values may be specified by the user. Crosses identify the locations at which the tabular data are computed. Only points within the outermost 85 dBA contour are included in the tabular output.

An option available to the user provides a plot of L_{dn} contours instead of the equal duration contours described above. If this option is selected, tabular output will be generated for points within the outermost L_{dn} contour. Contours of 65 L_{dn} and 75 L_{dn} are normally provided; other L_{dn} levels may be specified by the user.

Noise data for the common aircraft types are provided within the program. For those aircraft which may be retrofitted to meet FAR-36 requirements, data for both "standard" aircraft and aircraft equipped with quiet nacelles are included. Certain standard operational procedures - specifically takeoffs utilizing ATA procedures at a number of gross weights, and landings with maximum certificated flap settings - are assigned operational codes. These codes access a library of pre-computed

noise data available to the program. Other operational procedures may be specified by the user. These cause additional data to be generated on a temporary basis.

The complete program package is available on tape through the SHARE Program Library Agency.*

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APPENDIX D

SYSTEM REQUIREMENTS

The INMPROG program package is written in PL/I source language, and hence requires a PL/I compiler and associated I/O subroutines to be available on the user's system. Specifically, the PL/I 'REGIONAL(1)' direct access I/O capability is utilized.

Several assumptions regarding hardware storage organization have been made; in particular that 4 characters = 1 word = 1 floating point number = 1 fullword interger = 2 halfword integers = 32 bits. These assumptions were made to achieve efficient input/output. Use of this program on a machine with a different word organization would require a methodical review of the program to change the structures used in I/O and overlay defining.

The program runs easily in 500k bytes of memory, either real or virtual. It may be possible to run in a substantially smaller machine - perhaps 300-400k bytes - if the compiled object code and the system I/O routines are space-efficient.

The standard library must be loaded onto a direct access storage device, and requires nearly 4,000,000 bytes of external storage.* Additional storage is required for user-generated library data. The average user-generated library entry requires 20,000 bytes; it is suggested that double this amount be available.

A direct access scratch file of 200,000 bytes is also required by the program. Two sequential output files are produced, requiring (for example) 200,000 bytes and 50,000 bytes, respectively, and very much dependent on the size of the airport.

The amount of input data is relatively small, seldom requiring more than 200 punched cards (16,000 bytes). These may be stored on disk or included in the jobstream.

The plotted output requires a CALCOMP plotter or CALCOMP-compatible software. The only plotter routines required are PLOT, PLOTS, LINE, and SYMBOL. Note however that the one

* About 17 cylinders on an IBM 3330 disk.

call to PLOTS (which initializes the plotter) is system-dependent, and may have to be changed to suit the installation.

The plotter width is assumed to be at least 27 inches; this may be changed, if necessary. However, the plotter must be of the drum type, with effectively unlimited length, for all but the smallest plots.

APPENDIX E

PROCEDURE FOR BRINGING UP PROGRAM

The source program supplied on tape consists of 27 separate PL/I procedures (5 main programs and 22 subprograms), plus 5 'copy' files required as macros. These are listed in Table E-1. Together these programs comprise about 5000 card images.

In addition, the standard noise library and a separate acoustic data library are also supplied on the tape. These must be loaded onto a direct access device prior to execution of the program. They are not required for compilation, however.

As mentioned in Appendix D, the call to PLOTS is dependent on the installation and may require modification. This call occurs in the procedure INMPLOT, at about line 212 (sequence number 02120). The supplied call reads

```
CALL PLOTS (0E0, 0E0);
```

and no buffer space is provided. Further, PLOTS is declared in line 93 (seq. no. 00930) to be

```
ENTRY (BIN FLOAT (21), BIN FLOAT (21));
```

any changes required must of course be made before compilation. If the plotter width is less than 27 inches, the declaration of PLOTTER-HEIGHT (line 100), must also be changed.

A PL/I macro library must be generated from the 5 macro files. These are named FIRSTIN, TRKS, OUTPUT, COSD, and CONST. This library must be made available to the PL/I compiler. (It is no longer needed once compilation is complete.)

The 27 programs must be compiled by the PL/I compiler, using the INCLUDE option. It is assumed that the optimizing compiler will be used for such a long program. In addition, it is recommended that the OPTIMIZE (TIME) option be used to achieve the fastest execution time possible. These two options have been specified on *PROCESS cards within the programs.

It is also suggested that the SOURCE and OFFSET options (or GOSTMT, if storage is not a problem) also be specified by the user. This will facilitate error-tracking in the event of any difficulties.

TABLE E-1

LIST OF MAIN- AND SUB-PROGRAMS

INMII (main computational program)

STARTUP
*RESET
TRAX
GETMIX
GETNOIS
PRESCAN
SCAN
LINEINT
INTERP
CPC
PUTEXPO
OUTEXPO
OUTPUT
TRKIO
AIRPORT
ZEROTRK
EDGE
ZEROOUT
DEFGRID
MINMAX

NOISLIB (generates user-specified library)

PRPROF
LIBPROC

INMPRT (prints tabular data)

PREPLOT (extracts and sorts output contours)

INMPLOT (plots contours)

MACROS (input for preprocessor)

FIRSTIN
TRKS
COSD
CONST
OUTPUT

Certain 'informatory' and 'warning' messages will be generated by the compiler, and do not signify any difficulty. 'Error' and 'severe' messages should not occur.

The five main programs may be loaded and run directly, or load modules may be generated. These five main programs are named

INMII
NOISLIB
INMPRT
PREPLOT
INMPLOT

At load time, and again at execution time, the appropriate PL/I system library (including the I/O routines, etc.) must be made available to the system.

In addition, when loading the plotter program INMPLOT, the library containing the CALCOMP subroutines must also be made available. Since these subroutines are written for a FORTRAN environment (and the PL/I program is expecting this), it may be necessary to specify the main program entry point to the loader.*

At execution time a number of files or data sets must be specified. These include input data, reference (library) data, program output, and scratch space. A list of required files is given in Table E-2, together with a "typical" size given in number of records (not bytes). The files NOISLIB, ACDFILE, and EXPOREG are fixed in size; the rest depend on the size of the airport. The main output file SCNFIL (and the PREPLOT output file INDATA) are roughly proportional to the area enclosed by the contours. The sizes given in the table are taken from the TESTCITY example of Section 2.

Where no user-defined operation codes are to be generated, it is not necessary to run the NOISLIB program, and hence one need not define the files ALTPROC, ACDFILE, LIBFIL, or ALTLIB.

The four user input files to INMII may, if desired, be entered sequentially as part of the job stream. The card formats have

* For example for IBM's VM/CMS system, the option RESET DMSIBM must be specified in the LOAD command.

TABLE E-2
LIST OF FILES

| PROGRAM | ddname | RECORD LENGTH | BLOCK SIZE | SAMPLE NO. OF RECORDS | USE |
|----------------|-------------------------------|------------------|---------------|--------------------------|--|
| <u>NOISLIB</u> | | | | | |
| | ALTPROC | 80 | (cards) | 50 | User Input (sequential) |
| | ACDFILE | 558 | 558 | 50 | Acoustic Data (read only direct access) |
| | LIBFIL | 800 | 800 | 100 (25 per entry) | Output = User library (sequential) |
| | SYSPRINT | 133 | 133 | 100 | Printed Output |
| <u>INMII</u> | | | | | |
| | PARMFIL | 80 | (cards) | 5 | User Input (sequential) |
| | RWFILE | 80 | (cards) | 5 | User Input (sequential) |
| | TRKFILE | 80 | (cards) | 20 | User Input (sequential) |
| | MIXFILE | 80 | (cards) | 100 | User Input (sequential) |
| | NOISLIB | 800 | 800 | 4500 | Standard Library (read only direct access) |
| | ALTLIB | 800 | 800 | 100 | User Library (read only direct access) Use the LIBFIL generated by NOISLIB |
| | EXPOREG | 4000 | 4000 | 48 | Scratch Space (direct access) |
| | SCNFILE | 80 | 800 | 2000 | Output (sequential) |
| | SYSPRINT | 133 | 133 | 200 | Printed Output |
| <u>INMPRT</u> | | | | | |
| | SCNFILE | 80 | 800 | 2000 | Input (sequential) |
| | SYSPRINT | 133 | 133 | 500 | Printed Output |
| <u>PREPLOT</u> | | | | | |
| | SCNFILE | 80 | 800 | 2000 | Input (sequential) |
| | INDATA | 20 | 800 | 2000 | Output (sequential) |
| <u>INMPLOT</u> | | | | | |
| | INDATA | 20 | 800 | 2000 | Input (sequential) |
| | SYSPRINT | 133 | 133 | 5 | Printed Output |
| | ** depends on installation ** | | | | Output to Plotter |

been described in Section 5.

Prior to program execution, the standard library NOISLIB and the acoustic data file ACDFIL must be transferred to a direct access storage device. ALTLIB and EXPOREG also require direct access storage. The other files are accessed sequentially within any single program, although some - like SCNFILE - are created by one program and form the input for subsequent programs in the package.

Note that the output to the plotter varies in form from installation to installation, and must be treated as specified by the installation's own user's manual. In some cases the plotter may be driven directly, or output may be spooled for the plotter; in others a file of a certain ddname may be required on disk or on tape. This file is referenced only by the system's own PLOTS subroutine, not by anything in the INMPROG package.

Running time, of course, depends on the speed of the computer. An estimate may be made - usually quite conservative - by using the dollar estimate of Appendix B and assuming it is entirely due to CPU usage. The program should be run at night, because of the heavy demands on the CPU and peripheral storage.

An example of an 'EXEC', or job control program, used to run INMPROG under an IBM VM/CMS time-sharing system, is given in Figure E-1. Clearly this must be modified for each particular installation, although the general sequence of operations would remain the same.

```

&TYPE ENTER JOBNAME -- UP TO 8 CHARS
&READ ARGS
* &I TAKES THE VALUE OF JOBNAME
*
* CHECK FOR PRESENCE OF REQUIRED FILES ON DISK
&ERROR &GOTO -NOFIL
STATE &I PARMFIL A
STATE &I HWFILE A
STATE &I TRKFILE A
STATE &I MIXFILE A
&ERROR &CONTINUE
* CHECK FOR DISK WITH LIBRARY ON IT
CP Q V 198
&IF &RETCODE NE 0 &GOTO -NOODISK
-CONTI &CONTINUE
ACC 198 G
&ERROR &GOTO -ERR
* MAKE PL/I AND PLOTTER LIBRARIES AVAILABLE:
GLOBAL TXLIB PLILIB CALCOMP
* DEFINE PRINTER FOR ENTIRE JOB:
FILEDEF SYSPRINT PRINTER(PEM RECFM FA LRECL 133 BLOCK 133
&ERROR &GOTO -NOGEN
* IF AN ALTPROC DOES NOT EXIST, SKIP NOISLIB PORTION
STATE &I ALTPROC A
&ERROR &GOTO -ERR
*
*** GENERATE USER LIBRARY *****
*
FILEDEF ALTPROC DISK &I ALTPROC A (RECFM FB LRECL 80 BLOCK 800
FILEDEF LIBL DISK &I ALTLIB G (RECFM F LRECL 800 BLOCK 800
&A = ACOUSTIC
* &A IS DEFINED SO THAT NEXT LINE IS SHORT ENOUGH FOR EXEC INTERPETER
FILEDEF ACUFILE DISK ACOLIB &A G (XTENT 9999 RECFM F LRECL 558 BLOCK 558
*
NOISLIB
-NOGEN &CONTINUE
*
***** MAIN COMPUTATIONAL PROGRAM *****
*
&ERROR &GOTO -ERR
*INPUT FILES:
FILEDEF PARMFIL DISK &I PARMFIL A (RECFM FB LRECL 80 BLOCK 800
FILEDEF MIXFILE DISK &I MIXFILE A (RECFM FB LRECL 80 BLOCK 800
FILEDEF HWFILE DISK &I HWFILE A (RECFM FB LRECL 80 BLOCK 800
FILEDEF TRKFILE DISK &I TRKFILE A (RECFM FB LRECL 80 BLOCK 800
*LIBRARY FILES:
&L = NOISLIB
FILEDEF &L DISK FAAM0000 &L G (XTENT 30000 RECFM F LRECL 800 BLOCK 800
FILEDEF ALTLIB DISK &I ALTLIB G (XTENT 30000 RECFM F LRECL 800 BLOCK 800
*SCRATCH FILE:
&E = EXPOREG
FILEDEF &E DISK FILE &E G (RECFM F LRECL 4000 XTENT 48 BLOCK 4000
*OUTPUT FILE:

```

FIGURE E-1
INM EXEC

```

FILEDEF SCNFILE DISK &1 SCNFILE G (PERM RECFM FB LRECL 80 BLOCK 800
*
INMII
* CHECK THAT OUTPUT FILE IS THERE AND DOCUMENT ITS LENGTH
LISTFILE &1 SCNFILE G (D
ERASE FILE EXPOSED G
*
*
*** PRINT TABULAR DATA *****
*
FILEDEF SCNFILE DISK &1 SCNFILE G (PERM RECFM FB LRECL 80 BLOCK 800
*
INMPRT
*
*
*** EXTRACT CONTOURS FROM DATA *****
*
FILEDEF SCNFILE DISK &1 SCNFILE G (PERM RECFM FB LRECL 80 BLOCK 800
FILEDEF INDATA DISK &1 INDATA G (PERM RECFM FB LRECL 20 BLOCK 800
*
PREPLOT
*
*
*** PRODUCE PLOTTED OUTPUT *****
*
* CHECK PREPLOT OUTPUT FILE AND DOCUMENT ITS LENGTH
LISTFILE &1 INDATA G (D
* THIS INSTALLATION NEEDS A TAPE FOR PLOTTER OUTPUT. SEE THAT IT'S THERE
CP Q V 181
&IF &RETCODE NE 0 &GOTO -TAPE2
-CONT2 &CONTINUE
FILEDEF SCNFILE DISK &1 SCNFILE G (PERM RECFM FB LRECL 80 BLOCK 800
FILEDEF INDATA DISK &1 INDATA G (PERM RECFM FB LRECL 20 BLOCK 800
*THIS INSTALLATION REQUIRES THE FOLLOWING PLOTTER OUTPUT FORMAT:
FILEDEF 36 TAPI (DEN 800 RECFM VS LRECL 504 BLOCK 508
*
INMPLOT
TAPE RUN
CP DET 181
CP M UP TAPE JUST DETACHED IS TO BE PLOTTED
&TYPE SCNFILE, INDATA, AND ALTLIB ARE STORED ON 198 G. ERASE WHEN DONE.
&EXIT
*
*
*** ACQUIRE DISK SPACE AND GET LIBRARY ***
*
* DEFINE TEMPORARY DISK 198 G
-NODISK &CONTINUE
&COUNT = 0
&SKIP 1
-AGAIN CP DET 198
&COUNT = &COUNT + 1
CP DEFINE T3330 AS 198 CYL 30
&IF &RETCODE NE 0 &GOTO -NOSPACE
&STACK YES

```

FIGURE E-1
INM EXEC
(Continued)

```

&STACK DISK6
FORMAT 198 6
&IF &RETCODE NE 0 &IF &COUNT EQ 1 &GOTO -AGAIN
&IF &RETCODE EQ 0 &GOTO -GETLIB
-NOSPACE &CONTINUE
&TYPE CANNOT DEFINE NEEDED DISK SPACE.
&EXIT 1111
-GETLIB &CONTINUE
*
* READ NOISE LIBRARY AND ACOUSTIC DATA ONTO DISK
&LOOP -&ENDLOOP 10
CP M OP PLEASE MOUNT FAA NOISE TAPE AS 181 READ ONLY. PROGRAM WAITS.
CP SLEEP 2 MIN
CP Q V 181
&IF &RETCODE EQ 0 &GOTO -READY1
-&ENDLOOP &CONTINUE
&GOTO -ERR
-READY1 &CONTINUE
TAPE REW
TAPE LOAD * * 6
&IF &RETCODE NE 0 &GOTO -ERR
TAPE RUN
CP DET 181
&GOTO -CONT1
*
*
*** MOUNT TAPE NEEDED BY THIS INSTALLATION FOR PLOTTER OUTPUT ***
-TAPE2 &CONTINUE
&LOOP -&ENDL2 10
CP M OP PLEASE MOUNT SCRATCH TAPE FOR PLOTTER OUTPUT ON DUAL DENS DRIVE
CP SLEEP 2 MIN
Q V 181
&IF &RETCODE EQ 0 &GOTO -READY2
-&ENDL2 &CONTINUE
&GOTO -ERR
-READY2 &CONTINUE
TAPE REW
&GOTO -CONT2
&EXIT 111
*
* ERROR HANDLING
-NOFIL &TYPE A REQUIRED FILE IS MISSING. PROGRAM NOT EXECUTED
&EXIT 100
-ERR &BEGTYPE
ERROR DURING PROCESSING. PROGRAM TERMINATED.
&END
&EXIT &RETCODE

```

FIGURE E-1
INM EXEC
(Concluded)

DESCRIPTION OF DISTRIBUTION TAPE

The tape contains five files each separated by one tape mark, with several consecutive tape marks at the end. This document is highly VM/CMS oriented. However, the files on tape, with the exception of the fifth (last), are all sequential. The last is in CMS tape dump format, and not useable by other than CMS users.

Tape File Summary

| <u>File No.</u> | <u>Description</u> | <u>LRECL</u> | <u># Records</u> | <u>Block</u> | <u># Blocks</u> |
|-----------------|------------------------------|--------------|------------------|--------------|-----------------|
| 1 | PL/I Source | 80 | 5321 | 8000 | 54 |
| 2 | Input data | 80 | 73 | 5840 | 1 |
| 3 | ACDLIB | 558 | 39 | 5580 | 4 |
| 4 | NOISLIB | 800 | 4586 | 8000 | 459 |
| 5 | CMS MACLIB and TEXT files | 805 | 508 | 805 | 508 |

PL/I SOURCE ROUTINES, PLUS TWO CMS EXEC'S
(1 FILE)

This tape file is sequential, 80-character records, blocksize 8000.
Each separate routine has a control record in front of it with the format:
./ ADD NAME=XXX, LIST=ALL
where XXX is the name in the column marked CMS FILE NAME below.

| <u>FILE</u> <u>NAME</u> | <u>FILE</u> <u>TYPE</u> | <u>FIXED RECORD</u> <u>FORMAT LENGTH</u> | <u>NUMBER OF</u> <u>RECORDS</u> |
|----------------------------|----------------------------|---|------------------------------------|
| CONST | COPY | 80 | 7 |
| COSD | COPY | 80 | 14 |
| FIRSTIN | COPY | 80 | 31 |
| OUTPUT ¹ | COPY | 80 | 2 |
| TRKS | COPY | 80 | 28 |
| AIRPORT | PLI | 80 | 362 |
| CPC | PLI | 80 | 72 |
| DEFGRID | PLI | 80 | 68 |
| EDGE | PLI | 80 | 162 |
| GETMIX | PLI | 80 | 171 |
| GETNOIS | PLI | 80 | 210 |
| INMII | PLI | 80 | 71 |
| INMPLOT | PLI | 80 | 884 |
| INMPRT | PLI | 80 | 277 |
| INTERP | PLI | 80 | 60 |
| LIBPROC | PLI | 80 | 184 |
| LINEINT | PLI | 80 | 165 |
| MINMAX | PLI | 80 | 17 |
| NOISLIB | PLI | 80 | 469 |
| OUTEXPO | PLI | 80 | 111 |
| OUTPUT | PLI | 80 | 101 |
| PREPLOT | PLI | 80 | 422 |
| PRESCAN | PLI | 80 | 134 |
| PRPROF | PLI | 80 | 159 |
| PUTEXPO | PLI | 80 | 63 |
| RESET | PLI | 80 | 108 |
| SCAN | PLI | 80 | 56 |
| STARTUP | PLI | 80 | 239 |
| TRAX | PLI | 80 | 174 |
| TRKIO | PLI | 80 | 87 |
| ZEROOUT | PLI | 80 | 117 |
| ZEROTRK | PLI | 80 | 85 |
| INM | EXEC | 80 | 157 |
| NOISLIB ¹ | EXEC | 80 | 20 |

¹ NOTE: These two routines have the same CMS filename as two other routines, but different file type. In order to preserve their identity, the file OUTPUT COPY is on tape with NAME=OUTPUTCP, and NOISLIB EXEC with NAME=NOISLIBX.

TEST INPUT FILES AND LIBRARIES
(3 FILES)

Five input data sets and two libraries for program checkout are included on the tape. These correspond to the TESTCITY input files and the ACDLIB and NOISLIB tape libraries. Please note that the NOISLIB library furnished with this program is a revised version of that used to generate the "example output" in the User's Guide. Hence the program output obtained by the user will differ somewhat from the published example.

File 2 contains 80 character records, blocksize 8000, with the individual data sets ("files") each preceded with a ./ ADD card as in file 1, but where the XXX is the name in the filetype columns.

File 3 contains 558 character records, blocksize 5580, and no ./ ADD card.

File 4 contains 800 character records, blocksize 8000, and no ./ ADD card.

| <u>FILE</u> <u>NAME</u> | <u>FILE</u> <u>TYPE</u> | <u>FIXED RECORD</u> <u>FORMAT LENGTH</u> | <u>NUMBER OF</u> <u>RECORDS</u> |
|----------------------------|----------------------------|---|------------------------------------|
|----------------------------|----------------------------|---|------------------------------------|

FILE 2:

| | | | |
|----------|---------|----|----|
| TESTCITY | ALTPROC | 80 | 27 |
| TESTCITY | MIXFILE | 80 | 16 |
| TESTCITY | PARMFIL | 80 | 6 |
| TESTCITY | RWFILE | 80 | 2 |
| TESTCITY | TRKFILE | 80 | 17 |

FILE 3:

| | | | |
|-----------------------|--------|-----|----|
| FAAMOD00 ¹ | ACDLIB | 558 | 39 |
|-----------------------|--------|-----|----|

FILE 4:

| | | | |
|-----------------------|---------|-----|------|
| FAAMOD02 ² | NOISLIB | 800 | 4586 |
|-----------------------|---------|-----|------|

¹ note: for use with INM EXEC, change this file name and type to ACDLIB ACOUSTIC.

² note: for use with INM EXEC, change this file name and type to FAAMOD00 NOISLIB

MACRO LIBRARY AND OBJECT PROGRAM
(1 FILE)

This file is in CMS tape dump format. It can be loaded by using the tape load command. Since these text decks were not compiled with the OSDECK option, only a CMS user can use them.

| <u>FILE</u> <u>NAME</u> | <u>FILE</u> <u>TYPE</u> | <u>FIXED RECORD</u> <u>FORMAT LENGTH</u> | <u>NUMBER OF</u> <u>RECORDS</u> | <u>NUMBER OF</u> <u>BLOCKS OF</u> <u>800</u> <u>CHARACTERS</u> |
|----------------------------|----------------------------|---|------------------------------------|---|
| INMLIB | MACLIB | 80 | 86 | 9 |
| AIRPORT | TEXT | 80 | 304 | 31 |
| CPC | TEXT | 80 | 69 | 7 |
| DEFGRID | TEXT | 80 | 99 | 10 |
| EDGE | TEXT | 80 | 82 | 9 |
| GETMIX | TEXT | 80 | 160 | 16 |
| GETNOIS | TEXT | 80 | 175 | 18 |
| INMII | TEXT | 80 | 80 | 8 |
| INMPLOT | TEXT | 80 | 853 | 86 |
| INMPRT | TEXT | 80 | 313 | 32 |
| INTERP | TEXT | 80 | 69 | 7 |
| LIBPROC | TEXT | 80 | 146 | 15 |
| LINEINT | TEXT | 80 | 106 | 11 |
| MINMAX | TEXT | 80 | 24 | 3 |
| NOISLIB | TEXT | 80 | 424 | 43 |
| OUTEXPO | TEXT | 80 | 116 | 12 |
| OUTPUT | TEXT | 80 | 71 | 8 |
| PREPLOT | TEXT | 80 | 432 | 44 |
| PRESCAN | TEXT | 80 | 74 | 8 |
| PRPROF | TEXT | 80 | 94 | 10 |
| PUTEXPO | TEXT | 80 | 70 | 7 |
| RESET | TEXT | 80 | 109 | 11 |
| SCAN | TEXT | 80 | 45 | 5 |
| STARTUP | TEXT | 80 | 286 | 29 |
| TRAX | TEXT | 80 | 135 | 14 |
| TRKIO | TEXT | 80 | 86 | 9 |
| ZEROOUT | TEXT | 80 | 100 | 10 |
| ZEROTRK | TEXT | 80 | 73 | 8 |

Update Request Form

Please fill out this form and send it to:

Dr. Ronald G. Gados, W545
The MITRE Corporation
1820 Dolley Madison Blvd.
McLean, Virginia 22101

in order to receive notification of program updates, including
"bugs" and their fixes.

Name of User Organization: _____

Name of individual to whom update information is to be directed:

Date of acquisition of program:
