User’s Guide for
PIA Calculation Program
version 1994.1

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Social Security Administration
Office of the Actuary

December 1993
SSA Pub. No. 11-11501

Requirements:

1 disk drive

384K memory

color monitor, or monochrome emulating color

Additional copies of the PIA94 disk and user's guide may be ordered from the National Technical Information Service. Call (703) 487-4650 for ordering information and prices. At time of printing, current product numbers were not known. Ask for the update to one of the following product numbers:

PB93-500585 — 5 1/4 inch disk and user's guide.

PB93-500593 — 3 1/2 inch disk and user's guide.

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INTRODUCTION

Description and use

The PIA Program is an interactive program written for the IBM PC and compatibles. It produces the Social Security primary insurance amount (PIA) for an old-age, survivor, or disability benefit, given the characteristics of a particular worker. It also produces the maximum family benefit (MFB) and, for old-age and survivor cases, the actuarial reduction or increment factor and monthly benefit amount (MBA) in single-benefit cases.

The program can produce a PIA for any historical case from the first Social Security benefit paid (1940). It can also produce a projected PIA, based on stored or user-specified assumptions, through 2065. All amendments to the law, and automatic adjustments, through 1993 are taken into account.

The program can also produce the figures shown in the Personal Earnings and Benefit Estimate Statement (PEBES). PEBES provides estimates for early, normal, and delayed retirement, survivors, and disability benefits.

Although we have tried to be as accurate as possible, this is not the same program as is used for official Social Security calculations and it may produce results that differ from an official calculation. In particular, we have made approximations for pre-1965 benefits and for the frozen minimum PIA, and we do not yet take account of closed periods of disability, disability non-exclusion calculations, or disability guarantee PIA's. Based on experience to date, this program matches the official calculations very well, with most differences due to late posting of earnings to the earnings record, or different assumptions for projected benefits.

We gratefully acknowledge the assistance of the following Social Security Administration employee: Bob Ievers, Elmira, NY, for the one-page summary printed output.

Benefits of the PIA program

This program automates what might otherwise be a lengthy hand calculation. It has some limitations as compared to the on-line benefit estimate program available in the Social Security Administration, but it has some advantages also:

- cases can be saved on disk to be rerun later,
- a large amount of detailed output is available,
- assumptions as to future benefit increases and average wages can be user-selected,
- the windfall elimination provision is included, and
- the program can be run on a stand-alone personal computer.

Training

The program is menu-driven. The user can get an explanation of any request for input by pressing the F1 function key. However, the user is expected to be generally familiar with the Social Security program (e.g. benefits can be paid to retirees, survivors, or disabled workers, etc.). Within the Social Security Administration, anyone who has used the on-line benefit estimate program should have no problem with this program.

Technical support

Within the Social Security Administration, designated local support personnel should be contacted for technical support.

Comments

We welcome your written suggestions and comments. If you let us know how you would like the program modified, we will make the suggested changes, if possible, if we think there is widespread interest.

Send your suggestions and comments to the author at:

Room 4-N-29 Link
6401 Security Blvd.
Baltimore, MD 21235

I. GETTING STARTED

The distribution disk with the PIA program has 58 files:

- ANYPIA.EXE - the main PIA program;
- ANYPIA.HLP - help screens;
- ANYPIA.NDX - index for the help screens;
- PIAGUIDE.DOC - this user's guide in ASCII format;
- PIAGUIDE.PS - this user's guide in PostScript format;
- 36 data files (with extensions of .DAT);
    - 5 starting with OS for old-start calculations;
    - 8 files with projected average wages;
        - 4 starting with AW93, for 1993 computation year;
        - 4 starting with AW94, for 1994 computation year;
    - 8 files with projected benefit increases;
        - 4 starting with BI93, for 1993 computation year;
        - 4 starting with BI94, for 1994 computation year;
    - 8 files with projected catch-up increases;
        - 4 starting with CU93, for 1993 computation year;
        - 4 starting with CU94, for 1994 computation year;
    - 2 files with historical average wages and benefit increases;
        - AWBI93.DAT for 1993 computation year;
        - AWBI94.DAT for 1994 computation year;
    - BASEYEAR.DAT - computation year (currently 1994);
    - 2 files with titles of projected amounts;
        - TITLES93.DAT for 1993 computation year;
        - TITLES94.DAT for 1994 computation year;
    - CONFIG.DAT - configuration data;
    - FO.DAT - field office information;
- CONFIG.PIA - configuration data for calculations;
- README - last-minute information.
- 15 sample calculation files (with extensions of .PIA).

There is also a subdirectory SOURCE, containing the source code for the program. See section 6 for more information about the source code.

The main program is directly executable, but you should first make a working copy of the program. To do that, the computer must be up and running under DOS. The procedure to follow depends on whether you have a hard disk or floppy disks, and on whether you want to run it over a network.

Hard disk installation

If you have a hard disk (drive C), create a subdirectory at the C> prompt by entering **mkdir anypia**. Change to that directory by entering **cd anypia**. Insert the PIA disk into drive A (or drive B) and copy all the files onto the hard disk by entering **copy a:*.*** (or **copy b:*.***).

Floppy disk installation

If you have only floppy disks, create a formatted disk by putting your DOS system disk in drive A and a blank disk in drive B and entering **format b:** at the A> prompt.

When the formatting is finished, remove the DOS system disk and put the PIA disk in drive A. Copy all the files on the PIA disk onto your newly formatted disk by entering **copy a:*.* b:.** Your newly formatted disk is now your PIA working disk.

If you have 360K disks, you will not be able to copy all files onto one disk. For a minimum installation, copy ANYPIA.EXE, CONFIG.DAT, and CONFIG.PIA onto one disk, and the remaining files with an extension of .DAT onto a second disk. Then edit CONFIG.DAT so that the program looks for the data files on your second disk drive (see section 3 for more information about setting up the configuration).

Network installation

The PIA program can be installed on a network of computers. The executable program and most of the data files can be stored on a file server. The two files CONFIG.DAT and CONFIG.PIA must be stored on the local machine. Two lines in CONFIG.DAT tell the PIA program where the remaining data files are located, as described in section 3. Edit CONFIG.DAT with a text editor and enter the appropriate network server name and directory.

Running the PIA program

To run the program locally, simply insert a DOS system disk into drive A and the PIA working disk into drive B (if you have floppy drives only) or change to the ANYPIA subdirectory (if you have a hard drive). Then start the program by entering **anypia**.

To run the program over a network, change to the local directory containing the files CONFIG.DAT and CONFIG.PIA and enter the command to start the program from a mounted file system. For instance, if the file server is mounted as drive G, and the PIA program and data are stored there in directory ANYPIA, enter **g:\anypia\anypia**.

Options at start-up

There is an option available when starting the program which will allocate either more or less memory to the program. Normally, the program can handle projections through the year 2065. If your computer cannot load the program due to insufficient memory, you can start the program specifying the maximum projection year **xxxx**. Start the program with the command **anypia /yxxxx**.

Alternatively, if you wish to do projections beyond 2065, and your computer has enough memory, you can enter the same command with a year greater than 2065 (up to 2100).

Color-coding

The PIA program can print information on the screen in color or in monochrome. If you have a color monitor, and the configuration file allows for color output, information on the screen will appear in color, where the color-coding follows the conventions of the Social Security Administration's computer systems as closely as possible. There are four basic colors used:

- yellow for “help” information,
- white for requested actions,
- green for user responses, and
- red for error information.

II. MAIN MENU

When you start the program, you are presented with the main menu (the bar at the top of the screen) with five choices ("File", "View", "Setup", "Run", or "Help"). You can move from choice to choice by using the space bar or the arrow keys. Press ENTER (or RETURN) to make your selection. A pulldown menu will appear giving you additional selections. You can again move from choice to choice; press ENTER to make your selection from the pulldown menu. Press ESCAPE to return from any of the pulldown menus to the main menu.

File

If you select "File" from the main menu, you will be offered the choices "Open", "Save", "Save as", "Delete", "Directory", and "Quit". If you have saved a case in a previous run, you can choose "Open" to recall that case. After a case has been entered and edited, you can choose "Save" or "Save as" to save it on the disk so that it can be recalled later. You can choose "Delete" to delete a previously saved case. Choose "Directory" for a listing of all cases that have been saved to disk. Choose "Quit" to stop the program.

If you are saving a case using "Save as", or recalling or deleting a previously saved case, you will be prompted for the name of the case. (If you choose "Save", the case will automatically be saved using the last specified name. If you haven't yet specified a file name, you must use "Save as", not "Save".) Enter the name of the file with the stored case. This must be a legal DOS pathname (including a drive specifier, if desired). The program will add an extension of ".PIA" so it can recognize the saved file as a PIA case. If you enter the extension as part of the name, it must be ".PIA". Any other extension will cause the program to fail.

There is a special saved case named CONFIG.PIA. This is the default case that is recalled when you first start the program. Do not save a case named CONFIG unless you want to replace your default information for future sessions. In addition, do not delete CONFIG.PIA; the program will not run in a future session without the existence of CONFIG.PIA.

View

If you select “V iew” from the main menu, a pulldown menu will allow you to choose from a series of data entry forms. The first choice, “All”, will guide you through all applicable forms. The other choices bring up only the one form specified. See section 4 for information on filling out the forms.

Some choices on the pulldown menu are preceded by an asterisk, meaning that they are not available for the current case. For instance, if you have chosen PEBES as the type of benefit, the “Non-PEBES data” choice will not be available.

Setup

The “Setup” menu choice allows you to select among four data-initialization choices. It is not necessary to select any of the four choices to calculate a PIA, but you may want to select them in some circumstances.

- The “Configuration” menu choice allows you to set two indicators (for the method used to send output to the printer and the type of monitor), the printer initialization string, the location of the data files, and the command used to send output to the printer .
- The “Historical amounts” menu choice allows you to review and update the historical average wage series and benefit increases.
- The “Computation year” menu choice allows you to change among various possible computation years. The current distribution of the PIA disk contains data for two computation years (1993 and 1994); trying to change the computation year before creating data files for other computation years will result in error messages. The necessary data files for future computation years are created by selecting the “Historical amounts” choice.
- The “Field office info” menu choice allows you to tailor the field office address, and name and title of the field office manager , to the appropriate values. This gives each Social Security Adminis-

tration field office the ability to produce customized letters transmitting their PEBES estimates. Users outside of the Social Security Administration can ignore this information.

See section 3 for more information on the data-initialization menu selections.

Run

When you choose “Run” and then “Start” from the pulldown menu, the benefit is computed for the currently chosen case. A summary of the results is presented on the screen, with an option to print out the results. Enter Y if you want printed output of the results.

If you respond with a Y , and you are not performing a PEBES calculation, you will be asked to choose a one-page summary (including indexed earnings), a two-page summary , or details of all calculations (including the two-page summary , if not already printed). Press ESCAPE if no further printed output is desired. See section 5 for a description of the output.

If you are doing a PEBES calculation and you request printed output, you will automatically receive a five-page summary of the PEBES results. If you wish to see detailed output for some of the individual PEBES estimates, you can rerun the case as an old-age, disability , or survivor calculation. Y ou will, however , be required to enter all the data necessary to complete the calculation.

Help

When you choose “Help”, you are given three choices:

- “This Program” presents a summary of the capabilities of this program,
- “Main Menu” presents information on the main menu (similar to the above information), and
- “Forms” tells how to enter information into the forms that appear when “V iew” is chosen from the main menu, as follows.

MAIN MENU

Data can be entered or modified by choosing “View” from the main menu and then one of the choices from the pulldown menu. You must answer the prompts which appear on the form or forms which will be presented to you. Each prompt should be answered with the requested data and then RETURN. You can use the arrow keys to edit your response before pressing RETURN.

If more than one number is in a single response, the numbers are separated by pre-entered slashes. Months and days should be entered as 2 digits (e.g. March 7 would be 03/07). Years may be entered as 4 digits (or as the last 2 digits only if in the 1900’s).

You can move to other responses on the form by pressing the up or down arrow key. You can accept all responses currently shown on the form by pressing ESCAPE. You can get help on any requested response by pressing the F1 key while entering that response.

In order to produce accurate results with this program, you must have a Social Security earnings record showing earnings for each year. You should also have the total number of quarters of coverage earned to date. If the number is not known, you can enter 40, since that is the maximum number needed for a retirement or survivor benefit.

It is possible to produce approximate results without a Social Security earnings record by projecting known earnings forward or backward to years with unknown earnings. The benefit estimate produced will only be as accurate as your assumption about unknown earnings.

III. SETUP OPTIONS

The “Setup” menu choice offers you four data-initialization choices from the pulldown menu. It is not necessary to choose any of the four selections to calculate a PIA, but you may want to choose them in some circumstances.

Configuration

The “Configuration” menu choice allows you to set two indicators (for the method used to send output to the printer and the type of monitor), two directory names (for storage of data files), the printer initialization string, and the command used to send output to the printer.

If you choose this option, you are asked if you want to continue with the procedure to update the two indicators, the directory names, the initialization string, and the command used to send output to the printer. This gives you an opportunity to exit this choice without updating the values. If you answer with a Y, the program will ask you for the new values.

Setting the type-of-printing indicator to 0 sends the printout directly to the printer; this is the usual choice. You may set the indicator to 1 to first create a print file and then have the operating system send the file to the printer; this is useful if you want to edit the print file, or if you are on a network where you must send the print file to a remote printer.

Creating a print file requires more memory; if your computer has insufficient memory, the program may stop running when you try to print your results.

The indicator for type of monitor allows you to specify color output to the screen. (Some monochrome monitors can emulate the particular colors chosen for the PIA program, while others cannot. If you have trouble with the color setting, try the monochrome setting.) Program disks are initially configured for color output to the screen.

This program reads and saves various data files used in the operation of the program. They are normally stored in the same directory as the program, but the two entries for directory names allow for the storage of the data files in other directories. Currently, the directories store files as described in the next two paragraphs.

The first directory (called "local") is used to store the data for cases you have run (files that end in .PIA). If you want to store them in the directory with the program, leave this field blank. If you want to store them in another directory, or another drive, enter that directory or drive. For example, to save cases to the A drive, enter **a:**.

The second directory (called "central") is used to store historical and projected program data, the base year, and the field office address (files that end in .DAT), and the help files (ANYPIA.HLP and ANYPIA.NDX). An exception is the configuration file, CONFIG.DAT, which must be in your current working directory when you start the program. Users on a network may want to use a directory on a file server as their central directory. By doing that, data files will not have to be copied onto all the local machines. Enter the name of the directory, as it is known by the local machine, in this field.

The printer initialization string can be used to set up your printer before any output is printed. Check your printer manual to find which options are available. For instance, you may want to change to 12 characters per inch, or bold, etc. The printer initialization string is entered as a series of back-slashes and numbers. For instance, the escape code would be entered as **\27**.

The command used to send output to the printer is split into two parts: the part preceding the filename and the part coming after the filename. For instance, the MS-DOS command would be "COPY FILENAME PRN"; therefore the two parts of the printer command as supplied with the MS-DOS version of the program are "COPY" and "PRN". If you are on a network and must use a different command to send output to the printer, you must change these fields.

After you have updated the two indicators, the two directory names, the printer initialization string, and the command used to send output to the printer, you will be asked if you want to save the new values to disk. You are given a final opportunity to exit this choice without updating the values. If you answer with a Y, the values you entered will be recorded to your disk.

Historical amounts

The "Historical amounts" menu choice allows you to review and update the historical average wage series and benefit increases. You will first be asked if you want to review or update the amounts. (You can press ESCAPE to return to the main menu.) If you choose "Review" from the popup menu, the following series will appear on the screen, one at a time:

- the average wage (indexing) series,
- the OASDI wage bases,
- the HI wage bases,
- the old-law wage bases (ignoring the 1979-81 ad hoc increases), and
- the benefit increases.

Press RETURN after each series is presented.

If you choose "Update" from the popup menu, you will see a message warning that you are about to make permanent changes to the five series described in the preceding paragraph. You will have to provide an additional year of data for each of the five series. Normally, this would be done around November 1, when the benefit increase for December and the average wage and wage bases are announced. The five necessary values, described in the following paragraphs, will be distributed by the National Technical Information Service (NTIS) to all registered users outside of the Social Security Administration in November of each year.

The average wage is used for indexing an earnings record in the computation of Average Indexed Monthly Earnings (AIME). It also is used in the determination of the benefit formula bend points and other Social Security parameters. It is based on the average of all W-2 earnings reported to the Social Security Administration.

The OASDI wage base limits the earnings on which OASDI taxes are paid and on which OASDI benefits are based. It increases in proportion to the average wage, but is rounded to a multiple of $300. It is announced at the same time as the average wage.

The HI wage base limits the earnings on which HI taxes are paid. Beginning with 1994, the HI wage base is eliminated; HI taxes are paid on all covered earnings. The HI wage base does not affect the computation of OASDI benefits. It is used in this program only in the calculation of HI taxes paid.

The old-law OASDI wage base is necessary in the calculation of the special-minimum PIA. It increases in the same manner as the regular wage base. It is announced at the same time as the average wage, although some announcements may fail to mention the old-law wage base.

The benefit increase applies to any benefit based on a year of eligibility that is the same as, or earlier than, the year of the benefit increase. It is equal to the increase in the Consumer Price Index from the third quarter (July, August, and September) of the prior year to the third quarter of the current year, rounded to the nearest 0.1 percent.

After you have updated the five series of historical amounts, you will be asked if you want to save the new values to disk. You are given a final opportunity to exit this choice without updating the amounts. If you answer with a Y, the values you entered will be recorded to your disk.

Immediately after the new historical amounts are saved, the four sets of assumptions as to future benefit increases and average wages that are stored on the disk are also updated, because the starting year of the assumptions must be changed to agree with the new ending year of historical data. The program will also attempt to update the titles of the assumptions, but will present the four titles to you for your approval. Press RETURN to accept the titles, or enter your own choice of titles.

At the completion of "Update", there will be 14 new files of data:

- one with the updated historical amounts,

- four with new average wage increase assumptions,
- four with new benefit increase assumptions,
- four with new catch-up benefit increase assumptions, and
- one with the titles for the new assumptions.

The 14 files for the previous year will remain on the disk, and will remain accessible by choosing “Computation year” from the “Setup” pulldown menu. If you make a mistake, you can reselect “Historical amounts” (after changing back to the previous computation year); updating the historical amounts will overwrite the 14 files described above.

Computation year

The “Computation year” menu choice allows you to change among various possible computation years. The current distribution of the PIA disk contains data for two computation years (1993 and 1994); trying to change the computation year before creating data files for other computation years will result in error messages. The necessary data files for future computation years are created by choosing “Historical amounts” from the “Setup” pulldown menu.

The PIA disk is distributed with the computation year set to the latest year for which data is available (currently 1994). This means that benefit increases through December 1993 and benefit formulas through 1994 are known and available to the program. Requests for PIA computations which require program amounts beyond those values will necessitate the user entering assumptions about those future amounts.

If desired, the necessary data files for years prior to 1993 could be created by copying the files for 1993 to the appropriately named files and using a text editor to make the required changes. This would not normally be necessary; using a computation year of 1994 will allow for the computation of any benefit in or prior to 1994.

After you have updated the computation year , you will be asked if you want to save the new value to disk. Y ou are given a final opportunity

to exit this choice without updating the value. If you answer with a Y ,
the value you entered will be recorded to your disk.

Field office info

The “Field office info” menu choice allows you to tailor the field office address, and name and title of the field office manager , to the appropriate values. This gives each Social Security Administration field office the ability to produce customized letters transmitting their PEBES estimates. Users outside of the Social Security Administration can ignore this information.

IV. DESCRIPTION OF INPUT

Data can be entered or modified by choosing “View” from the main menu. A pulldown menu offers the following selections: “All”, “Wage-earner data”, “PEBES data”, “Non-PEBES data”, “Quarters of coverage”, “Disability/death data”, “Noncovered pension”, “Assumptions”, “Benefit increases”, “Catch-up increases”, “Wage increases”, “Present-law bases”, “Old-law bases”, “Type of earnings”, “OASDI earnings”, “HI earnings”, “Type of taxes”, and “Name and SSN”. Choosing “All” will guide you through all the applicable screens. Alternatively, you can go directly to any applicable screen by choosing it from the pulldown menu.

Some screens are unavailable at certain times, depending on the choices you have made. For instance, if you have chosen a PEBES case, the “Non-PEBES data” selection will be unavailable. This is indicated by an asterisk (“*”) preceding the pulldown menu selection.

Sex-of-worker code (M or F)

Enter M for male or F for female. The sex of the worker does not matter for current and future retirees, but it does matter for some historical cases.

Type of benefit (1, 2, 3, or 4)

Enter 1 for an old-age benefit, 2 for a survivor benefit, 3 for a disability benefit, or 4 for a Personal Earnings and Benefit Estimate Statement (PEBES). If you enter 4, the data that you will enter will have to meet the specifications required by PEBES, as described in each applicable item below. The output will consist of all the benefit estimates (old-age, survivor, and disability) shown on an official PEBES statement.

Please note that there were some minor differences between the estimates produced by this program and those produced by the initial version of the official PEBES system. Those differences involved the use of 1987 earnings in some early-retirement estimates, and the real-wage-gain increase factor in old-start and special-minimum cases. The current version of the official PEBES system eliminates those differences.

Please also note that there was a problem in reproducing official PEBES estimates that were produced in January 1989, before the PEBES system switched from a 1988 to a 1989 computation year . This program will only calculate estimates with a 1989 computation year for a processing month in 1989.

Benefit at initial entitlement or later date (I or L)

In most cases, the calculated PIA does not depend on how long the beneficiary has been receiving a benefit. In the PIA program, there is only one place where the initial entitlement date affects the PIA: the DI 1-for -5 dropout year rule applies only if initial entitlement was after June 1980. In addition to the PIA, the MFB is affected by the DI maximum family benefit only if initial entitlement was after that same date.

The actual benefit payable, on the other hand, is affected by the date of initial entitlement in most cases. For example, if you want an old-age benefit at age 65, but initial entitlement was at age 62, the benefit will be affected by three years of reduction.

Enter I if you want a benefit at initial entitlement, or L for a benefit at a later date. The actuarial reduction or delayed retirement credit will be calculated as of the date of initial entitlement.

Earnings projected backward (Y or N)

If you do not know the actual earnings for all years, you may want to enter earnings for some years and project earnings prior to the first year entered and/or after the last year entered. The benefit calculated with projected earnings will of course be only approximate, to the extent that the projected earnings differ from the actual earnings for those years.

Enter Y if you want to project earnings prior to the first year of entered earnings. A later screen will ask you for the years for which earnings are projected backward, and for the type of projection.

Earnings projected forward (Y or N)

See the section on "Earnings projected backward" for the circumstances when you may want to use projected earnings.

Enter Y if you want to project earnings after the last year of entered earnings. A later screen will ask you for the years for which earnings are projected forward, and for the type of projection.

Totalization (Y or N)

Totalization agreements between the U.S. and foreign countries provide for limited coordination of U.S. and foreign social security programs. The agreements help eliminate situations where workers suffer a loss of benefit rights because they have divided their careers between the U.S. and a foreign country . Under an agreement, workers may qualify for partial U.S. or foreign benefits, called totalization benefits, based on combined work credits from both countries.

In order to be eligible for totalization benefits, the worker must: 1) not be insured for benefits based on U.S. coverage alone, and 2) have at least 6 quarters of coverage. Enter N if you are not requesting a totalization benefit, Y otherwise.

If you enter Y , you will be asked for annual earnings and quarters of coverage, beginning with the first year of earnings (even if before 1950). The figures must be accurate to produce an accurate totalization benefit.

Medicare earnings (Y or N)

There are two types of cases where a worker may pay HI (Medicare) taxes on earnings on which OASDI taxes are not paid:

- Since 1983, some categories of employees (such as some Federal, State, and local government employees) have been covered by HI and not by OASDI.

- Since 1991, the maximum earnings taxed for HI have been higher than the maximum taxed for OASDI. Workers earning more than the OASDI maximum paid HI tax only on earnings above the OASDI maximum, up to the HI maximum.

Earnings taxed by HI and not by OASDI do not affect the OASDI benefit calculation. However, if you wish to calculate OASDI and HI taxes accurately, you should enter any earnings taxed by HI only.

You should enter Y for the first type of worker, in which case you will be able to enter the Medicare earnings later. You do not need to enter Y for the second type of worker, since you can enter the full amount of earnings, including earnings above the OASDI base, on the OASDI earnings form. If you prefer, you can enter Y for the second type of worker, enter earnings up to the OASDI wage base on the OASDI earnings form, and enter the excess earnings above the OASDI base on the HI earnings form.

Date of birth (month, day, and year)

This prompt appears on the “PEBES data” and “Non-PEBES data” screens. Enter the month (two digits, 01-12), day (two digits, 01-31), and year of birth of the worker, separated by the pre-entered slashes. Even if you are calculating the PIA for an auxiliary or survivor beneficiary, you should enter the worker’s date of birth.

You may notice some odd results for workers born on the first day of the month, and particularly on the first day of January. This is because the Social Security law is written in terms of “attainment” of a certain age, and an age is “attained” on the day before a birthday.

Date of initial entitlement (month and year)

This prompt appears on the “Non-PEBES data” screen. Enter the month (two digits, 01-12) and year of initial entitlement, separated by the pre-entered slash. The year of entitlement must be between 1940 and 2065, inclusive. This will also be the date of the benefit, if you specified that the benefit was to be calculated as of initial entitlement.

For old-age benefits, the month and year of entitlement cannot be before age 62 and 1 month unless the date of birth is on the first or second day of the month, in which case the initial month of entitlement can be as early as the month of the 62nd birthday .

Date of desired benefit (month and year)

This prompt appears on the “Non-PEBES data” screen if you specified that the benefit was to be calculated at a date after initial entitlement. Enter the month (two digits, 01-12) and year for which the benefit is to be calculated. The date of the benefit must not be before the date of initial entitlement.

Processing month

This prompt appears on the “PEBES data” screen. Enter the month (01-12) that this case was processed by the official PEBES system, if you are trying to reproduce an official PEBES statement. Otherwise, enter the current month.

This entry allows you to prepare backdated PEBES estimates. Y ou must be careful, however , if you try to prepare a PEBES estimate for a previous calendar year . For instance, if this is January 1989 and you are trying to reproduce an official PEBES statement produced in October 1988, you will first have to change the computation year to 1988.

The worker must be under age 65 as of the month of processing for a PEBES statement to be produced. Otherwise, the program will ask that the data be re-entered.

Planned retirement age

This prompt appears on the “PEBES data” screen. Enter the age shown on the PEBES statement, if you are trying to reproduce an official PEBES statement. Otherwise, enter the age at which the worker plans to retire.

First year of earnings

This prompt appears on the "PEBES data" screen, and on the "Non-PEBES data" screen if there are no backward-projected earnings. Enter the first year for which the worker had any earnings. This must be no more than 2065, or the year before the computation year in a PEBES case. It must be no less than the year of birth, or 1937, if later. Because of a program limitation, if the year of birth is greater than 1936, then the first year of earnings must be at least 1951.

If there are any pre-1951 earnings, you can usually enter 1950 and enter the total pre-1951 earnings for 1950. However, in the following two cases, you should enter the actual first year of earnings, even if less than 1950:

- the applicable old-start calculation is prior to the simplified 1967 old-start, or
- the type-of-earnings indicator is M, A, L, or O for any year prior to 1951 (see "Type of earnings").

First year of earnings before projection

This prompt appears on the "Non-PEBES data" screen if you answered the backward-projected earnings prompt with a Y. Enter the first year for which you will enter earnings. Earnings prior to that year will be projected backwards.

Type of backward earnings projection (1 or 2)

This prompt appears on the "Non-PEBES data" screen if you answered the backward-projected earnings prompt with a Y. Earnings may be projected backward by one of two methods:

- by the percentage increase in average wages for each year, plus a constant salary scale percentage, or
- by a constant percentage.

Enter 1 to project backward by a percentage related to the growth in average wages, or 2 to project backward by a constant percentage.

Backward projection percentage factor

This prompt appears on the "Non-PEBES data" screen if you answered the backward-projected earnings prompt with a Y. The meaning of the value entered at this prompt depends on the type of backward projection:

- For a type-1 projection, this is the percentage increase to be added to the percentage increase in average wages in each year.
- For a type-2 projection, this is the constant percentage increase used to project backwards.

First year of earnings after projection

This prompt appears on the "Non-PEBES data" screen if you answered the backward-projected earnings prompt with a Y. Enter the first year of earnings, after earnings are projected backwards. This must be less than or equal to the first year of earnings before projection.

Last year of earnings

This prompt appears on the "Non-PEBES data" screen if there are no forward-projected earnings. Enter the last year for which the worker had any earnings. This must be greater than or equal to the first year of earnings, and no more than 2065. A maximum of 60 years of earnings is allowed. You can enter a year after the entitlement date, but any earnings after the last allowable year will be ignored in the benefit computation.

If this is a PEBES case, the last year of earnings will automatically be set to the year after the computation year. This allows for two lag years of earnings, in the computation year and the year prior to the computation year, and one year for estimated future earnings, in the year after the computation year.

Last year of earnings before projection

This prompt appears on the “Non-PEBES data” screen if you answered the forward-projected earnings prompt with a Y. Enter the last year for which you will enter earnings. Earnings after that year will be projected forwards.

Type of forward earnings projection (1 or 2)

This prompt appears on the “Non-PEBES data” screen if you answered the forward-projected earnings prompt with a Y. Earnings may be projected forward by one of two methods:

- by the percentage increase in average wages for each year, plus a constant salary scale percentage, or
- by a constant percentage.

Enter 1 to project forward by a percentage related to the growth in average wages, or 2 to project forward by a constant percentage.

Forward projection percentage factor

This prompt appears on the “Non-PEBES data” screen if you answered the forward-projected earnings prompt with a Y. The meaning of the value entered at this prompt depends on the type of forward projection:

- For a type-1 projection, this is the percentage increase to be added to the percentage increase in average wages in each year.
- For a type-2 projection, this is the constant percentage increase used to project forwards.

Last year of earnings after projection

This prompt appears on the “Non-PEBES data” screen if you answered the forward-projected earnings prompt with a Y. Enter the last year of earnings, after earnings are projected forwards. This must be greater than or equal to the last year of earnings before projection.

Prior disability (Y or N)

This prompt appears on the "Non-PEBES data" screen if you are requesting an old-age or survivor case. Enter N if the worker did not have a disability immediately prior to entitlement, Y otherwise.

Prior disability is not considered in a PEBES case.

Past quarters of coverage, 1937-1977

This prompt appears on the "Quarters of coverage" screen if you responded with an N to the totalization prompt and the worker had any earnings in the period covered by quarterly postings to the Social Security Administration's earnings records (up to 1977). Enter the number of quarters of coverage up to and including 1977. If unknown, estimate the number of quarters of coverage from the annual earnings. You may enter 0, in which case the program may determine that the worker does not meet fully-insured status, but will calculate a theoretical benefit even if uninsured. It is never necessary to enter a number greater than 40, since that is the maximum number of quarters needed for a retirement or survivor benefit.

Past quarters of coverage, 1951-1977

This prompt appears on the "Quarters of coverage" screen if you responded with an N to the totalization prompt, the worker had any earnings prior to 1951, and the worker attained age 22 after 1950. This figure must be less than or equal to the figure entered at the previous prompt ("Past quarters of coverage, 1937-1977"). It should be as accurate as possible, because otherwise one of the calculation methods may be applied incorrectly.

Annual quarters of coverage

This prompt appears on the "Quarters of coverage" screen if this is a PEBES calculation or if you responded with a Y to the totalization prompt, and there are earnings prior to 1978. Possible values are 0 to 4 for each year from the first year of earnings (after any backward projection) through 1977. Data remains on the screen for all years, with up to 3 columns of 20 years each. You can use the arrow keys to place the cursor on any quarters you wish to change. Press the Page Down key when all entries are correct.

Date of death (month and year)

This prompt appears on the "Disability/death data" screen if you are requesting a survivor case. Enter the month (two digits, 01-12) and year of death, separated by the pre-entered slashes. The date of death must not be after the date of entitlement, or an error message will appear.

Type of survivor claim (1, 2, or 3)

This prompt appears on the "Disability/death data" screen if you are requesting a survivor case. The type of survivor affects the PIA of a survivor case where entitlement is 1985 or later, because starting in that year, the re-indexed widow(er) guarantee calculation applies, but only to aged or disabled widow(er) survivors. Enter 1 for a child beneficiary, or parent of a child, 2 for a disabled widow(er) (aged 50-59), or 3 for an aged widow(er) (aged 60 or over).

Worker's date of disability onset (month, day, and year)

This prompt appears on the "Disability/death data" screen if you are requesting a disability case, or if you specified that there was a prior disability in an old-age or survivor case. Enter the month (two digits, 01-12), day (two digits, 01-31), and year of disability onset, separated by the pre-entered slashes. The date of onset must not be after the date of entitlement, or an error message will appear.

Date of prior disability entitlement (month and year)

This prompt appears on the "Disability/death data" screen if you specified that there was a prior disability in an old-age case. The date of prior disability entitlement affects the applicability of the DI 1-for-5 dropout year rule, as explained earlier under "Benefit at initial entitlement or later date."

First month of waiting period (month and year)

This prompt appears on the “Disability/death data” screen if this is a disability case. In general, there is a 5-month waiting period between the disability onset date and the date of entitlement to a disability benefit. The waiting period starts with the first full month of disability, which is the month after the month of onset unless onset is on the first day of the month. You do not need to have a full 5-month waiting period for this program to furnish a computation.

Widow(er)'s date of birth (month, day, and year)

This prompt appears on the “Disability/death data” screen if you are requesting a survivor case with a widow(er) beneficiary. Enter the month (two digits, 01-12), day (two digits, 01-31), and year of birth of the widow(er), separated by the pre-entered slashes.

Widow(er)'s date of disability onset (month, day, and year)

This prompt appears on the “Disability/death data” screen if you are requesting a survivor case with a disabled widow(er) beneficiary. Enter the month (two digits, 01-12), day (two digits, 01-31), and year of disability onset, separated by the pre-entered slashes. The date of onset must not be after the date of entitlement, or an error message will appear.

Amount of monthly noncovered pension

A modified benefit formula generally is used to compute benefits for persons entitled to both a pension based on employment after 1956 not covered by Social Security and a Social Security retirement or disability benefit. However, the difference between the Social Security benefit computed under the modified formula and the Social Security benefit under the regular formula cannot be greater than one-half the amount of the noncovered pension for the first month of entitlement for both the pension and the Social Security benefit.

If you are preparing a PEBES estimate, note that the official PEBES system does not consider the effect of a noncovered pension. Therefore, if you want to reproduce an official PEBES estimate, you should enter 0 at this prompt.

For Federal workers who elect into FERS and thus are entitled to a pension split between the CSRS and FERS retirement systems, only that part of the pension attributable to CSRS is a noncovered pension.

Benefit increase assumption trigger (1-7)

This prompt appears on the "Assumptions" screen if you are requesting a PIA at a date on or after the next scheduled benefit increase. The value entered must be 1-7 for a non-PEBES calculation, or 5-6 for a PEBES calculation.

Enter 1, 2, 3, or 4 if you want to use one of the four sets of assumptions stored on the disk. Enter 5 if you do not want any future benefit increases, as used in official PEBES calculations beginning in September 1993. Enter 6 to use the assumptions used in official PEBES calculations prior to September 1993 (see below). Enter 7 if you want to enter your own set of assumptions.

The stored assumptions for selections 1 through 3 are initially set to those from the latest Report of the Board of Trustees of the OASI and DI Trust Funds. These assumptions vary for each year in the future for each alternative assumption, until the benefit increases reach their ultimate level in about the tenth year of projection. The ultimate levels of the benefit increases are 3, 4, and 5 percent for alternatives I, II, and III, respectively. (A copy of the latest Trustees Report may be obtained from the Office of the Actuary, Room 700 Altmeyer Bldg., Baltimore, MD 21235.)

The stored assumptions for selection 4 were formerly set to those for alternative II-A from the Trustees Report. Beginning with the 1991 report, there is no longer an alternative II-A; selection 4 is now the same as selection 5.

The PEBES calculation prior to September 1993 is described in the Programs Operations Manual System (POMS), Part 3 (Retirement and Survivors), section 00605.800, "PIA's for Benefit Estimates--The Personalized [sic] Earnings and Benefit Estimate Statement

(PEBES)", revised July , 1992. The PEBES calculation is the generally accepted method of projecting a PIA for official Social Security benefit estimates. For the pre-September 1993 PEBES calculation, no benefit increases were assumed beyond the last actual one. This remains the same for the September 1993 and later PEBES calculations.

Benefit increases

The projected yearly benefit increases are available for entry under "Benefit increases" if you responded with a 7 to the benefit increase assumptions prompt. You must provide the benefit increase from the year after the last known benefit increase through the year of entitlement.

Catch-up benefit increases (Y or N)

Under the "stabilizer" provision of the Social Security law, a benefit increase may be reduced from what it otherwise would be, in conditions of low trust fund ratios. If a benefit increase is reduced, "catch-up" benefit increases may be paid in later years to beneficiaries affected by the initial benefit reduction. (None of the three Trustees Report alternatives have any catch-up benefit increases.) This prompt appears on the "Assumptions" screen.

Catch-up benefit increases

If you responded with a Y to the catch-up benefit increase prompt, the "Catch-up increases" screen becomes available. You will have to provide catch-up benefit increases for 8 calendar years, for 10 possible years of eligibility.

Title of benefit increase assumptions

This prompt appears on the "Assumptions" screen if you responded with a 7 to the benefit increase assumptions prompt. The title will appear on the hardcopy output.

Average wage increase assumption trigger (1-7)

This prompt appears on the “Assumptions” screen if you are requesting a PIA that requires an average wage in its computation after the last known average wage. The value entered must be 1-7 for a non-PEBES calculation, or 5-6 for a PEBES calculation.

Enter 1, 2, 3, or 4 if you want to use one of the four sets of assumptions stored on the disk. Enter 5 if you do not want any change in average wages beyond the last known average wage, as used in official PEBES calculations beginning in September 1993. Enter 6 to use the assumptions used in official PEBES calculations prior to September 1993 (see below). Enter 7 if you want to enter your own set of assumptions.

The projected PIA formula and MFB formula “bend points”, and the amount required for a quarter of coverage, will automatically be projected in step with the projected average wages.

The stored assumptions for selections 1 through 3 are initially set to those from the latest Report of the Board of Trustees of the OASI and DI Trust Funds. These assumptions vary for each year in the future for each alternative assumption, until the average wage increases reach their ultimate level in about the tenth year of projection. The ultimate average wage increases are 4.7, 5.1, and 5.6 percent for alternatives I, II, and III, respectively. (See “Benefit increase assumption trigger” for information on obtaining a copy of the latest Trustees Report.)

The stored assumptions for selection 4 were formerly set to those for alternative II-A from the Trustees Report. Beginning with the 1991 report, there is no longer an alternative II-A; selection 4 is now the same as selection 5.

See the earlier section on “Benefit increase assumption trigger” for reference to the PEBES calculation. For the PEBES calculation prior to September 1993, average wages did not change beyond the last known average wage. However, the PIA and MFB were adjusted for expected future real-wage gains by applying a factor which increased the benefit by 1 percent for each year from the current year to the year of eligibility. For PEBES calculations in September 1993 and later, the 1-percent factor was dropped.

Average wage percentage increases

The projected yearly average wage percentage increases are available for entry under "Wage increases" if you responded with a 7 to the average wage increase assumptions prompt. You must provide the average wage increase from the year after the last known average wage through the year of entitlement.

Title of average wage increase assumptions

This prompt appears on the "Assumptions" screen if you responded with a 7 to the average wage increase assumptions prompt. The title will appear on the hardcopy output.

Wage base change indicator (1-2)

This prompt appears on the "Assumptions" screen if you are requesting a PIA (other than a PEBES calculation) at a date after the last known maximum earnings base. Enter 1 if you want the wage base to increase in accordance with the automatic provisions of the law. The wage base increases in step with the projected average wages (with a 2-year lag), except that the wage base does not change if there is no benefit increase for that year. Enter 2 if you want to enter your own wage bases.

If you are performing a PEBES calculation (type-of-benefit indicator is 4), this indicator is automatically set to 1.

Wage bases

If you responded with a 2 to the wage base change prompt, you will be able to provide wage bases for each year from the year after the last known wage base through the year of benefit on the "Present-law bases" screen.

Old-law wage bases

If you responded with a 2 to the wage base change prompt, you will be able to provide old-law wage bases for each year from the year after the last known wage base through the year of benefit on the "Old-law bases" screen. The old-law wage bases are used in the special-minimum benefit computation. If that computation is not relevant to you, you can enter any value for the old-law wage bases.

Type of earnings (E, M, A, L, or O)

The "Type of earnings" screen allows you to specify one of four earnings levels stored in the program for each year from the first year of earnings (after any backward projection) through the last year of earnings (after any forward projection): M for maximum, A for average, L for low, and O for old-law maximum. Maximum earnings are equal to the wage base. Average earnings are equal to the Social Security average wage. Low earnings are equal to 45 percent of the average wage. Old-law maximum earnings are equal to the old-law wage base. Alternatively, you may enter E to specify that you will enter earnings from the keyboard for that year.

Worker earnings, OASDI

The "OASDI earnings" screen allows you to provide earnings for each year from the first year of earnings (before any backward projection) through the last year of earnings (before any forward projection). Earnings are displayed for all years, with up to three columns of 20 years each. If the type of earnings for a year is E, the earnings may be changed to a new value; otherwise, the earnings are displayed but are not editable. If there are any pre-1951 earnings, and you entered 1950 as the first year of earnings, enter the total pre-1951 earnings on the line for 1950.

You can use the arrow keys to place the cursor on any earnings you wish to change. Press the Page Down key when all entries are correct.

If you are doing a PEBES calculation, enter the amount for future earnings in the space for the last year shown (the year after the computation year). The earnings will automatically be projected to the date of retirement.

Worker earnings, HI

There are two types of cases where a worker may have paid HI (Medicare) taxes on earnings which were not taxed for OASDI:

- Since 1983, some categories of employees (such as some Federal, State, and local government employees) have been covered by HI and not by OASDI.
- Since 1991, the maximum earnings taxed for HI have been higher than the maximum taxed for OASDI. W orkers earning more than the OASDI maximum paid HI tax only on earnings above the OASDI maximum, up to the HI maximum.

If you entered Y for the worker having Medicare earnings, you can enter the Medicare earnings here. For the first type of worker , enter the full amount of Medicare earnings. For the second type of worker , you should not enter anything here if you entered the full amount of earnings, including earnings above the OASDI base, on the OASDI earnings form. If you only entered earnings up to the OASDI wage base on the OASDI earnings form, enter the excess earnings above the OASDI base here. Use the arrow keys to place the cursor on any earnings you wish to change. Press the Page Down key when all entries are correct.

Type of taxes (E or S)

The “T ype of taxes” screen allows you to enter the type of taxes paid on the earnings for each year from the first year of earnings (after any backward projection) through the last year of earnings (after any forward projection). The screen format is similar to that for the yearly earnings entry . Enter E for employee taxes, or S for self-employed taxes.

Worker ’s name and address

The “Name and SSN” screen allows you to enter the worker ’s name, address, and Social Security number . The name and Social Security number will be printed on each page of output for a non-PEBES case, while the name and address will be printed on a letter transmitting the estimates to the requestor of a PEBES calculation.

V. DESCRIPTION OF OUTPUT

Output from the PIA program depends on whether or not you have run a PEBES case. For a PEBES case, output consists of 9 or 10 benefit estimates, written to the screen, corresponding to the estimates provided on the official PEBES statement. If you answer the output prompt with a Y , a five-page output is printed, consisting of a letter and four pages displaying the input data, estimated taxes, and benefit estimates.

If your calculation is other than a PEBES case, output of the PIA program consists of the AME, AIME, or number of years of coverage (whichever is applicable), PIA, support PIA (if the PIA is based on the special minimum method), number of months of reduction or increment, MBA before rounding down to a dollar , MBA after rounding down to a dollar , and MFB, written to the screen, unless additional output is requested. If you answer the output prompt with a Y , you are presented with a menu of three printed output choices:

- a 1-page summary , including indexed earnings, suitable for field office use,
- a 2-page summary of results, showing the results of each trial PIA calculation, and
- detailed results for each trial PIA calculation and a page of estimated taxes.

PEBES output

The PEBES output consists of five pages:

- a letter transmitting the results and a statement of the limitations of the estimates,
- a summary of the values, other than the yearly earnings, used to calculate the estimates,
- the yearly OASDI and HI earnings and estimated Social Security taxes paid on those earnings,

- a display of the retirement and survivor benefit estimates, and
- a display of the disability benefit estimates and explanations of the retirement benefit projection and the calculation of taxes paid.

The letter displays the field office return address as stored on the disk (see section 3). It also displays the worker's name and address as entered at the keyboard. The body of the letter describes the PEBES estimates and contains a statement of the limitations of the estimates similar to that found in the official PEBES estimates. The letter closes with the field office manager's name and title as stored on the disk (see section 3).

The page summarizing the values used to calculate the estimates begins with the same identifying information as is shown on the official PEBES statement: name, Social Security number, date of birth, earnings in the year prior to the computation year, earnings in the computation year, estimated future yearly earnings, and planned retirement age. Next is a line showing the amount of the noncovered pension used in the calculations. Note that this should say NONE in order to reproduce an official PEBES estimate. There is also a line showing the processing month, since this program can produce an estimate as of a prior processing month.

Following the identifying information are three paragraphs providing general information about Social Security credits and earnings.

The next page shows a table of maximum earnings, the actual earnings of the worker, and the estimated taxes paid for each year through the last year for which earnings are posted to the earnings record. Taxes are shown for both:

- retirement, survivors, and disability insurance, and
- Medicare hospital insurance.

This table parallels a similar one in the official PEBES estimates.

The first page of benefit estimates has sections for retirement and survivors, while the second page continues with disability estimates.

Each estimate is based on the same basic data, but varies as to final year of earnings, assumed date of death, or assumed date of disability onset. PEBES estimates are rounded down to a multiple of $5, if not already a multiple of $5.

Retirement estimates are shown for normal and delayed retirement. If the planned retirement age is less than the normal retirement age, there is also an early retirement estimate. Earnings for the normal and delayed retirement estimates continue to normal retirement age and age 70, respectively. Earnings for the early retirement estimate continue to the planned retirement age. Any assumed earnings beyond the computation year are at the level shown as "Your Estimated Future Yearly Earnings".

The results are shown in today's dollars, meaning that the benefit formula bend points are not projected beyond those in the computation year and no future benefit increases are applied. However, for official calculations prior to September 1993, a real-wage-gain factor was applied in cases where the year of eligibility was after the computation year (see section 4). This program can produce results with or without the real-wage-gain factor.

Survivor estimates are shown for three possible family groups:

- one child,
- one child and a surviving spouse (or two children), and
- a surviving spouse at full retirement age.

There is also an estimate of the most that could be paid (the MFB) if more family members qualify for benefits. Finally, there is an estimate of the one-time death benefit. All survivor estimates assume that death occurs in the processing month.

Disability estimates are shown as the amount for the worker alone, and as the maximum for the family of the disabled worker. Both estimates assume that disability occurs in the processing month.

One-page summary output

The upper half of this summary shows actual earnings as a total for 1937 through 1950, if any, (shown as 1950), and for each single year from the earliest year with earnings through the last year with earnings. The lower half shows indexed earnings for the same years. Each section shows the corresponding dividend and divisor months (old-law or transitional guarantee average monthly earnings (AME) using actual earnings, or average indexed monthly earnings (AIME) using indexed earnings).

The applicable PIA is shown at the bottom of the page, along with any other trial PIA's. If one of the trial PIA's is the special minimum, then the number of years of coverage is also shown. If there is a noncovered pension, there is a note concerning the windfall elimination provision. There is also a one-line warning message if the worker is not fully insured, based on the data entered. (Disability-insured status is not checked in disability cases; it must be checked by the user.)

Two-page summary output

The first summary page presents the sex and date of birth of the worker, the type of benefit, the date of death or disability (if any), the date of entitlement, the age at entitlement, the date of benefit and age at benefit date (if the benefit date is after entitlement date) the normal and early retirement ages (for life cases), the type of survivor (for survivor cases), the widow(er)'s date of birth and disability (for survivor cases with an aged or disabled widow(er)), and the noncovered monthly pension (if any). Then, for each of the seven computation methods, the PIA and MFB are shown, if that method is applicable. A final summary shows the actual PIA (the highest from all of the applicable methods), the MFB, the early or delayed retirement factor, the calculated benefit after application of that factor, and the benefit after rounding down to the next lower dollar (if applicable). If the PIA involved a projection, the titles of the benefit increase and average wage increase assumptions are shown at the bottom of the page.

The number of quarters of coverage required for fully insured status equals the number of years after the year of attainment of age 21 (or 1950, if later) and before the year of eligibility (age 62 for old-age cases), with a minimum of 6 quarters required. If the worker is not fully insured, a paragraph is added explaining that the calculated benefit is theoretical. It shows how many quarters of coverage have been earned, compared to how many are required.

The second summary page lists the annual earnings used in the PIA computations, the wage base in each year , the amount required for a quarter of coverage, and the number of quarters of coverage earned each year . The amount required for a quarter of coverage for years after 1978 equals the amount in 1978 ($250), multiplied by the ratio of average annual earnings in the second year prior to the given year to average annual earnings in 1976. For this page and the following detail pages, there is a one-line warning message if the worker is not fully insured.

If this is a totalization benefit, there are two additional columns showing the relative earnings position and attributed earnings. These amounts are used to compute a theoretical PIA based on a full lifetime of earnings. The totalization benefit is based on a pro-rata share of the theoretical PIA.

Old-start method detail pages

The old-start method is actually a group of various methods, only one of which could apply in any given case. One of the old-start methods applies if the worker has earnings prior to 1951, with the following exception: if the worker attains age 22 after 1950 and has 6 or more quarters of coverage after 1950, the old-start method does not apply .

The first page shows actual earnings, imputed earnings, and the highest earnings. Earnings prior to 1951 are redistributed in the imputed earnings column, if the applicable method is the 1967, 1977, or 1990 simplified old-start method. (For earlier old-start methods, actual yearly earnings prior to 1951 must be used.) The imputed earnings column also shows that, for persons eligible in 1979 or later , earnings in the year of eligibility and later are not considered. The column of highest earnings shows those years selected for the AME.

The second page shows the derivation of the primary insurance benefit (PIB), PIA, and MFB from the years of highest earnings. Since the old-start method first became "old-start" in 1950, it has been modified about six times. The applicable method is the particular modification applicable to the case illustrated. The AME is the total of the highest earnings for the number of years equal to the number of old-start computation years, divided by the number of old-start computation years and by 12. The PIB is calculated from a formula which depends on the particular old-start method. The corresponding new-start AME is found from a conversion table, as is the PIA, before application of any benefit increases.

Prior to the 1977 amendments, the MFB is also found from a conversion table. Under the 1977 (and 1990) amendments, the MFB is calculated as under the wage-indexed method: an MFB at eligibility is calculated by applying a formula to the PIA at eligibility .

Under the 1977 amendments, where eligibility is in 1979 or later , benefit increases are applied beginning with the year of eligibility and continuing through the month of benefit.

New-start method detail pages

This method applies if the worker was eligible in 1978 or earlier . The first page shows the selection of earnings used in the AME calculation. All earnings after 1950 and before the year of old-age or disability entitlement are available for selection in the AME, with the following exception: For disability cases, only the usual disability freeze calculation is considered, so earnings after the year of disability onset and before the year of assumed or actual attainment of normal retirement age are not considered. For survivor cases, earnings in the year of death are available for selection, even if the benefit date is in that same year .

The second page shows the derivation of the PIA and MFB from the highest years of earnings. The number of computation years equals the number of elapsed years minus the number of dropout years. The AME equals the total of the highest earnings for the number of years equal to the number of computation years, divided by the number of computation years and by 12.

For entitlements prior to June 1975, the PIA and MFB at benefit date are found directly in the applicable PIA table. Beginning in June 1975, the program starts with the 1973 PIA table and applies benefit increases and wage base extensions up to the year of benefit. The PIA and MFB at benefit date are then found in the newly calculated PIA table.

Wage-indexed formula detail pages

This method applies if the worker is eligible in 1979 or later . The first page shows the indexation of earnings as a two-step process. First, actual earnings, limited to the wage base, are multiplied by average annual earnings from two years prior to the year of eligibility (for all years prior to and including the second year prior to the year of eligibility). Second, each resulting product is divided by average annual earnings in the year of actual earnings. The last column shows the selection of the computation years (the years with the highest indexed earnings).

The second page shows the derivation of the PIA and MFB from the indexed earnings. The base year for indexing is two years prior to the year of eligibility . The number of computation years equals the number of elapsed years minus the number of dropout years. The AIME equals the total of the highest indexed earnings for the number of years equal to the number of computation years, divided by the number of computation years and by 12. The PIA formula bend points equal the bend points applicable to workers becoming eligible in 1979 ($180 and $1085), multiplied by the ratio of average annual earnings in the second year prior to the year of eligibility to average annual earnings in 1977. The result is rounded to the nearest dollar . The MFB formula bend points are found similarly , starting from the 1979 bend points of $230, $332, and $433.

The PIA at eligibility is the sum of a three-part formula:

90% of AIME up to and including the first bend point, plus

32% of AIME from the first bend point to the second bend point, plus

15% of AIME in excess of the second bend point.

The result is rounded up (for eligibility in 1981 or earlier) or down (for eligibility in 1982 or later) to a multiple of a dime.

If the worker has a noncovered pension, and is eligible in 1986 or later, the PIA at eligibility is recomputed to take account of the windfall elimination provision. The PIA at eligibility under this provision is computed as above, except that the 90% factor is replaced with a 40% factor . There are three exceptions to this rule:

- If the worker is eligible prior to 1990, the replacement factor is greater than 40% (80% for 1986 eligibles, 70% for 1987, 60% for 1988, and 50% for 1989).

- If the worker has more than 25 years of coverage for entitlements in 1986-88, or more than 20 years of coverage for entitlements after 1988, the replacement factor is greater than 40%. During 1986-88, the replacement factor is 50% for 26 years of coverage, 60% for 27 years, 70% for 28 years, 80% for 29 years, and 90% for 30 or more years. After 1988, the replacement factor is 45% for 21 years, 50% for 22 years, 55% for 23 years, 60% for 24 years, 65% for 25 years, 70% for 26 years, 75% for 27 years, 80% for 28 years, 85% for 29 years, and 90% for 30 or more years. Years of coverage for this purpose are the same as those for the special minimum method, for years through 1990. After 1990, earnings are compared to one-quarter of the old-law wage base (rather than 15 percent of the old-law wage base, as for the special minimum method).

- The reduction in PIA due to this provision can be no more than one-half of the noncovered pension. If more than one exception applies, the one that produces the least reduction in benefit is applied.

The MFB at eligibility is normally the sum of a four-part formula:

150% of PIA up to and including the first bend point, plus

272% of PIA from the first bend point to the second bend point, plus

134% of PIA from the second bend point to the third bend point, plus

175% of PIA in excess of the third bend point.

The result is rounded up or down to a multiple of a dime (as for the PIA at eligibility).

In the case of a projected benefit using the old PEBES calculation method (which was used in official PEBES estimates prior to September 1993), there is an adjustment to the PIA at eligibility to reflect expected future real-wage gains. This is not part of the regular benefit-computation procedure; the benefit is increased by 1 percent for each year from the current year to the year of eligibility as an attempt to produce a benefit in today's dollars that takes account of higher future real-wage levels.

Automatic benefit increases are applied, beginning with the one in the year of eligibility and continuing through the month of benefit. After each increase in PIA and MFB, the result is rounded up (for the June 1981 increase or earlier) or down (for the June 1982 increase or later) to a multiple of a dime.

Transitional guarantee detail pages

This method applies for the calculation of an old-age benefit if the worker attains age 62 in 1979 to 1983, inclusive, and was not continuously disabled from prior to 1979. It also applies for survivor cases, if the worker attained age 62 in that same five-year period and survived at least to the month of attainment of age 62. The first page shows the selection of earnings used in the AME calculation. The same rules are followed as for the New-Start calculation (pre-1977 law), except that earnings in the year of attainment of age 62 and later cannot be used in the average.

The second page shows the derivation of the PIA and MFB from the highest years of earnings. The number of computation years equals the number of elapsed years minus the number of dropout years. The AMW equals the total of the highest earnings for the number of years equal to the number of computation years, divided by the number of computation years and by 12. The PIA as of the year of eligibility is found from the December 1978 PIA table (even if the year of eligibility is later than 1979). The MFB formula bend points are the ones applicable to the worker's year of eligibility, and the MFB at eligibility is found as in the wage-indexed method.

Automatic benefit increases are applied, beginning with the one in the year of eligibility and continuing through the month of benefit. After each increase in PIA and MFB, the result is rounded up (for the June 1981 increase or earlier) or down (for the June 1982 increase or later) to a multiple of a dime.

Special minimum detail pages

This method applies for benefits in 1973 or later. The first page shows the calculation of the number of years of coverage for special minimum purposes. Earnings in each year after 1950 and before 1979 are compared to one-quarter of the wage base for that year. Earnings after 1978 and before 1991 are compared to one-quarter of what the wage base would have been for that year had there not been ad hoc changes in the wage base in 1979-83 (the old-law base). Earnings after 1990 are compared to 15 percent of the old-law wage base. Each year for which earnings are at least equal to the required amount counts as a year of coverage. In addition, earnings prior to 1951 contribute toward years of coverage, on the basis of one year of coverage for each $900 of cumulative earnings, up to a maximum of 14 years of coverage for pre-1951 earnings.

The second page shows the derivation of the PIA and MFB from the number of years of coverage. The amount of PIA per year of coverage equals $11.50 for benefits in 1979 or later, before application of any automatic benefit increases. For months prior to 1979, the amount per year of coverage was $8.50 (prior to March 1974) or $9.00 (from March 1974 through December 1978). To compute the PIA, the amount per year is multiplied by the number of years greater than 10 but less than or equal to 30 (producing a maximum of 20 countable years). The MFB, before application of any automatic benefit increases, is 150% of the PIA.

For benefits in June 1979 or later, automatic benefit increases are applied beginning with the one for June 1979 and continuing through the month of benefit. After each increase in PIA and MFB, the result is rounded up (for the June 1981 increase or earlier) or down (for the June 1982 increase or later) to a multiple of a dime.

Re-indexed widow(er) guarantee detail pages

This method applies in survivor cases where there is an aged or disabled widow(er) and the worker dies in 1979 or later and before the year of attainment of age 62. In addition, if the worker dies before 1985, the widow(er) must be eligible in 1985 or later. The calculation is identical to the normal wage-indexed method, except that the year of eligibility is taken as the earlier of:

- the worker's year of attainment of age 62, or
- the widow(er)'s year of eligibility.

For aged widow(er)s, the year of eligibility is the year of attainment of age 60; for disabled widow(er)s, it is the later of the year of attainment of age 50 or the year of the first month after the disability waiting period. The first page shows the indexation of earnings.

The second page shows the derivation of the PIA and MFB from the indexed earnings. The format follows that of the second page of the wage-indexed formula output, except for the determination of the MFB. There is no separate MFB for the re-indexed widow(er) guarantee PIA, since the PIA applies only to the widow(er). If there are any other beneficiaries on the earnings record, the regular MFB (determined under one of the other methods) applies.

Frozen minimum detail page

This method applies if the worker is eligible in 1979-81. However, it does not apply for a totalization benefit. The PIA at eligibility is $122, and the MFB at eligibility is $183. Benefit increases are applied beginning with the earlier of the year of entitlement or the year of attainment of age 65, and continue through the month of benefit.

Taxes paid

The final page shows OASDI earnings, and taxes paid in each year for old-age and survivors insurance (OASI), disability insurance (DI), OASI and DI combined (OASDI), hospital insurance (HI), and OASI, DI, and HI combined (OASDHI). The appropriate employee or self-employed OASI or DI tax rate is applied to the OASDI earnings, and the HI rate is applied to the HI earnings (not shown) for each year . Note that the estimated taxes will be incorrect for years where there were both employee and self-employed earnings, or where earnings were estimated.

VI. USER MODIFICATIONS

The first two user modifications below do not require any change to the executable program. The other modifications require that you modify and recompile the source code (found in subdirectory SOURCE on the distribution disk).

Input data from a file

Input can be entered from a file by choosing “File” from the main menu and “Open” from the pulldown menu. If the file was originally created by this program, then it will automatically be in the correct format to be read back into the program. It is possible to create a file with the required information, in the correct format, outside of this program (for instance, in another program running against a database of worker information). However, the file created must be in exactly the correct format or this program will detect an error and stop. See Appendix C for a description of the required file structure.

Modification of stored assumptions

When a case requires projected benefit increases and/or average wages, the program presents a menu of choices for those assumptions. Three sets of assumptions, from the latest annual Trustees Report, are available in the menu, as well as a “no change” assumption, the two types of PEBES calculations, and an option for the user to enter his/her own assumptions.

The Trustees Report assumptions, labeled alternatives I, II, and III, and a fourth set (currently a “no change” assumption) are actually stored in data files which are read into the program as necessary. There are three files for each set of assumptions, with the name shown for a 1994 computation year:

- benefit increases (BI94*.DAT),
- catch-up benefit increases (CU94*.DAT), and
- average wage increases (AW94*.DAT).

In each file, there is one number per line. There is one number for each year from 1994 to 2065 for the benefit increases, and from 1993 to 2065 for the average wage increases, for a 1994 computation year. There are 80 catch-up benefit increases (8 increases for each of 10 years of eligibility; years of eligibility run from the year after the computation year to the eleventh year after the computation year; benefit increases run from December of the third year after the computation year to December of the eleventh year after the computation year).

The data in the assumptions files can be changed to whatever is desired, as long as the number of figures in each file is not changed. Thus, commonly used assumptions can be presented directly in the menu of choices. To complete the change, the titles of the assumptions should be changed in the TITLES94.DAT file, for a 1994 computation year.

Source code

The PIA program source code is set up in an easy-to-understand format, so that users can make any modifications that they would like. The current version of the C source code has macros defined to allow compilation in an MS-DOS, Unix, or Macintosh operating system. It consists of about 40 source code modules, plus about 30 “include” files, all of which are documented with comment lines. The exact number of files depends on the operating system under which the program is being compiled.

The source code is divided into user interface code that depends on a specific windowing library, and “core” code that does the benefit calculations, output, and file reading and writing (and does not depend on any specific windowing library). The core code consists of the following files:

ardri.c	ardri.h	calculat.c
calculat.h	coment.c	coment.h
comma.c	comma.h	common.h
compdate.c	compdate.h	delspc.c
lawchg.c	lawchg.h	oldpia.c
one_page.c	pebspage.c	pebspage.h

piacal.c	piacal.h	piacallc.c
piaout.c	piaout.h	piaparms.c
piaparms.h	prep.c	prep.h
prtutils.c	prtutils.h	savdis.c
savdis.h	scanfile.c	scanfile.h
setup.c	setup.h	taxes.c
taxes.h	utils.c	utils.h
wrkrdata.c	wrkrdata.h	

The user interface code consists of the following files:

address.c	address.h	anypia.c
avgwage.c	baseyear .c	baseyear .h
beninc.c	config.c	config.h
disdeath.c	earnin.c	getdate.c
getdate.h	lawchgwn.c	lawchgwn.h
nonpen.c	oldawbi.c	oldawbi.h
piain.c	piain.h	piaoutwn.c
piaoutwn.h	windows1.c	winboss1.h
wnutils.c	wnutils.h	worker .c

This version of the program was created by compiling the C source code using the Datalight C compiler . The source code, as distributed, may not compile correctly with other MS-DOS compilers. The author will provide limited assistance to anyone trying to recompile the program with another compiler or in another operating system. See the files with an extension of .DOC in the SOURCE subdirectory for more information about compilation.

Elimination of printed output

The printed output is handled by five modules (piaout.c for the detailed output, pebspage.c for the PEBES output, one_page.c for the one-page summary , two_page.c for the two-page summary , and prtutils.c for various print utilities). If you do not need the printed output, you can remove those modules and the calls to the functions in those modules. Alternatively, the output can be wholly or partially modified by changing all or some of those modules.

Program in FORTRAN

We also have a PIA program in FORTRAN, the operation of which is virtually identical to that of the C program. The FORTRAN version is structured similarly to the C version, being split into about the same 40 modules. The source code for the program, or the program compiled for MS-DOS, is available from the author. Call the telephone number in section 7 for more information.

The program compiles on an IBM PC or compatible running MS-DOS. There are also separate files of subroutines enabling the program to compile on a Unix system or on an IBM mainframe. However, the compiled program does not have some of the screen-handling capabilities of the C version; therefore we distribute the C version, rather than the FORTRAN version, as the primary program.

VII. QUESTIONS

The author will try to answer all questions sent to the address in the introduction. If you have a question, please send all pertinent input and output. We can also handle a limited number of questions over the phone. If there is a mistake in the program, we would certainly like to hear about it, but please do not call us until you have thoroughly attempted to solve the problem yourself. Also, we are not able to provide instruction in how DOS works.

The phone number to call, in the situations described above, is (410) 965-3014.

APPENDIX A.—SAMPLE CASES

The data for the following sample cases is stored in files named SAMPLE*.PIA, where "*" equals the number of the case. The following results were obtained with the computation year set to 1994.

Sample Cases

Case	Description	Result
1	Male old-age benefit, January 1995 born January 15, 1930 (retired at age 65) maximum earnings 1952-94 alternative II assumptions	PIA=$1,202.60 MBA=$1,202.00 Shows effect of assumed increases
2	Male old-age benefit, January 1995 born January 15, 1930 (retired at age 65) maximum earnings 1952-94 no benefit increases after Dec 1993 no average wage change after 1992	PIA=$1,166.50 MBA=$1,166.00 Shows effect of no assumed increases (compare to Case 1)
3	Male old-age benefit, June 1982 born January 2, 1920 (retired at age 62 and 5 months) low earnings 1945-82	PIA=$345.10 MBA=$285.00 Shows Special Minimum PIA
4	Male old-age benefit, September 2012 born September 2, 1950 (retired at exact age 62) earnings of $1000 in 1971-80, $2000 in 1981-90, $3000 in 1991-2000, $4000 in 2001-10 old PEBES assumptions monthly noncovered pension of $200	PIA=$166.60 MBA=$125.00 Shows old PEBES assumptions, entered earnings, noncovered pension offset, retirement at exact age 62
5	Aged widow benefit, October 2009 worker born September 10, 1950 died September 2000 widow born September 10, 1949 earnings of $1000 in 1971-80, $2000 in 1981-90, $3000 in 1991-2000 old PEBES assumptions	PIA=$254.60 MBA=$183.00 Shows survivor calculation, re-indexed widow guarantee PIA, old PEBES assumptions

Sample Cases

Case	Description	Result
6	Male old-age benefit, January 2037 born January 5, 1970 (retired at age 67) earnings 1986-95: $2412, $2412, $7132, $15,050, $16,125, $17,200, $18,275, $19,350, $19,350, $20,425 previous disability onset December 15, 1995 previous disability entitlement June 1996 no benefit increases after Dec 1993 no average wage change after 1992	PIA=$770.20 MBA=$770.00 Shows retirement age 67, previous disability onset, DI 1-for -5 drop-out rule carried into retirement
7	Male disability benefit, January 1978 born January 15, 1918 (retired at age 60) earnings of $1000 in 1941-54, $1560 in 1955-65, $2000 in 1966-70 disability onset June 15, 1977 first month of waiting period July 1977	PIA=$180.00 MBA=$180.00 Shows Special Minimum PIA
8	Male old-age benefit, January 2035 born January 15, 1968 (retired at age 67) maximum earnings 1989-2034 alternative II assumptions	PIA=$10,598.90 MBA=$10,598.00 Shows retirement age 67, benefit greater than $10,000
9	Disabled widow benefit, October 2009 worker born September 10, 1950 died September 2000 widow born September 10, 1954 widow disabled September 10, 2006 earnings of $1000 in 1971-80, $2000 in 1981-90, $3000 in 1991-2000 old PEBES assumptions	PIA=$253.00 MBA=$180.00 Shows re-indexed widow guarantee PIA for disabled widow
10	Male old-age benefit, February 1996 born January 29, 1934 (retired at age 62 and 1 month) maximum earnings 1989-95 5% benefit increases after Dec 1993 6% average wage increases after 1992 totalization benefit	PIA=$270.10 MBA=$217.00 Shows user -selected assumptions, totalization benefit
11.......	Male old-age benefit, January 1952 born January 15, 1887 (retired at age 65) maximum earnings 1937-51	PIA=$68.50 MBA=$68.50 Shows 1950 old-start PIA, annual earnings before 1951

Sample Cases

Case	Description	Result
12	Male old-age benefit, January 1989 born March 22, 1922 retired at age 65 benefit at age 66 and 10 months maximum earnings 1953-88 previous disability onset April 1, 1954 previous disability entitlement January 1959	PIA=$1,621.70 MBA=$1,621.00 Shows use of earnings after disability freeze ends at normal retirement age, benefit after entitlement
13	Aged widow benefit, June 1992 worker born August 23, 1927 died March 1954 widow born January 5, 1929 earnings 1950-54: $8,479.71, $2,038.64, $2,136.27, $1,920.00, $418.20	PIA = $484.60 MBA = $440.00 Shows 1990 old-start PIA, summed earnings before 1951
14	PEBES calculation, June 1993 born January 15, 1945 planned retirement age 62 maximum earnings 1967-93 maximum projected earnings old PEBES assumptions	MBAs: old-age 62 = $1,135 old-age 65 = $1,545 old-age 70 = $2,085 child survivor = $965 widow(er) = $1,290 survivor family = $2,260 disability = $1,275 disability family = $1,910
15	PEBES calculation, June 1993 born January 15, 1945 planned retirement age 62 maximum earnings 1967-93 maximum projected earnings new PEBES assumptions	MBAs: old-age 62 = $1,005 old-age 65 = $1,370 old-age 70 = $1,845 child survivor = $965 widow(er) = $1,290 survivor family = $2,260 disability = $1,275 disability family = $1,910

APPENDIX B.—ERROR CODES

If the PIA program detects an error in the input data, it sets variable ierr to a value indicating the type of error. When the error results from data entered from the console, the code stored in ierr is not needed because the appropriate error message is written to the screen. When data is entered via an input file (option "Open" on the "File" pulldown menu), however, only the error code is written to the screen.

Error Codes

Code	Description
Input file errors	
1	sex is not 1-2
2	month of entitlement is not 1-12
3	year of entitlement is less than 1940 or greater than maximum allowable
4	month of birth is not 1-12
5	day of birth is not 1-31
6	type of benefit is not 1-4
7	type of earnings is not 1-4
8	first year of earnings is less than 1937, greater than maximum allowable, less than year of birth, or less than 1951 when year of birth is greater than 1937
9	last year of earnings is less than first year of earnings or is greater than maximum allowable
10	month of death is not 1-12 when type of benefit is 2
11	year of death is less than 1940 or greater than maximum allowable when type of benefit is 2
12	assumption is not 4 or 5 in PEBES case
13	type of survivor is not 1-3 when type of benefit is 2
14	worker's month of disability onset is not 1-12 when disability code is 1
15	worker's year of disability onset is less than 1940 when disability code is 1
16	worker's year of disability onset is greater than maximum allowable when disability code is 1
17	widow(er)'s month of birth is not 1-12 when type of survivor is nonzero
18	widow(er)'s day of birth is not 1-31 when type of survivor is nonzero
19	benefit increase assumption code is not 1-7
20	average wage increase assumption code is not 1-7
21	wage base change indicator is not 1-2
22	noncovered pension is less than zero or greater than $999,999.99
23	disability code is not 0-1
24	disability code is 0 for a disability case

Error Codes

Code	Description
25	backward projection code is not 0-2
26	number of years of earnings is greater than 60
27	forward projection code is not 0-2
28	earnings out of range (less than zero or greater than $999,999.99)
29	benefit increases do not start in correct year
30	average wage increases do not start in correct year
31	catch-up increase response is not Y or N
32	worker's day of disability onset is not 1-31 when disability code is 1
33	quarters of coverage from 1937 to 1977 is less than zero
34	disabled widow(er)'s month of disability onset is not 1-12 when type of survivor is 2
35	disabled widow(er)'s day of disability onset is not 1-31 when type of survivor is 2
36	disabled widow(er)'s year of disability onset is less than 1940 when type of survivor is 2
37	disabled widow(er)'s year of disability onset is greater than maximum allowable when type of survivor is 2
38	Medicare earnings out of range (less than zero or greater than $999,999.99)
39	wage base is less than zero or greater than $999,999.99
40	quarters of coverage from 1951 to 1977 is less than zero or greater than quarters of coverage from 1937 to 1977
41	annual quarters of coverage is less than zero or greater than 4
42	month of prior entitlement to disability is not 1-12
43	year of prior entitlement to disability is greater than year of disability onset
44	year of prior entitlement to disability is greater than year of entitlement
45	first month of waiting period is not 1-12
46	year of waiting period is greater than year of disability onset
47	year of waiting period is greater than year of entitlement
48	type of tax is not 0-1
55	year of birth is greater than maximum allowable
56	month of processing in PEBES case is not 1-12
57	totalization code is not 0-1
58	recalculation code is not 0-1
59	Medicare earnings code is not 0-1
Data-file errors	
61	BI*.DAT starts with wrong year
62	AW*.DAT starts with wrong year
63	BI*.DAT does not exist
64	CU*.DAT does not exist
65	AW*.DAT does not exist
66	CONFIG.DAT does not exist
67	CONFIG.DAT is in error

Error Codes

Code	Description
68	stored case file does not exist
69	stored case is in error
70	cannot store case to disk
71	AWBI*.DAT does not exist
72	AWBI*.DAT is in error
73	BI*.DAT is in error
74	CU*.DAT is in error
75	AW*.DAT is in error
76	OS*.DAT is in error
77	OS*.DAT does not exist
78	cannot open the output file
79	cannot send the output file to the printer
80	cannot store CONFIG.DAT to disk
81	cannot store AWBI*.DAT to disk
82	cannot store BI*.DAT to disk
83	cannot store CU*.DAT to disk
84	cannot store AW*.DAT to disk
85	cannot store TITLES*.DAT to disk
86	cannot remove specified PIA file
87	BASEYEAR.DAT does not exist
88	BASEYEAR.DAT is in error
89	cannot store BASEYEAR.DAT
90	FO.DAT does not exist
91	FO.DAT is in error
92	cannot store FO.DAT
93	LAWCHG.DAT does not exist
94	LAWCHG.DAT is in error
95	cannot store LAWCHG.DAT
Data inconsistency errors	
112 ...	month of death is after month of entitlement when type of benefit is 2
113 ...	month of death is before month of birth when type of benefit is 2
114 ...	benefit date is before entitlement date
115 ...	no type of survivor specified in survivor case
127 ...	worker's month of disability onset is after month of entitlement when disability code is 1
138 ...	disabled widow(er)'s month of disability onset is after month of entitlement when type of survivor is 2
141 ...	age at entitlement is less than zero
142 ...	retirement age is less than earliest possible retirement age
143 ...	disabled widow(er) benefits prior to earliest possible date (February 1968)
144 ...	disabled widow(er) benefits prior to age 50

Error Codes

Code	Description
145 ...	disabled widow(er) benefits after age 59
146 ...	aged widow(er) benefits prior to age 65 (before November 1956), age 62 (November 1956 - August 1965), or age 60 (after August 1965)
149 ...	disability benefits prior to earliest possible date (January 1957)
150 ...	disability benefits prior to age 50 (before January 1959)
151 ...	disability benefits at or after normal retirement age
152 ...	PEBES request over normal retirement age
157 ...	disability onset after death
158 ...	disabled widow(er)' s onset before birth
159 ...	disability onset at or after normal retirement age
160 ...	waiting period before disability onset
161 ...	waiting period after entitlement
162 ...	prior disability entitlement after current entitlement
163 ...	prior disability entitlement before disability onset

APPENDIX C.—FILE STRUCTURE

Each PIA calculation case can be saved to disk from within the PIA program. Some sample cases, named SAMPLE*.PIA where "*" has values starting at 1, are included with the PIA disk. A disk file can be prepared for a PIA calculation case outside of the PIA program, but the file must follow exactly the structure required of the PIA input file. The required structure of the PIA input file follows. There is one variable per line in the file.

File Structure

Format	Description
I4	computation year
I4	sex of worker
I4	type of benefit
I4	recalculation code
I4	totalization code
I4	Medicare earnings code
I4	month of birth
I4	day of birth
I4	year of birth
I4	processing month
I4	month of entitlement
I4	year of entitlement
I4	month of benefit
I4	year of benefit
I4	planned retirement age (0 if type of benefit is not 4)
I4	indicator for backward projection
F6.2	percentage used in backward projection
I4	first year of earnings after backward projection
I4	first year of earnings before backward projection
I4	indicator for forward projection
F6.2	percentage used in forward projection
I4	last year of earnings before forward projection
I4	last year of earnings after forward projection
I4	type of earnings from first year before projection to last year before projection
I4	quarters of coverage, 1937 to 1977
I4	quarters of coverage, 1951 to 1977

File Structure

Format	Description
I4	quarters of coverage for each year from first year of earnings after projection to lesser of 1977 or last year of earnings after projection (only if totalization indicator is 1 or if type of benefit is 4)
I4	month of death
I4	year of death
I4	type of survivor
I4	disability code
I4	worker's month of disability onset
I4	worker's day of disability onset
I4	worker's year of disability onset
I4	month of prior disability entitlement
I4	year of prior disability entitlement
I4	first month of waiting period
I4	year of waiting period
I4	month of birth of widow(er)
I4	day of birth of widow(er)
I4	year of birth of widow(er)
I4	disabled widow(er)'s month of disability onset
I4	disabled widow(er)'s day of disability onset
I4	disabled widow(er)'s year of disability onset
I4	benefit increase assumption trigger
F6.2	benefit increases from December of computation year to December of year of benefit (only if benefit increase trigger is 7)
A1	catch-up benefit increase response (only if benefit increase trigger is 7)
F6.2	80 catch-up benefit increases (only if benefit increase trigger is 7 and catch-up benefit increase response is Y)
A65	title of benefit increase assumptions (only if benefit increase trigger is 7)
I4	average wage assumption trigger
F6.2	average wage percentage increases from year before computation year to year of entitlement (only if average wage trigger is 7)
A65	title of average wage assumptions (only if average wage trigger is 7)
I4	wage base indicator
F10.2	wage bases from year after computation year to year of benefit (only if wage base indicator is 2)
F10.2	old-law wage bases from year after computation year to year of benefit (only if wage base indicator is 2)
F10.2	OASDI earnings from first year of earnings before projection to last year of earnings before projection (only if type of earnings is 1 for each year)
F10.2	HI earnings from first year of earnings after projection to last year of earnings after projection (only if Medicare earnings code is 1)
I4	type of taxes paid on earnings from first year of earnings after projection to last year of earnings after projection
F10.2	noncovered pension

File Structure

Format	Description
A35	name of beneficiary
A35	3 address lines
A12	Social Security number