

APPENDIX G CHANGING QUICK INPUT DEFAULT VALUES

- G.1 Quick Input Default Usage 425
- G.2 Loads Dynamic Default Files 429
 - G.2.1 QIFILES.DFT 429
 - G.2.2 Climate Default File 429
 - G.2.3 Building Default File 430
 - G.2.4 Zone Default File 431
 - G.2.5 Space Default Values 432
 - G.2.6 Non-Dynamic Default Values 433
- G.3 Systems Default Values 434
- G.4 Plant Default Values 435
- G.5 Viewing the Loads Default Values 435

G.1 Quick Input Default Usage

Quick Input uses several different files of default values. These are called "dynamic defaults" in the sense that inputs made to the program determine the values of later defaults.

In order to change the default values in Quick Input, it is necessary to have an understanding of how the Quick Input program works. Only the Loads portion of Quick Input uses dynamic defaults. That is, there are five data files of loads default values, and the values selected is dependent on your response to input questions in Quick Input. For example, the number of people per square foot depends on the space type selected. The Systems and Plant portions do not use the same type of dynamic defaults. Instead, there is a complete set of default files for each system type and plant component. Within Quick Input, you specify only the system type and energy source for the systems loads; the appropriate system or plant default values are then used for the remainder of the input.

The names of all the default files used in Quick Input are stored in a file named "QIFILES.DFT." That is, it is possible to create and use different default files for Quick Input it is not necessary to continually modify the original default files or re-compile Quick Input to access different files. The file structure of each default file, however, cannot be changed without re-compiling Quick Input.

Each of the default files contain different values. For the loads portion of Quick Input, these files may be classified in the following manner:

QICLIMDF.PRN Climate Default File

This file contains default values for thirty different climate types. Based on the climate type entered in Quick Input, the wall, roof, and window U-factors and the summer beginning and ending month numbers are defined.

QIBLDGDF.PRN Building Default File

This file contains default values for fourteen different building types. You select a building type in the Quick Input routine. Default values for occupancy starting and ending hours and diversity factors for people, equipment, and lights are read from this file. Also, the building type determines the typical zone types.

QIZONEDF.PRN Zone Default File

This file contains default values for up to 55 zone types. You select the predominate zone type for each zone in the Quick Input routine. Default values for thermostat setpoints and whether or not there is a ceiling plenum are then read from this file. Also, the zone type determines the typical space types.

QISPCEDF.PRN Space Default File

This file contains default values for up to 95 space types. You select space

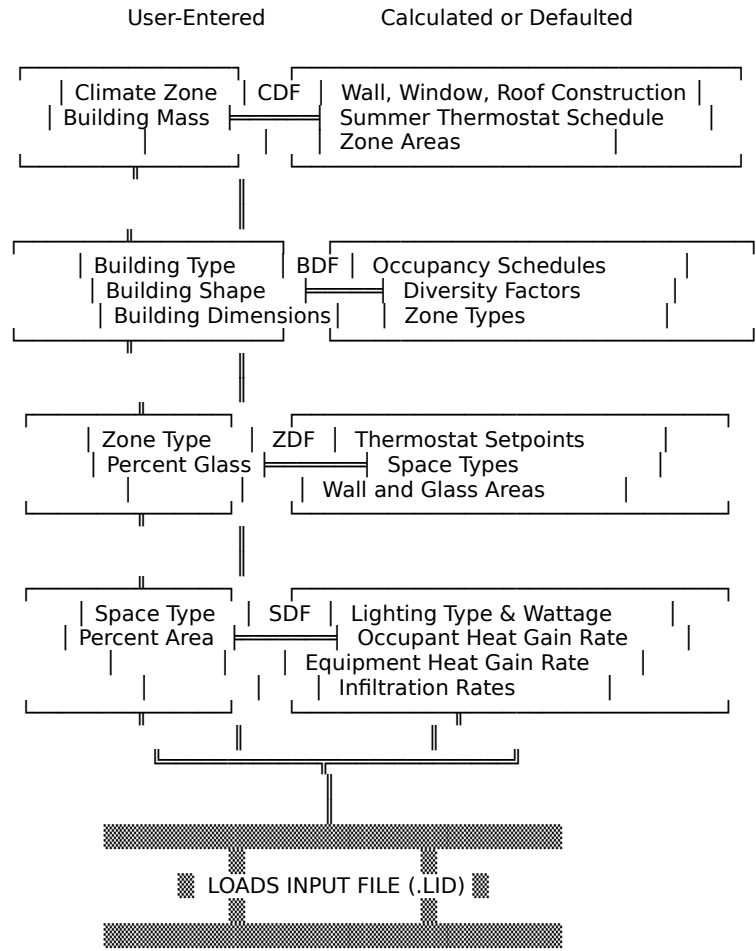
types in the Quick Input routine. Default values for lighting type and wattage, occupancy density and heat gain rate, equipment density and heat gain rate, and infiltration are read from this file.

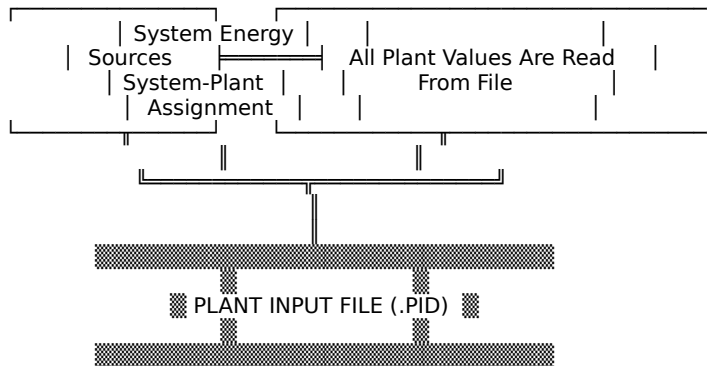
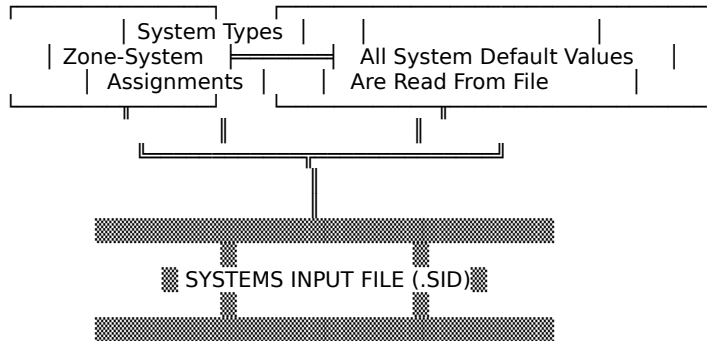
QINONDDF.PRN Non Dynamic Default File

This file contains default values that are not dependent on the climate, building, zone, or space type. Examples of these include ground reflectance, daylighting control methods, etc.

The diagram below shows which inputs are entered by the user and which are selected, based on the user inputs, from the default files. Between the blocks printed below are the abbreviations for the default files:

CDF Climate Default File
BDF Building Default File
ZDF Zone Default File
SDF Space Default File





ASEAM3.0 User's Manual Appendix G - Changing Quick Input Default Values

G.2 Loads Dynamic Default Files

If you want to change any of the loads default values, you can do so by editing the appropriate default files with a word processor or line editor. Follow all the same rules for changing screen input files, listed in Appendix C. Samples of each of the default file types are shown below. Note that the filenames used for all the different default files are accessed in the file "QIFILES.DFT." For clarity, the filenames for the default files supplied with ASEAM3.0 are used below. Quick Input "reads" this file first to retrieve the filenames for all the default files. Section G.5 describes how you may view the loads default values.

G.2.1 QIFILES.DFT

This file contains nineteen lines. Each line contains the filename for different default files as outlined below. The first five define the loads default filenames as outlined above. Following these are default filenames for the different systems and one for the plant default values.

QICLIMDF.PRN	Climate Default File
QIBLDGDF.PRN	Building Default File
QINONDDF.PRN	Non Dynamic Default File
QIZONEDF.PRN	Zone Default File
QISPCEDF.PRN	Space Default File
DFLTDDMZ.SID	Dual Duct/Multizone System Default File
DEFLTCVR.SID	Constant Volume Reheat System Default File
DFLTVAVR.SID	VAVR System Default File
DFTCBVAV.SID	Ceiling Bypass VAV System Default File
DFLTSZRH.SID	Single Zone Reheat System Default File
DEFLTFCU.SID	Fan Coil Unit System Default File
DFLTWSHP.SID	Water Source Heat Pump System Default File
DLTAHP.SID	Air/Air Heat Pump System Default File
DEFALTBBSID	Baseboard System Default File
DFLTFURN.SID	Furnace System Default File
DEFALTUH.SID	Unit Heater System Default File
DEFALTHV.SID	Heat & Vent System Default File
DEFLTWAC.SID	Window Air Conditioner System Default File
DEFLTPLT.PID	Plant Default File

The systems and plant default files (extensions ".SID" and ".PID") can be changed with the normal ASEAM3.0 Systems and Plant input programs. The Loads default files (extension ".PRN") must be changed with an editor or word processor as described below.

These files must be located in the default directory on the hard disk.

G.2.2 Climate Default File

The Climate defaults supplied with ASEAM3.0 are located in a file named "QICLIMDF.PRN" (the first filename in "QIFILES.DFT").

IMPORTANT: Each loads default file contains the exact same number "fields" or

ASEAM3.0 User's Manual Appendix G - Changing Quick Input Default Values

default values for each climate (or building, zone, and space). Therefore, when making changes in these files, make sure that the new or changed values replace the original values. If you accidentally delete or add a "field" or value, Quick Input will not read in the default values properly. It is always advisable to check the input files through the normal input programs, or by using the data echo program.

Outlined below is the file structure of the Climate default file. The numbers printed as column headers below are defined underneath the sample file. The actual default file read by Quick Input has no column headers. There are thirty different climate types in the climate default file. Only four are shown below.

1	2	3	4	5	6	7	8	9	10	11	12
1	0.480	0.580	0.740	0.800	1.15	0.69	0.81	0.55	0.092	1	12
2	0.480	0.580	0.740	0.800	1.15	0.69	0.81	0.55	0.061	1	12
3	0.100	0.110	0.130	0.150	0.68	0.55	0.45	0.55	0.071	4	11
4	0.150	0.230	0.390	0.550	1.15	0.69	0.81	0.55	0.094	4	11

etc.

column contents

- (1) climate number
- (2) wall U-factor, wall category G (BTU/hr-sf-F)
- (3) wall U-factor, wall category E,F (BTU/hr-sf-F)
- (4) wall U-factor, wall category D (BTU/hr-sf-F)
- (5) wall U-factor, wall category A,B,C (BTU/hr-sf-F)

NOTE: the wall categories listed above correspond to mass or construction groups outlined in the ASHRAE Handbook of Fundamentals.

- (6) window U-factor (BTU/hr-sf-F)
- (7) window shading coefficient
- (8) window U-factor (BTU/hr-sf-F)
- (9) window shading coefficient
- (10) roof U-factor (BTU/hr-sf-F)
- (11) summer beginning month number (1=Jan,...,12=Dec)
- (12) summer ending month number (1=Jan,...,12=Dec)

G.2.3 Building Default File

The building default values supplied with ASEAM3.0 are originally located in a file named "QIBLDGDF.PRN" (the second filename listed in "QIFILES.DFT"). The values in this file are separated only by commas, therefore, the values do not necessarily line up with each other. For example, the third entry will not always be found at a certain column number. A few sample lines are printed below. Underneath these lines is a description of what each entry contains. (For example, (3) describes the entry in the third field on each line.) When making changes in this file, make sure that the order of entries remains the same and that all fields are separated by commas.

The building default file stores default values for the fourteen building types. Each building type or line has 34 default values.

ASEAM3.0 User's Manual Appendix G - Changing Quick Input Default Values

```
1,"Auditorium",9,8,900,1700,900,1700,0,0,33,0,80,2,2,36,16,12,37,0,0,0,0,0,0,0,0,0,0,0,0,0
2,"Clinic",8,16,800,2200,800,1900,900,1600,46,0,65,4,14,16,12,19,11,22,32,37,33,0,0,0,0,0,0,0,-
0,0
3,"Community
Center",7,16,700,2200,800,2200,800,2200,43,1,68,4,7,28,13,10,17,30,35,23,25,37,18,6,22,12,2,36,2-
9,20,0,0
4,"Gymnasium/Health
Club",7,16,700,2200,800,2200,800,2200,43,1,68,4,17,30,35,7,28,13,10,23,25,22,0,0,0,0,0,0,0,0
...
```

field	contents
(1)	Building Number (1 to 14)
(2)	Building Type (must be within double quotation marks)
(3)	Occupancy Starting Hour
(4)	Number of Occupied Hours per Day
(5)	Weekdays Occupied From Hour
(6)	Weekdays Occupied To Hour
(7)	Saturdays Occupied From Hour
(8)	Saturdays Occupied To Hour
(9)	Sundays Occupied From Hour
(10)	Sundays Occupied To Hour
(11)	People and Equipment Diversity Factor, Occupied Period
(12)	People and Equipment Diversity Factor, Unoccupied Period
(13)	Lighting Diversity Factor, Occupied Period
(14)	Lighting Diversity Factor, Unoccupied Period
(15)	Zone Type #1
(16)	Zone Type #2
...	
(34)	Zone Type #20

Up to twenty typical zone types are allowed for each building type. These zone type numbers correspond to the zone default file (see Section G.2.4 below). A "0" entry for the zone type indicates no assignment, however the "0" must still be present.

G.2.4 Zone Default File

The zone default values originally supplied with ASEAM3.0 are contained in a file named "QIZONEZDF.PRN." The values in this file are also separated only by commas, therefore the values do not necessarily line up with each other. A few sample lines are printed below. Underneath these lines is a description of what each entry contains. (For example, (3) describes the entry in the third field on each line.) When making changes in this file, make sure that the order of entries remains the same and that all fields are separated by commas.

The zone default file contains default values for up to 55 different zone types. Each zone or line has 26 default values.

```
1,"ASSEMBLY RM",75,70,60,"Y",6,8,16,18,31,47,49,50,63,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
2,"AUDITORIUMS",78,70,60,"Y",6,8,16,18,31,47,49,50,63,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
3,"AUTO REP WKRM",80,60,55,"N",69,43,48,73,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
4,"BARS",75,70,60,"Y",8,9,22,32,38,57,66,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
...
```


ASEAM3.0 User's Manual Appendix G - Changing Quick Input Default Values

```
39,"WAITING ROOM",75,70,60,"Y",8,11,16,18,40,42,55,57,63,71,0,0,0,0,0,0,0,0
40,"WAREHOUSE",80,60,55,"N",45,66,67,51,53,64,1,11,19,29,30,33,36,41,42,0,0,0,0,0
```

field	contents
(1)	Zone Type Number (1 to 55)
(2)	Zone Type Description (enclosed in double quotations)
(3)	Summer Occupied Period Thermostat Setpoint
(4)	Winter Occupied Period Thermostat Setpoint
(5)	Winter Unoccupied Period Thermostat Setpoint
(6)	Ceiling Plenum (enclosed in double quotations)
(7)	Space Type #1
(8)	Space Type #2
...	
(26)	Space Type #20

Up to twenty typical space types are allowed for each zone type. These space type numbers correspond to the space default file (see Section G.2.5 below). A "0" entry for the space type indicates no assignment, however the "0" must still be present.

G.2.5 Space Default Values

The space default values originally supplied with ASEAM3.0 are stored in a file named "QISPCEDFT.PRN." Up to 95 different space types can be defined. Each space type or line has 19 default values.

```
1,"Acntg/Low Part",2.1,2,80,.65,"B",20,8.5,70,75,100,255,255,.75,.3,.3,.5,1
2,"Acntg/Med Part",2.4,2,80,.65,"B",20,8.5,70,75,100,255,255,.75,.3,.3,.5,1
3,"Acntg/High Part",2.7,2,80,.65,"B",20,8.5,70,75,100,255,255,.75,.3,.3,.5,1
...
```

column	contents
(1)	Space Type Number
(2)	Space Type Name (enclosed in double quotations)
(3)	Lighting Watts/Square Foot
(4)	Lighting Type Code (used only for description) <ul style="list-style-type: none"> 1 = Suspended Fluorescent 2 = Recessed Fluorescent (vented) 3 = Recessed Fluorescent (vented) 4 = Incandescent 5 = Recessed Fluorescent (not vented)
(5)	Percent Heat to Space
(6)	"A" Classification for lighting
(7)	"B" Classification for lighting
(8)	Room-Length (for daylighting), ft
(9)	Floor-Ceiling Height, ft
(10)	Wall Reflectance (percent)
(11)	Footcandles (design and present)
(12)	Square Feet per Person
(13)	BTU per Person Sensible

ASEAM3.0 User's Manual Appendix G - Changing Quick Input Default Values

- (14) BTU per Person Latent
- (15) Equipment Watts per Square Foot
- (16) Occupied Period Infiltration Rate (air changes per hour)
- (17) Unoccupied Period Infiltration Rate (air changes per hour)
- (18) Space diversity factor for people and equipment (decimal)
- (19) Space diversity factor for lighting (decimal)

G.2.6 Non-Dynamic Default Values

Quick Input stores default values that are unrelated to climate location, building, zone or space type in a file named "QINONDDF.PRN." Many of these default values are associated with daylighting defaults.

There are 18 default values or lines in this file.

.83
.5
3
20
2
100
D
20
30
...

Described below are the contents of the file.

- (1) wall color correction (1, .83, .65)
- (2) roof color correction (1, .5)
- (3) infiltration leakage coefficient for windows and doors

Lines 4 through 18 are default values for daylighting only

- (4) ground reflectance
- (5) sensor location
- (6) percent controlled
- (7) daylighting control method (`D'im or `S'tep)
- (8) minimum footcandles maintained by artificial lighting (dimming control)
- (9) percent of total power at minimum lighting (dimming control)
- (10) number of steps (stepped control)
- (11) step #1 artificial lighting footcandles
- (12) step #1 artificial lighting watts
- (13) step #2 artificial lighting footcandles
- (14) step #2 artificial lighting watts
- (15) step #3 artificial lighting footcandles
- (16) step #3 artificial lighting watts
- (17) step #4 artificial lighting footcandles
- (18) step #4 artificial lighting watts

ASEAM3.0 User's Manual Appendix G - Changing Quick Input Default Values

G.3 Systems Default Values

The systems default values are not assigned dynamically. There is a separate file of default values for each system type. You choose only the system type and the energy source and/or plant component which meets the system load. All the data for this system is then retrieved from the appropriate system default file.

To change system default values, enter the Systems Input program, and change the data using the standard procedure for editing a file. If you save the file under a different name, be sure to change the filename in the "QIFILES.DFT" file. You may want to make a backup copy of the original system default files first, for later use.)

The default system files are:

DFLTDDMZ.SID	Double Duct or Multizone	(System #1)
DEFLTCVR.SID	Constant Volume Reheat	(System #2)
DFLTVAVR.SID	Variable Air Volume Reheat	(System #3)
DFTCBVAV.SID	Ceiling Bypass Variable Air Volume	(System #4)
DFLTSZRH.SID	Single Zone Reheat	(System #5)
DEFLTFCU.SID	Fan Coil Unit	(System #6)
DFLTWSHP.SID	Water Source Heat Pump	(System #7)
DFLTAHP.SID	Air-to-Air Heat Pump	(System #8)
DEFALTBBSID	Baseboard Heaters	(System #9)
DFLTFURN.SID	Furnace	(System #10)
DEFALTAUH.SID	Unitary Heater	(System #11)
DEFALTHV.SID	Heating and Ventilating Unit	(System #12)
DEFLTWAC.SID	Window Air Conditioner	(System #13)

G.4 Plant Default Values

All plant default values are contained in the file named "DEFLTPLT.PID." This file has default values for all possible plant types. Those plant types not required (i.e. not specified as an energy source in systems) will also have data, but will not be used during the calculations.

To change default values for the plant, use the standard procedure for editing a file in the Plant Input program. If you save the file under a different name, be sure to change the filename in the "QIFILES.DFT" file. You may want to make a backup copy of the original plant default files first, for later use.

G.5 Viewing the Loads Default Values

Since the loads default files (and other "data" files) contain many values, and the numbers are not "lined up" for easy comprehension, it is sometimes difficult (at best) to discern what is actually in the file.

For this reason, the loads defaults files have been "stored" in a Lotus (tm) compatible file format. That is, you may "import" the loads default values into Lotus (tm) by using the "File/Import/Numbers" command.

ASEAM3.0 User's Manual Appendix G - Changing Quick Input Default Values

For your convenience, a Lotus (tm) worksheet "template" is supplied with ASEAM3.0 (filename "QIDEFALT.WKS"). This file contains the column headers for the climate, building, zone, and space default files. Once you have loaded the spreadsheet, first retrieve the "QIDEFALT.WKS" template using the "File/Retrieve" command. You will notice that this file contains four sets of column headers across the top of the worksheet one for each default file (Climate -> Building -> Zone -> Space). The column headers are stored in the file.

To view the default values for a particular default file, first you must locate the cursor at the top left VALUE under the column headings. DO NOT PLACE THE CURSOR IN THE HEADINGS YOU WILL LOAD THE DATA VALUES IN ON TOP OF THE HEADINGS. With the cursor properly located, use the "File/Import/Numbers" command to load in the appropriate default file.

WARNING - THIS TEMPLATE IS USEFUL ONLY IN VIEWING THE DEFAULT VALUES. DO NOT ATTEMPT TO USE THE TEMPLATE TO CHANGE AND SAVE NEW DEFAULT FILES. THEY MAY NOT BE "READABLE" BY QUICK INPUT. YOU MUST MAKE CHANGES TO THE DEFAULT VALUES USING A WORD PROCESSOR OR EDITOR!

This template can be very useful especially when creating or modifying new default files. For example, if one of the 34 default values per line is accidentally omitted from the building default file, this will be readily apparent when viewing the data in Lotus (tm), since one line will only have 33 values.