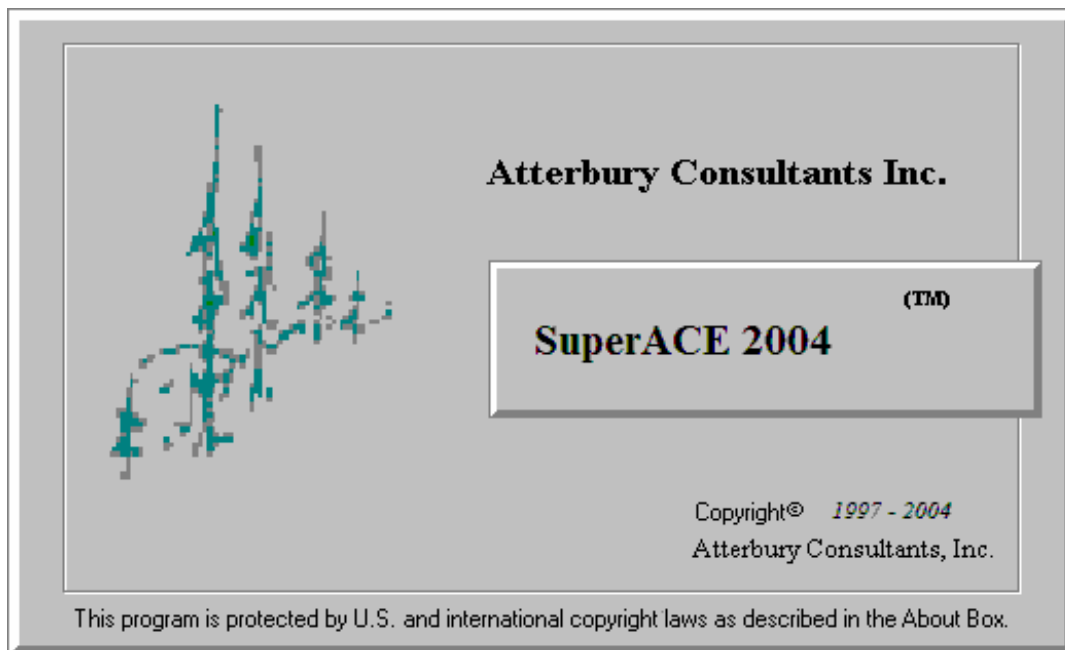


# ***Atterbury Consultants, Inc.***



## ***User's Manual***

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## Welcome to SuperACE

Atterbury Consultants is pleased to bring you SuperACE, the windows version of our *Super Accurate Cruise Extension* program. Finally, a user-friendly, flexible working environment to assist you in completing all of your timber cruising projects. Below is a brief list of some of the exciting new features available with SuperACE .

*Seamless Integration with FLIPS*

*Import Data from DOS Versions of our Forestry Software*

*Menu Driven*

*On-line Help*

*Flexible Database Design*

*Multiple sampling systems*

*Generate Numerous Reports and Graphs*

*Variable log lengths*

*User defined tables*

*Timber cruise and reforestation input*

## Sampling

Forests are generally too large and have too many trees for a 100% inventory of every tree. Limited time and money for cruising usually dictates that the population be sampled. Samples are collected that hopefully will represent the entire population. Sampling has to be done in a way that the answers are still reliable. Reliability comes only when the stratification is done properly, the acres are calculated correctly, the right sampling method is used, the trees are measured or estimated correctly, and data are properly extended to useful information.

There is always some risk of not having the right answer when sampling. Bias can cause a systematic distortion. This can be caused by using the wrong sampling system, bad measurements, or poor estimates. This can only be avoided by cruiser training and continually measuring all of the parameters all day, every day.

Accuracy means the estimates are close to the true values. Often, cruisers will measure one parameter, such as DBH with great precision, and guess all of the heights and have very inaccurate cruise. The measurement effort must be balanced among all parameters in all species to avoid bias and error.

The populations in forests are often variable. Every tree can have a different volume and balance and every acre a different volume and value. This variation is measured by installing a series of samples spread over the entire population.

SuperACE calculates and reports a "Statistical Summary" for each timber type. Variation and Standard Error are calculated for basal area, net cubic feet per acre, and net board feet per acre. The confidence limits are printed for each parameter for a given standard deviation. Usually foresters use one standard deviation, or that the average will fall in the confidence limits 67% of the time.

The statistical calculations are done after the cruise is complete. Rarely is it feasible to go back to the forest and take more samples. The cruiser must decide before starting the cruise, what kind of sampling system to use, what kind of plots to take, and how many plots to establish.

Stratifying the forest into homogeneous types usually brings the Coefficient of Variation in normal forests to around 50%. We have found that 30 to 40 proportional plots with an average of 4 to 6 trees per plot, or a total of around 150 sample trees will yield accurate answers that will cut-out around + or -10%, 67% of the time. Stands with more variation require more plots. Count plots should be used when the basal area per acre varies more than the volume per acre. Count plots only measure species and basal area per acre.

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Common sense and a basic knowledge of the various sampling systems are more important than sampling theory.

## Key To Timber Cruise Sampling Method

To use this key, make estimates based on observation, aerial photographs, comparable data and personal knowledge of the timber stand. Record the following stand conditions:

1. total height
2. average diameter
3. acres
4. stand structure

Start at the top of the key and review each of the conditions about the stand. Select the sampling method to which the key leads.

### REFORESTATION CRUISES: (Trees up to 20 feet tall)

Stocking variable ..... Variable Radius  
Stocking even; density adequate ..... Fixed Area

### TIMBER CRUISES: (Trees over 20 feet)

#### Small area up to 10 acres

##### Area known

Small trees up to 8" ..... Fixed area  
Few large trees ..... 100 %  
Many large trees ..... Strip or fixed

##### Area unknown

Few trees ..... 100 %  
Many trees ..... Strip

#### Larger area over 10 acres

##### Area known

Small trees up to 8" ..... Fixed area  
Tree over 8" ..... Prism  
Even aged stand with large tree overstory ..... Prism plots plus 100 %  
Variable Stocking ..... Prism plus count plots  
Homogeneous stand (Spp and DBH) ..... Prism plus count trees

Area unknown ..... Strip

## Sampling Methods

### Reforestation Cruise

Reforestation surveys are used in stands with heights of less than 20 feet. Timber stands taller than 20 feet have measurable volume and should be sampled with a timber cruise program. Reforestation surveys are entered in the TC-Tree Input screen of SuperACE by placing **R1, R2, R3, R4** or **R5** in the **PF** column to indicate a fixed radius reforestation plot. Values are assigned to the R1 thru R5 factors on the type master screen. For example, if you're running a stocking survey with 1/100<sup>th</sup> acre plots, R1 is entered in the PF column for each tree record. In the type master screen a value of

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11.78 (plot radius, in feet, for a 1/00<sup>th</sup> acre plot) is entered in the cell next to R1. Values for R2 thru R5 are left blank since only one plot radius was used in the survey. All blank plots must be recorded in order to calculate stocking. All blank plots must be recorded in order to calculate stocking. Blank plots are recorded by entering a plot number, species code and 0 in the **Ct.** column.

## **100 % Cruise**

This is not a sampling method, but rather a complete or 100% cruise of the entire population. This is rarely feasible. Do not attempt a 100% cruise unless you are absolutely sure all trees can be identified and measured. A 100% cruise tree is entered in SuperACE by preceding the plot number with a dash (-). For example -001. Or, use **S1** in the **PF** column for the tree and assign a value of "1" in the type master screen.

### Situations for use:

A cruise of one tree.

Marked trees along a right-of-way.

A few (less than 100) large scattered trees in a reproduction type which can be easily identified.

A few scattered, large trees of a merchantable type, which are usually a different species, age, and of high value; i.e., older Douglas-fir trees in a younger stand. The younger trees may be prism cruised while the more valuable Douglas-fir trees should be 100% cruised.

### Advantages

1. No sampling.
2. Provides a record of every tree.

### Disadvantages

1. 100% cruises are expensive. The higher costs must be justified by specific requirements which cannot be obtained otherwise.
2. Possibility of missing trees.  
Possibility of cruising trees twice.

## **Strip Cruise**

A strip cruise is a cruise of a percentage of the total type area or number of trees. Continuous strips are run through the tract at regular intervals. A strip cruise is entered in the tree input screen of SuperACE by entering **S1, S2, S3, S4** or **S5** in the **PF** column for each tree record. A strip cruise "blow-up" factor is entered as a whole number on the type master screen. For example, if each tree cruised represents 5 trees (a 20% cruise) then a "5" is entered next to S1 on the type master screen. Values for S2 thru S5 are left blank since only one strip "blow-up" factor was used in the cruise.

### Situations for use:

1. Areas of unknown size.
2. Irregular shaped areas.
3. Irregular area with field around it.
4. Road right-of-way laid out in timber.
5. Narrow strip where powerline right-of-way is widened.
6. Brushy areas or areas with broken topography where prism cruising would not work.

Acreage's by types must be calculated with a strip cruise; however, they are only used to calculate volume per acre. The total volumes are calculated by multiplying the volume of each tree times the strip area factor.

There is no balancing of diameter and trees per acre as in a prism cruise. If the diameters are estimated too small in a

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strip cruise, the volume will be low.

## Advantages

1. Strip cruises can avoid critical acreage errors in small units.
2. Blow-up factors can be independent of acreage.
3. Brushy areas with scattered trees can be cruised accurately.

## Disadvantages

The entire tree distribution will be sampled, which may mean that many small trees will have to be recorded. These small trees add greatly to the cost of cruising but may not add to the volume and value.

An accurate baseline has to run completely through the number of strips for cruise % control.

Accurate strip widths placed at right angles to the baseline have to be constantly maintained with frequent checking of borderline trees. The strip center must be accurately marked in order to do this.

## Fixed Area Plots

These are usually fixed circular plots of a certain size. These plots should be large enough to sample the population with an average of 5-10 trees per plot. The radius of the plot must be larger than the radius of the square of the actual stocking.

Plot Radius = sq.rt. (13,865.58\*plot area)

Five fixed area plots can be nested in a plot. They are indicated on the plot card or data recorder with an **F1**, **F2**, **F3**, **F4** or **F5** in the **PF** column and the plot size defined on the type master screen. A plot radius is entered on the type master screen as decimal factor. For example, a ¼ acre plot is entered as 0.25.

## Proportional Plots, Variable Radius Plots, Prism Plots

These are the most popular plots for cruising merchantable timber today. A BAF should be selected to yield an average of 5 trees per plot. Use the same BAF for the entire type or strata. SuperACE allows BAF of any number between 1 and 99.99. BAF that are whole numbers can be put directly in the **PF** column on the plot card or in the cruise input screen. BAF that have a decimal number are assigned in the type master screen and coded on the plot card or data recorder as **B1**, **B2**, **B3**, **B4**, or **B5**.

More than one BAF can be used in a type to sample various species or size groups.

## Combination Sampling Systems

Types that have mixed species of extreme value, or a wide diversity in age or size, may have to be sampled with more than one system or plot size at the same time.

Nested plots can be used for many situations.

Merchantable stands, with a few scattered large trees, can be cruised with a BAF for the merchantable element and with a 100% or a strip used for the large trees.

Merchantable stands, containing a minor species of high value, can be cruised using a combination of prism for the major species and a strip cruise for the high value minor species.

## Sampling Design and Intensity

Determine the accuracy needed for the project or each sampling unit (type). Prioritize the sampling intensity to the highest value, largest, nearest to operations or highest volume per acre.



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Stratify the ownership into sampling units (types) or operational units that can be sampled. Each type may be sampled with a different method and intensity.

The number of plot and tree samples is a function of the needed accuracy and the variation with the sampling unit. Stratification can reduce the number of plots needed to satisfy accuracy. Statistical calculations of the samples will determine the actual sampling error. Estimating the number of plots needed for the accuracy comes more from experience than from statistical calculations before the sampling is started. Statistics from old cruises in an area can help in judging the number of plots that are required for a certain accuracy on types to be sampled. Average timber types have coefficient of variation of around 40 – 50% and can be sampled to about +/-10% at 1 standard deviation with 30 to 40 plots. Proportional plots require about 4-6 trees average or 120 to 240 trees. Stands with more variation require more plots or trees. To reduce the error by half requires four times the samples.

## Determine the number of sample trees per plot.

Proportional plots determine the BAF by estimating the basal area per acre and divide by 5 trees.

Example:

$$\text{BAF} = 100 \text{ sq. ft. per acre} / 5 \text{ trees} = 20$$

Fixed area plots estimate the trees per acre and divide by 10

Example:

$$\text{Plot Radius} = 200 \text{ trees per acre} / 10 = 20^{\text{th}} \text{ acre} = \text{plot radius of } 26.33 \text{ feet.}$$

## Determine plot spacing.

Square grid =  $\sqrt{(43,560 \times \text{type acres}) / (\text{number of plots})}$

Example:

$$\text{Total acres} = 44 \quad \text{Plots} = 44$$

$$\text{Square grid} = \sqrt{(43,560 \times 44) / (44)} = 208.71 \text{ feet.}$$

$$\text{Acres per plot} = (\text{plot spacing})^2 / 43,560 = (208.71)^2 / 43,560 = 1.00$$

Rectangular grid = Spacing between lines =  $(\text{Acres} \times 43,560) / (\# \text{ plots} \times \text{distance between plots})$

Example:

$$\text{Total acres} = 44 \quad \text{Plots} = 44 \quad \text{Distance between plots} = 132'$$

$$\text{Spacing between lines} = (44 \text{ ac.} \times 43,560) / (44 \text{ plots} \times 132') = 330'$$

$$\text{Acres per plot} = (\text{distance between plots} \times \text{spacing between lines}) / 43,560 = (132' \times 330') / 43,560 = 1.00$$

Lay out the plot lines on the maps to cross drainages and other patterns that may cause the sample to be in error. The acres per plot should be multiplied by the number of plots in each type to check the acres calculations and the plot count.

## Measure the results.

Statistical calculations should be computed for each type, the average for all types and possibly the standard error for the entire project. Cut-out records should be kept to check the actual against the estimated. Measurement errors must be considered. Measure the right things for quality results.

## Data Input

### TC - Dbh Cru/Cnt

The TC – Dbh Cru/Cnt screen is accessed via the **TC – Dbh Cru/Cnt** tab of the stand information screen. This screen gives a stand table summation based on the cruise data in the selected stand. It can also be accessed in the TC – Tree Input and TC – Tree Edit screens by clicking on the Stand Table button. The diameter class can be adjusted in the "Dia. Class" cell and the diameter class mid-point is defined in the "Round up on" cell. The changes take affect by pressing on the Enter button after entering the change. The other variable cells are not active at this time.

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## **TC - Extra Tree Measurements**

The TC – Extra Tree Measurements screen is accessed by clicking the **TC – Extra Tree Mea** tab of the stand information screen. This screen stores site tree measurements. The measurements include species, DBH, total ht., age code, BH age, total age, DBH growth, height growth, and bark thickness.

## **TC - Plot Loc**

The TC – Plot Loc screen is accessed via the **TC – Plot Loc** tab of the stand information screen. This screen allows the user to input, through keyboard or data recorder download, direction of travel, coordinates (state plane, latitude/longitude, or UTM system), slope, aspect, and habitat description for each cruise plot.

## **TC - Scaling**

Under construction.

## **Stand Information Screen**

Each stand in a project is accessed through a stand information screen. It is a collection of dialog screens that contain all the data associated with a given stand in a project. This includes stand information such as location, associated cost and price tables, cruiser name, etc.; tree details; stand history and planning; land and soils information; and GIS information. In this dialog the user can add or edit information via the Stand Input screen. It is also possible to move through the list of stands in the selected project using the four buttons, First, Previous, Next, and Last.

## **TC - Transect**

Under construction.

## **TC - Tree Edit Screen**

This screen is accessed by clicking the **TC – Tree Edit** tab of the stand information screen. It shows the data as it was entered in the **TC - Tree Input** screen along with the computed values and error messages for each log segment. This screen is used to edit the tree data that was entered in the TC - Tree Input screen. The tree data is edited directly into the screen cells and through the insert segment, delete segment, insert tree, delete tree, and replace buttons located at the bottom of the screen.

**Computed ( These fields are calculated automatically by the program.)**

**Cum Ht.** – Cumulative Height – Height of segments including trim.

**Top DOB** – Top Diameter Outside Bark – The small end of the log, outside the bark, as specified in the scaling rule.

**Top DIB** – Top Diameter Inside Bark – The small end of the log, inside the bark, as specified in the scaling rule.

**Net CuFT** – The cubic feet in a log less defect deductions.

**Net BdFt** – The board feet in a log less defect deductions.

If a tree segment does not meet any of the parameters defined in the species or sort and grades tables an error message will appear in red to the right of the computed fields. Once the segment is edited the message will disappear.

## **TC - Tree Input Screen**

The TC – Tree Input Screen is accessed by clicking on the **TC – Tree Input tab** of the stand information screen. It is this screen where timber cruise plot data is entered. The data is entered directly into the screen cells and through the insert tree, delete tree, and replace buttons located at the bottom of the screen.

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**Plot No.** - Plot Number (required). A Four digit plot number, alpha/numeric, is assigned to each plot. Each plot in a timber type must have a unique number. Duplicate plot number will be computed as one plot. The program will check for duplicate plot numbers when you start entering a plot. Plot numbers should be pre-assigned when more than one cruiser is taking plots in a type.

**Tree No.** - Tree Number. A three digit numeric field. Tree number is assigned by the computer except when measuring permanent plots. Users input tree numbers when measuring permanent plots for growth and each tree is going to be measured more than once.

**PF** – Plot Factor or Prism Factor (required). A two digit alpha numeric field. When a two digit number is entered, the field is a Prism Factor or Basal Area Factor ( i.e. 20 equals a 20 BAF). If a decimal value is used for a prism factor then a B1, B2, B3, B4 or B5 is entered with the prism factor value defined in the type master screen (i.e. B1 is entered in the PF column and 33.61 is entered next to B1 in the type master screen). Glass prisms should always be checked for the proper prism factor. A letter followed by a number (i.e. F1, R1 or S1) is referring to a Plot Factor in the type master screen. These refer to various sampling systems and plot sizes. If a cruiser requires that a tree be treated as 100% cruise tree on a cruise plot, a S1 code is entered in the PF column for the tree and a "1" is entered in the type master screen next to S1 to give the tree a blowup factor of 1.

Up to 5 options for each sampling system can be used:

System	Option	Example (As entered in the Cruise Master Screen)
Basal Area Factor:	B1 thru B5	B1 = 27.78
Fixed Area Plots:	F1 thru F5	F1 = 0.25 (One quarter acre plot)
Reforestation Plot Radius:	R1 thru R5	R1 = 11.78 (1/100 acre plot)
Strip Cruise Blowup:	S1 thru S5	S1 = 4.00 ( 25% strip cruise)

## Identification

**A.** –Age (required): A one digit numeric field for age code. The age in years is input on the cruise master screen. Default age is code 1. Up to nine ages can be input per type. Age is used for calculating the tree form, bark factors, growth, and for age class reports. If no age is assigned, then a default age of 30 is used for volume calculations.

**Spp.** – Species (required): A six digit alpha/numeric field is provided for species. The numbers or letters must match the active species screen. A species table must be active before the cruise data is entered. Species is very important. It is usually not a good idea to group species. Each individual species should be entered on the species table with appropriate factors and limits.

**St.** – Status (optional): A one digit alpha/numeric field. Input must match codes in the status table. Status is used to indicate dead trees, etc.

**Ct.** – Count (optional): The tree count. A two digit numeric field is provided for tree count. Count plots are used to adjust the trees per acre for the trees on the cruise plot. Trees can be counted on the plots by species and diameter. Count plots can be used with BAF, fixed area plots, and strip cruises. Blank plots are entered as a count plot with a species code and a 0 in the Ct. column.

## Measurements

**DBH** – Diameter Breast Height: This field is required when cruising volume plots and optional when cruising count and regeneration plots. DBH is a four digit numeric field, including the decimal point, is provided for diameter. This diameter is normally at 4.5 feet above the ground on the uphill side of the tree. This diameter is measured four feet or 1.3 meters above the stump outside the bark. Diameters less than 99.9 inches can be input to the nearest tenth inch. Trees larger than 100 inches are input to the nearest inch.

**FP** – Form Point (required) – A two digit numeric field is provided for form point. Default is DBH (four feet above the stump). Form point is where Form Factor is measured and/or where the tree taken "in" with a BAF. If form point is defined as four feet, the program will automatically use a form point of 16 feet to calculate Form Factor. Form point can be varied for each tree if needed.

**FF** – Form Factor (required) – A two digit numeric code. Form factor is the percent relationship of the diameter at Form Point (16 feet) divided by the DBH. Default values for Form Factor by species are input on the species screen. If no form factor is entered, the form factor from the species table will be used.

**TD** – Top Diameter (required). A one digit alpha/numeric field. Top diameter is the diameter outside the bark at the top of the bole. This is entered as a single digit percent value or as an alpha value for diameter. As shown below.

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## Top Diameter Fractions of FP

TDF = top dia. / dia. at Form Point

Code = % of diameter at FP

0 = Total Height  
 1 = 10%  
 2 = 20%  
 3 = 30%  
 4 = 40%  
 5 = 50%  
 6 = 60%  
 7 = 70%  
 8 = 80%  
 9 = 90%

## Top Diameters

Alpha Codes

Code = Inches Centimeters

A = 1 2.5  
 B = 2 5.0  
 C = 3 7.5  
 D = 4 10.0  
 E = 5 12.5  
 F = 6 15.0  
 G = 7 17.5  
 H = 8 20.0  
 I = 9 22.5  
 J = 10 25.0  
 K = 11 27.5  
 L = 12 30.0  
 M = 13 32.5

## Top Diameters

Alpha Codes

Code = Inches Centimeters

N = 14 35.0  
 O = 15 37.5  
 P = 16 40.0  
 Q = 17 42.5  
 R = 18 45.0  
 S = 19 47.5  
 T = 20 50.0  
 U = 21 52.5  
 V = 22 55.0  
 X = 23 57.5  
 W = 24 60.0  
 Y = 25 62.5  
 Z = 26 65.0

**Bole Ht.** – Bole Height (required)– A three digit numeric field. Bole height is the distance from the stump to the Top Diameter Fraction or the Top Diameter outside the bark to the nearest foot or meter.

**Tot Ht.** – Total Height (optional) – A three digit numeric field. Total height is the distance from the stump to the tip of the tree. Maximum tree height for a species is input on the species screen. Bole height and tree height can be entered individually or together.

**Classification** (optional)

**Po (T1)** – Position

O = over-story – Older age trees, usually residual  
 D = dominant  
 C = co-dominant  
 I = intermediate  
 S = suppressed  
 U = under-story – younger trees than the main canopy

**CR (T2)** – Crown Ratio percent of the tree length with canopy.

1 = 10%  
 2 = 20%  
 3 = 30 %  
 4 = 40%  
 5 = 50%  
 6 = 60%  
 7 = 70%  
 8 = 80%  
 9 = 90%

**Vi (T3)** – Vigor

H = healthy, living tree, may have damage  
 M = alive, but damaged and/or is not normal.  
 D = dying

**Da (T4)** – Damage

A = animal damage, unknown species  
 B = bear  
 C =  
 D = deer

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E =  
F = fire  
G =  
H =  
I = insects  
J = J rooted when planted  
K =  
L =  
M =  
N =  
O =  
P =  
Q =  
R =  
S =

**T5** – other

**Segments - Up to 12 Segments can be described for each tree (required for volume calculation).**

**S#** - Segment number – two digit automatically assigned by the program. This includes cull segments, breakouts and logs.

**S** – Sort – A single alpha or numeric code as described in the active sort/grade table.

**G** – Grade – A single alpha or numeric code as described in the active sort/grade table.

**Ln** – Segment length. Two digit numeric. On the final log segment of a tree, a “-” may be entered instead of a numeric length. If a “-” is entered, the program will compute the length of the segment to the minimum top diameter. Log length min and max are defined in the species, sort and grade tables.

**Bd. Ft. F.** – Board Foot length deductions.

**I.** – Board Foot diameter deductions

**Cu. Ft. F.** – Cubic Foot length deductions

**I.** – Cubic Foot diameter deductions

**%** – Numeric field left blank when using length or diameter deductions. A **1** is entered when percentage deductions for both board foot and cubic feet are to be used. Percentages are entered as whole numbers (i.e. 10 equals 10% and 05 equals 5%).

## **Type Master Screen**

The screen is accessed by double clicking on the gray area to the left of the TWN number. This screen contains all the inventory and cruise information associated with a given type (stand) in a distinct township, range, and section location. This includes information such as location, tract name, type number, stand size, cost and price tables, cruiser name, site index, BAF, age, etc. A master is either created by hand entering values, or by copying or exploding a stand. The master is the first screen that appears when the stand information screen is opened.

See Also

Stand Information Screen

## **How To**

## Adjust Timber Cruise Volume

Timber cruise volumes can be adjusted over an entire project or individual stands. These adjustments only occur when a cruise report is run. The original cruise data is not effected. If an adjustment is applied then the name of the adjustment table is displayed in the **Cru Adj** window on the stand information screen.

From the menu bar select either **project** or **stand**, depending on the level of adjustment.

Choose **adjustments** from the drop down menu.

The adjustments dialog screen appears.



Select **Cruise** and **Volume Adjustment**.

Click on the **Adjustment Table** button in order to edit the adjustment parameters or to create a new adjustment table.

In the adjustment pull down window select the table you wish to run the adjustments against.

Click **OK**

From the cruise reports selection screen, select the report to run and check the **Apply Cruise Adjustments** box at the bottom of the screen.

Click the **Process** button.

The volumes calculated in the reports will include the adjustments.

See Also

Adjustment Tables

## Assign Tables to a Project

Each project has four primary groups of tables associated with it: Species, Sort/Grade, Price, and Cost tables (screens). At any time, the project may refer to any one of a number of different tables, within each of these primary groups.

There are two methods to set default tables. The first method is the recommended procedure.

Method One:

1. Choose **Defaults** from the **Setup** drop down menu.
2. The defaults screen appears.
3. If the Tables screen isn't visible click on the tables tab.
4. Click in the field next to the table category you wish to change.
5. Use the drop list arrow button to show a list of available tables
6. Click on the table you require.
7. Click OK.

Method Two:

1. Choose **Tables** from the menu bar
2. From the drop down menu choose a table category.
3. Click on the table name you require in the upper left corner of the screen.

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4. Click the **Make Default** button.
5. Close the Tables screen.

## **Backup a Project**

Backing up data is recommended after any significant changes have been made to a project. The data is stored in a zip file format (i.e. filename.zip) and can be saved to a hard drive, tape drive, zip drive, or floppy disks. The zip file contains the data in an Access file format and has an MDB extension (i.e. filename.mdb).

Select the **Backup/Restore** option in the **File** drop down menu.

1. Backup/restore dialog screen appears.
2. Select the tab labeled **Backup**.
3. Select a project to backup from the project list window.
4. Type or browse to where you want it stored (i.e. hard drive or floppy disk).
5. Check the boxes if you want to include tables and multi volume in backup.
6. Click OK.

See Also

Restore a Project

## **Change Communication (COM) Ports**

When the software is installed, **com port 1** is set as the default serial port for communication between the PC software and data collector software. It may be necessary to change this setting on some PC's due to other input devices utilizing com port 1 (i.e. mouse). The com port settings are stored in the **FLIPS.ini** file which is located under the **C:\windows\** directory (Windows 98), **C:\Winnt\** directory (Windows 2000\XP).

To change the com port setting:

1. Open the FLIPS.ini file using notepad or an editor software application.  
The file will look similar to this:

```
[Directories]
FlipsDir=C:\FLIPS04\
CurrDB=C:\FLIPS04\DEMO\DEMO.mdb
CurrDataDir=C:\FLIPS04\DEMO
[Setup]
ID=3CE3 4018
CruFlag=1
InvFlag=1
Company=***
ComPort=1
ConvBoise=1
Customer=DEMO
ReportWeyco=1
ReportMB=1
ReportBoise=1
ReportHampton=1
[ForestVIEW]
PassDataDir=C:\FV37
[Project]
CurrProject=DEMO
```

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2. Near the bottom of the **[Setup]** section is the statement "**ComPort=1**".
3. Simply change the "1" to a different com port number (i.e. ComPort=2).
4. Save the FLIPS.ini file and close.
5. Communications will now utilize the new com port setting.

## Change Report Parameters

Report parameters are accessed by choosing **Reports** on the opening menu bar. Then choose **Parameters** and Log Stock Table or Project Summary by Species, Sort, Grade from the drop down menu. Assign min. and max. values as needed and click **OK**. All cells must have a value.

## Change Species, Sort or Grade Codes

Situations may arise where it will become necessary to change species, sort or grade codes in a type or project. An example would be if a cruiser mistakenly used a different set of species, sort or grade codes than the other cruisers on a cruise job. In order to make all the data consistent, the cruiser's codes will need to be changed before the data can be processed. Instead of editing each tree entry one at a time the codes can be changed globally on a stand or project by using the **Change Species, Sort, Grade** option under **Project** and **Stand** on the menu bar. Codes can be changed in SuperACE only.

### Change Species, Sort or Grade at the PROJECT Level

1. Select the project to be processed.
2. Click on **Project** from the menu bar.
3. Click on **Change Species, Sort, Grade** from the Project menu.
4. The following screen appears.

Species		Sort		Grade	
Old	NEW	Old	NEW	Old	NEW
DF		8		1	
RA		9		2	
WH		D		3	
		J		4	
		K		9	

5. The codes shown under the "Old" column are the current codes assigned to the data.
6. Under the "NEW" column enter the codes that are to replace the old codes. If an old code is still to be used, leave the new cell blank. Each time a code is entered in a cell, be sure to hit the enter key.
7. Be sure that the new codes are consistent with the tables associated with the project. After all the entries have been made click on the **OK** button.
8. The codes are now changed for the whole project.

### Change Species, Sort or Grade at the STAND Level

1. Select the stand to be processed.



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2. Click on **Stand** from the menu bar.
3. Click on **Change Species, Sort, Grade** from the Stand menu.
4. Follow steps 4 through 7 from above.
5. The codes are now changed for the selected stand.

## **Change a Tract Name**

Use the following method if you have a stand or stands in which the tract name needs to be edited or changed.

1. Backup your data.
2. Select a stand or stands with a tract name that requires editing.
3. Choose **Maintenance** from the **Stand** drop down menu. The Stand Maintenance dialog screen appears.
4. Select **Copy** and **Cruise** or **Inventory** from the **Options** area of the dialog screen.
5. Copy the stand(s) to a new temporary project by filling in the **Destination Project** and **Destination Directory** of where the temporary project is to be stored.
6. Choose the **Type** tab at the bottom of the dialog screen if a single stand is to be copied, or select **Section/Tract** if the types associated with an entire section or tract are to be copied.
7. In the **Destination** area of the table in the dialog screen, change the **Tract** name as needed. If the stand is to be linked to ForestVIEW, the tract name can not exceed eight characters.
8. Click **OK**. The stand(s) are copied with the tract name changes into the temporary project.
9. Select the temporary project and verify that the stand(s) data has been copied correctly.
10. Select the original project and delete the original stand(s).
11. Select the temporary project and repeat steps 3 through 4.
12. Fill in the **Destination Project** and **Destination Directory** of the original project.
13. Click **OK**.
14. Select the original project and verify that the stand(s) data has been copied correctly.
15. Once you have verified that all the data has been copied correctly, you can delete the temporary project.

## **Copy Cruise Plots**

1. Select a Stand.
2. Click on **Stand** on the opening screen menu bar.
3. Choose **Plot Maintenance** from the drop down menu.
4. The **Plot Maintenance** dialog screen appears.
5. Confirm that original project and type are correct.
6. Check the **copy** option in the options area of the screen.
7. In the **Destination** area, fill in the legal description and type number of where the plots are to be copied.
8. Browse to the **Destination directory** of where the project is you want to copy to.
9. Choose a project (it can be within the same project) or enter the name of a new project.
10. Select the plots to be copied by selecting the cells of the plot numbers you want copied.
11. Click **OK**.

See Also

Delete Cruise Plots

## **Copy a Project**

1. Choose **Maintenance** from the **Project** drop down menu. The Project Maintenance dialog appears.
2. In the **Original** window enter the name of the project you are copying from.
3. In the upper **Destination** window enter the name of the destination project.
4. In the lower **Destination** window use the browse button and browse to the directory where the destination project is stored.

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5. Select **Copy** in the options section and either **Cruise** or **Inventory**.
6. Click **OK**.

See also

Copy a Stand  
Delete a Project  
Delete a Stand

## **Copy a Stand**

1. Select a stand to copy.
2. Choose **Maintenance** from the **Stand** drop down menu. The Stand Maintenance dialog appears.
3. Select **Copy** and **Cruise** or **Inventory** from the **Options** area of the dialog.
4. Fill in the **Destination Project** and **Destination Directory**.
5. Choose the **Type** tab at the bottom of the dialog if a single stand is to be copied, or select **Section/Tract** if the types associated with an entire section or entire tract are to be copied.
6. In the Destination area of the table in the dialog screen, change Twn, Rge, Sec, Tract and Type information as needed. If only the tract name is to be edited, follow the directions in the on-line help for changing a tract name.
7. Click **OK**. The new stand is created in the new location.

See also

Change a Tract Name  
Delete a Stand

## **Create or Add a Project**

1. Build a new project from scratch or add an existing project.
2. Choose **New Project** from the **Project** menu. The Add/Edit Dialog box appears.
3. Set the path and directory for the project file in the **Directory** box.
4. Fill in the **Project** box with a new project name up to 8 alphanumeric characters long or choose an existing project from the drop down window to add a project.
5. Enter optional information in the **Project Information** section of the screen then click on the Save button.

## **Create a New Stand**

In FLIPS, it is easy to create a stand by using the **New Master** dialog screen.

1. Select **New Stand** from the **Stand** drop down menu.
2. The new master dialog screen appears.
3. The Twn., Rge., Sec., Tract, Type and Acres fields must be defined. Other fields are filled as needed to describe the stand.
4. Click **OK**.
5. The new stand appears on the stand list screen.

See Also

Stand Input Screen

## **Create a New Table**

If the table needed for a project does not already exist in the system, you may create a new one. A table may be created by either typing the information one cell at a time, or by copying and editing a table that already exists.

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1. Choose **Tables** from the menu bar.
2. Choose a table category from the pull down menu.
3. Click the **New Table** tool button. The **New Table** dialog appears.
4. Select a **Table Type** from the drop down list of tables.
5. Name the table in the **New Table** box and click **OK** to begin entering table data.
6. If copying the table, choose the most similar table from the **Copy from Table** list of available tables and edit it appropriately.

Note that information can be cut and pasted from other Excel tables to fill in the new table information.

## **Delete a Project**

**Note:** You cannot delete a project if it is currently active. You must first make another project active, then exit and reenter the program.

1. Choose **Maintenance** from the **Project** drop down menu. The Project Maintenance dialog appears.
2. In the **Original** window enter the name of the project you are deleting. Select **Delete** in the options section.
3. Click **OK**. The project is now deleted from the harddrive.

See also

Copy a Project

Copy a Stand

Delete a Stand

## **Delete a Stand**

It is easy to delete any selected stand or delete several stands by type, section, or tract name.

1. Select a stand to delete
2. Choose **Stand Maintenance** from the **Stand** drop down menu. The Stand Maintenance dialog appears.
3. Select **Delete** from the Options area of the dialog.
4. Choose the Type tab at the bottom of the dialog if a single stand is to be deleted, or select Section/Tract if the types associated with an entire section or entire tract are to be deleted.
5. Click **OK**.

See also

Copy a Stand

## **Delete a Table**

1. Choose **Tables** from the menu bar.
2. Click the **Delete Table** tool button.
3. Choose the table category wish to delete from the left area of the table delete window.
4. Choose the name to the table you wish to delete from the right area of the table delete window.
5. Click **OK**.

Note: A table cannot be deleted if it is currently the active table.

See Also

Create a New Table

Edit a Table

## Delete Cruise Plots

1. Select a Stand.
2. Click on **Stand** on the opening screen menu bar.
3. Choose **Plot Maintenance** from the drop down menu.
4. The **Plot Maintenance** dialog screen appears.
5. Check the **delete** option in the options area of the screen.
6. Confirm that original project and type are correct.
7. Select the plots to be **deleted** by selecting the cells of the plot numbers you want copied.
8. Click **OK**.

See Also

Copy Cruise Plots

## Download Data from a CMT Unit

1. Connect download cable to com port 1 on the PC (default setting in SuperACE) and to com port 1 on the CMT.
2. Select **file** from the opening menu of SuperACE and choose **import** from drop down menu.
3. Select **SuperACE from handheld**.
  - On CMT enter '7' to select **Communications** option.
  - Enter '1' for **Send Data**.
  - Use arrow keys to select the project to send.
  - Select the type(s) in the selected project to send.
  - Press the **F2** key to initiate the transfer.
4. After the transfer process is complete, a dialog screen appears in SuperACE in which the destination of the data is entered.
5. The cruise project is now listed in the project screen.

## Download Tables From PC to CMT Unit

Connect download cable to com port 1 on the PC (default setting in SuperACE) and to com port 1 on the CMT.

Select **file** from the opening menu of SuperACE and choose **export** from drop down menu.

Select **Tables to handheld**, the mouse pointer turns into an hour glass.

On CMT enter '7' to select **Communications** option.

Enter '2' for **Recv Tables**.

Enter a 'Y' next to the tables to be received.

Press the **F2** key to initiate the transfer.

After the transfer process is complete, the hour glass turns into a plus sign and the CMT screens returns to communications screen.

The tables are now on the CMT unit.

## Edit Plot Data

This screen is accessed by clicking the **TC – Tree Edit** tab of the stand information screen. It shows the data as it was entered in the **TC - Tree Input** screen along with the computed values and error messages for each log segment. This screen is used to edit the tree data that was entered in the TC - Tree Input screen. The tree data is edited directly into the screen cells and through the insert segment, delete segment, insert tree, delete tree, and replace buttons located at the bottom of the screen.

**Computed ( These fields are calculated automatically by the program.)**

**Cum Ht.** – Cumulative Height – Height of segments including trim.

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**Top DOB** – Top Diameter Outside Bark – The small end of the log, outside the bark, as specified in the scaling rule.

**Top DIB** – Top Diameter Inside Bark – The small end of the log, inside the bark, as specified in the scaling rule.

**Net CuFT** – The cubic feet in a log less defect deductions.

**Net BdFt** – The board feet in a log less defect deductions.

If a tree segment does not meet any of the parameters defined in the species or sort and grades tables an error message will appear in red to the right of the computed fields. Once the segment is edited the message will disappear.

## **Edit Project**

Editing a project allows the user to change basic project information such as customer name, address, phone number, etc.

Select a project to edit.

From the **Project** drop down menu, choose **Edit Project**. The Add/Edit Project dialog appears.

Alter any customer information by clicking the cursor in the appropriate box and changing to the correct information. Click OK.

## **Edit Tables**

The primary tables associated with a project can easily be accessed and edited.

Choose **Tables** from the opening menu, then select **Tables** from the Tables menu.

Select the Table type and desired Table to be edited.

Write over the appropriate information in the required cells.

Note that you may cut and paste information from an Excel spreadsheet into a table.

See Also

Create a New Table

Delete a Table

## **Enter Plot Data**

The TC – Tree Input Screen is accessed by clicking on the **TC – Tree Input tab** of the stand information screen. It is this screen where timber cruise plot data is entered. The data is entered directly into the screen cells and through the insert tree, delete tree, and replace buttons located at the bottom of the screen.

**Plot No.** - Plot Number. A Four digit plot number, alpha/numeric, is assigned to each plot. Each plot in a timber type must have a unique number. Duplicate plot number will computed as one plot. The program will check for duplicate plot numbers when you start entering a plot. Plot numbers should be pre-assigned when more than one cruiser is taking plots in a type. Plot Number –000 means the tree on the line is a 100% cruise and the tree volume will be added separately to a plot cruise. A strip cruise value of 1.00 does the same thing.

**Tree No.** - Tree Number. A three digit numeric field. Tree number is assigned by the computer except when measuring permanent plots. Users input tree numbers when measuring permanent plots for growth and each tree is going to be measured more than once.

**PF** – Plot Factor or Prism Factor. A two digit alpha numeric field. When a two digit number is entered, the field is a Prism Factor or Basal Area Factor ( i.e. 20 equals a 20 BAF). If a decimal value is used for a prism factor then a B1, B2, B3, B4 or B5 is entered with the prism factor value defined in the type master screen (i.e. B1 is entered in the PF column and 33.61 is entered next to B1 in the type master screen). Glass prisms should always be checked for the proper prism factor. A letter followed by a number (i.e. F1, R1 or S1) is referring to a Plot Factor in the type master

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screen. These refer to various sampling systems and plot sizes.

Up to 5 options for each sampling system can be used:

System	Option	Example (As entered in the Cruise Master Screen)
Basal Area Factor:	B1 thru B5	B1 = 27.78
Fixed Area Plots:	F1 thru F5	F1 = 0.25 (One quarter acre plot)
Reforestation Plot Radius:	R1 thru R5	R1 = 11.78 (1/100 acre plot)
Strip Cruise Blowup:	S1 thru S5	S1 = 4.00 ( 25% strip cruise)

## Identification

**A.** –Age (required): A one digit numeric field for age code. The age in years is input on the cruise master screen. Default age is code 1. Up to nine ages can be input per type. Age is used for calculating the tree form, bark factors, growth, and for age class reports. If no age is assigned, then a default age of 30 is used for volume calculations.

**Spp.** – Species (required): A six digit alpha/numeric field is provided for species. The numbers or letters must match the active species screen. A species table must be active before the cruise data is entered. Species is very important. It is usually not a good idea to group species. Each individual species should be entered on the species table with appropriate factors and limits.

**St.** – Status (optional): A one digit alpha/numeric field. Input must match codes in the status table. Status is used to indicate dead trees, etc.

**Ct.** – Count (optional): The tree count. A two digit numeric field is provided for tree count. Count plots are used to adjust the trees per acre for the trees on the cruise plot. Trees can be counted on the plots by species and diameter. Count plots can be used with BAF, fixed area plots, and strip cruises. Blank plots are entered as a count plot with a species code and a 0 in the Ct. column.

## Measurements

**DBH** – Diameter Breast Height: This field is required when cruising volume plots and optional when cruising count and regeneration plots. DBH is a four digit numeric field, including the decimal point, is provided for diameter. This diameter is normally at 4.5 feet above the ground on the uphill side of the tree. This diameter is measured four feet or 1.3 meters above the stump outside the bark. Diameters less than 99.9 inches can be input to the nearest tenth inch. Trees larger than 100 inches are input to the nearest inch.

**FP** – Form Point (required) – A two digit numeric field is provided for form point. Default is DBH (four feet above the stump). Form point is where Form Factor is measured and/or where the tree taken “in” with a BAF. If form point is defined as four feet, the program will automatically use a form point of 16 feet to calculate Form Factor. Form point can be varied for each tree if needed.

**FF** – Form Factor (required) – A two digit numeric code. Form factor is the percent relationship of the diameter at Form Point (16 feet) divided by the DBH. Default values for Form Factor by species are input on the species screen. If no form factor is entered, the form factor from the species table will be used.

**TD** – Top Diameter (required). A one digit alpha/numeric field. Top diameter is the diameter outside the bark at the top of the bole. This is entered as a single digit percent value or as an alpha value for diameter. As shown below.

### Top Diameter Fractions of FP

TDF = top dia. / dia. at Form Point

Code = % of diameter at FP

0 = Total Height  
 1 = 10%  
 2 = 20%  
 3 = 30%  
 4 = 40%  
 5 = 50%  
 6 = 60%

### Top Diameters

Alpha Codes

Code = Inches Centimeters

A = 1 2.5  
 B = 2 5.0  
 C = 3 7.5  
 D = 4 10.0  
 E = 5 12.5  
 F = 6 15.0  
 G = 7 17.5

### Top Diameters

Alpha Codes

Code = Inches Centimeters

N = 14 35.0  
 O = 15 37.5  
 P = 16 40.0  
 Q = 17 42.5  
 R = 18 45.0  
 S = 19 47.5  
 T = 20 50.0

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7 = 70%	H = 8	20.0	U = 21	52.5
8 = 80%	I = 9	22.5	V = 22	55.0
9 = 90%	J = 10	25.0	X = 23	57.5
	K = 11	27.5	W = 24	60.0
	L = 12	30.0	Y = 25	62.5
	M = 13	32.5	Z = 26	65.0

**Bole Ht.** – Bole Height (required)– A three digit numeric field. Bole height is the distance from the stump to the Top Diameter Fraction or the Top Diameter outside the bark to the nearest foot or meter.

**Tot Ht.** – Total Height (optional) – A three digit numeric field. Total height is the distance from the stump to the tip of the tree. Maximum tree height for a species is input on the species screen. Bole height and tree height can be entered individually or together.

**Classification** (optional)

**Po (T1)** – Position

- O = over-story – Older age trees, usually residual
- D = dominant
- C = co-dominant
- I = intermediate
- S = suppressed
- U = under-story – younger trees than the main canopy

**CR (T2)** – Crown Ratio percent of the tree length with canopy.

- 1 = 10%
- 2 = 20%
- 3 = 30 %
- 4 = 40%
- 5 = 50%
- 6 = 60%
- 7 = 70%
- 8 = 80%
- 9 = 90%

**Vi (T3)** – Vigor

- H = healthy, living tree, may have damage
- M = alive, but damaged and/or is not normal.
- D = dying

**Da (T4)** – Damage

- A = animal damage, unknown species
- B = bear
- C =
- D = deer
- E =
- F = fire
- G =
- H =
- I = insects
- J = J rooted when planted
- K =
- L =
- M =
- N =
- O =
- P =

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Q =

R =

S =

T5 – other

**Segments - Up to 12 Segments can be described for each tree (required for volume calculation).**

**S#** - Segment number – two digit automatically assigned by the program. This includes cull segments, breakouts and logs.

**Ln** – Segment length. Two digit numeric. Log length min and max are input on species, sort and grade tables.

**S** – Sort – A single alpha or numeric code as described in the active sort/grade table.

**G** – Grade – A single alpha or numeric code as described in the active sort/grade table.

**Bd. Ft. F.** – Board Foot length deductions.


**I.** – Board Foot diameter deductions

**Cu. Ft. F.** – Cubic Foot length deductions

**I.** – Cubic Foot diameter deductions

**%** – Numeric field left blank when using length or diameter deductions. A **1** is entered when percentage deductions for both board foot and cubic feet are to be used. Percentages are entered as whole numbers (i.e. 10 equals 10% and 05 equals 5%).

## Export a Report\Graph

After running a report, you can export a report or graph by clicking on the  button in the report preview window. Next, select the file format you wish the report/graph to be exported in. Then select the destination of the file and click **OK**. This will bring a browse tree screen to browse to the drive and directory where you want to store the file.

See Also

Run a Report

## Find a Stand

It's easy to find a stand by using the **Find Type** dialog screen.

Select **Find** under the **Stand** drop menu.

The find type dialog screen appears.

Enter as many fields as needed to find the appropriate stand.

Click **OK**

The desired stand is highlighted on the stand list screen.

## Import a DOS-based SuperACE Project

Projects from DOS-based SuperACE may be converted for use in SuperACE. The following steps assume the project to be converted has already been restored into DOS SuperACE from a previous version of DOS Superace.

1. Start the DOS based SuperACE program.
2. Go to the **Timber Cruise** option and hit enter.
3. Choose **3. Maintenance**.



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4. Select **S. Copy projects to windows**.
5. Select the project to convert and press Enter.
6. Move the cursor to either **All Types** or desired individual types to convert by pressing the enter key to select or deselect.
7. Press F9 to run the operation. This creates a Windows conversion file.
8. Close DOS SuperACE and open SuperACE.
9. Select **file** from the menu bar and select **import** from the drop down menu.
10. Select **SuperACE from DOS SuperACE**.
11. Fill out the directory path where the project is to be located, then click **Process**. The converted project is now active in the opening menu window.

## Open a Type Master Screen

Access the master screen for a stand by double clicking the gray area to the far-left end of the stand window beside the appropriate stand. The stand type master screen appears.

## Open a Table


1. Choose **Tables** from the opening screen menu bar.
2. Pick the table type from the tables pull down menu.
3. A Table screen appears.
4. On the upper left corner of the screen choose a table name from the drop down window.

## Print a Report\Graph

After running a report, you can print a report by clicking on the  button in the report preview window.

See Also  
Run a Report

## Print a Table

1. Click on **Reports** on the menu bar and select **Tables** from the drop down menu to show the table tree.
2. Click and highlight the table or tables to print from the table tree.
3. Click the **Process** button at the bottom of the screen.
4. In the print preview screen click on the  button.

See Also  
Open a Table

## Print a Window

Print a window by selecting **Print** from the **File** menu. This will print anything visible in the window.

## Query Stands

It's easy to query stands based on stand attributes using the **Query Builder** dialog or by using **Selection** under the **Reports** drop down menu. The query builder gives results based on the non-calculated data for on-screen queries while the selection screen gives results based on processed data for reporting.

Using the query builder dialog.

Select **Filter/Query** from the **Stand** drop down menu.

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Use the filter/query dialog screen to build your query using Boolean expressions.

If you wish to save the criteria values, use the **save** button and enter a name for the query for future use.

Click **OK**.

Only the stands that meet your query parameters are displayed on the stand list screen.

To restore a complete stand listing simply select **Stand** from the menu bar and click on **Clear Selected Types**.

Using the selection screen to query stands.

Choose **Selection** from the **Reports** drop down menu.

The selection screen appears.

Click the criteria from the left side of the screen that you want to query on. More than one criteria can be selected.

As you highlight the criteria a tab is created on the input side of the screen.

Fill in the minimum and maximum values for the criteria you've chosen on the input side of the screen.

If you wish to save the criteria values, use the **save jobs** button and fill in the dialog screen to save for future use.

Click on the **process** button.

The reports selection screen appears for you to pick the report you wish to run the selection on.

The resulting report is based on those stands which meet the criteria of your selection.

## Record Blank Plots

If a blank plot (no trees on plot) is encountered on a timber cruise it must be recorded in order to calculate an accurate cruise. To record a blank plot, enter the plot number, prism or fixed radius code, species and a "0" in the CT column.

If nested plots such as a combination of prism with fixed radius (F1 thru F5) or strip cruise (S1 thru S5), are being sampled and a blank plot occurs on any of the nested plots on the same sample point, it is recommended that the nested plot be recorded as a blank plot. If, at any time, a blank plot occurs on the reforestation plot (R1 thru R5) it **must be** recorded as a blank plot in order to calculate accurate stocking.

Example of blank plot entry on a nested plot. Blank plot is highlighted in yellow.

Twn: 01N Rge: 01W Sec: 11 Tract: TEST Type: 1001																																
Plot		Identification					Measurements						Classification					Segment - 1														
No.	Tree	PF	A	Spp	T	CT	DBH	FP	FF	D	Ht.	Ht.	Total	P	C	V	D	T	O	R	I	A	S	S	G	LN	F	I	F	I	%	
T101	1	20	2	DF			12.0	16	89	4	64	80												8	3	40						
	2	20	1	DF			17.0	16	88	4	75	97												8	3	40	2					
	3	20	1	DF			30.0	16	87	4	90	102												8	2	40						
	4	F1	3	WH			6.0	4	90	0	30	30																				
	5	F1	3	DF			4.0	4	86	0	25	25																				
T102	1	20	1	DF			18.0	16	88	4	77	99												8	3	40						
	2	20	1	WH			14.0	16	87	4	64	85												8	3	40						
	3	F1	3	WH		0																										
*																																

## Record Count Plots

Count plots are taken to supplement the cruise plots. They are used when there is a need for more basal area measurements to measure the stocking variation. This system allows recording the count by species. Count plots must be done exactly as the cruise plots, using the same form point and prism factor. Counts are recorded by entering the plot number, prism or fixed radius code, species and the number of trees in the CT column.

If *count plots* are taken with measure plots, **DO NOT** record count trees on the measure plots. *Count trees* can only be recorded on measure plots in a timber cruise with **no count plots**.

Example of count plot entry. Count plots are highlighted in yellow.

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Twn: 01N Rge: 01W Sec: 11 Tract: TEST Type: 1001																						
Plot		Identification					Measurements					Classification					Segment - 1					
No.	No.	PF	A	Spp	T	CT	DBH	FP	FF	D	Ht.	Ht.	Total	P	C	V	D	T				
T101	1	20	2	DF			12.0	16	89	4	64	80							8	3	40	
	2	20	1	DF			17.0	16	88	4	75	97							8	3	40	2
	3	20	1	DF			30.0	16	87	4	90	102							8	2	40	
	4	20	2	WH			15.0	16	88	4	66	83							8	3	40	
	5	20	1	DF			14.0	16	87	4	64	85							8	3	40	
T102	1	20	1	DF		3																
	2	20	1	WH		2																
T103	1	20	1	DF		4																
T104	1	20	1	DF			18.0	16	88	4	77	99							8	3	40	
	2	20	1	WH			14.0	16	87	4	64	85							8	3	40	
	3	20	1	DF			13.0	16	87	4	62	82							8	3	40	
*																						

## Record Count Trees

Count trees may be recorded by diameter class on measure plots when similar diameters occur in a sampled species or identical measure trees occur on a plot. Count trees are useful in situations such as cruising merchantable stands with very little variation in tree measurements. The count trees are recorded by entering the plot number of the measure plot being sampled, prism factor, species, the number of trees in the CT column, and diameter.

If *count plots* are taken with measure plots, **DO NOT** record count trees on the measure plots. *Count trees* can only be recorded on measure plots in a timber cruise with **no count plots**.

Example of count tree entries on measure plots. Count trees are highlighted in yellow.

Twn: 01N Rge: 01W Sec: 11 Tract: TEST Type: 1001																						
Plot		Identification					Measurements					Classification					Segment - 1					
No.	No.	PF	A	Spp	T	CT	DBH	FP	FF	D	Ht.	Ht.	Total	P	C	V	D	T				
T101	1	20	2	DF			12.0	16	89	4	64	80							8	3	40	
	2	20	1	DF			17.0	16	88	4	75	97							8	3	40	2
	3	20	1	DF			30.0	16	87	4	90	102							8	2	40	
	4	20	2	DF			15.0	16	88	4	66	83							8	3	40	
T102	1	20	1	DF			20.0	16	88	4	80	100							8	2	40	1
	2	20	1	DF			22.0	16	88	4	83	101							8	2	40	
	3	20	1	WH			30.0	16	87	4	94	110							8	2	40	
	4	20	2	DF		3	12.0															
	5	20	1	WH		2	18.0	16	88	4	77	90							8	2	40	
*																						

## Restore a Project

Select the **Backup\Restore** option in the **File** drop down menu.

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Backup\Restore dialog screen appears.

Select the tab labeled **Restore**.

In the **source** window browse to the drive and directory where the project is stored.

Select the zip file from dialog screen.

Click the **open** button.

Select the project name from the project window.

In the **Destination directory** window browse to the drive and directory where you want the project restored.

Check on the screen if you want to restore the tables and defaults in the **extract files** section of the restore screen.

Click **OK**.

If restore tables was selected, the **select tables to restore** screen appears.

Highlight the tables you want to restore. Use the CTR key with the mouse to select more than one table.

Click **OK**.

The project is restored and can be selected from the project selection screen.

See Also

Backup a Project

## **Run Reports\Graphs**

Reports are often viewed as the desired end product of a SuperACE/FLIPS session. Based on the tables that were set up at the beginning of the work session, the user may generate several different types of reports with project data. Note that graphs are also available. Reports are either type or project reports. Type reports print individually when multiple types are selected. Project reports print one combine report for multiple types.

Select a stand, stands or project for which the report will be run.

Click on **Reports** on the menu bar and select **Inventory** or **Cruise** from the drop down menu to show the report tree.

If an entire project or multiple stands are selected, click on the report or reports followed by (project) from the report tree so it is highlighted. If a single stand is selected, click on the report or reports followed by (type).

Click the **Process** button at the bottom of the screen.

Reports can also be run from the following screens by clicking on the **Reports** button.

Screens:

SuperACE: Master TC-Tree Input TC-Tree Edit TC-Plot Loc TC-Extra Tree Mea TC-Scaling TC-Transect

FLIPS98: Master FI-Sort/Grade FI-History/Planning FI-SppSum FI-Stand Input

See Also

Print a Report\Graph

## **Run a Stand Table Adjustment Cruise**

With this routine, existing stand table information can be entered into the TC – Tree Input screen to be run against existing cruise information. Use this feature **only** if there is a high level of **confidence** in the stand table information. The stand table data is actually used to adjust the volume of the collected cruise data. This is useful in situations such as timber marking, dot tally cruises or percent cruises. **Do not** run this routine with count plots or count trees in the timber cruise.

The stand table information can be entered before or after the cruise is run. Every species and diameter class must be represented by at least one cruise tree. The stand data is entered by inputting **STND** in the plot number column, a species code, tree count and diameter class. The cruise data is entered as normal.

Below is an example of the TC – Tree Input screen with stand table and cruise data entered.

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Twn: 01N Rge: 01W Sec: 11 Tract: TEST Type: 1000																										
Plot		Tree		Identification				Measurements					Classification					Segment - 1								
No.	No.	PF	A	Sp	T	CT	DBH	FP	FF	D	Ht.	Ht.	O	R	I	A	S	S	G	LN	F	I	F	I	%	
STND	1	20	1	WH		99	12.0																			
	2	20	1	WH		45	12.0																			
	3	20	1	WH		20	14.0																			
	4	20	1	WH		10	17.0																			
	5	20	1	WH		20	18.0																			
	6	20	1	WH		5	30.0																			
T101	1	20	2	WH			12.0	16	89	4	64	80						8	3	40						
	2	20	1	WH			17.0	16	88	4	75	97						8	3	40	2					
	3	20	1	WH			30.0	16	87	4	90	102						8	2	40						
T102	1	20	1	WH			18.0	16	88	4	77	99						8	3	40						
	2	20	1	WH		1	14.0	16	87	4	64	85						8	3	40						
*																										

In the above example, the stand data listed WH 12.0" at 144 trees. The CT column only accepts a two digit number, therefore, WH 12.0" has to be entered twice. Once with CT equal to 99 and again with CT equal to 45 so that the two entries together yield 144 trees.

Cruise reports can be run to view the results of the cruise after the data has been entered for the stand table and the cruise plots.

## Select Multiple Stands

The list of available stands appear on the opening screen. To select multiple stands:

Click the mouse on the gray area to the far left of the first stand to select. The entire line should be highlighted in black.

Hold down the Ctrl key and select any other stands. Note that clicking on the stand again will deselect it.

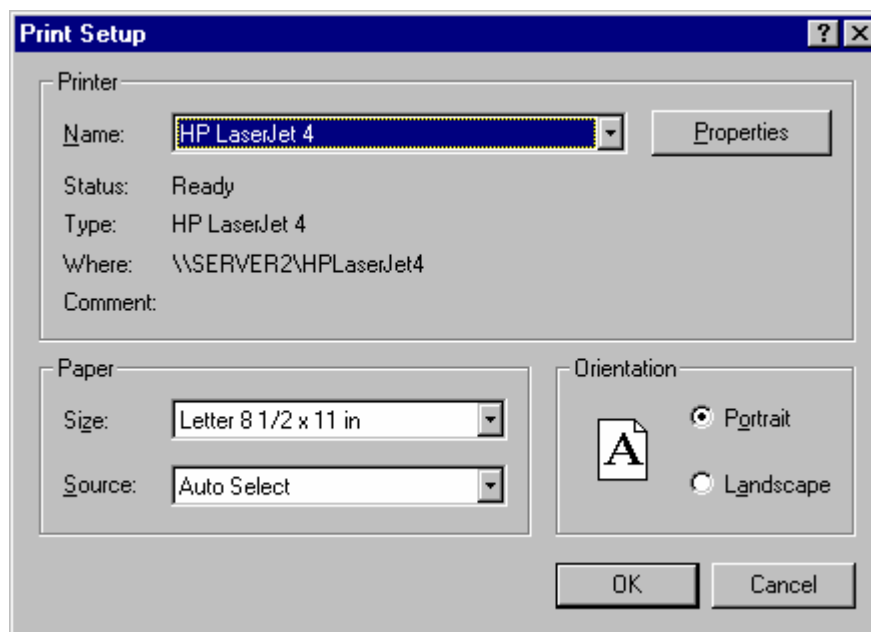
To select a continuous range of types, select the first type by clicking in the gray area on the left to highlight the line, then hold down the Shift key and select the bottom, or last type desired in the range of types.

See also Select a Stand

## Select a Printer


Select **File** from the menu bar and choose **Printer setup** from the drop down menu.

The **Print Setup** dialog screen appears.



In the **Name** drop down window select the printer you wish to use.  
Click on the **OK** button.

## Select a Project

The list of available projects is found by clicking the  button on the opening screen tool bar. Or, by selecting **Project** on the menu bar, then **Select Project** from the drop down menu. This opens the project selection screen. To select a specific project, mouse click on the gray area to the left of the desired project. Once a project is highlighted click on the **Select** button at the bottom of the screen to display the associated stands.

## Select a Stand

The list of available stands appear on the opening screen. To select a stand:  
Click the mouse on the gray area to the far left of the stand. The entire line should be highlighted in black.  
The Stand Information screen can be accessed by either double clicking on the desired stand, or by selecting **Stand** on the menu bar, then select **Stand** from the drop down menu.

See also Select Multiple Stands

## Start ForestVIEW

If you have purchased ForestVIEW 3.01, you can start it without leaving FLIPS.

Select **ForestVIEW** from the **Stand** drop down menu.

## Use Defaults Screen

The defaults screen is accessed by choosing **Defaults** from the **Setup** drop down menu. This screen enables the user to assign active tables and modify parameters for data input, report calculation, log scale calculation, and statistical calculation. The modifications are made by using the following tabs in the Defaults Screen. These defaults do not effect the original data. They are applied only when reports are run.

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**Tables Tab** – With this screen the user can assign tables to run a project against for volume and value calculations.

See also  
Assign Tables

**Sample Tab** – The user can define timber sampling system minimum and maximum values by species to be downloaded to a data recorder for collecting plot data.

**Measurements/Fields Tab** – Data input fields can be toggled on/off to aid in entering tree data into program.

**Calculation Tab** – This screen enables the user to run reports with different log scale rules, scaling diameters, minimum log lengths, and trim against any project or timber type. It is recommended that the user select "T" (temporary) in the Replace All cell. With the "T" option, the defaults are applied for only one report run. After the reports are generated the value reverts to "N" (no). If "Y" (yes) is selected the defaults will be applied every time reports are run.

**Report Format Tab** – Enables the user to select options such as a stand attribute to determine the dominant species of a timber stand for reporting purposes.

**Statistics Tab** – The user can change statistical parameters to run project and stand reports against.

## Reports

### Catalog Species Volume Report

Reports volumes by individual species for an entire project or for a selected stand or stands in a project. It totals acres and volumes (both Cunits and mbf ) by section, township, range, and project. A brief description of the report column headings follows:

#### **Type**

The number associated with a specific timber type.

#### **Acres**

The acres for each individual timber type are listed, plus a total of project acres is computed.

#### **Sce**

The source of the data (information). For example, from a timber cruise.

#### **Date**

Date the data was collected or input (the exam date).

#### **Age**

The age of the timber in years.

#### **SI**

The site index for the timber type, base 50 or base 100.

#### **Spc**

Species for which the information is being reported.

#### **ST**

Species status code.

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## **DBH**

Average diameter for the species measured outside the bark at 4 feet above stump.

## **FF**

Average form factor for the species.

## **Total Hgt**

Average total height for each species is listed, plus the average total height of all species is computed.

## **STK**

Percent of normal stocking.

## **Ba/Ac**

Basal area per acre by individual species and for all species combined.

## **Trees/Ac**

The number of trees per acre by individual species and for all species combined.

## **Logs/Ac**

The number of logs per acre by individual species and for all species combined.

## **Avg Log CuFt and BdFt**

The average number of cubic feet and board feet in a given log by species and for all species combined.

## **Net Cf/Ac and Net Bf/Ac**

The net cubic feet or board feet per acre.

## **Total Cunits and Total MBF**

The total number of net Cunits or net MBF by species and for all species combined.

See Also

How to Run Reports\Graphs

## **Catalog - Tree Classification Report**

Reports on all species within a stand listed by age and species.

### **Type**

Type number

### **Acres**

Total acres in type

### **Date**

Exam date of stand as entered in inventory.

### **Age**

Age assigned to species

### **SI**

Site index assigned to species.



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## **Spc**

Species code as defined in the species table.

## **ST**

Status code assigned to species (ie. D for Dead).

## **PO**

Crown position assigned to the species.

## **CR**

Crown ratio assigned to the species.

## **VI**

Vigor code assigned to the species.

## **DA**

Damage code assigned to the species.

## **T5**

A user defined code.

## **DBH**

DBH of the species.

## **FF**

Form factor assigned to the species.

## **Total HT**

Total height of the species.

## **STK**

Percent normal stocking represented by the species.

## **BA/Ac**

Basal area per acre represented by the species.

## **Trees/Ac**

Trees per acre represented by the species.

## **Net Cf/Ac**

Net cubic feet per acre represented by the species.

## **Total CUNITS**

Total cunits represented by the species.

## **Total MBF**

Total MBF represented by the species.

See Also

How to Run Reports\Graphs

## **Log Stock Table - MBF Report**

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The log stock report - MBF breaks down the board foot volume attributed to the individual sort/grade combinations by scaling diameter classes for individual species. The scaling diameter classes are defined by the user in the report parameters screen. It summarizes information for an entire project or selected types associated with the project.

## **Spp**

Species for which the information is being reported.

## **ST**

Species status code.

## **Sort**

A means of classifying the type of tree, usually based on its destination. For example, a tree may sorted according to export sorts, local market destinations, or "take" vs. "leave" trees.

## **Grade**

A means of classifying a tree based on its quality, generally defined by the local scaling bureau.

## **Log Len**

The length of the log assigned to a grade classification for a given species.

## **Gross MBF**

The total volume, in MBF, calculated for a given grade and log length without deductions for defect.

## **% Def**

The percent of defect calculated for a given grade and log length.

## **Net MBF**

The total volume, in MBF, calculated for a given grade and log length after deductions for defect are removed.

## **% Spc**

The percent of total species net mbf volume in a given grade and log length.

## **Net Volume by Scaling Diameter in Inches**

The calculated net mbf volume by scaling diameter classes.

See Also

How to Run Reports\Graphs

## **Log Stock Table - Percent Board Foot Report**

This report breaks down the percent board foot volume attributed to the individual sort/grade combinations by scaling diameter classes for individual species. The scaling diameter classes are defined by the user in the report parameters screen. It summarizes information for an entire project or selected types associated with the project.

## **Spp**

Species for which the information is being reported.

## **ST**

Species status code.

## **Sort**

A means of classifying the type of tree, usually based on its destination. For example, a tree may sorted according to export sorts, local market destinations, or "take" vs. "leave" trees.

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## **Grade**

A means of classifying a tree based on its quality, generally defined by the local scaling bureau.

## **Log Len**

The length of the log assigned to a grade classification for a given species.

## **Gross MBF**

The total volume, in MBF, calculated for a given grade and log length without deductions for defect.

## **% Def**

The percent of defect calculated for a given grade and log length.

## **Net MBF**

The total volume, in MBF, calculated for a given grade and log length after deductions for defect are removed.

## **% Spc**

The percent of total species net mbf volume in a given grade and log length.

## **Percent Net Volume by Scaling Diameter in Inches**

The calculated percent net mbf volume by scaling diameter classes.

See Also

How to Run Reports\Graphs

## **Log Stock Table - Percent Cubic Feet Report**

This report breaks down the percent cubic foot volume attributed to the individual sort/grade combinations by scaling diameter classes for individual species. The scaling diameter classes are defined by the user in the report parameters screen. It summarizes information for an entire project or selected types associated with the project.

## **Spp**

Species for which the information is being reported.

## **ST**

Species status code.

## **Sort**

A means of classifying the type of tree, usually based on its destination. For example, a tree may sorted according to export sorts, local market destinations, or "take" vs. "leave" trees.

## **Grade**

A means of classifying a tree based on its quality, generally defined by the local scaling bureau.

## **Log Len**

The length of the log assigned to a grade classification for a given species.

## **GR CCF**

The total volume, in CCF, calculated for a given grade and log length without deductions for defect.

## **% Def**

The percent of defect calculated for a given grade and log length.

## **GR CCF**

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The total adjusted volume, in CCF, calculated for a given grade and log length with defect removed.

## **% Spc**

The percent of total species adjusted gross ccf volume in a given grade and log length.

## **Percent Net Volume by Scaling Diameter in Inches**

The calculated percent adjusted gross ccf volume by scaling diameter classes.

See Also

How to Run Reports\Graphs

## **Plot List Report**

Gives a list of plots in a selected type with calculated volumes and bole measurements.

### **Plot No.**

Plot number.

### **Plot acres**

Total acres represented by a given plot

### **Age**

Age class major species on the plot

### **SI**

Site index of major species on the plot

### **Maj Spc**

Major species on the plot

### **Trees Me**

Number of measure trees on the plot

### **Trees Ct**

Number of count trees on the plot

### **DBH**

DBH of the major species on the plot

### **16' FF**

Form factor of the major species on the plot

### **Tot Ht**

Average total height of the major species on the plot

### **Nor Stk**

Percent normal stocking of the plot

### **BA/Ac**

Basal area per acre of the plot

### **Trees/Ac**

Trees per acre of the plot

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## **Net CuFt/Ac**

Net cubic feet per acre of the plot

## **Net BdFt/Ac**

Net board feet per acre of the plot

## **Total Cunits**

Total cunits represented by the plot

## **Total MBF**

Total mbf represented by the plot

See Also

How to Run Reports\Graphs

## **Species Sort/Grade Report**

There are two types of species sort/grade reports, type and project, that break down the percent of board foot volume attributed to the individual sort/grade combinations by species. The project report summarizes information by species from all types associated with the project, while the type report summarizes information by type for each species.

### **Spp**

Species for which the information is being reported.

### **ST**

Species status code.

### **Sort**

A means of classifying the type of tree, usually based on its destination. For example, a tree may be sorted according to export sorts, local market destinations, or "take" vs. "leave" trees.

### **Grade**

A means of classifying a tree based on its quality, generally defined by the local scaling bureau.

### **% Net BdFt**

The percent of total net board feet for an individual species that a particular sort and grade combination comprises.

### **BdFt per Acre Def%**

The percent of Net board feet for a species sort grade combination accounted for by defect. For example, if the Gross Bd Ft per Acre is 464 and the Net Bd Ft per Acre is 413, there are 51 board feet of defect. Fifty-one equates to 0.78 % of the 413 Net Bd Ft per Acre. This is also calculated for the species as a whole (all sort/grade combinations included), and for the project as a whole (all species and all sort/grade combinations included).

### **BdFt per Acre Gross**

The board feet per acre for a species sort/grade combination before taking out any defect. This is also calculated for the species as a whole (all sort/grade combinations included), and for the project as a whole (all species and all sort/grade combinations included).

### **BdFt per Acre Net**

The board feet per acre for a species sort/grade combination minus any defect. This is also calculated for the species as a whole (all sort/grade combinations included), and for the project as a whole (all species and all sort/grade combinations included).

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## **Total Net Mbf**

The Net Mbf per acre times the number of acres.

## **Percent of Net Board Foot Volume-Log Scale Dia**

The percent of total net board foot volume accounted for by logs of a given species sort/grade combination that fall in a scaling diameter range. For example, 84% of the total volume of Douglas fir with a sort of 4 and a grade of 3 have a scaling diameter of 9-11 inches.

## **Percent of Net Board Foot Volume-Log Length**

The percent of total net board foot volume accounted for by logs of a given species sort/grade combination that fall in a log length range. For example, 22% of the total volume of Douglas fir with a sort of 4 and a grade of 3 have a log length of 26 to 34 feet.

## **Ave Log Ln Ft**

The average log length for logs of a given species sort/grade combination.

## **Ave Log Board Feet**

The average number of board feet in a log of a given species/sort/grade combination.

## **Logs per Acre**

The average number of logs per acre for a given species/sort/grade combination.

See Also

How to Run Reports\Graphs

## **Species Summary - Logs and Volumes Report**

This report totals the cunit and mbf volume, gross and net, by species along with the number of logs in a project or selected stands.

### **Species**

Species for which the information is being reported.

### **Total Number Logs**

The total number logs for a given species in a project or selected stands.

### **Total Gross Cunits**

Total cunits represented by a given species.

### **Total Net Cunits**

Total net cunits represented by a given species.

### **Total Gross MBF**

Total gross mbf represented by a given species.

### **Total Net MBF**

Total net mbf represented by a given species.

See Also

How to Run Reports\Graphs

## **Stand Table Summary Report**

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Reports tree information by D4H by species for either an individual type, for two or more types combined, or for an entire project. Following is a description of the types of information provided in the report:

## **Spc**

Species for which the information is being reported.

## **ST**

Species status code.

## **DBH**

The tree diameter measured outside the bark at 4 feet above stump.

## **Sample Trees**

The number of trees measured with the same D4H in the sample area.

## **FF 16'**

Average form factor measured at 16 feet for sampled trees of a given D4H.

## **Av Ht Total**

Average total height of sampled trees with a given D4H.

## **Trees/Ac**

Number trees per acre with a given D4H.

## **BA/Ac**

The basal area per acre for a tree of a given species and D4H.

## **Logs/Ac**

The number of logs per acre for a tree of a given species and D4H.

## **Average Log Net CuFt**

The net cubic feet in an average log of a given species and D4H.

## **Average Log Net BdF**

The net board feet in an average log of a given species and D4H.

## **Tons/Ac**

The tons per acre of wood for a given species and D4H.

## **Net CuFt/Ac**

The net volume per acre in cubic feet for a given species and D4H.

## **Net BdFt/Ac**

The net volume per acre in board feet for a given species and D4H.

## **Totals-Tons**

The total tons of wood for a given species and D4H in the type or project acreage.

## **Totals-Cunits**

The total net cunits of wood for a given species and D4H in the type or project acreage.

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## **Totals-MBF**

The total net MBF of wood for a given species and D4H in the type or project acreage.

See Also

How to Run Reports\Graphs

## **Statistics**

A statistical analysis on the selected project or stand(s) in a project. It reports on the total number of plots and trees cruised in a stand. It includes a stand summary by species and reports coefficient of variation and standard error percent on board feet, cubic feet, trees/ac, basal area/ac, net bf/ac, and net cuft/ac.

See Also

How to Run Reports\Graphs

## **Timber Value Analysis Report**

Evaluates an individual timber type, two or more types combined, or an entire project in terms of revenues and costs associated with harvesting.

The components for estimating revenues are:

### **Species**

Species for which the information is being reported.

### **Name**

Eight alphanumeric character wide name.

### **Logs**

The number of logs of a given species.

### **Tons**

The total tons of wood of a given species.

### **Cunits**

Total cunits of a given species.

### **Mbf**

The total Mbf of a given species.

The components for revenues and costs are:

### **\$/Log**

The revenues and costs per log associated with harvesting. Costs could be road maintenance, cable yarding, falling and bucking, etc.

### **\$/Acre**

The revenues and costs per acre associated with harvesting. Revenues listed at the top, costs at the bottom.

### **\$/Ton**

The revenues and costs per ton associated with harvesting. Revenues listed at the top, costs at the bottom.



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## **\$/CCF**

The revenues and costs per CCF associated with harvesting. Revenues listed at the top, costs at the bottom.

## **\$/MBF**

The revenues and costs per MBF associated with harvesting. Revenues listed at the top, costs at the bottom.

## **Total Dollars**

Total costs associated with harvesting. A bridge may be a one time cost of \$35,000 and would be listed under this column.

See Also

How to Run Reports\Graphs

## **Tract Summary Report**

Reports timber acres, non-stocked acres, non-timbered acres, net cunits, and net mbf\_by Tract.

See Also

How to Run Reports\Graphs

## **Tree Segment Volumes Report**

Report that gives a break down of measurements, sorts/grades, constants, calculations and volumes for each tree on a given plot.

See Also

How to Run Reports\Graphs

## **Type Acres List Report**

Reports type acres and volumes by tract in a project. Age, site index, predominate species, DBH, height, BA/ac, trees/ac, net cf/ac, net bf/ac, and volumes (both Cunits and mbf) are reported for every type within a tract.

See Also

How to Run Reports\Graphs

## **Volume Relationships by Species Report**

Reports on all species within a project or selected stands and compares various calculated items by species.

### **Items:**

**Total Gross Cunits:** Total gross cunits

**Total Net Cunits:** Total net cunits

**Total Gross MBF:** Total gross mbf

**Total Net MBF:** Total net mbf

**Total Tons:** Total tons

**BA/Acre:** Basal area per acre

**Trees/Acre:** Trees per acre

**QM DBH:** Quadratic mean DBH

**Gross CuFt/Acre:** Gross Cubic feet per acre

**Net BdFt/Acre:** Net board feet per acre

**Net/Gross Ratio:** Net to gross ratio

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**Tons/Acre:** Tons per acre

**Logs Per Acre:** Logs per acre

**Avg Log Length:** average log length

**Lineal Ft per Acre:** Lineal feet per acre

**G CuFt/SqFt BA:** Gross cubic feet per square feet basal area

**N CuFt/SqFt BA:** Net cubic feet per square feet basal area

**G BdFt/SqFt BA:** Gross board feet per square feet basal area

**N BdFt/SqFt BA:** Net board feet per square feet basal area

**Tons/SqFt BA:** Tons per square feet basal area

**G CuFt/G MBF:** Gross cubic feet per gross mbf

**N CuFt/N MBF:** Net cubic feet per net mbf

**G BdFt/G CuFt:** Gross board feet per gross cubic feet

**N BdFt/N CuFt:** Net board feet per net cubic feet

**Tons/G CCF:** Tons per gross cunits

**Tons/G MBF:** Tons per gross mbf

**Lbs/G CuFt:** Pounds per gross cubic feet

**Lbs/N BdFt:** Pounds per net board feet

**N CuFt/Lineal Ft:** Net cubic feet per lineal foot

**N BdFt/Lineal Ft:** Net board feet per lineal foot

**Lbs/Lineal Ft:** Pounds per lineal foot

See Also

How to Run Reports\Graphs

## Tables

### Adjustment Tables

Adjustment tables are used to store the parameters and percent adjustment to be used for adjusting site index or board foot and cubic foot volumes in cruise or inventory data. Several tables can be created for different adjustment scenarios. The adjustment tables are accessed in one of two methods.

Method 1:

From the menu bar choose **Tables** and from the drop down menu choose **Cruise Adjustments**.

The table dialog screen appears.

Method 2:

While in the adjustments dialog screen click on the **Adjustment Table** button.



The table dialog screen appears.

With the adjustments table dialog screen you can create new tables, delete outdated tables, print a table and edit table parameters and adjustment percentages.

On the top right hand corner of the adjustments table dialog screen pick either **CruAdjustments** from the pull down window. Next, pick the table name you want to run from the pull down window on the upper left corner of the adjustments table dialog screen.

The adjustment parameters are entered and edited in the current adjustments section of the adjustment table.

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Current CRU-ADJUSTMENTS Table: GENERAL						
			Min	Max	BdFt	CuFt
	Abv.	Status	Age	Age	Adjustment	Adjustment
	DF		25	50	0.10	1.00
						

Enter the species code for the species that is to be adjusted.

A status code value is optional.

Enter a minimum age for the adjustment (required).

A maximum age is optional.

If you are adjusting BdFt volume or CuFt volume, enter a decimal percent value (i.e. to decrease the volume by 90 percent enter 0.10 in the adjustment cell). You do not have to adjust both BdFt and CuFt, but, a 1 value must be entered in the cell where no adjustment is to occur.

If you are adjusting Site Index a decimal percent adjustment value is entered into the CuFt adjustment cell with a 1 value in the BdFt adjustment cell.

Start a new row for each additional species.

When you have finished entering the species adjustment parameters click **OK** at the bottom of the adjustments table dialog screen.

## Age

A table in which age categories are defined for the cruise data. There are two fields, Code and Description.  
Currently not available.

### Code

A one character wide numeric field representing the age class.

### Description

A field describing the age class category.

For example for a Code 2, the description could be 150-249, meaning all those trees falling in the age class of 150 to 249 years.

## Aspect

Defines the codes used for describing aspect in a cruise . There are two fields, Code and Description.

### Code

A two character wide alphabetic field describing the aspect.

### Description

A field briefly describing the code.

For example, the code for northwest would be NW, while the description could be either NW again, or NORTHWEST.

## Category

A table with one column that describes non-forested areas.

Examples of these are ROAD, FIELD, CLEAR CUT, etc.

## Cost Table Overview

Defines the various per unit costs associated with harvesting and transporting trees in a stand. A cost table can be assigned to an entire project or different cost tables can be assigned to each stand in a project by assigning the table in the type master screen. If a cost table is assigned in a type master, it will override the cost table assigned to a project. Conversely, if no cost table is assigned in the type master then the cost table assigned to the project will be

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used.

See also: Assigning Tables to a Project

## **Table Name** (required)

The table name reflects the choice of cost table made from the **Table Names** dropdown list box located at the bottom left of the screen. These tables may already exist, or may need to be created. See *Creating a New Table*.

## **Group**

Currently not available.

## **Spp** (optional)

Species abbreviation from the species table. For example, DF for Douglas fir.

## **Items** (required)

Any tasks such as falling and bucking, rafting, road construction, etc., associated with the harvest operation.

## **Fiber** (required)

Refers to whether or not the log is being graded, or will be used for its fiber (pulped). Entering an F in this column will cause any logs of this sort to have no Scribner volume calculated for it. If a G or a blank is in this column, Scribner volume will be calculated.

## **Cost** (required)

The amount in dollars per unit that a given task costs. For example, reforestation may be given a cost of \$200 per acre. 200 would be entered into this cell.

## **Cost Unit** (required)

The unit for which the cost is being assigned. For example, the costs might be in terms of thousands of board feet (M), Cunits (C), tons (T) or acres (A).

## **T1-Crown Position**

A table describing the crown position of a tree in a stand. There are two fields, Code and Description.

### **Code**

A one character wide numeric field describing the crown position.

### **Description**

A field that briefly describes the code.

For example, with a code of D, the description might be DOMINANT.

## **T2-Crown Ratio**

A table describing the percent of total tree height covered by live crown. There are two fields, Code and Description.

### **Code**

A one character wide numeric field describing the crown ratio.

### **Description**

A field that briefly describes the code.

For example, with a code of 2, the description might be 20%.

## **Component**

Defines the codes used in describing stand component in the species table. There are two columns, Code and Description.

### **Code**

A one character wide field representing the component.

### **Description**

A field in which the code is briefly described.

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For example, a code of C would have a description of CONIFER Component.

## **Cruise System**

A table defining the origins of the cruise data.

### **Code**

A two character wide alphabetic field describing the source of the data.

### **Description**

A field that briefly describes the code.

For example, a code of TC would have a description of timber cruise and a code of RS would have a code of REFORESTATION SURVEY.

## **T4-Damage**

A table classifying the tree damage in a stand.

### **Code**

A one character wide field describing the type of tree damage.

### **Description**

A brief description of the code.

For example, with code of W, the description is WIND.

## **Environment**

A table that defines any either legal or disputed issues over the property. For example, the area may be an endangered wildlife area or may have the location of a boundary in dispute with the adjacent landowner.

### **Code**

A three character wide alphanumeric field describing the issue.

### **Description**

A brief description of the code.

For example, if there is a boundary dispute, the code may be BD, and the description would be BOUNDARY DISAGREEMENT.

## **Harvest**

A table describing the logging method used.

### **Code**

A three character wide alphabetic field describing the logging method.

### **Description**

A field that briefly describes the code.

For example, with a code of CAB, the description might be "Cable Logging".

## **History/Planning**

A table describing any previous or future planned land management operations. For example, the stand may have undergone a pre-commercial thin or is slated to have a pre-commercial thin carried out on it at some future point.

### **Code**

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A two character wide alphabetic field describing the type of history or planning operation.

**Description**

A brief description of the Code.

Ex. - If the stand had a prescribed burn planned for it, the Code would be BU, and the description would be BURN.

## **Landform**

A table that describes the project area terrain.

**Code**

A five character wide alphabetic field that describes the type of terrain.

**Description**

A field that briefly describes the code.

For example, with a code of STEEP, the description would be MORE THAN 30% SLOPE.

Another example is for a code of INACC, the description would be INACCESSIBLE.

## **NonStock**

A table containing **Codes**, **Categories**, and **Descriptions** of various Non-stocked types.

**Code**

A two character wide field, describing the classification code of non-stocked area.

**Category**

A two character alphabetic field, describing a category grouping the non-stocked area.

**Description**

A field, that briefly describes the kind of non-stocked area.

For example, a non-stocked area with dense brush might have a code of DB for dense brush, a category of BR for brush, and a description of DENSE BRUSH; whereas, an non-stocked area that is light brush (not dense), might have a code of LB for light brush, a category of BR for brush, and a description of LIGHT BRUSH.

Another example for a non-stocked area that is a clearcut which has been prepared for replanting would have a code of PL for plantable, a category of CL for clearcut, and a description of CLEARCUT PLANTABLE AS IS.

## **NonTimber**

A table with descriptions of non-timbered types such as roads, creeks, rock pits.

**Code**

A two character wide field that describes the category of non-timbered area.

**Category**

A two character wide alphabetic field that describes the non-timbered area.

**Description**

A field that briefly describes the non-timbered area.

For example, a non-timbered area such as a homesite might have a code of HM for home, a category of MM for manmade, and a description of HOMESITE.

A second example would be a lake. This would have a code of LA for lake, a category of WA for water, and a description of LAKE.

Note, there are two entries into this table that are useful when updating an inventory. These are Codes of ZM and ZP, both with a category of MM for manmade. The codes have descriptions of MINUS ACRES and PLUS ACRES, respectively. These refer to artificial types which add or subtract acres to get the type acres to add up to the legal acres for a section.

## **Price Table Overview**

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The price table (screen) allows the user to apply log values to the volume being inventoried. These values are usually "pond" prices (i.e., delivered to the destination) without costs subtracted. They are useful in facilitating appraisal work. A price table can be assigned to an entire project or different price tables can be assigned to each stand in a project by assigning the table in the type master screen. If a price table is assigned in a type master, it will override the price table assigned to a project. Conversely, if no price table is assigned in the type master then the price table assigned to the project will be used.

See also: Assigning Tables to a Project

**Table Name** (required)

The table name reflects the choice of price table made from the **Table Names** dropdown list box located at the bottom left of the screen. These tables may already exist, or may need to be created. See Creating a New Table.

**Species** (required)

The species abbreviation for which the price is being determined.

**Copy Species** (optional)

Use this to copy and apply the same prices for one species to another. For example, Red Alder and Big Leaf Maple may have the same prices, so entering Red Alder in the Big Leaf Maple Copy Species column will apply Red Alder prices to Big Leaf Maple, by sort and grade.

**Product Name** (required)

An eight character wide alphanumeric field, describing the type of log being priced. For example, a Japan export log with a minimum of 12 inches for the butt log diameter would be JAEX 12+.

**Product** (optional)

The type of product expected.

**Sorts** (required)

An alphanumeric field, representing the sorts of the logs being priced. E.g., JCK would mean that all 3 sorts, Japan, China, and Korea would have the same price. Up to five sorts can be assigned to a single price.

**Grades** (required)

An alphanumeric field, representing the grades of the logs being priced. Up to five grades can be assigned to a single price.

**Min Dia** (required)

The minimum allowed diameter of the log being priced.

**Max Dia** (optional)

The maximum allowed diameter of the log being priced.

**Min Len** (required)

The minimum allowed length of the log being priced.

**Max Len** (optional)

The maximum allowed length of the log being priced.

**Rate** (required)

The number of dollars assigned to a Rate Type.

**Rate Unit** (required)

Units of measure, i.e.: Thousands of board feet (M), cunits (C), tons (T), piece (P), etc.

**Destination** (optional)

Name of the destination where logs will be delivered.

**Load Size** (optional)

Average load size.

**Margin** (optional)

Percentage

**Margin Unit** (optional)

Thousands of board feet (M), cunits (C), tons (T), piece (P), etc.

## Roads

A table that classifies types of roads.

**Code**

A three character wide alphabetic field that describes a type of road.

**Description**

A field that briefly describes the code.

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For example, an abandoned road might have a code of ABN, with a description of ABANDONED ROAD.

## **Seed Zone**

A table that describes the seed zone that a stand falls in.

### **Code**

A three character wide numeric field describing the seed zone.

### **Description**

A brief description of the code.

For example, a code of 041 would have a description of SEED ZONE 041.

## **Slash**

A table that describes the distribution of slash on a site.

### **Code**

A one character wide alphabetic field that describes the distribution of slash.

### **Description**

A brief description of the code.

For example, with Heavy slash distribution, there would be a code of H with a description of HEAVY.

## **Soils**

A table that briefly describes the soils in the project area based on the type of tree species that can be grown there.

### **Code**

A five character wide alphabetic field that describes the soil type.

### **Description**

A brief description of the code.

For example, with a code of NONCO, the description would be NON-CONIFER SITE-CAN'T GROW CONIFER SPP.

## **Sort/GradeTable Overview**

The sort/grade table is the table in which the project's sorts and grades are defined. These definitions or classifications will be used when generating reports that have a reference to tree sorts and grades. Below is a description of the fields of the sort/grade table.

### **Table Name** (required)

The table name reflects the choice of sort table made from the **Table Names** dropdown list box (of existing tables) located at the bottom left of the screen. These tables may be existing, or newly created. See *Creating a New Table*.

### **Sort** (required)

One character wide alphanumeric field, representing a specific sort. For example, an export table might assign a 0 to a cull log, a 1 to an old growth log, a 4 for a peewee Japan log, an H for a hardwood sawlog, etc.

### **Grade** (required)

A one character wide alphanumeric field that represents a specific grade.

### **Abrv** (required)

Two character wide alphabetic field, representing a specific sort. For example, an export table might assign CU to a cull log, OG to an old growth log, PW for a peewee Japan log, an HD for a hardwood sawlog, etc.

### **Description** (required)

An eight character wide alphanumeric field, describing a specific sort. It may relate to a log's probable destination or



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to its surface characteristics. For example, a Japan export with a 12 inch minimum diameter might have a description such as JA EX 12.

**Fiber** (optional)

Refers to whether or not the log should have board foot volume calculated. Entering an F in this column will cause any logs of this sort to have no Scribner volume calculated for it. If a G or a blank is in this column, Scribner volume will be calculated.

**Min Dia** (required)

The minimum acceptable small end diameter to meet a specific sort requirement. E.g., a China export may have a minimum diameter of 12 inches on the small end of the log. If a log does not meet a Min Dia requirement the volume and assigned sort and grade are still reported. A message will appear in the SuperACE TC-Tree Edit screen noting the discrepancy.

**Max Dia** (optional)

The maximum acceptable small end diameter to meet a specific sort requirement.

**Max Butt** (optional)

The maximum acceptable large end diameter of a log to meet a specific sort requirement.

**Min Len** (required)

The minimum acceptable log length for a given log sort. For example, for a PeeWee Japan log, the minimum length accepted by the buyer might be 34 feet.

**Max Len** (optional)

The maximum acceptable log length for a given log sort relative to the scaling rules. Logs over this length are split scaled as 2 or more segments.

**Defect** (optional)

The maximum amount of defect allowable for a particular log expressed as a percent.

**Min Vol** (optional)

The minimum amount of volume that a log must contain in order to be classified as a given sort.

**Vol Unit** (optional)

Refers to the choice of units used when defining minimum volume. For example, the units may be in cubic feet or board feet, so would put a C or M, respectively in this column.

**Min Rings Per Inch** (optional)

The minimum number of rings per inch that the butt end of a log must contain to be classified as a given sort. For user information only, not used in the program.

**Knot Size** (optional)

The maximum allowable diameter of knots for a particular log sort. For user information only, not used in the program.

**Knot Frequency Per Foot** (optional)

The maximum number of knots per foot allowable for a given log sort. For user information only, not used in the program.

**Strt** (optional)

Enter a Y or N in this column to express whether the log is straight or not. For user information only, not used in the program.

**Sap** (optional)

A measurement, in inches, of the minimum sapwood thickness. For user information only, not used in the program.

**Min Age** (optional)

The minimum allowable age measured by ring count on the butt end of the log for a given log sort

**Lbs** (optional)

The weight, in pounds per thousand board feet or cunit. This information can be gathered from scaling bureaus, state forestry departments, timberland owners, etc.

**Lbs Unit** (optional)

The type of volume unit being used to describe weight. This would be either thousand board feet (M) or cunits (C).

**Cords** (optional)

Cords per ton (T), cunit (C), or thousand board feet (M) taken from scaling bureaus, state forestry departments, timberland owners, etc.

**Cords Unit** (optional)

The type of unit being used to describe cords. This would be either weight units of tons (T) or volume units such as thousand board feet (M) or cunits (C).

**Product** (optional)

A description of the expected end product for the log. For example, pulp, veneer, etc. In the South, product refers to sort.

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## Species Table Overview

This table lists all the species used in the project and gives critical information on each of these species.

### **Table Name** (required)

The table name reflects the choice of sort table made from the **Table Names** dropdown list box located at the bottom left of the screen. These tables may already exist, or may need to be created.

See also

Creating a New Table

### **Code** (required)

A five character wide numeric field, representing a specific species. For example, 0001 could be assigned to western hemlock and 0004 could be Sitka spruce.

### **Abrv** (required)

A two character wide alphanumeric field, representing a specific species. For example, western hemlock is WH, Douglas-fir is DF, etc.

### **Description** (required)

An eight character wide alphanumeric field, describing a species, e.g. NOB FIR for noble fir, or COTWOOD for cottonwood.

### **Bark** (required)

The bark thickness ratio for a given species.

### **Asubo (Ao)** (required)

A factor used in Behre's hyperbola, which describes tree form. Enter one of the following species codes to use an Ao factor base upon age (DF, LP, WH, RA, PP, SS, SF, RC or NF). For example, red alder and cottonwood have a similar tree bole form, so for both species in this column, RA may be entered (the Ao for red alder). Age must be defined for each species in every stand. The age is defined on the type master screen. If age is not defined on the type master, the program uses a default age of 50 years old. An Ao factor may also be entered as a numeric value to be run against all ages for the specified species (i.e. 0.593 for WH).

See Also

Ao Factor Chart

### **Form Factor** (required)

The diameter outside the bark measured at Form Point (generally 16 feet) divided by the diameter outside bark measured at D4H. Either a number value or one of thirteen species codes can be entered. If a number value is entered then the value is used as a default for the species when a form factor isn't entered in the tree input or edit screen. If a species code is entered then the form factor will be predicted based on the active form table and the tree's total height. When a form factor is entered with the tree data in a field data recorder or in the tree input screen, then it will override the value entered in the species table.

### **Wood type** (required)

A one character wide alphabetic field, referring to the type of wood. For example, a W code would describe WHITEWOODS. Codes are defined by the user and are stored in the active Wood Type table.

### **Component** (required)

A one character alphabetic code used to classify species for reporting. Codes are defined by the user and are stored in the active Component table.

### **Yield Table** (required)

The yield equation that best mimics the volume yields for a given species. Occasionally, if a species has a similar yield equation as another species, then the same yield equation can be applied. Used only with the FLIPS program.

### **Min Dia** (optional)

The minimum allowed small-end diameter of a log for a particular tree species. For example, in many timber cruises, logs smaller than a 5" x 12' are not accounted for. If a value entered is less than the Min Dia value defined in the Sort/Grade table, then the value in the Sort/Grade table will be overridden.

### **Min Len** (optional)

The overall minimum acceptable length of a log by species. If a value is entered, it overrides a lesser Min Len value defined in the Sort/Grade table.

### **Max Len** (optional)

The overall maximum acceptable length of a log relative to scaling rules. Logs over this length are split scaled.

### **Max Ht** (optional)

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The maximum total tree height.

**Trim** (required)

Excess length added on to the log that is not reported. It compensates for length that will be lost in processing at the mill. For example, a 40 foot log may actually be 41 feet because approximately 1 foot may be lost in processing.

**BdFt Rule** (required)

The board foot rule to be employed. For example, depending on where the project is located, westside, eastside or doyle rules may be employed.

**CuFt Rule** (required)

The cubic foot rule to be employed when calculating volumes.

1=Northwest

S=Samalian

W=Weyerhaeuser

**Weight** (optional)

The pounds of wood per either MBF or CCF

**Weight Type** (optional)

The volume unit used in the measurement of weight. Would enter an M for MBF or a C for CCF.

## **Status**

A table classifying the status of a tree damage in a stand.

**Code**

A one character wide field describing the type of tree status.

**Description**

A brief description of the code.

For example, with code of D, the description is DEAD.

## **Streams**

A table defining the stream classes.

**Code**

A one character wide numeric field describing the stream class.

**Description**

A field brief description the code.

For example, a code of 4 would have a description of CLASS FOUR.

## **Tax**

A table describing the type of tax to be applied.

**Code**

A two character wide alphabetic field describing the species of vegetation.

**Description**

A field brief description the code.

## **Treatment**

This table refers to how a particular plot in a timber cruise should be viewed relative to the stand. This takes into account whether a plot seems representative of the overall stand.

**Code**

A two character wide alphabetic field that describes the way the plot should be viewed.

**Description**

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A brief description of the code.

For example, with a code of NR, the description would be NOT A REPRESENTATIVE; conversely, with a code of T, the description would be TYPICAL PLOT OF THE STAND.

## **TreeSource**

A table classifying the origins of the trees in a stand.

### **Code**

A one character wide field describing the origins of the trees.

### **Description**

A brief description of the code.

For example, with codes of S and N, the descriptions are SEEDED and NATURAL, respectively.

## **T3-Vigor**

A table that classifies the trees relative to their position in a stand or health (diseased, suppressed, etc.).

### **Code**

A one character wide alphanumeric field describing a tree's health or position in the stand.

### **Description**

A brief description of the code.

For example, if a tree has mechanical defect from a pre-commercial thin done to the stand, the code would be M, and the description would be MECH. DEFECT.

## **Vegetation**

A table describing the type of vegetation found in the project area.

### **Code**

A two character wide alphabetic field describing the species of vegetation.

### **Description**

A field describing the code.

For example, with a code of SW, the description would be sword fern.

## **WoodType**

A table describing the type of wood in the stand. The table defines wood type codes entered into the species table.

### **Code**

A one character wide alphanumeric field describing the type of wood.

### **Description**

A field that briefly describes the code.

For example, with a code of P, the description would be PINE; or, with a code of W, the description would be WHITEWOODS.

## **Technical Support**

## **Before Calling for Technical Support**

Before you call ACI for technical support, you should be at your computer with SuperACE running and prepared to give the following information:

- The version of SuperACE you are using  
To find the current version number, choose About SuperACE from the Help menu.
- Your registration and product identification numbers  
To find your registration number, choose About SuperACE from the Help menu. Your product identification number (Product ID, or PIN) is assigned to you when you register your product.
- The type of hardware you are using, including network hardware
- The operating system you are using
- The exact wording of any messages that appeared on your screen
- What happened and what you were doing when the problem occurred
- How you tried to solve the problem.

## **Calling ACI Technical Support in the United States**

### **Using ACI's Complementary Support Service**

Users in the United States who have registered their software are eligible to receive complementary support directly from ACI's Technical Support Center for a period of 30 days. The complementary support period begins when you call for your installation code(s).

To contact ACI's Technical Support Center:

Phone: (503) 641-5372

Fax: (503) 644-1683 Attn: Tech. Support

E-mail: [atterbury@atterbury.com](mailto:atterbury@atterbury.com)

Hours: 8:00am to 5:00pm Pacific Time, Monday through Friday, except holidays.

### **Pay-as-you-go Support**

Users in the United States may purchase technical support by simply calling ACI's Technical Support Center and charging the service to a VISA, MasterCard, or American Express credit card. Call for current prices.

### **Support for Single Users**

Single-User Support Services receive:

- ACI Technical Support Center for one year - must specify contact person.

## **Customer services**

You can contact any of ACI's customer service groups via telephone, fax, or E-mail during our normal business hours, Monday through Friday, excluding ACI holidays.

### **ACI Corporate Office**

3800 SW Cedar Hills Blvd #280

Beaverton, OR 97005

Phone: (503) 646-5393

Fax: (503) 644-1683

Hours : 8:00 a.m. to 5:00 p.m. Pacific Time

### **Customer Service (for ordering, billing, shipping, product information, and order status)**

Phone: (503) 646-5393

Fax: (503) 644-1683

E-mail: [atterbury@atterbury.com](mailto:atterbury@atterbury.com)

Hours: 8:00 a.m. to 5:00 p.m. Pacific Time

## **Training Services**

ACI offers an introductory course on SuperACE:

- Introduction to SuperACE

These courses are taught at ACI's Education Center in Beaverton, OR, and at a variety of training sites throughout the United States. On-site classes and ACI Rent-a-Tech customized training are also available.

## **How to Find a Class Near You or Set up Customized Training**

For more information about ACI SuperACE software classes, contact:

Atterbury Consultants, Inc

3800 SW Cedar Hills Blvd #280

Beaverton, OR 97005

Telephone: 503-646-5393

Fax: 503-644-1683

E-mail: [atterbury@atterbury.com](mailto:atterbury@atterbury.com)

## **Downloading Software Updates from the Internet**

Rather than waiting for SuperACE updates in the mail, download them from the internet from our homepage at [www.atterbury.com](http://www.atterbury.com). Simply access our site and click on the button to download updates to your computer.

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