

**Resources Inventory Branch**

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# **Data Collection System GyHost/GyHand Version 8.0**

**User's Manual**

**Growth and Yield Section  
June 1998**

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Ministry of Forests  
Resources Inventory Branch

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# Chapter 1: Set-up Procedures

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## Setting up the Host PC

### Memory and RAM Disk Requirements

The minimum memory required on the Host PC is in the order of 500 KBytes. While most desktop or laptop PCs are configured with the standard 640 KBytes, this lower requirement allows other Terminate and Stay Resident modules to occupy some of the RAM.

The free disk space requirement depends on the volume of data to be kept on-line. However, over and above this, five megabytes are required at run-time for the GyHost program to run efficiently.

### Directory SetUp

The GyHost program should reside in a directory named GyHost. This directory may be on the root of a disk drive or be a sub-directory of another directory. All the files required to run both the GyHost and GyHand (now called Gy) programs reside in the GyHost directory with the exception of DOS or other utility programs. A sub-directory named HandHeld is required under GyHost to act as a repository for data to be transferred to and from the physical HandHeld computer. If this directory is not present, it will be created when GyHost is started up. The contents of the HandHeld directory are not maintained and are only relevant during the UpLoad or DownLoad processes. At all other times, this directory's contents are irrelevant.

The steps required to create the Host PC directory and load in the system from the system distribution diskette are:

- Make the directory under which the GyHost directory is to reside the current directory (this will likely be C:)  
**CD\**
- Create the GyHost directory thus:  
**MD GyHost**

- Make GyHost the current directory:  
**CD GyHost**
- Insert the distribution diskette which contains the complete system (GyHost8.ZIP, Install.CFG, and Install.EXE) into the A (or B) drive. Install the GyHost system by typing **A:INSTALL**.

The GyHost directory together with the necessary files and sub-directory has now been set up. The contents of GyHost can be compared to the lists given in the following sub-section. However, some of the files named in the following sub-section may not be present since they are created when the GyHost and/or Gy systems are used.

## Minimum File Requirements:

The files listed below are the minimum requirements for running GyHost. The **(O)**ptional ones do not have to exist when GyHost is invoked, but may be generated by GyHost during its execution. **(R)**equired files, are necessary at all times for the correct execution of the GyHost and the Gy programs. Those files indicated as **(D)**ata files contain pertinent data for the collection activity. Those files indicated as **(P)**rogram files exist to support the correct execution of the GyHost program.

### List of minimum files for running GyHost:

Key: R = Required, D = Data, O = Optional, P = Program

File Name	Approx. Size	R / O	D / P	Purpose
ACCESS.DBF	~	R	D	Access Notes database table.
ACCESS.NTX	~	O	D	Access Notes database table index
ACCESS2.NTX	~	O	D	Access Notes database table index
BATHCOM.BAT	5552	R	P	Host/Handheld communication
CMDHCOM.CFG	20	R	P	Host/Handheld communication
CMDHCOM.EXE	44081	R	P	Host/Handheld communication
CMDHCOM.LOG	11040	R	P	Host/Handheld communication
COLORS.DBF	1835	R	D	Colours database table
COLORS.NTX	2048	O	D	Colours database table index
DOT.DBF	~	R	D	Dot Count database table
DOT.NTX	~	O	D	Dot Count database table index
DT_STD_C.DBF	~	R	D	Dead Tree Tally Diameter Classes database table
DT_STD_C.NTX	~	O	D	Dead Tree Tally Diameter Classes database table index
DT_TALLY.DBF	~	R	D	Dead Tree Tally database table
DT_TALLY.NTX	~	O	D	Dead Tree Tally database table index
EPSL_FIZ.DBF	61453	R	D	FIZ lookup table from EPSL
EPSL_FIZ.NTX	96256	R	D	FIZ lookup index from EPSL
EXTRACT.DBF	-	O	D	EPSL extract database
GROUP.DBF	~	R	D	Group database table
GROUP.NTX	~	O	D	Group database table index
GY.BAT	102	R	P	GyHand execution BAT file
GY.RP1	123904	R	P	GyHost Report definitions
GY_HAND.EXE	344784	R	P	GyHand program executable
GY_HOST.EXE	570752	R	P	GyHost 'Dual' mode program executable
GY_HOSTR.EXE	-	R	P	GyHost 'Real' mode program executable
GYHAND.BAT	52	R	P	Alternate GyHand execution BAT file
GYHOST.BAT	151	R	P	GyHost 'Dual' mode execution BAT file
GYHOSTTA.FMT	135	R	D	SiteTools format definition
GYHOSTR.BAT	113	R	P	GyHost 'Real' mode execution BAT file
HANDHELD	<DIR>	R		HandHeld sub-directory
HANDMESS.DBF	10419	R	D	HandHeld messages database
HANDMESS.NTX	9216	O	D	HandHeld messages database index
HCOM.CFG	52	R	P	Husky 'PC <> HandHeld' Communications
HCOM.EXE	100303	R	P	Husky 'PC <> HandHeld' Communications

File Name	Approx. Size	R / O	D / P	Purpose
HCOM.HLP	3950	R	P	Husky 'PC <> HandHeld' Communications
HCS.COM	4352	R	P	Husky 'PC <> HandHeld' Communications
HOSTMESS.DBF	36951	R	D	Host messages database table
HOSTMESS.NTX	9216	O	D	Host messages database table index
LOOKUP.DBF	3161	R	D	Code Lookup database table
LOOKUP.NTX	8192	O	D	Code Lookup database table index
MESSAGES.DBF	45521	R	D	All Messages database table
MESSAGES.NTX	9216	O	D	All Messages database table index
PLOT.DBF	~	R	D	Plot database table
PLOT.NTX	~	O	D	Plot database table index
PSPMEAS.DBF	~	R	D	Previous measurement's Sample Measurement database table
PSPMEAS.NTX	~	O	D	Previous measurement's Sample Measurement database table index
PUBLIC.DBF	2095	R	D	Internal GyHost GyHand database table
RR.CNF	725	R	P	Report Writer configuration file
RRPRINT.PCF	73792	R	P	Report Writer Printer configuration file
RRPRINT3.PCF	33106	R	P	Report Writer Printer configuration file
RRSETUP.EXE	197934	R	P	Report Writer Printer setup utility
RRUN.EXE	515622	R	P	Report Writer runtime executable
RRUNIN.DBF	38154	O	P	Report Writer incoming report request
RRUNOUT.DBF	293	R	P	Report Writer outgoing report status
RRUNTIME.EXE	15789	R	P	Report Writer runtime executable
RULES.DBF	15303	R	D	Validation Rules database table
SAMPLE.DBF	~	R	D	Sample database table
SAMPLE.NTX	~	O	D	Sample database table index
SITETOOL.EXE	252110	R	P	Site Index calculation executable
SP_MEAS.DBF	~	R	D	Current measurement's Sample Measurement database table
SP_MEAS.NTX	~	O	D	Current measurement's Sample Measurement database table index
SPECIES.DBF	~	R	D	Species composition database table
SPECIES.NTX	~	O	D	Species composition database table index
SPECIESH.NTX	~	O	D	Species composition database table index
SPECIESL.NTX	~	O	D	Species composition database table index
SPECIESS.NTX	~	O	D	Species composition database table index
TR_MEAS.DBF	~	R	D	Tree measurement database table - measurement sensitive data for current and previous measurements
TR_MEAS.NTX	~	O	D	Tree measurement database table index - measurement sensitive data for current and previous measurements
TR_MEAS2.NTX	~	O	D	Tree measurement database table index - measurement sensitive data for current and previous measurements
TR_MEAS3.NTX	~	O	D	Tree measurement database table index - measurement sensitive data for current and previous measurements
TREE.DBF	~	R	D	Tree database table - non measurement-sensitive data
TREE.NTX	~	O	D	Tree database table index - non measurement-sensitive data
TREE_SEQ.NTX	~	O	D	Tree database table index for sequencing ingrowth - non measurement-sensitive data
TREESEC.NTX	~	O	D	Tree database table index by sector - non measurement-sensitive data
VALID.DBF	38210	R	D	Validation steps database table
VALID_HA.NTX	27648	O	D	Validation steps database table index for HandHeld
VALID_HO.NTX	27648	O	D	Validation steps database table index for Host PC
WINDOW.DBF	547	R	D	Screen windows database table
WINDOW.DBT	512	R	D	Screen windows database table memos

## DOS StartUp Files:

### CONFIG.SYS

The CONFIG.SYS file on the Host PC must contain the following two lines:

```
buffers=24
```

```
files=109
```

The buffers parameter should be a multiple of 8 (necessary for some versions of DOS) and be at least 24.

The files parameter should be an ODD number and be at least 109.

### AUTOEXEC.BAT

There AUTOEXEC.BAT file on the Host PC must contain the following two lines:

```
prompt $p$g
```

```
path c:\;c:\dos
```

### Setting Up in a LAN Environment

*To Be Supplied*

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## Setting up the HandHeld PC

### Memory and Disk Requirements

The Husky FS/2 HandHeld Computer has a basic memory of 655,360 bytes and must be equipped with at least

2 MBytes of RAM Disk. The RAM Disk, drive C: is initially set up with a sub-directory named 'DOS' which contains many DOS utility programs in read-only memory. These programs cannot be deleted.

A sub-directory GY must be created on the C: drive. This will be the directory in which GyHand will operate and in which all of the Growth & Yield specific information is to be kept. If this directory does not exist, carry out the following procedures:

- |              |   |
|--------------|---|
| <b>CD\</b>   | This makes the root directory on the current drive the current directory. |
| <b>MD GY</b> | This creates the GY directory.  |
| <b>CD GY</b> | This makes the directory GY the current directory.                        |

The GY directory receives the sample data from the host PC for field work, maintains the samples through the GyHand program, and is the source of the data sent back to the host PC upon completion of the field work. With the necessary programs and program files set up in the GY sub-directory, but with the databases essentially empty, there should be available in excess of 643 KBytes of RAM Disk.

### Keyboard Requirements:

In addition to the normal number and alpha keys, GyHand requires the following keys:

**<Esc>** Normally used for escaping from the current to the previous screen without updating. Exceptions are some Browsing screens. In case of ERROR/WARNING, <Esc> will return the cursor to the problem field.

**<F1>, <F2>, <F3>, <F4>, <F5>, <F6>** These are the Hot-Keys, single key operation that are desirable. The Husky FS/2 has single key for F1 - F4; F5 and F6 are available by pressing the Paw Key + the '5' or '6' key.

Lower case alpha, and, if required by the user, upper case as well.

## Minimum File Requirements:

### At Initial Start-up after Down-Load:

Key: R = Required, D = Data, O = Optional, P = Program

File	Approx. Size	R / O	D / P	Notes
COLORS.DBF	1835	R	D	Colours database table
COLORS.NTX	2048	O	D	Colours database table index
DOT.DBF	~	R	D	Dot Count database table
DOT.NTX	~	O	D	Dot Count database table index
DT_TALLY.DBF	~	R	D	Dead Tree Tally database table
DT_TALLY.NTX	~	O	D	Dead Tree Tally database table index
FLAG.TMP	50	R	P	Re-index indicator
GROUP.NTX	~	O	D	Group database table index
GROUP.DBF	~	R	D	Group database table
GY.BAT	50	R	P	GyHand execution BAT file
GY_HAND.EXE	344784	R	P	GyHand program executable
HANDMESS.DBF	10443	R	D	HandHeld messages database
HANDMESS.NTX	9216	O	D	HandHeld messages database index
LOOKUP.DBF	3161	R	D	Code Lookup database table
LOOKUP.NTX	8192	O	D	Code Lookup database table index
PLOT.DBF	~	R	D	Plot database table
PLOT.NTX	~	O	D	Plot database table index
PSPMEAS.DBF	~	R	D	Previous measurement's Sample Measurement database table
PSPMEAS.NTX	~	O	D	Previous measurement's Sample Measurement database table index
PUBLIC.DBF	2095	R	D	Internal GyHost GyHand database table
RULES.DBF	15303	R	D	Validation Rules database table
SAMPLE.DBF	~	R	D	Sample database table
SAMPLE.NTX	~	O	D	Sample database table index
SP_MEAS.DBF	~	R	D	Current measurement's Sample Measurement database table
SP_MEAS.NTX	~	O	D	Current measurement's Sample Measurement database table index
SPECIES.DBF	~	R	D	Species composition database table
SPECIES.NTX	~	O	D	Species composition database table index
SPECIESH.NTX	~	O	D	Species composition database table index
SPECIESL.NTX	~	O	D	Species composition database table index
SPECIESS.NTX	~	O	D	Species composition database table index
TR_MEAS.DBF	~	R	D	Tree measurement database table - measurement sensitive data for current and previous measurements
TR_MEAS.NTX	~	O	D	Tree measurement database table index - measurement sensitive data for current and previous measurements
TR_MEAS2.NTX	~	O	D	Tree measurement database table index - measurement sensitive data for current and previous measurements
TR_MEAS3.NTX	~	O	D	Tree measurement database table index - measurement sensitive data for current and previous measurements
TREE.DBF	~	R	D	Tree database table - non measurement-sensitive data
TREE.NTX	~	O	D	Tree database table index - non measurement-sensitive data
TREE_SEQ.NTX	~	O	D	Tree database table index by sector - non measurement-

File	Approx. Size	R / O	D / P	Notes
TREESEC.NTX	~	O	D	sensitive data Tree database table index for sequencing ingrowth - non measurement-sensitive data
VALID.DBF	38210	R	D	Validation steps database table
VALID_HA.NTX	27648	O	D	Validation steps database table index for HandHeld
WINDOW.DBF	~	R	D	Screen windows database table
WINDOW.DBT	~	R	D	Screen windows database table memos

## DOS StartUp Files - Config & Autoexec:

### CONFIG.SYS

The CONFIG.SYS file on the HandHeld PC must contain the following 2 lines:

```
buffers=24
files=69
```

The buffers parameter should be a multiple of 8 (necessary for some versions of DOS) and be at least 24. The files parameter should be an ODD number and be at least 69.

### AUTOEXEC.BAT

The AUTOEXEC.BAT file on the Husky HandHeld PC must contain the following lines:

```
path c:\;c:\dos
prompt $p$g
```

## Editing on the Husky FS/2:

The editing process is discussed in the *Husky System Developers Guide* - Chapter 12 but an outline is included here for reference:

For modifying a text file named CONFIG.SYS:

**CD\** Changes to the Root Directory

**EDIT CONFIG.SYS** Invokes the Text Editor

- Use the arrow keys and character keys to position in the text and add/change values. The left arrow key does not delete characters as it moves left, to do this use the left arrow over the Clr key. The editor is in the insert mode when it begins operation. This means that all typed characters are inserted BEFORE the one highlighted by the cursor.

<F1> Saves the File

<F2> Exits the editor

---

## Setting up the Printer

<Esc> to GyHost directory (i.e. in DOS), enter the command "rrsetup". A screen with three options (configuration, fonts, exit) is then displayed.



<Enter> with the cursor on configuration.

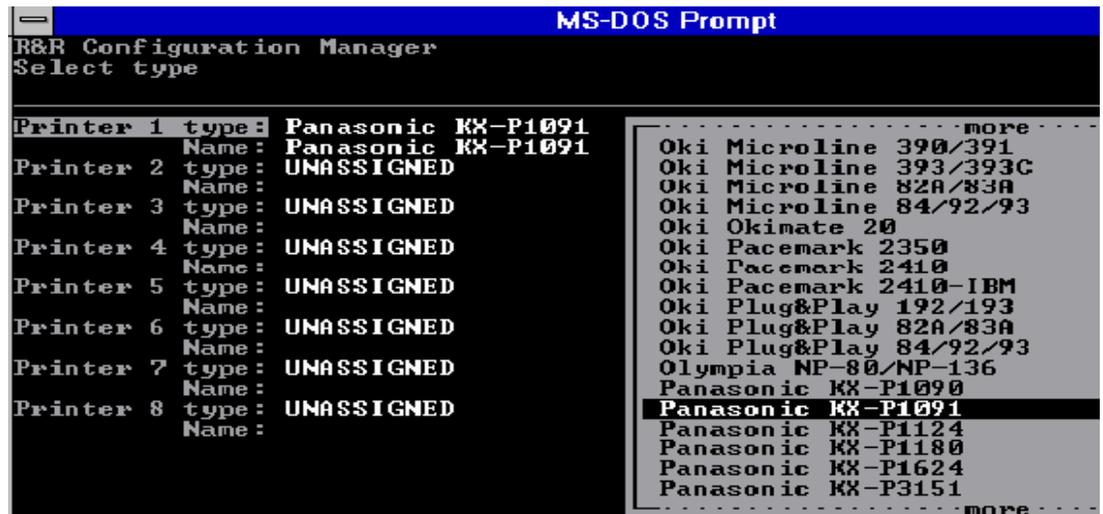


<Enter> with the cursor on "RR.CNF" A screen with five options (defaults, printers, colors, save, quit) is then displayed.



Scroll to **Printers** and <Enter>. A screen with several printers is then displayed.

With the cursor on Printer 1 <Enter>. A list of printers is then displayed. Cursor to the printer, you want to select and <Enter>. Note that the standard printer used successfully in the past is the "Panasonic KX-P1091".



Cursor to **Quit** and <Enter>

<Esc>

Cursor to **Save** and <Enter>

Cursor to **Quit** and <Enter>

Cursor to **Exit** and <Enter>. This will take you back to the GyHost directory



# Chapter 2: Functional Overview

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## Data Collection System Overview

The Sample Data Collection System for the Growth and Yield Database comprises a Desktop Personal Computer system, a HandHeld Computer system, and the necessary communications processes to link these and the Ministry Growth and Yield Database together.



All the database files used in this system are flat ASCII files termed 'SDF' (System Data Format) with fixed length records, each record being delimited with a 'return/linefeed' character pair.

The smallest unit of data that is handled externally to the GyHost and GyHand programs is the Sample. Samples may be moved between the Ministry database and the GyHost system or between the GyHost system and the HandHeld PC system.

The flow of data through the system depends on whether the Samples are re-measurement or establishment, each of these two cases will be discussed separately here to aid in understanding the process.

### **Data-Flow for Establishment Samples:**

- No data is received from the Ministry for these samples.
- The Samples would normally be created using the GyHand system. No tree information can be originated using GyHost.
- The HandHeld system is used to identify the trees in the sample and record the measurement data.
- Upon completion of the collection activity, the establishment data is uploaded to GyHost using the UpLoad option and specifying the samples to be uploaded. The UpLoad facility will first delete those records on GyHost relating to the samples to be uploaded, and then perform the UpLoad.
- The uploaded samples can be reviewed with GyHost.
- If the sample data is to be returned to the Ministry at this time, it can be exported to diskette in ASCII format.

### **Data Flow for Re-Measurement Samples:**

- The previous measurement data together with non-measurement specific data is received from the Ministry in ASCII format. There will not be any records in the Current Sample Measurement database (SP\_MEAS.DBF). There will, however, be one record for each previously measured sample in the Previous Sample Measurement database (PSPMEAS.DBF).
- The Data Import option is used to bring the previous measurement information into the working directory on the GyHost system in Clipper database format.
- The remeasurement database is downloaded to the HandHeld system using the GyHost DownLoad option and specifying the samples to be downloaded. All data relating to each selected sample is downloaded.
- The HandHeld system is used to identify the trees in the sample and record the remeasurement data.
- Upon completion of the collection activity, the establishment and re measurement data is uploaded to GyHost using the UpLoad option and specifying the samples to be uploaded. The UpLoad facility will first delete those records on GyHost relating to the samples to be uploaded, and then perform the UpLoad.
- The uploaded samples can be reviewed with GyHost.
- If the sample data is to be returned to the ministry at this time, it can be exported to diskette in ASCII format.

---

## The External Interface between GyHost and the Ministry's Standard Edit Format

The files comprising this interface are as follows:

ACCESS	DOT	SP_MEAS	TR_MEAS	SAMPLE
PLOT	PSPMEAS	TREE	SPECIES	

They have a three character extension, the first character of which will indicate the sample type (G, T, I etc.). The second and third characters are numeric and indicate multiple diskettes (i.e., 01, 02, 03 etc.).

---

## Using the HandHeld System

### Starting GyHost

With the current directory as GyHost, type: **GyHost<Enter>**

This will invoke the GyHost program and present the Main Menu to the user.

**Refer to the GyHost Section of this Manual for instructions on how to use GyHost.**

### Operational notes

Note the following when using the GyHost system:

- GyHost automatically reindexes the databases when necessary following UpLoad, DownLoad and DataTran data transfer so the user does not have to be concerned with this.
- The batch file for executing GyHost is GyHost.BAT. Following the running of GyHost, the batch file deletes all files that have no extension (i.e. ABCDEF.). This is a precautionary step but means that the user must not rely on any user files with no extension being retained in the GyHost directory.
- It may be required to remove all the samples in the GyHost directory. To do this the program is invoked as follows:  
**GyHost PURGE<Enter>**  
**\*\*\*\*Caution: this will erase all samples from the GyHost directory \*\*\*\***



# Chapter 3: GyHand - The HandHeld System

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## Introduction

The sequence of the HandHeld (H/H) software was designed to imitate, as much as possible, the logical sequence of data collection in the field. Therefore, the sample and plot identification must be entered before any tree can be measured. In the same way, a sub-plot tree cannot be measured before the sub-plot size is known.

It is recommended that the logical sequence built into the software be followed in order to take full advantage of it.

The H/H normally retains information that was last entered in some fields. Therefore, when first turned on, one may find the region, compartment, etc of a sample completed days before. To override this, simply enter the new data to change the identity for the sample required.

---

## Other features:

<Esc> Normally used for escaping from the current to the previous screen without saving. Exception

are some browsing screens.

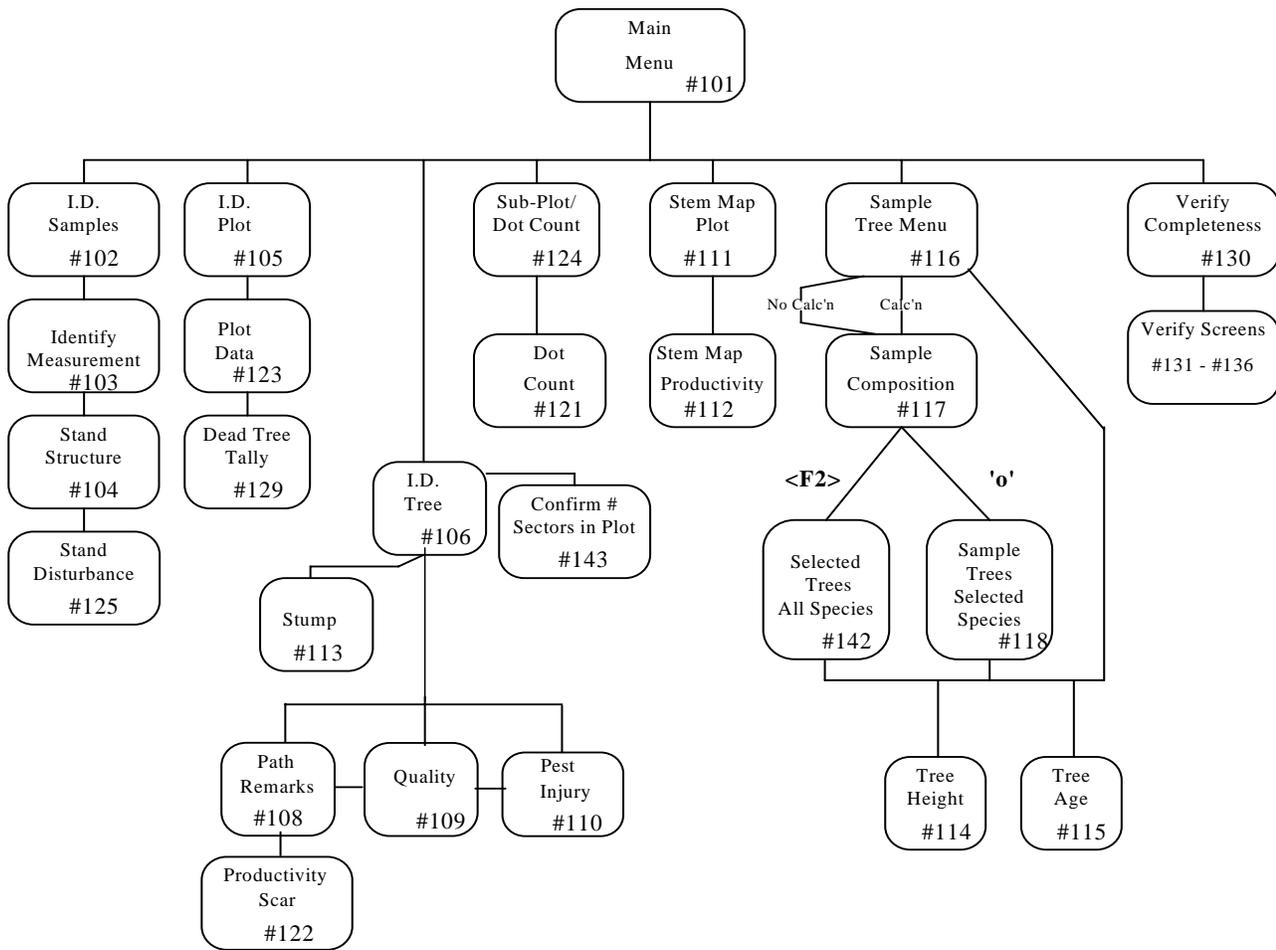
< Y > will save the data of an active screen when the message Screen O/K (Y/N) appears.

< N > will access the first field in the screen.

< é or ê > up and down arrows will allow movement around the screens.

Normally screen and version numbers do not appear on the HandHeld. If this information is required, use "PAW" and "DOWN ARROW" on the Husky FS2

**HandHeld Screen Structure Chart**  
Version 8.0 (98.06.01)



**Hot Keys**

- F1** Sample or Tree Remarks.
- F2** Display Mapped Trees - from screen #111  
Tree Class/Path-Tree Measurements - from others.
- F3** Dead Tree Tally - establishment  
Previous Measurements - re-measurement
- F4** Measure Tree - from screen #121, 124  
Measure Height - from id tree sub-system
- F5** Display Incomplete (re)measurements - from id tree subsystem
- F6** Stem Map (#111 or #112 - from id tree subsystem)

## Screen #101

Vers: 8.0 MAIN MENU

1. Identify Sample
2. Identify Plot
3. Measure Trees
4. Sub-Plot/Dot Cnt
5. Sample Trees
6. Stem Map
7. Verify Complete

As seen	Notes
1. Identify Sample 2. Identify Plot 3. Measure Trees 4. Sub-Plot/Dot Cnt. 5. Sample Trees 6. Stem Map 7. Verify Complete	<p><i>** Generally, it is recommended that these screens be accessed and completed in the same order as they appear so that full advantage can be taken of the editing capabilities of the software.**</i></p> <ul style="list-style-type: none"><li>• Trees cannot be measured until the sample and plot are identified.</li><li>• Use the 'up' and 'down' arrows to choose the desired screen and then &lt;Enter&gt;</li><li>• <b><u>'Verify Complete'</u></b> should only be used after all measurements have been done.</li></ul>

### User Notes:

## Screen #102

ID SAMPLE					
Reg	Cmp	L	Ins	Sam	TP
73	96		0	1	G
Csamp					
Dia? 1.3 Y or 1.37 N					
TagLim 4.0 Dia/Ht D					
L/S? N SpecProg? N					
Screen OK (Y/N)?:Y					

As seen	Meaning	Default	Valid	Notes
Reg	Region No.	-	1 - 88	Unique provincial numbers
Cmp	Compartment #	-	1 - 206	Unique provincial numbers
L	Comp. Letter	-	∅ or A - Z	Some coastal compartments have a letter
Ins	Installation	-	1 - 99	-
Sam	Sample Number	-	1 - 999	-
TP	Sample Type	-	GIMPRST	<b>G</b> (natural), <b>I</b> (intensive forestry), <b>M</b> (productivity), <b>P</b> (photo), <b>R</b> (experimental), <b>S</b> (temporary) or <b>T</b> (silviculturally treated) <b>Prompts: "create Y/N at establishment"</b> <b>"N" - will close screen, return to screen #101</b> <b>"Y" - will create, measurement '0'</b>
Csamp	Company Sample	-	-	Character or Alpha if applicable
Dia? 1.3	Diameter at 1.3	Y	Y or N	Applies to the whole sample
or 1.37	Diameter at 1.37	N	Y or N	Applies to whole sample
TagLim	-	-	-	Break between plot and subplot ≥0.3 for ( <b>I</b> ), 4.0 for all others
Dia/Ht	DBH or Height	D	D or H	-
L/S?	Lean or Sweep	N	Y or N	For some samples. Applies to whole sample
Spec Prog?	Special Program	N	Y or N	Used for special projects only
Screen OK(Y/N)	-	-	Y or N	Y - saves and moves to next screen N - returns to Csamp

**<F1> with cursor on Reg, will list all samples in the machine.**

### User Notes:

### Screen #103

```

<F13>          ID MEAS
Measurement    2
Date           97.03.24
Stem Map?      N
Select Logged? N
Special Site    0.0
DBH Ref. Point PoG
Screen OK (Y/N)? :Y
  
```

As seen	Meaning	Default	Valid	Notes
<F13>	Hot Keys	-	Anytime	<b>F1 - Accesses area for sample remarks</b> <b>F3 - At remeas., displays prev. measurement</b>
Measurement	Meas. No	-	-	Entered automatically; check accuracy at remeas.
Date	-	-	-	Automatic for establishment, change at remeas.
Stem Map ?	-	N	Y or N	If "Y" all trees must be stem mapped
Select Logged	-	N	Y or N	Y - if in selectively logged areas in complex stands
Special Site	-	0.0	0.0, or 5-50	If age and height not representative
DBH Ref. Point	-	-	-	Automatically. PoG for samples <1991 or UpH if >1990
Screen OK(Y/N)	-	Y	Y or N	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #104

<b>&lt;F13&gt; STND STRUCT</b>	
Stand Structure	1
C.Clsr% :Lyr1	50
:LyrV	5
Stems/Ha	0
Spacing Type	S
Screen OK (Y/N)?:	Y

As seen	Meaning	Default	Valid	Notes
<F13>	<b>Hot Keys</b>	-	<b>Anytime</b>	<b>F1 - Accesses area for sample remarks</b> <b>F3 - At remeas. - displays prev. measurement</b>
Stand Struct.	-	-	1,2 or 3	Std. Struct. <b>1</b> -simple, <b>2</b> -complex, <b>3</b> -multi-layer <b>If '3', each tree is in layer 1 or 2. Identify primary layer.</b> <b>If '1' or '2', there is a "V" layer and layer 1 is assumed .</b>
C.Clsr%:Lyr1	Crown Closure	0	10 - 100	In increment of 10's
:LyrV	CC layer V	0	0 - 5	Vet layer must have a crown closure of <6%
Stems/Ha	-	0	1 - 99999	For ( <b>S</b> ) samples in young stands
Spacing Type	-	S	S or T	Normally ( <b>S</b> )quare but can be ( <b>T</b> )riangular
Screen OK(Y/N)	-	Y	Y - N	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #105

```

<F1>          ID PLOT
Plot#  1 CtrStk OK?Y
Plot Radius   11.28
      Area     0.0400
Ln   0.00 Wth   0.00
      BA Factr  0.000

Screen OK (Y/N)?:Y
  
```

As seen	Meaning	Default	Valid	Notes
<F1>	<b>Hot Key</b>	-	<b>Anytime</b>	<b>F1 - Accesses screen for sample remarks</b>
Plot #	No. of plot	1	1 - 10	(I) samples 1-10 or 1-5, (G,T) '80-88 est. 1-3 <b>Prompt 'Create (Y/N)'</b> "Y" - will create Meas. '0' "N" - will close screen, return to screen #101
CtrStk OK?	Centre Stake ok	Y	Y - N	"N" if repairs made to plot centre stake
Plot Radius	-	-	5 - 30.9	-
Area	-	-	-	Automatically done if circular, enter if square
Ln	Length	0.0	-	Enter if missing ( <b>R</b> samples only)
Wth	Width	0.0	-	Enter if missing ( <b>R</b> samples only)
BA Factor	basal area factor	-	-	For prism (S) samples
Screen OK(Y/N)	-	Y	Y or N	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #106

```

<F123456 TREE Pl# 1
Tree 109 D?N Spc FD
D13: 35.7 D137: 0.0
CC:1 LC%: 3 TC:2 Lr
Ht (M/E): 0.0 Stump:N
NxTree 110 NrTre 108
PrvHt:* M/D: Sec: 4
Screen OK (Y/N)? :Y
    
```

As seen	Meaning	Default	Valid	Notes
<F123456	Hot Keys	-	Anytime	<b>F1 - Accesses screen for tree remarks</b> <b>F2 - Recalls trees out of sequence</b> - enter tree number, <enter> choose option - tree class/path or tree measurements <b>F3 - Establish. - accesses dead tree tally</b> - Remeas. - displays previous meas. data <b>F4 - Accesses screen 114 to measure heights</b> <b>F5 - List of trees incompletely measured</b> <b>F6 - Accesses stem map screen</b>
Tree	Tree Number	-	-	Entered automatically. Change if out of sequence
D?	Delete tree?	N	Y or N	Accessed by arrowing back Y - will delete data for that tree. Only ingrowth or new tree
Spc	Species	-	-	See Appendix 3 for species symbols
D13:	DBH at 1.3m	-	-	Accessed if chosen for sample - screen 102
D1.37	DBH at 1.37m	-	-	Accessed if chosen for sample - screen 102
CC	Crown Class	-	1-6	If TC5 entered, CC will get a 5 and layer V
LC%:	Live Crown %	-	1-10	LC in 10's 10=100
TC:	Tree Class	-	1-6	TC 2,3,4, and 5 will access path screen
Lr	Stand Layer	∅	∅, 1,2,V	∅ assumes single layer
Ht(M/E):	Ht. (Est/Meas)	0.0	-	Accessed only in 'V' layer or for small tree height
Stump:	Stump	∅ ,N	Y/N	Accessed only if selectively logged sample chosen
NxTree	Next Tree No.	0	#	Appears automatically at remeasurement
NrTree	Near tree No.	0	#	Used to identify location of ingrowth or subplot trees
PrvHt:	Ht Taken Prev.?	∅	∅, *	* will appear if height for this tree was measured previously
M/D:	Missed/Dropped	∅	M,D or ∅	Missed trees at prev. meas. or dropped at remeas. Accessed with the up arrow key
Sec:	Sector number		1 - 16	Will remain the same until changed at establishment Displays number at remeasurement
ScreenOK(Y/N)	-	Y	Y or N	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #108

```

<F123456 PATH:Tr 109
Fk/Ck  0  Scar  0
FrostC 0  D/B Top 0
Conk    0  Misltoe 0
B.Conk  0  Rot Br  0
St/Dwn  BrknTop 0
      Ht to Break 0
Screen OK (Y/N)?:Y
  
```

As seen	Meaning	Default	Valid	Notes
<F123456	Hot Key		Anytime	<b>F1 - Accesses screen for tree remarks</b> <b>F2 - Recalls tree number out of sequence</b> - enter tree number <enter> and choose option - tree class/path or tree measurements <b>F3 - Establish. - accesses dead tree tally</b> - Remeas. - displays previous meas. data <b>F4 - Accesses screen 114 to measure heights</b> <b>F5 - Lists trees incompletely measured</b> <b>F6 - Accesses stem map screen</b>
Fk/Ck	Fork/Crook	0	0 - 7	Must be => than previous at remeasurement
Scar	-	0	0 - 7	Must be => than previous at remeasurement
Frost C	Frost Crack	0	0 - 7	Must be => than previous at remeasurement
D/B Top	Dead/Broken	0	0 - 3	For sample types "I" and "M", dead/brkn top become two separate
Conk	-	0	0 - 7	fields. If brkn top occurs, a height to break is required
Mistletoe	-	0	0 - 7	Must be => than previous at remeasurement
B.Conk	Blind Conk	0	0 - 7	Must be => than previous at remeasurement
Rot Br.	Rotten Branch	0	0 - 7	Must be => than previous at remeasurement
St/Dwn	Standing/Down	0	S or D	Must be => than previous at remeasurement
Brkn Top	-	0		For dead trees only
Ht to Break	Ht to Break	0		For dead trees only
Screen OK(Y/N)		Y	Y or N	For dead trees only if broken top entered Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #109

```

<F123456 QLTy:Tr# 1
Sweep 0 Lean 0
Spiral 0
1st Live Limb 0
1st Stub 0
Knot 1st 5M 0
Knot 2nd 5M 0
ScreenOK(Y/N)? :Y
    
```

As seen	Meaning	Default	Valid	Notes
<F123456	Hot Key	-	Anytime	<b>F1 - Accesses screen for tree remarks</b> <b>F2 - Recalls tree number out of sequence</b> - enter tree number <enter> and choose option - tree class/path or tree measurements <b>F3 - Establish. - accesses dead tree tally</b> - Remeas. - displays previous meas. data <b>F4 - Accesses screen 114 to measure heights</b> <b>F5 - Lists trees incompletely measured</b> <b>F6 - Accesses stem map screen</b>
Sweep	-	0	0 - 2	For 'M' samples, lean and sweep are combined.
Lean	-	0	0 - 2	As above.
Spiral	Spiral grain	0	0,1	-
1st Live Limb	-	0	0 - 7	Log (5M) no. which has the base of the live crown
1st Stub	-	0	0 - 7	Log (5M) no. that has first dead branch or stub
Knot 1st 5M	-	0	0 - 5	Consider $\geq 10$ cm diameter inside bark
Knot 2nd 5M	-	0	0 - 5	Consider $\geq 10$ cm diameter inside bark
Screen OK(Y/N)	-	-	-	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #110

```

<F123456 PEST/INJURY
Tree# 109 Tag OK:Y
Pest/Injury (Y/N)? Y
Type D Spc SG Sev 1
Nat/Plt: Ht Suit?:Y
PrvHt:* NxTree 110
InPlot:Y
Screen OK (Y/N)?:Y
    
```

As seen	Meaning	Default	Valid	Notes
<F123456	Hot Key	-	Anytime	<b>F1 - Accesses screen for tree remarks</b> <b>F2 - Recalls tree number out of sequence</b> - enter tree number <enter> and choose option - tree class/path or tree measurements <b>F3 - Establish. - accesses dead tree tally</b> - Remeas. - displays previous meas. data <b>F4 - Accesses screen 114 to measure heights</b> <b>F5 - Lists trees incompletely measured</b> <b>F6 - Accesses stem map screen</b>
Tree #	Tree Number	-	-	Must be $\geq 1$
Tag OK	Is tree tag okay	Y	Y or N	N - if nail was missing (tag missing for 'M' samples)
Pest/Injury	-	∅	Y or N	(Y)es or (N)o
Type	Damage type	∅	-	If yes, enter A,D,I,M,N,T,U or V If No, will skip balance of screen
Spc	Species	-	-	See codes in Appendix 14
Sev	Severity	-	-	See codes in Appendix 14
Nat/Plt:	Natural/Planted	∅	∅ ,N or P	'T' samples only
Ht Suit?	Suitable for Ht	Y	Y,N,C,F	Yes,No,Could be, Flagged
PrvHt: *	Previous Ht.	∅	-	The * indicates that a previous height was taken
NxTr#	Next Tree No.	Y	>0	Appears automatically at remeasurement
InPlot:	Tree inside plot	Y	Y or N	N - for trees measured outside plot. ie for ages
Screen OK(Y/N)		Y	Y or N	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #111

```

<F1>
STEM MAP, PLOT:      1
Offset?             N
Tree #              201
Bearing from PC     20
Slope %             0
Slope Dist          0.80
Screen OK (Y/N)? :Y
  
```

As seen	Meaning	Default	Valid	Notes
<F1>	Hot Key		Anytime	<b>F1 - Sample remarks when on "offset"</b>  <b>Tree remarks otherwise</b>
Plot: 1	-	1	1 - 10	At re meas. 1-10 for <b>I</b> , 1-3 for <b>G &amp; T</b> otherwise '1'
Offset?	Offset center	N	Y or N	Y - will prompt screen No.123
Tree #	-	-	1 or >	Must be $\geq 1$
Bearing from PC	-	-	1-360	360 is north
Slope %	-	-	0 or >	-
Slope Dist	-	-	-	Cannot exceed the plot radius
Screen OK(Y/N) ?		Y	Y or N	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #112

```

<F1>
STEM MAP: PRODUCTVTY
Tree #           1
To Tree# Distance(M)
1     5           0.95
2     4           1.10
3    22           0.30
Screen OK (Y/N)?:Y
  
```

As seen	Meaning	Notes
<F1>	<b>Hot Key</b>	<b>F1 - Accesses screen for tree remarks</b>
Tree #	Tree Number	Number of tree that is being stem mapped
To Tree #	To Tree Number	Number of tree to which the new tree is being mapped to
Distance	-	Distance between the two trees (center to center)
Screen OK	-	Y - saves and moves to next screen N - returns to beginning of screen

### **User Notes:**

### Screen #113

<F123456	STUMP
Tree #	1
Diameter cm	12.5
Height m	0.3
New/Old N/O	O
Screen OK (Y/N)?	:Y

As seen	Meaning	Default	Valid	Notes
<F123456	Hot Keys	-	Anytime	<b>F1 - Accesses area for tree remarks</b> <b>F2 - Recalls tree numbers out of sequence</b> - enter number and choose option - tree class or tree measurement <b>F3 - Accesses dead tree tally</b> <b>F4 - Accesses screen 114 to measure heights</b> <b>F5 - List of trees incompletely measured</b> <b>F6 - Accesses stem map screen</b>
Tree #	Tree No.	∅	∅	Not accessible or applicable
Stump	-	-	900 - 979	Use only numbers.900 to 979
Diameter cm	-	0.0	7.4-125cm	Stumps of merchantable trees only
Height m	-	0.0	-	-
New/Old	-	∅	O or N	New <10 years: old >10 years

### User Notes:

## Screen #114

```

<F12>      Plot#: 1
  Height Tree# 103
Prev Ht 24.5 Ht 25.3
Top% 75 Bot% -5
SlDist:30.0 Sl%: 5
Ht Corr 1.30 Ht 25.3
Top Height (Y/N)? Y
Screen OK (Y/N)? :Y
  
```

As seen	Meaning	Notes
<F123>	<b>Hot Key</b>	<b>F1 - Accesses area for tree remarks</b> <b>F2 - Accesses screen for TC and Path</b>
Plot #:1	Plot Number	Comes up automatically; check accuracy if more than one plot in sample
Height Tree #	Tree Number	Number of tree being measured
Prev Ht	Previous Height	Previous height if available - at remeasurement only
Ht.	Height	Enter height directly.;or will calculate when all information is entered
Top %	Top reading %	Top reading in per cent
Bot %	Bottom %	Bottom reading in per cent. Minus (-) must be entered; plus(+) is assumed)
SlDist:	Slope Distance	Slope distance in meters to one decimal place
Sl%:	Slope %	Assumed equal to bottom reading; change if not
Ht Corr	Ht Correction	Assumed 1.3 meters; change if not
Ht	Total Height	Calculated height comes up automatically. To redo height measurements, cursor to the top of screen and zero the Ht.
Top Height(Y/N)	-	Default is <b>Y</b> if tree is a 'top height tree'; otherwise <b>N</b>  Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #115

```

<F12>  Pl  2  Tr 103
PrvBHAge:  0  Age: 40
Mean Age (Y/N)?      Y
Boring Ht           1.30
Pith?                Y
RI1 10  RI2         15
In Plot? Y
Screen OK (Y/N)? :Y
  
```

As seen	Default	Notes
<F12>		<b>F1 - Accesses area for tree remarks</b> <b>F2 - Accesses TC and Path screen</b>
Pl	Current number	Plot number that tree is in
Tr	-	Tree number selected for age measurement
PrvBHAge	Previous age	- Previous breast height age if applicable
Age	-	- Current BH age
Mean Age(Y/N)	Y/N	- Will have Y/N depending on tree status
Boring Ht	1.3m	- Should be and is assumed to be 1.3 m: change if not
Pith?	∅	- Was pith hit? <b>Y</b> (yes), <b>N</b> (no) or <b>R</b> (rotten)
RI1	0	- Length of last 10 years in mm
RI2:	0	- Length of last 20 years in mm
In Plot?	Y	Is tree inside plot
Screen OK (Y/N)?	Y	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #116

<b>SAMPLE TREE</b>	
1	ID Sample Trees
2	ID SmpTrees-NoCalc
3	Measure Height
4	Measure Age
Choose and <Enter>	

As seen	Notes
1. ID Sample Trees	Calculates species composition and systematically allows for selection and measurement of sample trees.
2. ID SmpTrees-NoCalc	- Same as above but <b>does not calculate species composition.</b>  - - - - Use only if no trees have been added or deleted - - - -
3. Measure Height	Accesses screen #114 for height measurements
4. Measure Age	Accesses screen #115 for age measurements  <ul style="list-style-type: none"> <li>• Use the '<b>up</b>' and '<b>down</b>' arrows to choose the desired screen and then &lt;Enter&gt;</li> <li>• <i>This screen should only be used after all trees have been measured.</i></li> </ul>

### ***User Notes:***

## Screen #117

SAMPLE COMPOSITION				
L	SP	BA%	QMD	NT
	FD	53.3	24.1	12
	CW	33.4	24.6	9
	HW	12.8	26.5	3
	DR	0.4	3.8	1
Layer		, Den: 13.52		
F2=Selected; O=Other				

As seen	Meaning	Notes
L	Layer	- If single layer, will appear as blank - If Vet layer, will display a 'V' - If double layer, will display '1' or '2'
SP	Species	
BA%	Basal Area %	
QMD	Quadratic Mean Diameter	
NT	Number of Trees	

**Note:** To take full advantage of the software, it is recommended that the following procedure be used **and only** after all trees have been measured.

Arrow **up** (↑) or **down** (↓) to access other species or layer.

1. < F2 > To access screen #142 which will now list all sample trees chosen by plot in an ascending order of tree number.
2. < O > To access screen #118 to view and choose trees for height measurement. These will be listed by species and in descending order of DBH. The top height trees will already be identified with a 'T' or 'N' as identified in screen #110

*Return to screen #117 by < esc > once back*

*Repeat step '2' for each major species present*

### User Notes:

## Screen #118

ALL SAMPLE TREES:FD					
? PL TREE S DBH H					
H 1	109	6	35.7		
H 1	111	8	33.4	*	
T 1	103	2	32.1	*	
R 1	110	7	31.2	*	
#TopHt: 4 #Others: 5					
S,A,R,O,P,F2,Esc					

ALL SAMPLE TREES:FD					
S DBH H A TC CC					
6	35.7			2	1
8	33.4	*		1	1
2	32.1	*	*	2	1
7	31.2	*	*	1	2
#TopHt: 4 #Others: 5					
S,A,R,O,P,F2,Esc					

As seen	Meaning	Notes
? -	Status previously assigned -	- Entered when tree was measured as answer to suitable for Ht? (Y)es,(N)o,(C)ould be and (F)lagged - If already chosen (T)opHt or (O)ther, will change to <b>H</b> and <b>M</b> respectively
PL	Plot Number	-
Tree	Tree Number	-
S	Sector Number	-
DBH	DBH	-
H	Measured height	If tree was previously measured an '*' will appear <b><u>The following will appear by cursoring to the right</u></b>
A	Age taken	If tree has a previous age at DBH, an "*" will appear
TC	Tree Class	- Will appear as 1,2, or 5 for Vets
CC	Crown Class	-Will appear as 1,2,3,4, or 5 for Vets
#TopHt:	Number of Top Heights	- Running tally of 'top heights' measured or selected by species
#Others:	Number of Other Heights	-Running tally of 'other heights' measured of selected by species
S	Select	-Select for height measurement
A	Age	-Select for age measurement
R	Reject	- Reject for height measurement
T	Top Height	- Automatically chosen as a 'top height'
O	Other Height	- Chosen as 'other height'
P	Path	- Accesses path screens
F2	Hot Key	- Toggles between All Selected Trees and All Sample Trees for the species
Esc	Escape	Escapes to <b>Screen #117 - Sample Composition</b>

### User Notes:

## Screen #121

<F4>	DOT COUNT			
SP	D-0	D-1	D-2	D-3
FD	2	3	0	0
CW	1	2	0	0

Blank Spc. to Delete  
DotCt:Esc when Done

As seen	Meaning	Default	Valid	Notes
<F4>	Hot Keys	-	Anytime	F4 - Accesses tree measurements (screen 106)
SP	Species	∅	-	See Appendix 3 for species symbols
D-0	DBH class '0'	0	-	0.30 - 1.3 metres in height
D-1	DBH class '1'	0	-	0.1 to 1.9cm in DBH
				<b><u>For Intensive Forestry Samples Only</u></b>
D-2 to D-10	DBH classes	0	-	In 2.0cm classes (2.0-3.9, 4.0-5.9,etc)
D-11	DBH class	0	-	All trees greater than 20.0cm in DBH

### User Notes:

## Screen #122

```

-PRODUCTIVITY SCAR--
      TREE#      1
Base      0
Mid       0
Top       0
Screen OK(Y/N)?: Y
    
```

As seen	Meaning	Default	Valid	Notes
Tree #	Tree No.		1 - 1000	-
Base	-	0	0 - 8	Base is from germination point to 1.3m
Mid	-	0	0 - 8	Mid is the lower half from 1.3m to top
Top	-	0	0 - 8	Top is the upper half from 1.3m to top
Screen OK(Y/N)	-	Y	Y or N	Y - saves and moves to next screen N - returns to beginning of screen

### ***User Notes:***

## Screen #123

```

<F1>      P1DATA:P1# 1
Aspect180 Slope% 10
Elev 400 Sl Pos M
----- STEM OFFSET? N
Bearing to PC      0
Slope%             0
Slope Dist        0.00
Screen OK (Y/N)? :Y
  
```

As seen	Meaning	Default	Valid	Notes
<F1>	Hot Key	-	Anytime	Accesses area for sample remarks
Aspect	-	0	0-360	If slope is >0, then aspect must also be >0
Slope %	-	0	0 - $\pm$ 100	If aspect is >0, then slope must also be >0
Elev	Elev. in metric	-	1 - 2500m	Elevation in meters
Sl Pos.	Slope Position	-	-	Valid codes are C,D,F,L,M,T and U - <b>C</b> (rest), <b>D</b> (epression), <b>F</b> (lat), <b>L</b> (ower), - <b>M</b> (id-slope), <b>T</b> (oe), and <b>U</b> (pper-slope)
Stem Offset?	-	N	Y or N	Accessed only if screen #103 had <b>Y</b> for stem map.  If <b>Y</b> , bearing and slope distance must be >0
Bearing to PC	-	0	1 - 360	Bearing from compass location to plot center
Slope %	-	0	-100 - 100	Slope from compass to plot center
Slope Dist	Distance in 'm'	0.00	1 - 9	Slope distance from compass location to plot center
Screen OK(Y/N)		Y	Y or N	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #124

<pre> &lt;F14&gt;  SbPlot/DtC 1 Sub-Plot Rad.   5.64            Area   0.0100            BA Factr 0.000 Screen OK (Y/N)? :Y </pre>	<pre> &lt;F1&gt;  SbPlot/DtC 1 Sub-Plot Rad.   5.64            Area   0.0100 +-S-Plot/Dot Count-+  Meas S-Plot Trees    Do Dot Count        +-----+ Screen OK (Y/N)? :Y </pre>
--	--

As seen	Meaning	Default	Valid	Notes
<F14>	Hot Keys	-	Anytime	<b>F1 - Accesses area for sample remarks</b> <b>F4 - Accesses area for tree measurement</b>
Sb-Plot/DtC	SubPlot No.	1	1-10	-Entered for establishment
Sub-plot Rad.	Sub-Plot Radius	None	-	-Present at remeasurement otherwise must be entered  -Area will come up automatically  -Enter BA Factor only for 'S' samples  [for (I) samples an ingrowth radius comes up and must be entered]
Screen OK(Y/N)		Y	Y or N	Y - saves and prompts: - <b>S-Plot/Dot Count</b> box  Toggle for: - Meas S-Plot trees  or  Do Dot Count  N - returns to beginning of screen

### User Notes:

## Screen #125

```

<F13>   Stnd Disturb
Compl/Partl/Blank  P
Year              0
Type              I
Pest Responsible  DW
Degree(Intensity)  L
Screen OK (Y/N)? :Y
  
```

As seen	Meaning	Default	Valid	Notes
<F13>	Hot Key	-	Anytime	<b>F1 - Accesses area for plot remarks</b> <b>F3 - Establish. - accesses dead tree tally</b> <b>- Remeas. - displays previous meas. Data</b>
Compl/Partl/Blank	-	-	C,P or $\emptyset$	(C)omplete/(P)artial/or ( $\emptyset$ )no disturbance If ( $\emptyset$ ), curser will skip to Screen OK (Y/N)
Year	-	0	0 or year	Enter year of disturbance if known
Type	-	-	-	See appendix 14
Pest Responsible	-	-	-	See appendix 14
Degree(Intensity)	-	-	-	See appendix 14
Screen OK (Y/N)		Y	Y or N	Y - saves and moves to next screen N - returns to beginning of screen

### User Notes:

## Screen #129

DeadTreeT'ly				
Spc	D01	D02	D03	D04
FD	0	0	0	2
HW	0	0	1	0
Blank Spc. to Delete				
DTTally:Esc if Done				
Screen #129 93.02.25				
Vers 4.0: 94.02.06				

As seen	Meaning	Default	Valid	Notes
Spc	Species	-	-	See Appendix 3 for species symbols
D01	5.0cm DBH class	0	≥0	Class 4.0cm to 7.5cm
D02	5.0cm DBH class	0	≥0	Class 7.6cm to 12.5cm
D11	5.0cm DBH class	0	≥0	Class ≥55.6cm
<b>Use up/down arrows to move around the screen and &lt;Enter&gt;</b>				

### User Notes:

## Screen #130

### Verify Complete

1. Trees Stem Mapd?
2. Pest/Injury OK?
3. Sample Trees
4. Trees in Sample?
5. All Trees Measured?
6. All Heights Taken?

As seen	Notes
1. Trees Stem Mapd?	If the sample was stem mapped, will list trees not stem mapped. Otherwise will give a warning if less than three trees were stem mapped.
2. Pest/Injury OK?	Checks that if <b>pest/injury</b> information is entered for the sample, at least one tree has information; or vice versa.
3. Sample Trees	Summarizes the number of height trees taken by species and by type - top height or other.
4. Trees in Sample?	Summarizes the number of trees in the sample and sub-sample. The latter will be further sub-divided into dot count and others. A warning is given if there are less than 110 trees.
5. All Trees Measured?	Lists trees that have not been remeasured or have not been completely measured.
6. All Heights Taken	Lists trees chosen for height measurement that have not been measured.

- Use the 'é' and 'ê' arrows to choose the desired screen and then <enter>
- ***'Verify Complete' should only be used after all measurements have been done.***

### User Notes:

## Screen #142

ALL SELECTED TREES					
? Pl	Tree	S	DBH	Sp	
O 1	102	1	30.3	FD	
T 1	103	2	32.1	FD	
M 1	104	2	12.2	FD	
H 1	105	3	29.8	FD	
M 1	106	4	20.2	FD	
Press A, S, R, Esc Exit					

All SELECTED TREES						
? Pl	Tree	H	A	TC	Lyr	
O 1	102	*	*	1		
T 1	103	*	*	2		
M 1	104			1		
H 1	105	*		1		
M 1	106	*	*	2		
Press A, S, R, Esc Exit						

As seen	Meaning	Notes
?	Status	<p><b>T</b> - chosen as a 'top height' tree</p> <p><b>O</b> - chosen as an 'other tree'</p> <p><b>H</b> - measured 'top height tree'</p> <p><b>M</b> - measured 'other tree'</p>
Pl	Plot Number	Usually '1' unless a multi plot sample
Tree	Tree Number	In ascending order by plot
S	Sector Number	-
DBH	-	DBH
Sp	Species	-
<b><u>The following will appear by cursoring to the right</u></b>		
H	Height previously taken	An '*' will appear if height taken during previous measurement
A	Age previously taken	An '*' will appear if a DBH age was taken previously
TC	Tree Class	-
Lyr	Layer	If single layer: blank or 'V': otherwise '1' or '2'
A	Age	Will access screen #115 for recording age
S	Select	Will access screen #114 for measuring tree
R	Reject	Will remove tree from selected height tree status
Esc	Escape	Closes screen and accesses screen #117

### User Notes:

### Screen #143

<p style="text-align: center;"><b>VERIFY SECTORS</b></p> <p>Plot#: 1 No of Plot Sect: 8</p> <p>Correct total number of Sectors in Plot?</p> <p>Screen OK (Y/N)? :Y</p>
--

As seen	Meaning	Valid	Notes
Plot#	Plot Number	1 - 10	- will show the plot number being worked on
No of Plot Sect:	Number of sectors in plot	1 - 16	- will default to highest sector number that was used in the plot.  <b><u>Make sure this represents the total number of sectors in the plot - even if one sector is empty</u></b>

#### ***User Notes:***

# Chapter 4:

# GyHost - The Host System

---

## Introduction

GyHost is designed to be run in one of the following ways:

- Under DOS in either Real or Protected mode.
- In a Windows environment.

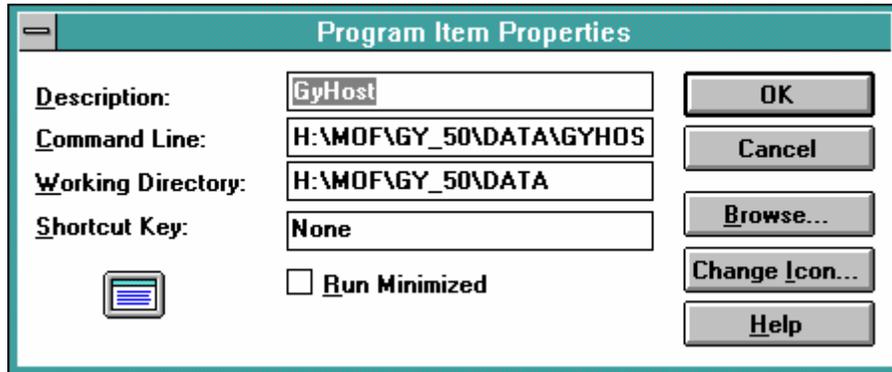
## Running in a DOS environment

GyHost may be run in a DOS environment in either a Real Mode or Protected Mode. If you have at least 2 MBytes of RAM, **GyHost** should be used whether or not you have the capability of running in protected mode. The program will determine this and execute in the most appropriate way.

If you have less than 2 MBytes of RAM, **GyHostR** should be run (Please note the 'R' at the end signifying the (R)real mode executable).

## Running in a Windows Environment

With version 8.0, GyHost may now be run in a Windows environment. The Program Group should be selected as normal with Windows programs and the Properties option is selected from the File menu. The following need to be identified:-

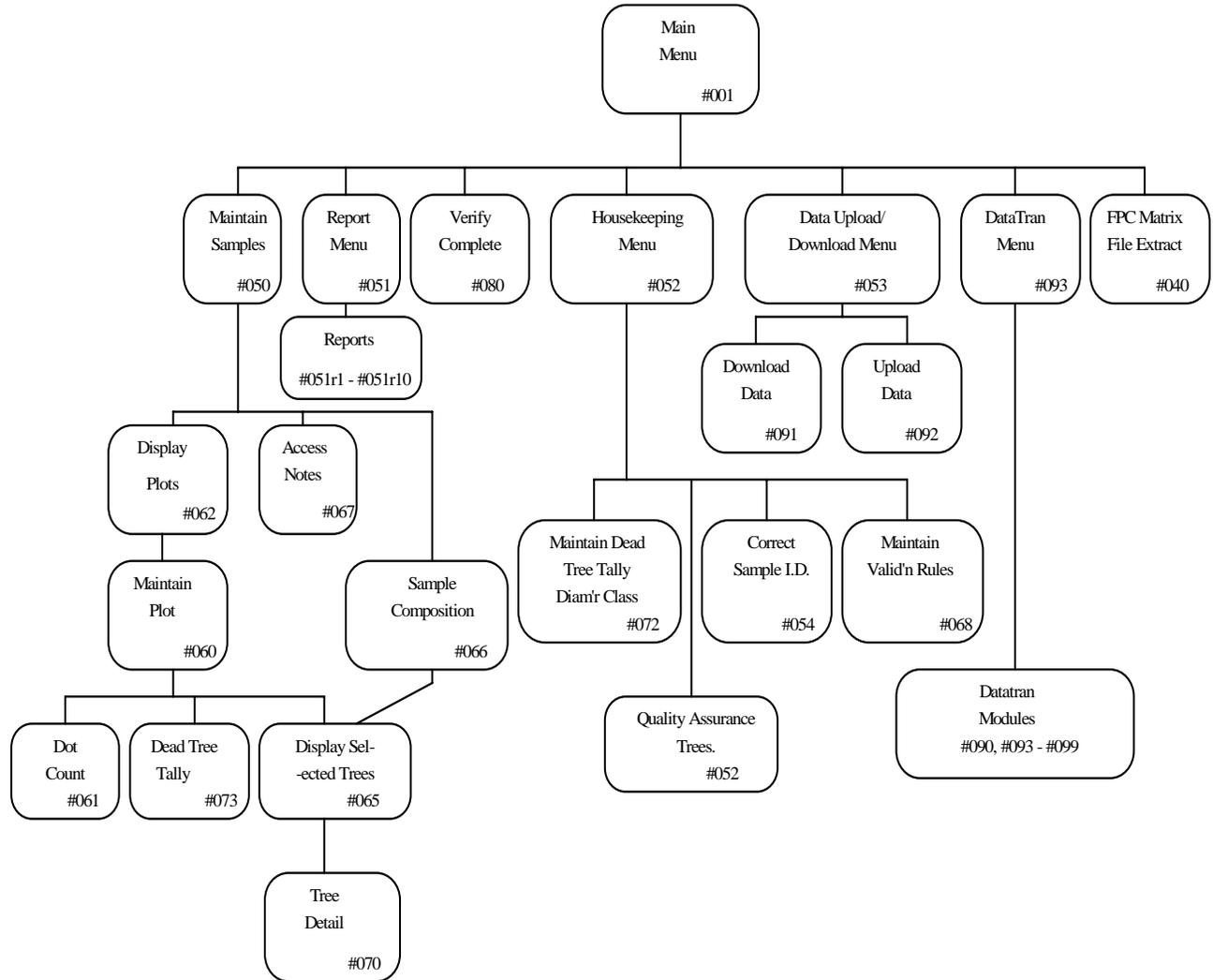


1. Description: 'GyHost' or as required.
2. Command Line: <Path>\GYHOST.BAT
3. Working Directory: <Path>
4. Shortcut Key: Whatever you choose.

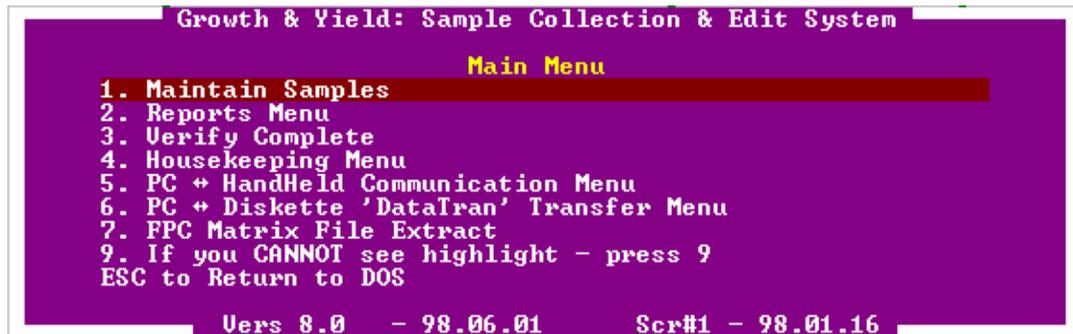
The icon that shows may be changed as usual using the Change Icon button. When complete, press [OK] to return to the program manager.

GyHost may now be selected in the same way as your other Windows programs. It does, however, run as a DOS program and does not have mouse handling.

**Growth and Yield Sample Data Collection System  
Host Screen Structure Chart  
Version 8.0 (98.06.01)**



## Screen 1. Maintain Samples



<Enter> “1. Maintain Samples” and the following screen appears requesting sample identity. By pressing <Tab> while the cursor is on Region, a list of samples in the Database appears. Cursor to the desired sample and <Enter>.



Once the sample identity is entered, this option allows the user to view and edit the data using the following:

(E)dit Sample Header

Data entry should be limited as this utility is not very efficient for this purpose.

(P)lot

This option allows the user to:

(A)dd new plot or <Enter> to:

(T)rees to edit, delete or view tree attributes

(D)ot count to view or edit

(E)dit plot header data

Dead tree tall(Y) to edit or view dead tree tally

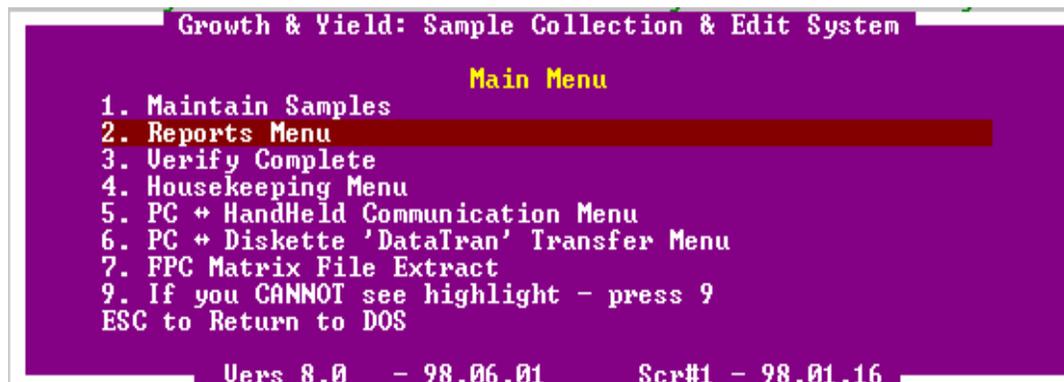
(S) tand composition

Calculates the stand composition for the sample and allows editing as in (T)rees above.

(A) ccess Notes

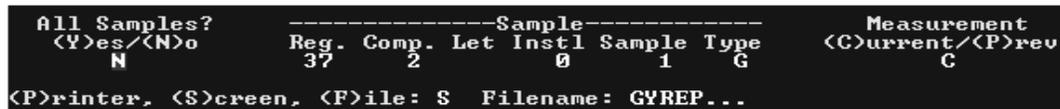
Allows the user to enter and edit access notes data.

## Screen 2. Reports Menu



<Enter> “2. Reports Menu” to view the data in one of the ten predetermined report formats. These reports are intended to aid in determining the quality of data collected. Data cannot be edited in these reports.

**Note:** If printer is not already selected go to “Setting up the Printer” on Page 7.



Having selected the Reports Menu from the Main Menu (screen #1) the user is then given the option of selecting reports for all samples (Y) or one (N) sample in the database.

Note that when the <Tab> key is pressed with the cursor on Region that a window displays the samples in the database. Select the desired sample.

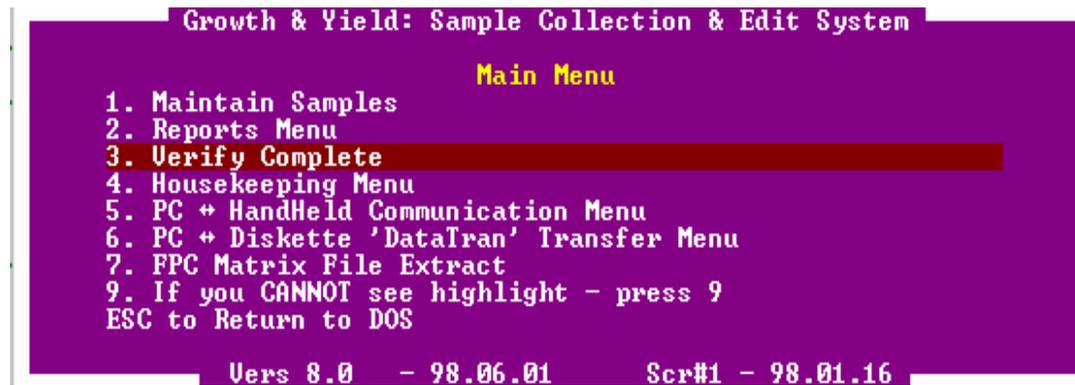
Select the (C)urrent or (P)revious Measurement. Select the report destination as (P)rinter, (S)creen, or (F)ile.

Select the individual report desired or the “All Reports (except report 4)” option.

1. **Access Notes Report** - Describes the route to the permanent sample.
2. **Remeasurement Exception Report** - This report displays the most important collected variables that were beyond the edit range. Values outside this range are identified by an \*. The system checks for species, dbh, tree class, and height.
3. **Sample Header Detail Report** - This report displays header data, dot count, and dead tree tally (only for establishments) data.

4. **Comprehensive Tree Detail Report** - This report displays all tree detail data for each tree in the sample
5. **Key Tree Information Report** - This report displays the key tree detail data for each tree in the sample plus a minor amount of header data. This report may be used in the field as a hard copy.
6. **Tree Range, Ingrowth, Missed/Out of Plot Trees Report** - This report displays the range of tree numbers used in the sample and should be used to avoid duplicating tree numbers. It also displays ingrowth trees larger than 15 cm, trees suspected of being missed at previous measurement(s), and trees to be dropped because they were found to be outside the plot boundary at remeasurement.
7. **Trees/Sample, Species Composition, Sample Tree Report** - This report displays the number of trees (by species) in the sample and sub-sample with the diameter ranges. It also displays the number of height sample trees taken and their range of diameters by species. This report aids in determining if the correct number and correct range of trees were measured for height. This report also displays the sample trees in detail.
8. **Quality Assurance Information Report** - This report displays randomly chosen trees for the purpose of field checks.
9. **Data Collection Platform Report** - This report displays the number of trees and the platform (HH or PC) where the trees were last modified.
10. **All Reports (except Reports 4, 8, 9)** - Select this option to print all reports of one sample or all reports of all samples in the database.

### Screen 3. Verify Complete



<Enter> “**3. Verify Complete**”. This option will allow the user to view the six verify complete reports for one sample or all samples in the database with the destination to printer, file or screen.

- 1. Trees Stem Mapped?** - This report checks that either three trees per plot were stem mapped (stem mapping centre stake) or all trees in the sample (if the stem map code is “Y” for the sample).
- 2. Pest/Injury OK?** - This report checks that if pest/injury is recorded for one or more trees in the sample, that the header also contains pest/injury data and vice versa.
- 3. Sample Trees** - This report lists the species composition and the number of top height trees and other trees measured for height and age.
- 4. Trees in Sample?** - This report provides a summary of the number of trees in the sample (i.e. plot, sub-plot, and dot count).
- 5. All Trees Measured?** - This report provides a list of trees not completely measured for the new measurement or at establishment.
- 6. All Heights Taken?** - This report provides a list of trees chosen for height measurement but not done.
- 7. All of the Above** - This option allows the user to report on all of the verify complete reports for one sample or for all samples in the database.

## Screen 4. Housekeeping Menu

```
Growth & Yield: Sample Collection & Edit System
                                     Main Menu
1. Maintain Samples
2. Reports Menu
3. Verify Complete
4. Housekeeping Menu
5. PC + HandHeld Communication Menu
6. PC + Diskette 'DataTran' Transfer Menu
7. FPC Matrix File Extract
9. If you CANNOT see highlight - press 9
   ESC to Return to DOS
Vers 8.0 - 98.06.01 Scr#1 - 98.01.16
```

<Enter> “**4. Housekeeping Menu**” The housekeeping menu allows three types of functions:

1. **Maintain Dead Tree Tally Diameter Class** - This section allows the changing of diameter class limits for dead trees. Note that this function is only available to the Branch.
2. **Correct Sample ID** - This function allows the user to change (at establishment only) the Reg., Compt., Let., Inst., Sample number. **The sample type cannot be changed.**
3. **Maintain Validity Checks** - This function allows viewing or modification of the validation rules and warning messages. Note that this function is only available to the Branch.
4. **Quality Assurance Trees** - This function allows viewing and modification of number of trees used for quality assurance.

## Screen 5. P.C. - HandHeld Communication Menu

```
Growth & Yield: Sample Collection & Edit System
                                     Main Menu
1. Maintain Samples
2. Reports Menu
3. Verify Complete
4. Housekeeping Menu
5. PC + HandHeld Communication Menu
6. PC + Diskette 'DataTran' Transfer Menu
7. FPC Matrix File Extract
9. If you CANNOT see highlight - press 9
ESC to Return to DOS
Vers 8.0 - 98.06.01 Scr#1 - 98.01.16
```

**Note:** If the improved Husky Communication Software has not been installed proceed as follows:

Improved communication software for the Husky HandHeld computer has been included with version 7.0. Users of Husky HandHeld computers should take advantage of this improved communication software:

### Installing the Latest Release of the Husky Communications Software.

All the files needed are contained on the distribution diskette. Check particularly, that the following files have the stated date-times:

HCS.COM	93-02-23 8:56
CMDHCOM.EXE	93-04-14 12:57

The following steps should be taken:

1. Physically connect the Husky FS/2 HandHeld to your PC.
2. On the Husky FS/2:
  - a. Ensure the root directory of the C: drive is the current directory by typing:  
**C: <Enter>**  
**CD \ <Enter>**
  - b. Bring up the existing version of HCOM on the Husky FS/2: **HCOM <Enter>**  
The Husky File Transfer Utility should appear on the screen.
3. On your local PC, select the directory in which the GyHost files reside, (probably GyHost).
4. **HCOM <Enter>**  
The "Husky File Transfer Utility" copyright screen should appear showing version/ number 1.02.  
Press any key, as requested.  
The 'Local PC' window should show the contents of the GyHost directory, the 'Remote Husky' window should show the contents of the root directory on the Husky FS/2.  
The 'Local PC' window should be 'active', if it is not, press the <Tab> key to make it active.
5. Using the Up and Down arrow keys, position the highlight over the HCS.COM file and then press <Enter> to select it.
6. Press the 't' key to transfer the HCS.COM file from the 'Local PC' to the 'Remote Husky' FS/2.
7. When the transfer is complete, <Esc> on the Husky FS/2 to return control to DOS.
8. The following commands are typed on the Husky FS/2 to complete the task:  
**RENAME HCOM.COM OLDHCOM.COM <Enter>**  
**RENAME HCS.COM HCOM.COM <Enter>**

This will give the new version of the HCOM program previously named HCS.COM the name HCOM.COM.

(Do NOT attempt to delete the old version of HCOM.COM, it is contained in read only memory and cannot be deleted.)

9. To ensure the transfer worked successfully, the command HCOM is typed on the Husky FS/2. The 'Husky File Transfer' copyright notice should show version 1.05s dated 1st. Dec 1992.

10. On the 'Local PC', HCOM can be quit by pressing <Esc>.

<Enter> "**5. PC - HandHeld Communication Menu**". This will give the user two options:

- Download Sample Data to Hand Held
- Upload Sample Data from Hand Held

## Download Sample Data to Handheld

<Enter> "**1. DownLoad Sample Data to HandHeld**".

- Screen #91 will show all the samples that are present in Sample.dbf in the GyHost directory, one on each line. If there are more than can fit in the window, they can be accessed with the cursor keys. A warning message advises that, if the download process is completed, all the application files currently resident on the HandHeld computer will be overwritten. It is therefore important to ensure that all previously entered data on the HandHeld computer that is to be retained is uploaded prior to this DownLoad operation.
- Those samples that are required to be downloaded must now be identified. This is done by moving the cursor up and down the list of samples and changing the Extract(Y/N) value from 'N' to 'Y'. It can be changed back to 'N' during this operation if a mistake is made.
- When all required samples have been selected, press <Esc>. This will terminate the selection process.

**OkTo Continue and Extract Selected Samples?(Y/N)**

- The prompt 'Ok To Continue and Extract Selected Samples?(Y/N)' shows. Pressing 'Y' will continue the download process by extracting all the relevant records from the application databases for the selected samples. Pressing 'N' will, prompt the command 'Choose HandHeld Device' menu.
- When the extract process is complete, the program asks 'OkTo Copy new version of HandHeld Program? (Y/N)'. **<Y> should only be needed once at the beginning of the Field Season.**
- When GyHost has assembled all the data to download, it presents a menu asking the user to select a HandHeld Device - Ministry HandHeld or any other.

## **Downloading to the Ministry HandHeld Computer**

- A set-up screen is presented to the user. The instructions presented here should be followed. They start with ensuring that the HandHeld is physically **connected from** either COM1 or COM2 on the host PC to the left-hand connector on the Husky. The user should follow the instructions given on the GyHost screen by entering the commands into the HandHeld. Before 'Y' is pressed to signal the setup is complete, the user should see the 'HCOM' screen on the HandHeld showing the logo.
- When 'Y' is pressed on GyHost, a selection box is presented. This asks the user to confirm/change communication parameters. Changing parameters should not normally be necessary after the initial setup. If changes are required, pressing <Tab> will present a picklist from which a suitable value can be selected by cursoring to it and pressing <Enter>. The initial value can be retained by escaping from this picklist. When 'Y' is entered for 'Save&Exit' the communication program takes over.

The communications program shows the following on a fresh screen:

```
Husky Command Line FileTransfer Utility Version1.05
(c) Copyright Husky Computers Ltd. December 1992.
```

- If a communications error occurred, a screen similar to that shown below will be displayed:

```
Husky Command Line File Transfer Utility Version 1.05
<C> Copyright Husky Computers Ltd. December 1992.

ERROR: Could not connect to handheld.
ECHO is off
A problem has occurred...
No remote attached - please check connection.
ECHO is off

Review Communications...
<R>etry the whole procedure if error(s) occurred, K_ENTER if all OK
```

If (R)etry is attempted, communications is retried. If anything else is entered, the communications process is exited.

- Text will show on the screen to show the user the progress of the transmission. It will end with a report of the free disk space on the HandHeld PC drive C:. The message

'Review Communications and Continue'  
'(R)etry, or anything else to proceed'

will show regardless as to whether communication was successful or not. If communication could not be established with the HandHeld or a communication error occurred, press 'R' to retry communications. If all is well press anything else.

## **Downloading to Any Other HandHeld Computers**

Selecting this option causes GyHost to shell out to DOS with the current directory being HandHeld under the GyHost directory. All the files to be transferred to the HandHeld computer are contained in this directory.

Using whatever software is supplied with the particular HandHeld computer, all the files in the HandHeld directory are transmitted to the HandHeld.

When this activity is complete and the DOS prompt shows, type: EXIT<Enter>

This will return the PC to the GyHost system.

Upon completion of the communication sub-system, GyHost returns to the 'UpLoad/DownLoad' Menu at which point the user may <Esc> back to the main menu. In certain cases, upon returning to the main menu, the databases are re-opened. This will show on the screen and is a normal process.

### **Using the GyHand System**

With the current directory as GY, type the following to start the GyHand: GY<Enter>

This will invoke the GyHand program and present the Main Menu to the user.

Refer to the GyHand User's Manual for instructions on how to use GyHand.

Bear in mind the following points when using the GyHand system:

- GyHand automatically reindexes the databases following UpLoad and/or DownLoad to/from the Host PC so the user does not have to be concerned with this. However, if the user wishes to ensure the databases are correctly sequenced:  
Type: GY REINDEX <Enter>
- The batch file for executing GyHand is GY.BAT. Following the running of GyHand, the batch file deletes all files that have no extension (i.e. ABCDEF.). This precautionary step means that the user must not rely on any user files with no extension being retained in the GY directory.
- It may be required to remove all the samples in the GY directory. To do this, invoke the program as follows:  
GyHand PURGE<Enter>  
{Caution this will erase all samples from the HandHeld PC}
- When GyHand is invoked with GY, the screen will show the databases being opened and/or reindexed. If this is not fully visible, or, if some of the menu appears to be off the top of the screen, it can be brought down by holding the paw key and <é> until the top line of the menu is visible.

## Upload Sample Data to Handheld

<Enter> “**2. UpLoad Sample Data to HandHeld**”.

The user is presented with a menu asking to select a HandHeld device - Ministry HandHeld or any other.

### ***Uploading from the Ministry HandHeld Computer***

- A set-up screen is presented to the user. The instructions presented here should be followed. They start with ensuring that the HandHeld is physically connected from either COM1 or COM2 on the host PC to the left-hand connector on the Husky. The user should follow the instructions given on the GyHost screen by entering the commands into the HandHeld. Before 'Y' is pressed to signal the setup is complete, the user should see the 'HCOM' screen on the HandHeld showing the logo.
- When 'Y' is pressed on GyHost, a selection box is presented. This asks the user to confirm/change communication parameters. Changing parameters should not normally be necessary after the initial setup. If changes are required, <Tab> will present a picklist from which a suitable value can be selected by cursoring to it and <Enter>. The initial value can be retained by escaping from this picklist. When 'Y' is entered for 'Save&Exit' the communication program takes over. The following is shown on a fresh screen:

```
Husky Command Line FileTransfer Utility Version1.05  
(c) Copyright Husky Computers Ltd. December 1992.
```

- If communication fails during the UpLoad, text similar to that shown below will appear:

```
Husky Command Line File Transfer Utility Version 1.05  
(C) Copyright Husky Computers Ltd. December 1992.  
  
ERROR: Could not connect to handheld.  
ECHO is off  
A problem has occurred...  
No remote attached - please check connection.  
ECHO is off
```

- At this point, the upload can be (R)etried for the same module, or the whole upload process can be aborted with <Esc>.
- Text on the screen to will show the user the progress of the transmission. It will end with a report of the free disk space on the HandHeld PC drive C:. The message

```

|
|
|Review Communications
|
|(R)etry the whole File UpLoad Procedure, or
anything else to proceed|
|_____
|_____

```

will show regardless as to whether communication was successful or not. If communication could not be established with the HandHeld or a communication error occurred, press 'R' to retry communications. If all is well, press anything else.

### **Uploading from any Other HandHeld Computers**

The 'Any Other' option is selected by cursoring to that option in the list and <Enter>.

This causes GyHost to shell out to DOS with the current directory being HandHeld under the GyHost directory. This directory is empty.

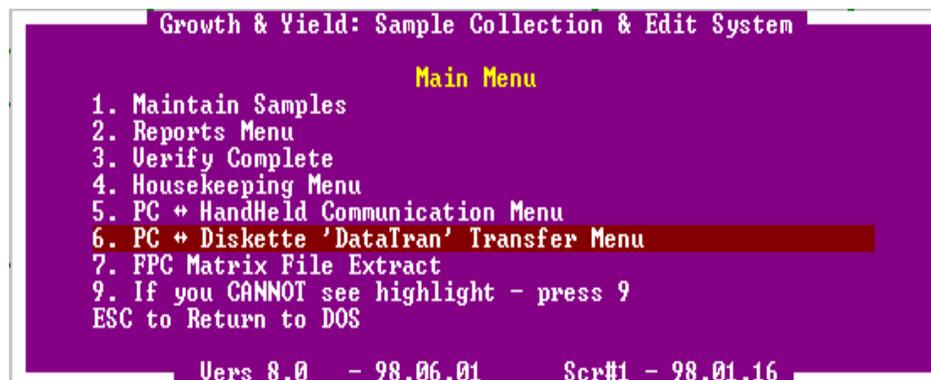
Using whatever software is supplied with the particular HandHeld computer, the following files are transferred from the HandHeld to the HandHeld directory:

- \*.DBF      All Files with the .dbf extension
- \*.          All Files with no extension

When this activity is complete and the DOS prompt shows, type:  
EXIT <Enter>

This will return the PC to the GyHost system.

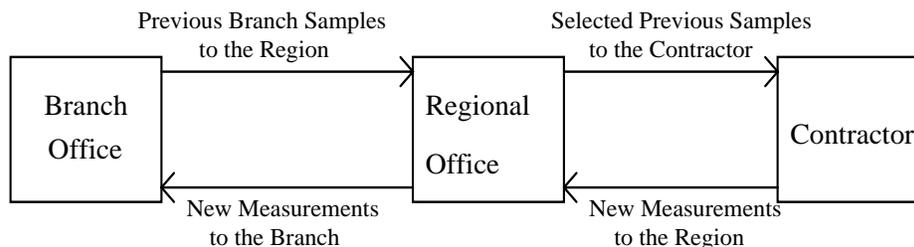
### **Screen 6. PC - Diskette 'DataTran' Transfer Menu**



## Features of the Sub-System

The DataTran sub-system provides the mechanism for transferring samples between Hard Drive directories and between Hard Drive directories and diskettes, displaying the contents of directories or diskettes, and deleting samples in the host directory on the Hard Drive.

When Samples are transmitted between the Branch and the Regions, and the Regions and individual contractors, they are contained on a diskette. The following diagram illustrates the movement of data among these three groups.



DataTran provides the mechanisms to achieve the above movement as well as facilities to assist the organization of the data within a users area of responsibility.

The Branch office creates the initial diskettes containing the previous measurements outside of the scope of this system. This data may, however, be processed at the Branch to distribute the samples among the various regional offices. This processing will be identical to that used at the regional offices to distribute the data among the contractors and will be described in that context later. Similarly, the diskettes received by the Branch office from the regional offices may be processed to review and/or consolidate the data and this process will be described in the context of the regional offices receiving the diskette(s) from the contractors for consolidation and/or reporting.

The Branch office will send to each regional office, diskettes containing the data for that region. The regional office will use the Import Previous Measurements DataTran facility to bring these data into his/her computer.

The regional office will transfer to a holding directory, one for each contractor, the samples to be re measured for that contractor. The Transfer Samples option from the DataTran menu will be used for this. Individual diskettes, one for each contractor, can be created directly from these holding directories using the 'Export Previous Measurements' option from the DataTran menu. The regional office will send this new previous samples diskette to the contractor.

The contractor will, upon receiving the 'previous samples' diskette, load it into his/her system using the 'Import Previous Measurements' DataTran option.

When the contractor has completed the measurements or re measurements, the 'Export New Measurements' DataTran option is used to create a diskette to return to the regional office.

The regional office uses the 'Reload Samples' option to load these new measurements into previously created sub-directories. The 'Transfer Samples' option is used to move these samples into the GyHost directory to enable the regional staff to review the new measurement data. If the data is incomplete, the regional office can use the 'Export New Measurements' DataTran option to put the samples onto a diskette and return them to the contractor. The previous measurements could be put onto a different diskette using the 'Export Previous Measurements' option as discussed above.

The regional office can use the 'Transfer Samples' facility to move all of his/her contractor's sample measurements into one directory and then use the 'Export New Measurements' DataTran option to put these on a diskette to be sent to the Branch office.

When this diskette is received at the Branch office, further consolidation can take place, before passing the resulting diskette out of this system to be input into the Ministry database.

## Structure of Data on the Hard Drive and Diskette

ALL data on the user's Hard Drive will have a database structure (.dbf and .ntx files) while ALL data on diskettes will have a flat file format.

DataTran will ensure that the above convention is maintained.

All database files on the Hard Drive are standard Clipper/dBASE structure with the accompanying index files (.ntx suffix).

The flat files will have a structure similar to their related database files, but without the database header or any field delimiters. Fields are fixed length character format according to the definition in the databases, and each record is delimited with a carriage return (ASCII 13).

<Enter> **“6. PC\_Diskette ‘DataTran’ Transfer Menu”**. The Transfer Menu allows seven options:

### 1. 'Import Previous Measurements From Diskette To Hard Drive'

- This menu item is selected when it is required to copy previous measurements into the system. This is required when the Regional office is importing the previous measurements from the Branch office or when a contractor is importing the previous measurements for his/her particular samples from the Regional office. During the execution of this option, ALL previous measurements for each selected sample are deleted and ALL new measurements are replaced.
- Next, the user is requested to insert the Original Branch Diskette as follows:
- When the diskette containing the previous measurements has been inserted and any key pressed, the user is asked to specify from where the previous data is coming and to where it is to be copied:
- The source diskette drive letter can be entered, or, alternatively, <Tab> can be pressed to show a list of possible drives. In this second case, the appropriate drive is selected by cursoring to it and <Enter> is pressed to select it. Whichever way the drive is selected, the choice is validated, and if it is invalid or the drive is empty, an error message will appear and re selection is required.
- The source directory on the diskette containing the previous measurement dataset is next requested. It can be entered by first pressing <\> followed by the path containing the directory. If the dataset is in the root directory, just <\> on it's own will suffice. Alternatively, <Tab> can be pressed to show a list of all directories on the diskette that contain a previous measurement dataset. The user can cursor to the appropriate directory and press <Enter> to select one of these. Whichever way the directory is selected, the choice is validated, and, if it is invalid, an error message will appear and re-selection is required.
- The destination hard drive or partition letter is requested. It can be entered or <Tab> can be pressed to pop up a picklist of all possible hard

drive/partitions available. The user cursor to the appropriate one and selects it with <Enter>. Whichever way the hard drive/partition is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.

- The destination directory on the hard drive/partition selected above which is to receive the previous measurements is next requested. It can be entered by first pressing <\> followed by the path defining the directory. <Tab> can be pressed to show a picklist of all possible directories on the particular hard drive/partition. The user can cursor to the required selection and select it with <Enter>. Whichever way the directory is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.
- The chosen selections are shown in the information window titled 'Source and Destination'.
- Following the selection of the source and destination drives and directories, the samples in the marker file (PspMeas.???) from the source drive-directory are shown in the 'Select Samples to Import' browse window. By default, all samples showing are set to (Y)es for copying. If any are NOT required, they can be de-selected by entering (N)o instead of (Y)es. The cursor up and down keys are used to navigate among the displayed samples. <Enter> will terminate the de-selection process.
- The program will now create temporary files from the flat diskette files in a temporary sub-directory TempDT. After this, it will import the selected samples into the destination drive/directory from the temporary databases. The user is kept informed of progress as these functions execute.
- Upon completion of the above, the program reverts to the DataTran menu.

At any point in the above process where user input is required, <Esc> can be pressed. The effect of this is in most cases, to return to the previous user input screen where information can be changed.

## 2. 'Export Previous Measurements From Hard drive To Diskette

This menu item is selected when it is required to copy previous measurement data from the Hard Drive to a diskette. This is required when the Branch Office is exporting particular previous measurements to the Regional Offices or when a Regional Office is exporting particular previous measurements to the Contractor.

- Next the user is requested to identify the drive and directory containing the previous measurements to be re-exported.
- The source hard drive or partition letter is requested. It can be entered or <Tab> can be pressed to pop up a picklist of all possible hard

drive/partitions available. The user cursor to the appropriate one and selects it with <Enter>. Whichever way the hard drive/partition is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.

- The source directory on the hard drive/partition selected above which contains the previous measurements is next requested. It can be entered by first pressing <\> followed by the path defining the directory. Alternatively, <Tab> can be pressed to show a picklist of all directories that contain the PspMeas.dbf marker file on the particular hard drive/partition. The user can cursor to the required selection and select it with <Enter>. Whichever way the directory is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.
- The above selections are shown in the information window titled 'Source and Destination'.
- Following the selection of the source drive and directory, the samples in the marker file from the source drive-directory are shown in the 'Select Samples to ReExport' browse window. By default, all samples showing are set to (N)o for copying. If any are required, they can be selected by entering (Y)es instead of (N)o. The cursor up and down keys are used to navigate among the displayed samples. Pressing <Enter> will terminate the selection process. The program checks that all selected samples are of the same type. If they are not, re selection is forced.
- If the Re-exporting previous measurements samples are to be incorporated into an existing diskette dataset, that diskette should be mounted here. If a new dataset is to be created for the Re-Exporting previous measurements, it is best to leave the diskette drive empty for now.
- The user is required to enter the drive and directory into which the Re-exporting dataset is to be merged. If a new dataset is to be created for the Re-Exporting previous measurements, the user should identify the drive, but set the directory to spaces.
- The destination diskette drive letter can be entered, or, alternatively, <Tab> can be pressed to show a list of possible drives. In this second case, the appropriate drive is selected by cursoring to it and <Enter> is pressed to select it. Whichever way the drive is selected, the choice is validated, and if it is invalid or the drive is empty, an error message will appear and re selection is required.
- The destination directory on the diskette containing the previous measurement dataset into which the ReExporting dataset is to be merged is next requested. It can be entered by first pressing <\> followed by the path defining the directory. If the dataset is in the root directory, just <\> on it's own will suffice. Alternatively, <Tab> can be pressed to show a

list of all directories on the diskette that contain a previous measurement dataset. The user can cursor to the appropriate directory and press <Enter> to select one of these. Whichever way the directory is selected, the choice is validated, and, if it is invalid, an error message will appear and re-selection is required. As mentioned above, if a previous measurement ReExporting dataset is to be created, the directory should be changed to spaces at this time.

- Following this process, the destination for the previous measurement ReExporting samples is shown in the 'Source and Destination' information window. In the case of creating a new diskette dataset, the drive will show, but the directory will be blank and the diskette file extension will show as '.x??', where 'x' is the sample type of the ReExporting dataset.
- Temporary database files are created in the TempDT sub directory for each of the flat files on the diskette. If the requirement is to create new ReExported diskette files, empty databases are created in TempDT. Messages will show on the bottom line of the screen showing the creation/copying process.
- The samples selected for export are shown in the 'ReExport Previous Measurements' window. If there was an existing dataset on the diskette which was selected, this dataset will show in an adjacent window captioned previous diskette measurement. If any of the datasets to be exported already exist in the diskette dataset, they are highlighted in the 'ReExport previous measurements window. This will enable the user to change the export? flag from (Y)es to (N)o if he or she wishes not to overwrite the specific diskette dataset sample with the new one.
- The ReExport Progress report shows the copying of the source data into the temporary directory TempDT.
- If a destination drive and directory has not yet been specified, it is requested.
- The destination diskette drive letter can be entered, or, alternatively, <Tab> can be pressed to show a list of possible drives. In this second case, the appropriate drive is selected by cursoring to it and <Enter> is pressed to select it. Whichever way the drive is selected, the choice is validated, and if it is invalid or the drive is empty, an error message will appear and re selection is required.
- The destination directory on the diskette which is to receive the previous measurements is next requested. It can be entered by first pressing <\> followed by the path defining the directory. If the dataset is in the root directory, just <\> on it's own will suffice. Alternatively, <Tab> can be pressed to show a list of all directories on the diskette that contain a previous measurement dataset. The user can cursor to the appropriate directory and press <Enter> to select one of these. Whichever way the

directory is selected, the choice is validated, and, if it is invalid, an error message will appear and re-selection is required.

- The destination extension for the diskette dataset is requested. The first alphabetic character must be as displayed, the next two characters are at the discretion of the user.
- The Source and Destination window is updated with the destination directory and dataset extension.
- Finally, the progress of the copying of the assembled ReExport dataset from TempDT to the Diskette is shown on the bottom line of the display.
- Upon completion of the above, the program reverts to the DataTran menu. At any point in the above process where user input is required, <Esc> can be pressed. The effect of this is, in most cases, to return to the previous user input screen where information can be changed.

### **3. 'Reload Samples from the Diskette to the Hard Drive.**

- This menu item is selected when it is required to re-load samples that have been exported. It is used when a Contractor wishes to re-load his previously exported measurements or when either the Regional office or Branch office wishes to load new measurements sent by a contractor or Regional office.
- The diskette and Hard Drive partition/drive and directory are identified using the window below.
- The source diskette drive letter can be entered, or, alternatively, <Tab> can be pressed to show a list of possible drives. In this second case, the appropriate drive is selected by cursoring to it and <Enter> is pressed to select it. Whichever way the drive is selected, the choice is validated, and if it is invalid or the drive is empty, an error message will appear and re selection is required.
- The source directory on the diskette containing the exported dataset is next requested. It can be entered by first pressing <\> followed by the path defining the directory. If the dataset is in the root directory, just <\> on it's own will suffice. Alternatively, <Tab> can be pressed to show a list of all directories on the diskette that contain a previous measurement dataset. The user can cursor to the appropriate directory and press <Enter> to select one of these. Whichever way the directory is selected, the choice is validated, and, if it is invalid, an error message will appear and re-selection is required.
- The destination hard drive or partition letter is requested. It can be entered or <Tab> can be pressed to pop up a picklist of all possible hard drive/partitions available. The user cursors to the appropriate one and selects it with <Enter>. Whichever way the hard drive/partition is

selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.

- The destination directory on the hard drive/partition selected above which is to receive the previously exported measurements is next requested. It can be entered by first pressing <\> followed by the path defining the directory. <Tab> can be pressed to show a picklist of all possible directories on the particular hard drive/partition. The user can cursor to the required selection and select it with <Enter>. Whichever way the directory is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.
- The above selections are show in the information window titled 'Source and Destination'.
- Those samples that are NOT required to be reloaded should have the Extract field changed from (Y)es to (N)o. Those that are required can be left as they are.
- Pressing <Enter> will cause the system to create temporary database files in the TempDT sub-directory for the selected samples from the flat files on the diskette.
- Note that if a remeasured sample is being reloaded, and the previous measurement is not not on the hard drive, both measurements will be listed on the screen as indicated below, and the system will require the previous measurement.
- The user may, change selected sample-measurements to (N)o. Under normal circumstances both measurements of each sample should be (Y)es. When the above window is satisfactorily set up, <Enter> is pressed.
- After the original Branch diskette has been inserted, any key is pressed and a window appears requesting the diskette drive and directory.
- The source diskette drive letter can be entered, or, alternatively, <Tab> can be pressed to show a list of possible drives. In this second case, the appropriate drive is selected by cursoring to it and <Enter> is pressed to select it. Whichever way the drive is selected, the choice is validated, and if it is invalid or the drive is empty, an error message will appear and re selection is required.
- The source directory on the diskette containing the original Branch dataset is next requested. It can be entered by first pressing <\> followed by the path defining the directory. If the dataset is in the root directory, just <\> on it's own will suffice. Alternatively, <Tab> can be pressed to show a list of all directories on the diskette that contain a previous measurement dataset. The user can cursor to the appropriate directory and press <Enter> to select one of these. Whichever way the directory is

selected, the choice is validated, and, if it is invalid, an error message will appear and re-selection is required.

- Following this, the system appends to the temporary databases in TempDT, the previous measurement records from the original diskette dataset.
- It only remains for the temporary databases to be incorporated into the specified destination directory. The progress of this is shown in the Re-Load Progress Report window.
- Upon completion of the above, the program reverts to the DataTran menu.

At any point in the above process where user input is required, <Esc> can be pressed. The effect of this is, in most cases, to return to the previous user input screen where information can be changed.

#### **4. 'Export New Measurements from Hard Drive to Diskette.'**

- This menu item is selected when it is required to copy new measurement data from the Hard Drive to a diskette. This is required when the Contractor is exporting the new measurements to the Regional office or when the Regional office is exporting new measurements to the Branch office. This process can add new sample measurements to or replace new sample measurements in an existing diskette dataset.
- Next the user is requested to identify the drive/partition and directory containing the new measurements to be exported.
- The hard drive or partition letter is requested. It can be entered or <Tab> can be pressed to pop up a picklist of all possible hard drive/partitions available. The user cursor to the appropriate one and selects it with <Enter>. Whichever way the hard drive/partition is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.
- The source directory on the hard drive/partition selected above which contains the new measurements is next requested. It can be entered by first pressing <\> followed by the path containing the directory. Alternatively, <Tab> can be pressed to show a picklist of all directories that contain the Sp\_Meas.dbf marker file on the particular hard drive/partition. The user can cursor to the required selection and select it with <Enter>. Whichever way the directory is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.
- The above selections are shown in the information window titled 'Source and Destination'.

- Following the selection of the source drive and directory, the samples in the marker file from the source drive-directory are shown in the 'Select Samples to Export' browse window. By default, all samples showing are set to (N)o for copying. If any are required, they can be selected by entering (Y)es instead of (N)o. The cursor up and down keys are used to navigate among the displayed samples. Pressing <Enter> will terminate the selection process. The program checks that all selected samples are of the same type. If they are not, re selection is forced.
- If the exporting samples are to be incorporated into an existing diskette dataset, that diskette should be mounted here. If a new dataset is to be created, it is best to leave the diskette drive empty for now.
- The user is required to enter the drive and directory into which the exporting dataset is to be merged. If a new dataset is to be created, the user should identify the drive, but set the directory to spaces.
- The destination diskette drive letter can be entered, or, alternatively, <Tab> can be pressed to show a list of possible drives. In this second case, the appropriate drive is selected by cursoring to it and <Enter> is pressed to select it. Whichever way the drive is selected, the choice is validated, and if it is invalid or the drive is empty, an error message will appear and re selection is required.
- The destination directory on the diskette containing the new measurement dataset into which the exporting dataset is to be merged is next requested. It can be entered by first pressing <\> followed by the path defining the directory. If the dataset is in the root directory, just <\> on it's own will suffice. Alternatively, <Tab> can be pressed to show a list of all directories on the diskette that contain a previous measurement dataset. The user can cursor to the appropriate directory and press <Enter> to select one of these. Whichever way the directory is selected, the choice is validated, and, if it is invalid, an error message will appear and re-selection is required. As mentioned above, if a new exporting dataset is to be created, the destination directory should be set empty at this time.
- For incorporating the measurements into an existing diskette dataset, temporary database files are created in the TempDT sub directory for each of the flat files on the diskette. If the requirement is to create a new exported diskette dataset, empty databases are created in TempDT. Messages will show on the bottom line of the screen showing the creation/copying process.
- The samples selected for export are shown in the 'Export Samples' window. If there was an existing dataset on the diskette which was selected, this dataset will show in an adjacent window captioned 'Floppy Samples' following the pressing of <Tab> to select that window. If any of the datasets to be exported already exist in the diskette dataset, they are highlighted in the 'Export Samples' window. This will enable the

user to change the export? flag from (Y)es to (N)o if he or she wishes not to overwrite the specific diskette dataset sample with the new one. <Enter> will begin extracting the specified sample measurements to the TempDT directory.

- The Export Progress report shows the copying of the source data into the temporary directory TempDT.
- If a destination drive and directory has not yet been specified, it is requested.
- The destination diskette drive letter can be entered, or, alternatively, <Tab> can be pressed to show a list of possible drives. In this second case, the appropriate drive is selected by cursoring to it and <Enter> is pressed to select it. Whichever way the drive is selected, the choice is validated, and if it is invalid or the drive is empty, an error message will appear and re selection is required.
- The destination directory on the diskette which is to receive the new measurements is next requested. It can be entered by first pressing <\> followed by the path defining the directory. If the dataset is in the root directory, just <\> on it's own will suffice. Alternatively, <Tab> can be pressed to show a list of all directories on the diskette that contain a previous measurement dataset. The user can cursor to the appropriate directory and press <Enter> to select one of these. Whichever way the directory is selected, the choice is validated, and, if it is invalid, an error message will appear and re-selection is required.
- The Source and Destination window is updated with the destination directory and dataset extension.
- Finally, the progress of the copying of the assembled export dataset from TempDT to the Diskette is shown on the bottom line of the display.
- Upon completion of the above, the program reverts to the DataTran **menu.**

At any point in the above process where user input is required, <Esc> can be pressed. The effect of this is, in most cases, to return to the previous user input screen where information can be changed.

##### 5. 'Transfer Samples Between Hard Drive Directories'.

- This menu item is selected when it is required to transfer or copy selected samples between directories on the Hard Drive. Transfer implies deleting the original after the copy process is completed; copy implies retaining the original after the copy is completed. The procedure is as follows:
- The source and destination drives and directories are specified.

- The source hard drive or partition letter is requested. It can be entered or <Tab> can be pressed to pop up a picklist of all possible hard drive/partitions available. The user cursor to the appropriate one and selects it with <Enter>. Whichever way the hard drive/partition is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.
- The source directory on the hard drive/partition selected above which contains the samples to be transferred is next requested. It can be entered by first pressing <\> followed by the path defining the directory. <Tab> can be pressed to show a picklist of all possible directories on the particular hard drive/partition. The user can cursor to the required selection and select it with <Enter>. Whichever way the directory is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.
- The destination hard drive or partition letter is requested. It can be entered or <Tab> can be pressed to pop up a picklist of all possible hard drive/partitions available. The user cursor to the appropriate one and selects it with <Enter>. Whichever way the hard drive/partition is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.
- The destination directory on the hard drive/partition selected above into which the samples are to be transferred is next requested. It can be entered by first pressing <\> followed by the path defining the directory. <Tab> can be pressed to show a picklist of all possible directories on the particular hard drive/partition. The user can cursor to the required selection and select it with <Enter>. Whichever way the directory is selected, the choice is validated and, if it is invalid, an error message will appear and re-selection is required.
- When the selection is complete, the user is asked if the samples are to be deleted from the source after the transfer is complete.
- All the samples from the source directory are presented in the transfer window with the Extract status defaulted to (N)o. Those samples to transfer will need to have their status changed to (Y)es.
- When all the required samples have had their Extract status changed, <Enter> is pressed and the transfer progress window is shown while the copying occurs. Following the copy process, if a transfer was requested (as opposed to a copy), confirmation of the deletion of the source samples is required.
- If (Y)es is pressed, a window shows the progress of the source deletion.
- Upon completion of the above, the program reverts to the DataTran menu.

At any point in the above process where user input is required, <Esc> can be pressed. The effect of this is, in most cases, to return to the previous user input screen where information can be changed.

## 6. 'Delete Samples From Host Directory'.

This menu item is selected when it is required to delete selected samples in the host directory.

- All samples in the directory that you are presently in, are presented in a window. The most recent measurement number for these samples is shown in brackets alongside the word ALL. ALL is shown to reinforce the fact that ALL measurements will be deleted.
- When those samples required to be deleted are selected by setting the extract status to (Y)es, <Enter> is pressed. This window asks the user if he or she is sure the deletion should proceed.
- A response of (Y)es will delete the required samples.
- Upon completion, the program reverts to the DataTran menu.
- At any point in the above process where user input is required, <Esc> can be pressed. The effect of this is, in most cases, to return to the previous user input screen where information can be changed.

## 7. 'Display Sample Identification'.

This menu item is selected when it is required to display samples on the Hard Drive or a Diskette.

- If a display of diskette samples is required, that diskette must be inserted prior to the entry of the drive and directory.
- The source diskette drive or the Hard Drive partition letter can be entered, or, alternatively, <Tab> can be pressed to show a list of possible drives and partitions. In this second case, the appropriate drive is selected from the displayed picklist by cursoring to it and pressing <Enter>. Whichever way the drive or partition is selected, the choice is validated, and if it is invalid or the drive is empty, an error message will appear and re selection is required.
- The source directory on the diskette or hard drive containing the dataset to be displayed is next requested. It can be entered by first pressing <\> followed by the path defining the directory. If the dataset is in the root directory, just <\> on it's own will suffice. Alternatively, <Tab> can be pressed to show a list of all directories on the diskette that contain a previous or current measurement dataset. The user can cursor to the appropriate directory and press <Enter> to select one of these. Whichever way the directory is selected, the choice is validated, and, if it is invalid, an error message will appear and re-selection is required.
- Having selected the source drive and directory, they are displayed in the 'Source' window.
- All the Samples that comprise the dataset on the selected drive - directory are now displayed in the Sample Display. The measurement number refers to the highest number in that dataset.
- Upon completion of the above, the program reverts to the DataTran **menu**.

At any point in the above process where user input is required, <Esc> can be pressed. The effect of this is, in most cases, to return to the previous user input screen where information can be changed.

## Screen 7. FPC Matrix File Extract

```
Growth & Yield: Sample Collection & Edit System
Main Menu
1. Maintain Samples
2. Reports Menu
3. Verify Complete
4. Housekeeping Menu
5. PC + HandHeld Communication Menu
6. PC + Diskette 'DataTran' Transfer Menu
7. FPC Matrix File Extract
9. If you CANNOT see highlight - press 9
ESC to Return to DOS
Vers 8.0 - 98.06.01 Scr#1 - 98.01.16
```

<Enter> “**7. FPC Matrix File Extract**” to prepare FPC Matrix Establishment Reports at the end of the field season.

The user is asked if samples are ready for extract and, if yes, is asked to select those samples for extraction.

Once done, the user has three choices:

1. **FPC Matrix File Extract** - Prepares reports of previously selected samples and asks the user for destination.

Note: If any missing data is found, the program automatically prepares option 3. FPC Matrix File Extract Error Report.

2. **Yearly Establishment List** - Prepares list of established samples which can be printed or seen on the screen.
3. **FPC Matrix File Extract Error Report** - Prepares a list of any missing data encountered which can be printed or seen on the screen.