

Base Station and Mobile User Guide

March 2023

ISMC Version 1.6

Manual Draft 5.2



Software so simple even a child can use it.

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About this Software

ISMC consists of three main parts:

1. **ISMC Host** is a web-based application that manages people, companies, contracts, projects, and samples.
2. **ISMC Base Station** is a desktop computer application that transfers data between ISMC HOST and ISMC Mobile. It also allows for data entry on desktops or Windows EFR's, validation of data, and production of reports.
3. **ISMC Mobile** is an electronic field recorder (EFR) application for data collection in the field. ISMC Mobile and EFR are used interchangeably to refer to the application.

This guide is focused on the ISMC Base Station and Mobile applications.

ISMC Base Station Installation

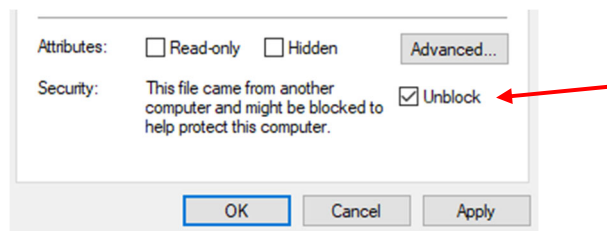
Initial Installation on a Windows PC

Note: You may require Administrator level access to install some of the applications.

Minimum requirements: Windows 7 or Windows 10 operating system.

1. Download *ISMC.BaseStation-Installer-<buildNumber>.zip* to your desktop from your contract manager. The <buildNumber> will be updated depending on the current version.

When an executable (.exe) file is downloaded, it may need to be 'unblocked' to provide permission for the computer to install it. Right-click on the file and select *Properties*. At the bottom of the *Properties* window click the *Unblock* box.



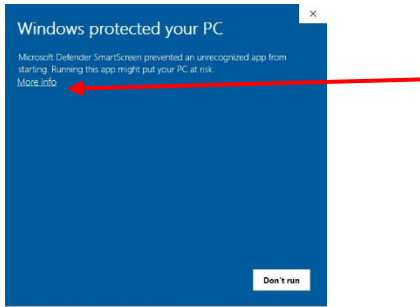
2. Unzip the file
3. Click on *setup.exe*:



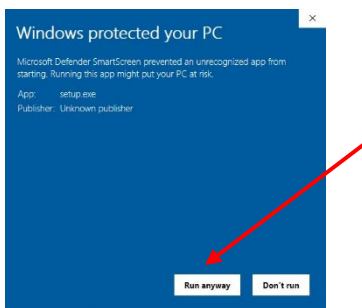
INSTALLATION NOTES:

- Installation may take up to 10 minutes to complete
- You may receive an error indicating the Windows Mobile Device driver is missing. **See the section on *Installing Windows Mobile Device Center***, complete the instructions, and return to this step
- You may receive an error regarding the database. **See the section on *Installing SQL 3.5 db***, complete the instructions, and return to this step

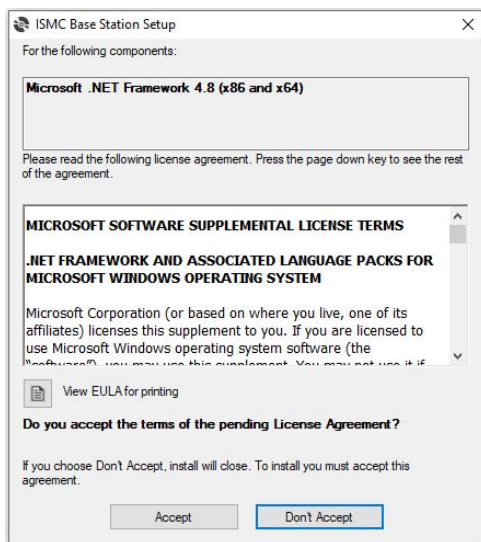
When you click on *setup.exe*, a warning may pop up. Click *More Info* to continue.



Then click *Run anyway*.

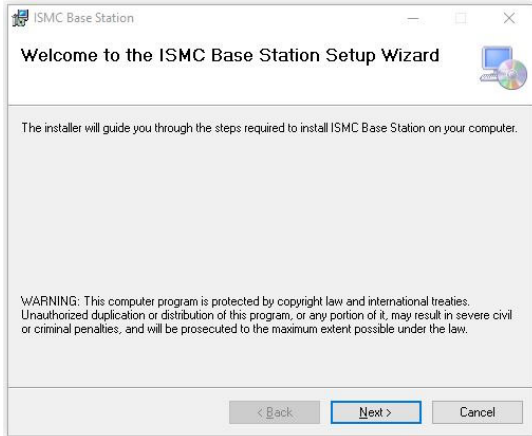


The *ISMC Base Station Setup* window will appear with the End-user License Agreement. Click *Accept*.

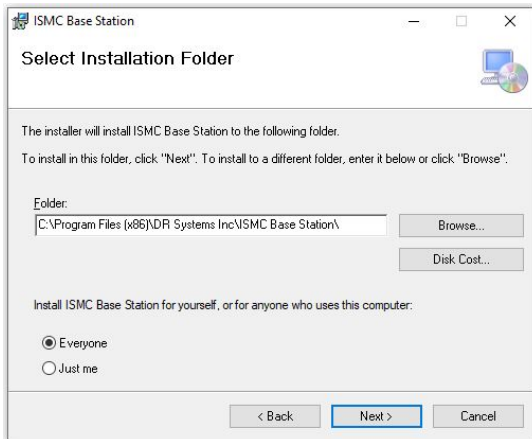


A warning will ask *Do you want to allow this app to make changes to your device?* Click *Yes*.

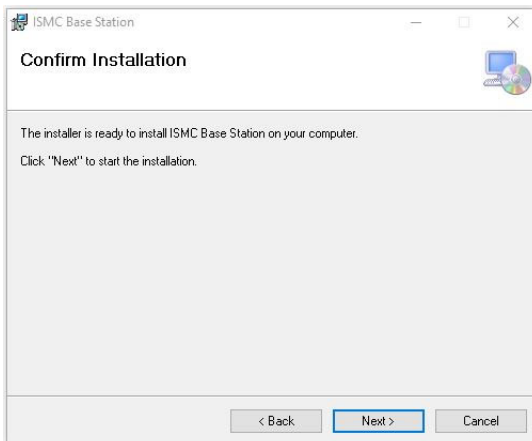
The ISMC installation wizard window will appear. Click *Next*.



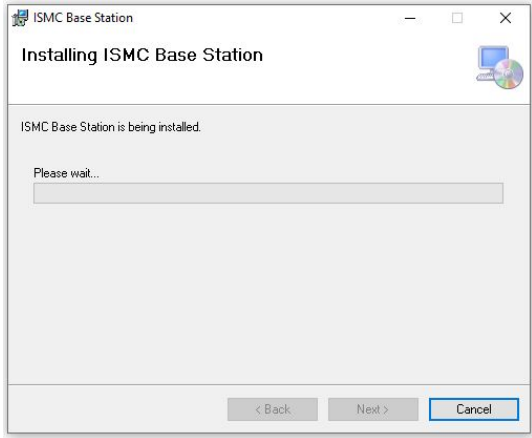
Then the *Select Installation Folder* window will appear. Click *Next*.



The *Confirm Installation* window will appear. Click *Next*.

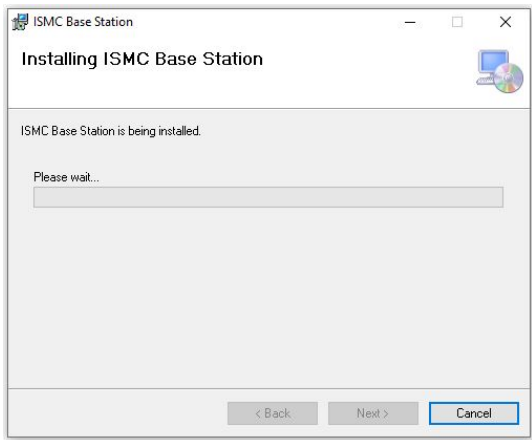


The installing ISMC Base Station window will appear.

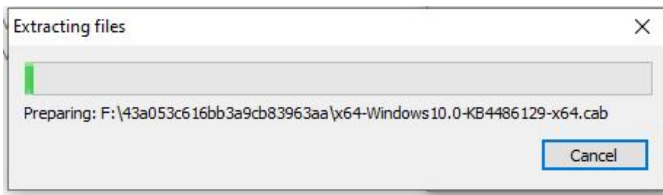


Another warning will ask *Do you want to allow this app from an unknown publisher to make changes to your device?* Click Yes.

The installing ISMC Base Station window will appear again.



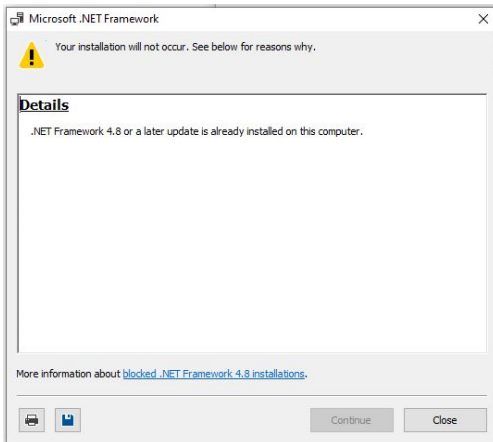
An *Extracting files* window will appear (this may take several minutes).



The *Microsoft.NET* icon will appear.

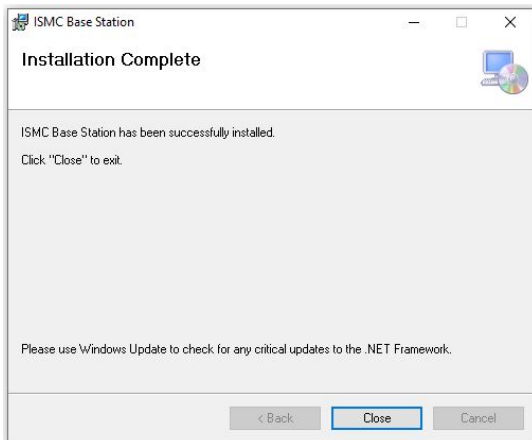


If Microsoft.net is up to date on your computer already, the following window will appear. Click *Close*.



If Microsoft.net is not up to date on your computer, click *Continue* to install.

After installation, the following window will appear. Click *Close*.



4. Click the ISMC Base Station icon to open ISMC Base Station.

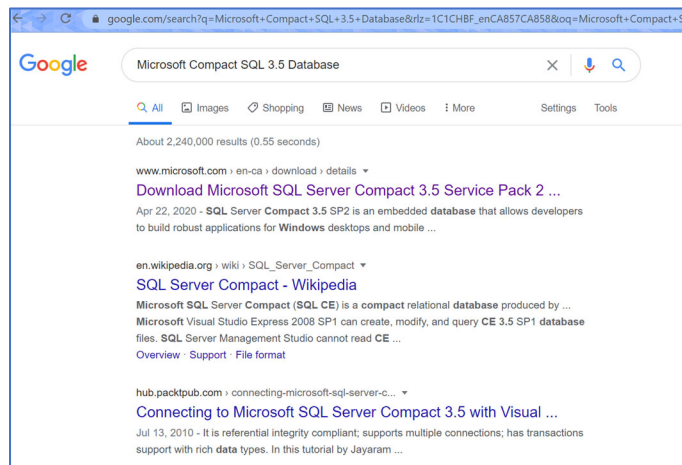


Note: Additional changes to Windows Mobile Device Center may be required before connecting the EFR to ISMC Base Station. See section *Windows Mobile Device Center Problems*.

Installing SQL 3.5 db

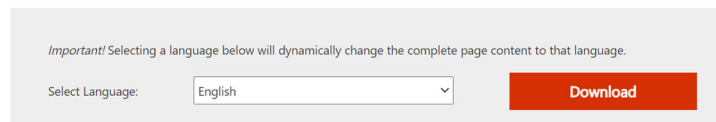
Microsoft does not enable direct links to their downloadable files, so the user must search for the information. Search for *Microsoft Compact SQL 3.5 Database* using your favourite search engine. The link you need to get to will usually be first in the search results.

<https://www.google.com/search?q=Microsoft+Compact+SQL+3.5+Database>



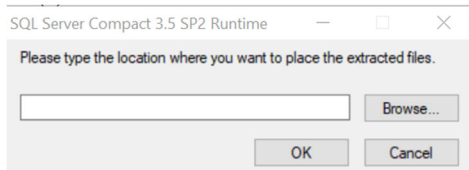
Select your language and download.

Microsoft SQL Server Compact 3.5 Service Pack 2 for Windows Desktop



This will download a file called: *SSCERuntime-ENU.exe*. Usually this saves in your Downloads folder.

- Run this EXE.
- **Note: this does not install the SQL files, it only extracts the installation files**
- It will ask you where you want to put the extracted files



- You may put these 2 extracted files anywhere – desktop, downloads, etc.



- Both files must be double clicked and installed to complete the SQL installation. Start with the 64 then then 86

Once completed, this will install the Microsoft Compact 3.5 Database files for the Base Station to operate successfully.

Installing Windows Mobile Device Center

Click on the following link to download Windows Mobile Device Center:

<http://www.drssystemsync.com/drsftp/ISMC/WindowsMobileDeviceCenterInstall.zip>

The download will start automatically and save to your Downloads folder.

Unzip the file called: *Windows Mobile Device Center Install*.

Right-click the *drvupdate-amd64.exe* file and choose “Run as Administrator” to start the install.

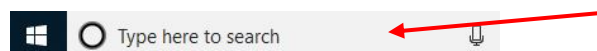
See section *Windows Mobile Device Center Problems* if additional steps are required.

Windows Mobile Device Center Problems

Windows 10 does not use the Windows Mobile Device Center required for the Base Station to connect to the EFR. Windows 10 periodically performs system updates, which may remove the Windows Mobile Device Center connectivity from your services menu.

If a Windows update has occurred, you may encounter errors with the Base Station due to this missing service. If this occurs, conduct the following steps. You may also have to restart the computer.

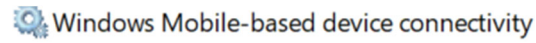
1. go to your Windows start menu and search for *Services*.



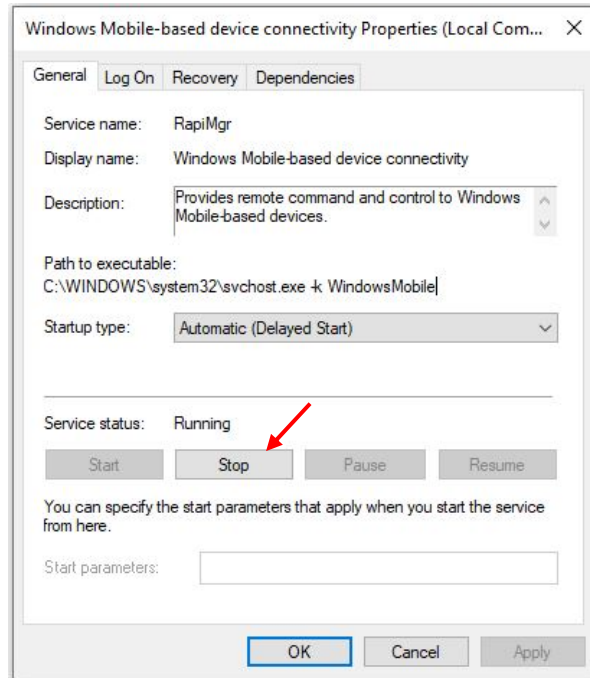
2. Open Services.



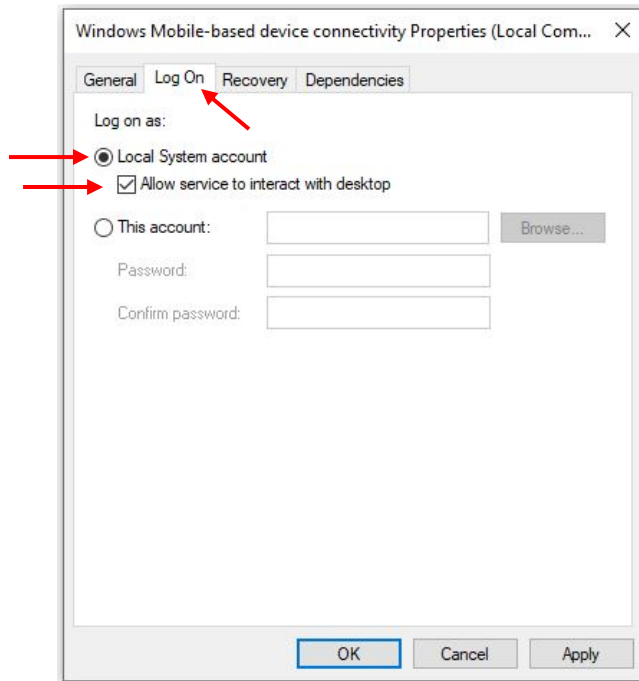
3. Navigate to *Windows Mobile-based device connectivity*. Double-click to open.



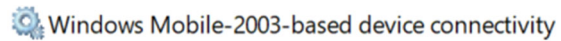
- Click *Stop*



- Navigate to the Log On tab
- Change settings to:
 - Local System account
 - Allow service to interact with desktop
- Click *OK*

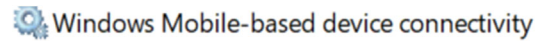


4. Navigate to *Windows Mobile-2003 based device connectivity*.

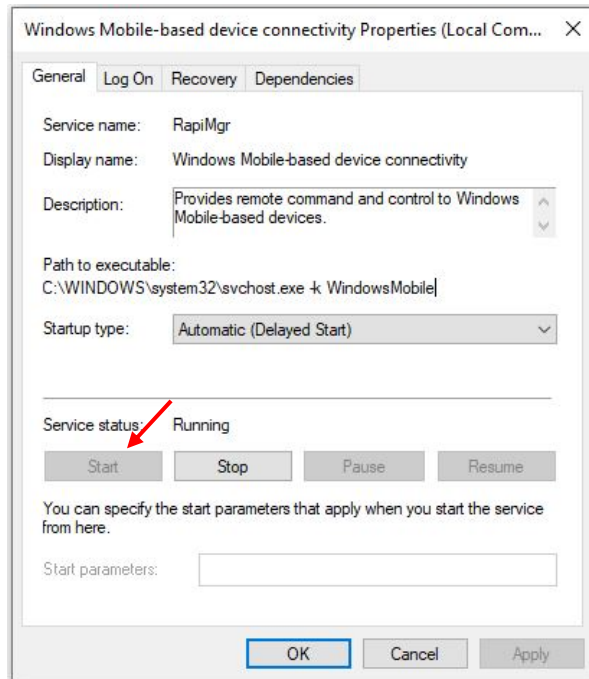


- Repeat step 3 settings for Windows Mobile-2003-based connectivity

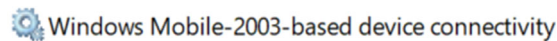
5. Navigate to *Windows Mobile-based device connectivity*.



- Click *Start*
- Click *OK*



6. Navigate to *Windows Mobile-2003 based device connectivity*.



- Repeat step 5 settings for Windows Mobile-2003-based connectivity

7. Click the ISMC Base Station icon to open ISMC Base Station.



Updating ISMC Base Station

When Base Station is updated, follow these steps.

1. Remove the existing ISMC Base Station using the windows system settings for Add/Remove Programs.
2. Navigate to: **C:\ProgramData\ISMIC** and delete the directory **\ISMIC**.

Note: Backup any ZIP files in a temporary directory before removing the ISMC directory. ISMC sample files are located in C:\ProgramData\ISMIC\Databases and start with ISMC.Domain...

3. Download *ISMC.BaseStation-Installer-<buildNumber>.zip* to your computer from your contract manager.
4. Note that the <build number> will be updated depending on the current version.
5. Unzip the file.
6. Click on *setup.exe*.



7. Proceed with installation. See section *Initial Installation on a Windows PC* for additional information.

Note: Base Station update requires re-installing ISMC Mobile on the EFR. Backup any samples on the EFR onto the PC before re-installing ISMC Mobile. Connect the EFR to the PC. ISMC sample files are located in Juniper Systems Allegro\Application Data\ISMC\Databases and start with *ISMC.Domain...*

Additional Instructions for use on a Trimble

Additional settings on the Trimble may be required to communicate with a desktop ISMC Base Station, or to manually access files on the Trimble.

Trimble Settings to Communicate with ISMC Base Station

1. From the Trimble home screen, click on Settings.



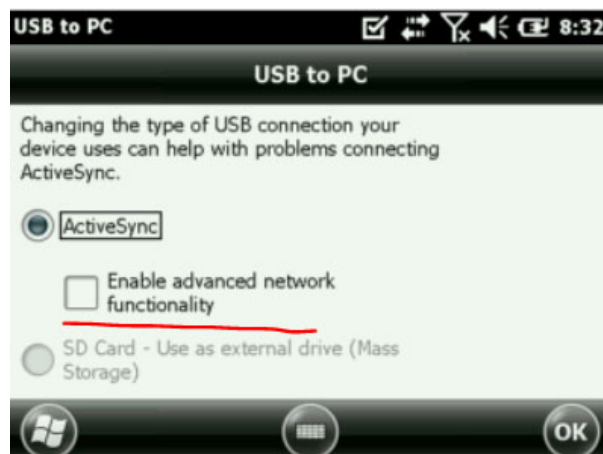
2. From the Settings screen, click on Connections.



3. From the Connections screen, click on USB to PC.



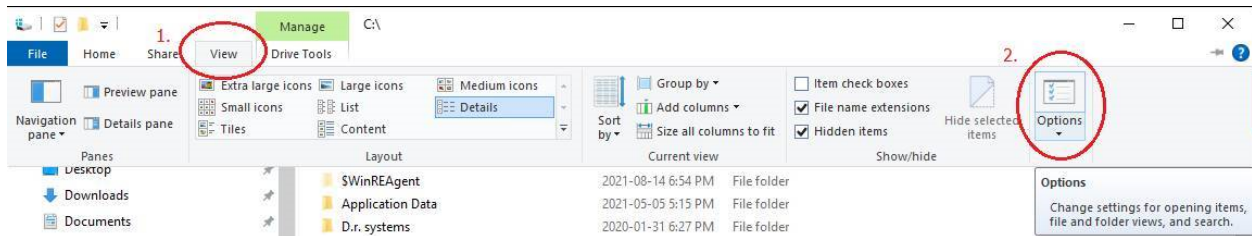
4. On the USB to PC screen, click ActiveSync and click the box Enable advanced network functionality.



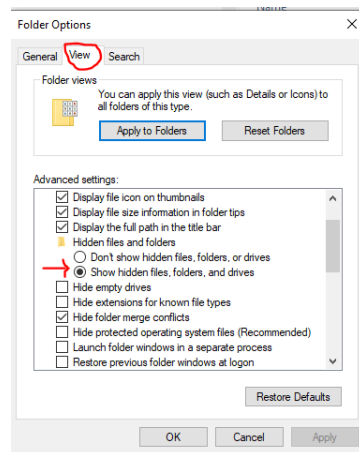
Manually Accessing Files on the Trimble

To access files (outside of the ISMC transfer process), File Explorer options must be changed on the Trimble.

Some folders on the Trimble, such as **C:\ProgramData**, are hidden by default. To make these folders available, open File Explorer on the Trimble. Click on View in the header. Then click Options and select “Change folder and search options”.



From the Folder Options window, click the View tab. Look in the list for Hidden files and folders and click to expand selections. Then click the circle for “Show hidden files, folders, and drives”.



Click OK and return to File Explorer.

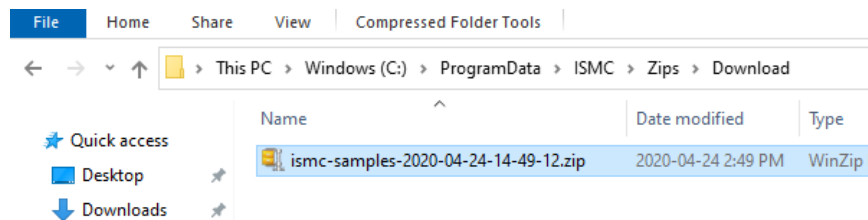
Starting ISMC Base Station

Importing Project Files into ISMC Base Station

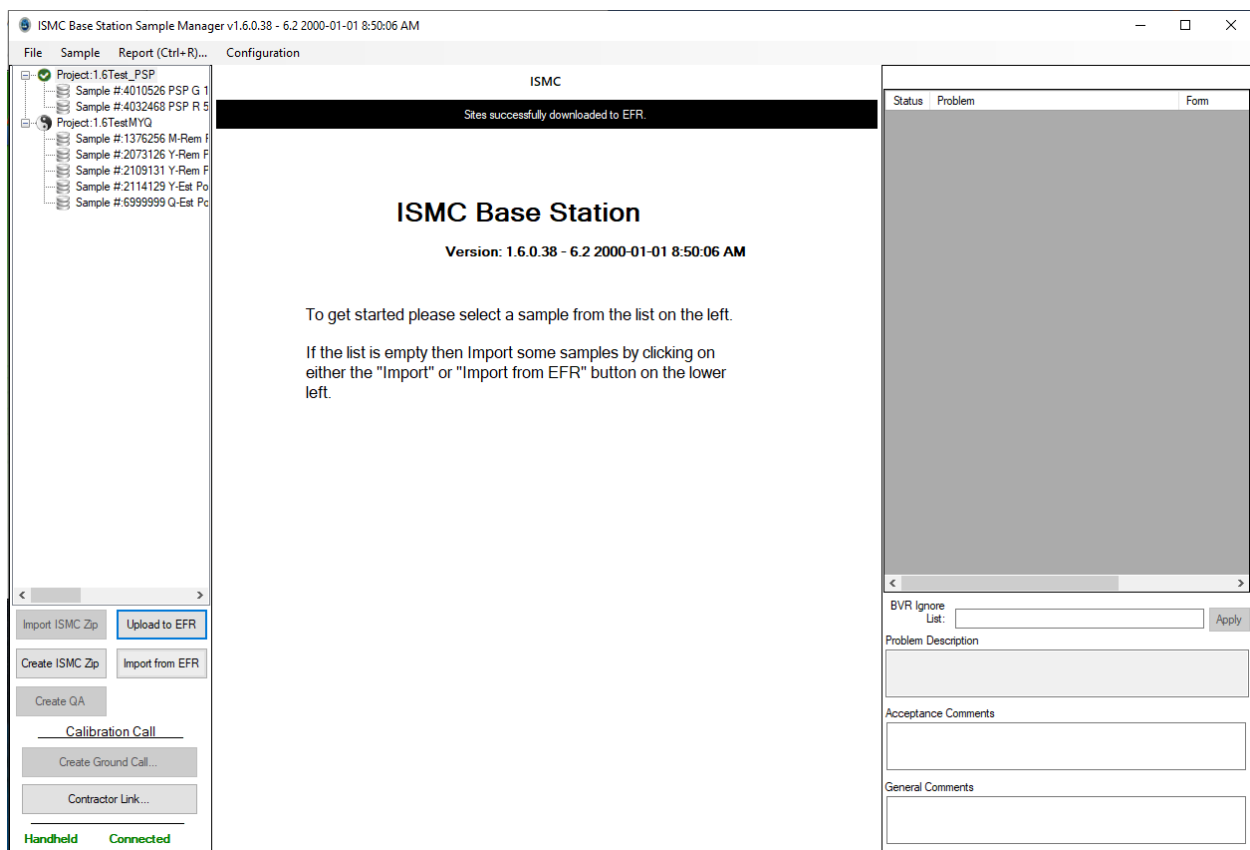
The Ministry Coordinator will supply the project ZIP file with the samples for the project. Save the ZIP file to a location on your computer and retain it as a backup.

With Base Station closed, copy the ZIP file into the ISMC directory.

C:\ProgramData\ISM\Zips\Download

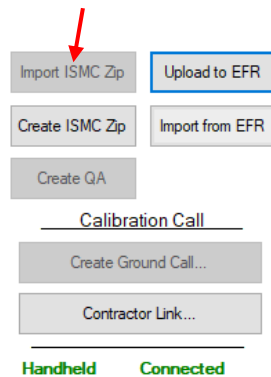


Then open Base Station.

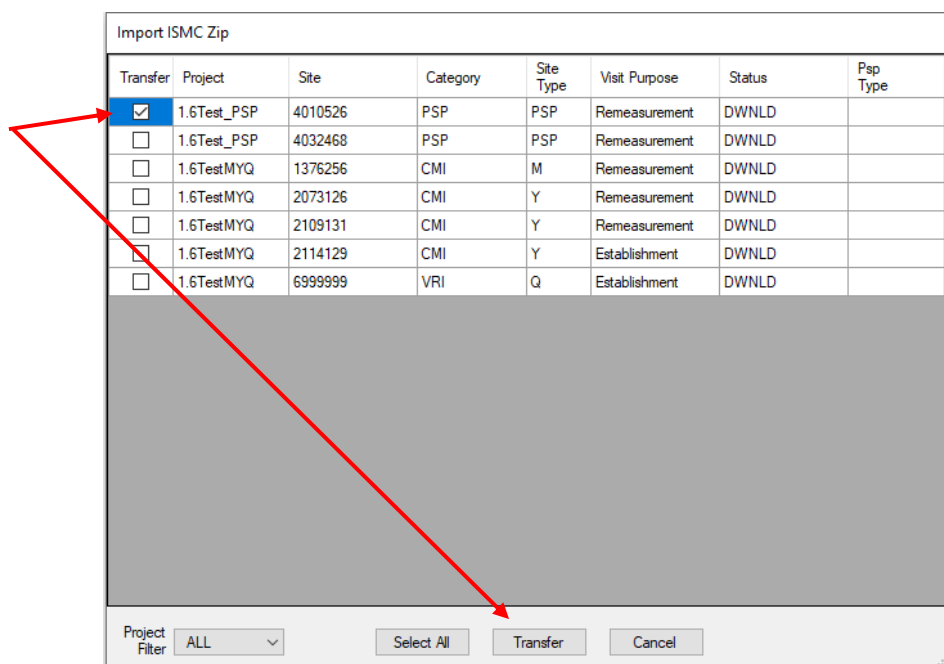


From Base Station:

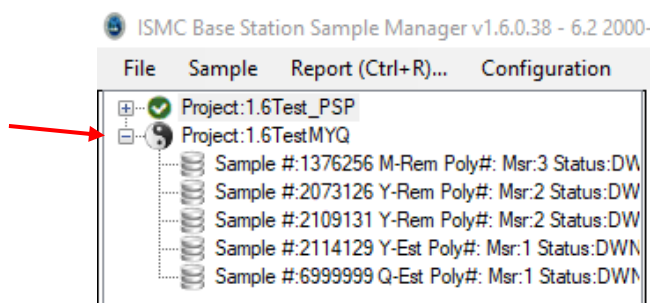
1. Click on the *Import Host Zip* button on the bottom-left corner of the Base Station screen, or **CTRL-I**.



2. When the *Download from Host* window opens, select the samples to import into Base Station by clicking on the *Transfer* box, or *Select All* button, then click the *Transfer* button on the bottom of the window.



3. The window closes when the files are transferred. This may take a few minutes.
4. The project will appear in the upper left window of Base Station. Click + to expand the projects to show samples. Click on a sample to open it in the centre screen.

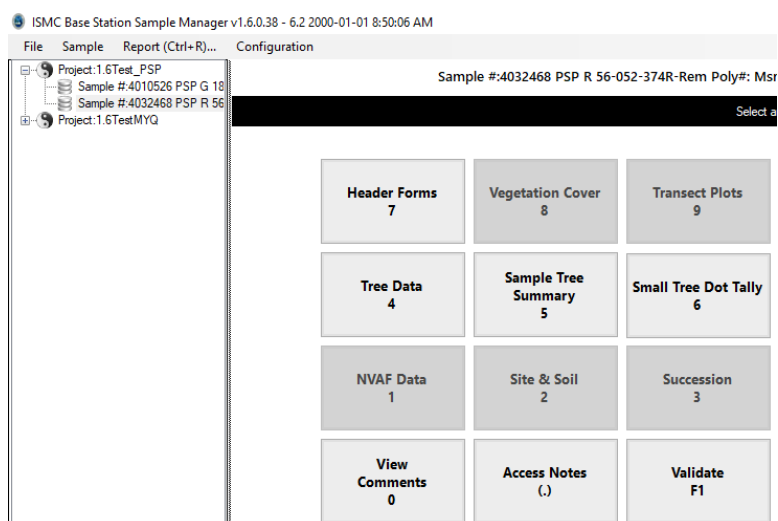


Working with a Sample in ISMC Base Station

Base Station is fully functional for data entry. To open a sample, select a project and sample, then click Configuration in the header and select *Data Collection Mode*, or **CTRL-O**, to expand the screen.

Instructions for use are in the section *Working with a Sample on the EFR*. Once in the sample, quick navigation keys, F commands, and additional shortcut keys are the same as the EFR. These are listed in the *Appendix* under *Base Station Shortcut Keys* and *Base Station and EFR Quick Navigation Keys*.

Additional instructions are in the sections *Validation*, *Managing Sample Data*, and *Reports*.



Working with a Sample on a Windows EFR (Trimble)

Base Station functions as a data entry platform on EFR's that use Windows as the operating system, such as the Trimble or Mesa. Open Base Station, select a project and sample, then click Configuration in the header and select *Data Collection Mode*, or **CTRL-O**, to expand the screen.

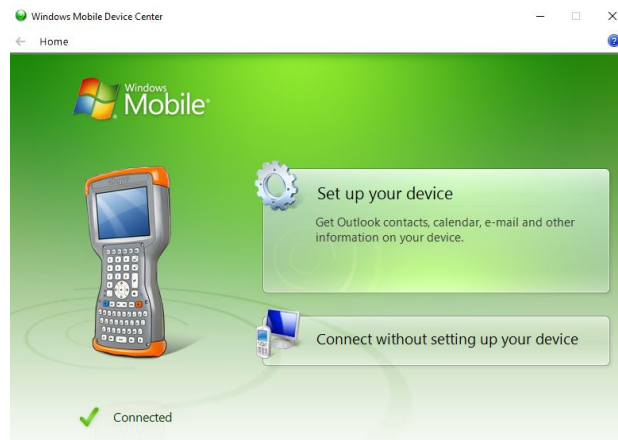
ISMC Mobile Installation on an EFR

Initial Installation

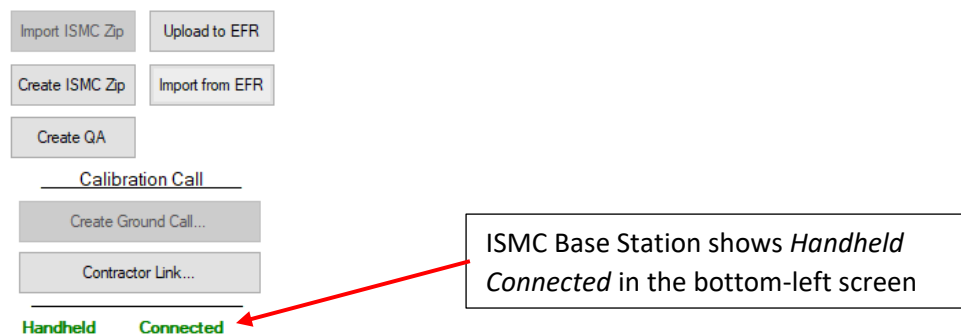
The Base Station must be installed on the PC and the EFR successfully connected to perform these tasks.

1. Connect the EFR to the PC using the USB cable.
2. Open Windows Mobile Device Center and wait for a connection. If Windows Mobile Device Center does not open or connect, see sections *Installing Windows Mobile Device Center* and *Windows Mobile Device Center Problems*.

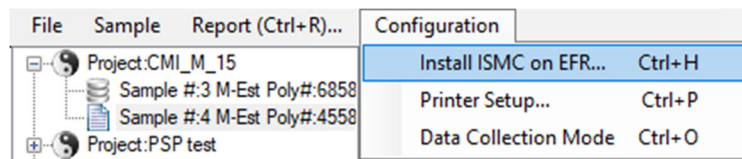
Note: Windows Mobile Device Center may open automatically.



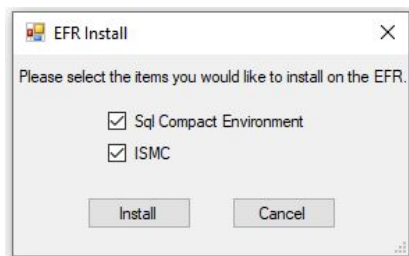
3. Open ISMC Base Station and check that the EFR is connected.



4. Select *Configuration* in the top-left corner of the Base Station window and click on *Install ISMC on EFR...*, or **CTRL-H**, to install on the EFR.



5. The *EFR Install* window will pop up. Click *Sql Compact Environment* and *ISMC*, then click *Install*.



Note: Installation takes several minutes and requires actions on the PC and EFR. Monitor both screens for instructions during installation. Complete EFR screen instructions first, then the PC.

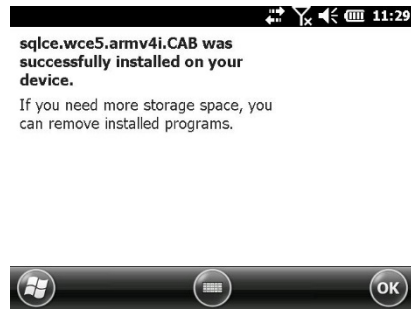
6. After a few minutes, the *Installing SQL Compact Environment* window will pop up on the PC. Do not click OK. Check the EFR for instructions.



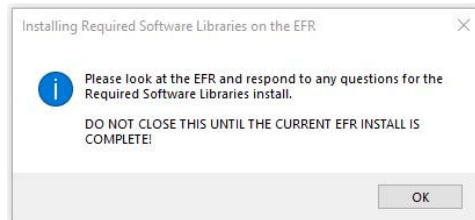
7. The *Installation* window will pop up on the EFR asking to remove the previous version of SQL. Click *OK* and wait for the process to complete.



8. When the process is complete on the EFR click *OK*. Then click *OK* on the PC.



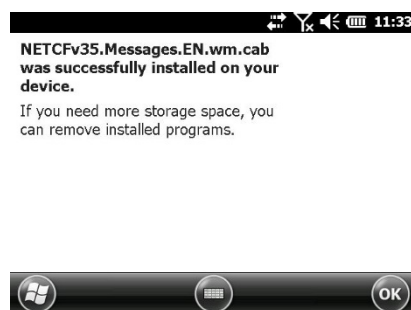
9. After a few minutes, the *Installing Required Software Libraries on the EFR* window will pop up on the PC. Do not click OK. Check the EFR for instructions.



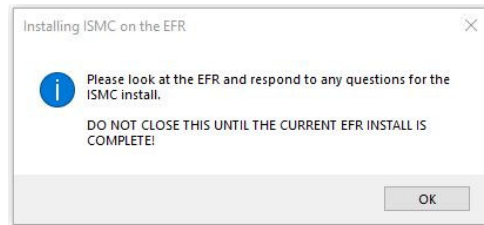
10. The *Installation* window will pop up on the EFR asking to remove the previous version of the BC MoF ISMC. Click *OK* and wait for the process to complete.



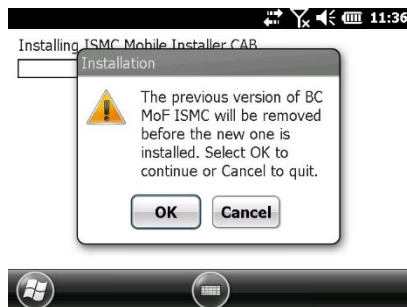
11. When the process is complete on the EFR click *OK*. Then click *OK* on the PC.



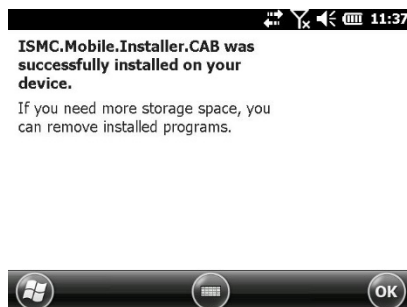
12. After a few minutes, the *Installing ISMC on the EFR* window will pop up on the PC. Do not click OK. Check the EFR for instructions.



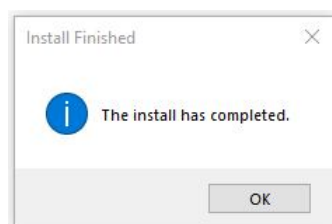
13. The *Installation* window will pop up on the EFR asking to remove the previous version of the BC MoF ISMC. Click *OK* and wait for the process to complete.



14. When the process is complete on the EFR click *OK*. Then click *OK* on the PC.



15. The PC will show the installation is complete. Click *OK* on the PC.



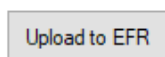
Deploying Project Files to the EFR

New projects and samples must be downloaded to Base Station before being deployed to the EFR.

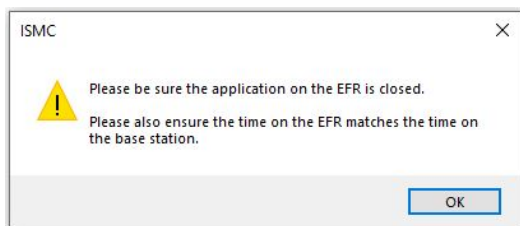
The Base Station must be open and the EFR successfully connected by *Windows Mobile Device Center* to the desktop to perform these tasks. **The EFR ISMC Mobile application must be closed.**

From the Base Station:

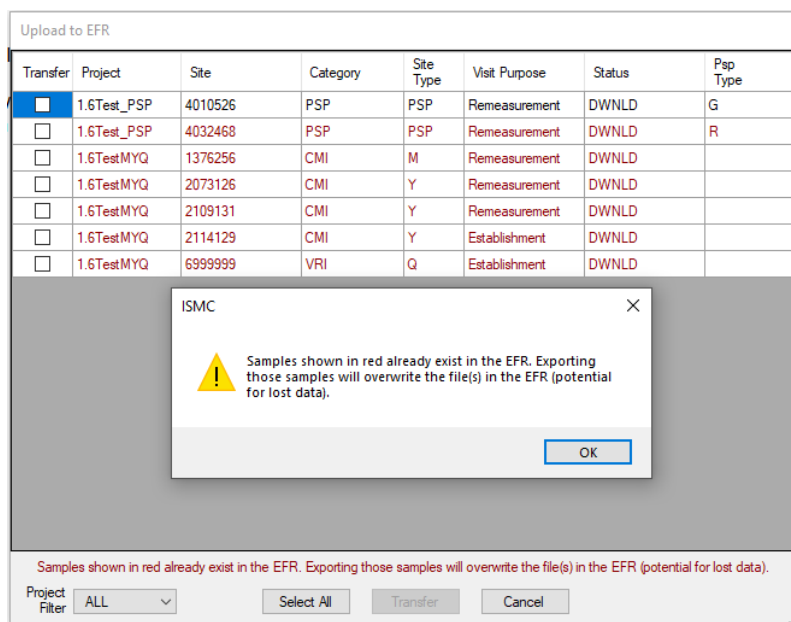
1. Click on *Upload to EFR* button in the bottom-left corner of the *Base Station*, or **CTRL-D**.



A warning box pops up reminding you to close the EFR ISMC Mobile and make sure computer system time and EFR time are aligned.



2. When the *Upload to EFR* window opens, a window pops up warning about samples listed in red already exist on the EFR. If selected for transfer, samples will be overwritten on the EFR by samples uploaded from Base Station.



Select samples to upload to the EFR by clicking on the *Transfer* box beside the sample, or click the *Select All* button, then click the *Transfer* button at the bottom of the window.

Transfer	Project	Site	Category	Site Type	Visit Purpose	Status	Psp Type
☒	1.6Test_PSP	4010526	PSP	PSP	Remeasurement	DWNLD	G
☐	1.6Test_PSP	4032468	PSP	PSP	Remeasurement	DWNLD	R
☐	1.6TestMYQ	1376256	CMI	M	Remeasurement	DWNLD	
☐	1.6TestMYQ	2073126	CMI	Y	Remeasurement	DWNLD	
☐	1.6TestMYQ	2109131	CMI	Y	Remeasurement	DWNLD	
☐	1.6TestMYQ	2114129	CMI	Y	Establishment	DWNLD	
☐	1.6TestMYQ	6999999	VRI	Q	Establishment	DWNLD	

Samples shown in red already exist in the EFR. Exporting those samples will overwrite the file(s) in the EFR (potential for lost data).

Project Filter: ALL Select All Transfer Cancel

3. The window closes when the file is transferred. This may take several minutes.

Files that appear in red text are files that already exist in ISMC Mobile.

ISMC Mobile Updates

ISMC Mobile is not updated automatically from Base Station. Whenever Base Station is updated, Mobile needs to be re-installed on the EFR. See section *Initial Installation*.

Note: Always backup files from the EFR before installing a new version of the software as samples on the EFR may be over-written during installation.

Working with a Sample on the EFR

This section is based on working on a full CMI sample, but most screens and features work the same in all sample types. Additional instructions for other sample types (Remeasurements, PSP's, VRI, Quality Assurance, and Ground Calls) are shown in other sections.

See the *Appendix for Base Station and EFR Quick Navigation Keys*.

Opening a Sample on the EFR

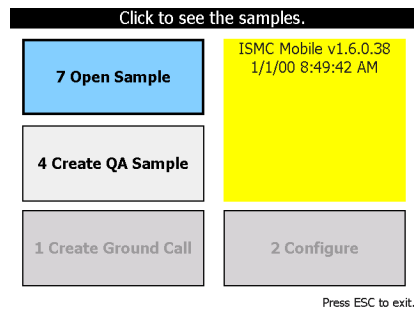
1. On the EFR, navigate to the applications screen by screen-clicking the Windows button in the bottom-left corner of the screen.



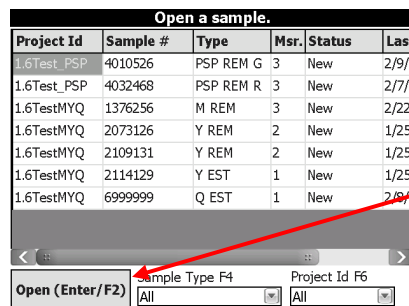
2. Scroll and locate the ISMC Mobile icon and screen-click to open.



3. From the ISMC Mobile main screen, click on *Open Sample* or press 7.



4. From the sample list, use the **ARROW** keys to navigate to the sample, then click **F2** or **ENTER** to open. Samples can be sorted by *Sample Type* and *Project ID* on the bottom of the screen.

A screenshot of the "Open a sample." screen. It features a table with sample data and sorting controls at the bottom. A red arrow points to the "Sample Type F4" dropdown menu.

Open a sample.					
Project Id	Sample #	Type	Msr.	Status	Last
1.6Test_PSP	4010526	PSP REM G	3	New	2/9/2
1.6Test_PSP	4032468	PSP REM R	3	New	2/7/2
1.6TestMYQ	1376256	M REM	3	New	2/22
1.6TestMYQ	2073126	Y REM	2	New	1/25
1.6TestMYQ	2109131	Y REM	2	New	1/25
1.6TestMYQ	2114129	Y EST	1	New	1/25
1.6TestMYQ	6999999	Q EST	1	New	2/9/2

Open (Enter/F2) Sample Type F4 Project Id F6
All All

When the sample is opened, the main menu screen will show the sample menu buttons. Screen-click, **TAB**, **ARROW** key, or enter the number of the button on the menu to open the main sample screen.

Buttons with grey text are not available for selection. *Tree Data* and *Sample Tree Summary* become active after *Plot Cluster* is completed.

Home		
Header Forms 7	Vegetation Cover 8	Transect Plots 9
Tree Data 4	Sample Tree Summary 5	Small Tree Dot Tally 6
NVAF Data 1	Site & Soil 2	Succession 3
View Comments 0	Access Notes (.)	Validate F1

Click ESC to return to the previous screen from any screen.

Header Forms



When *Header Forms* is highlighted, click **ENTER**, screen-click on the button, or press **7** for the header pop-up menu. Use **ARROW** keys to navigate and click **ENTER** on the menu item, or press a number, to open the data cells.

Data cells can be selected by screen-clicking on them, clicking right/left **TAB** to advance/reverse to cells. Cells with drop-down lists are activated by clicking **ENTER**, **ARROW** key to select, then click **ESC**.

Header Screen

From the pop-up menu, use the **ARROW** keys to navigate to *Header* and click **ENTER**, screen-click on the menu item, or click **7** to enter.



S#:1376256 Enter the survey start date.

Survey Date: 2/23/23 Crew Leaders

End Date: 2/23/23 Tree: Aixa Romon

BEC: MS xv

Site Access

Types:TRUCK,HIKE
Issues:GATE

☒ Stem Map Req. Helper: alberto Olkowski

Stand Disturbance: 0 - No significant da Helper:

Notes To Crew:

F10-Toggle : Previous

Click *Survey Date* for a calendar popup window. Click on *Tree*, *Helper*, and *Stand Disturbance* for drop-down menus. *Tree* is the crew leader responsible for data collection. The name must be selected from the drop-down menu. *Helper* is the assistant on the sample. The name can be typed in if it's not on the drop-down list but **first and last name is required** for a successful upload to Host.

Survey Date

S#:1376256 Enter the survey start date.

Survey Date: 2/23/23 Crew Leaders

End Date: 2/23/23 Tree: Aixa Romon

BEC: MS xv

Site Access

Types:TRUCK,HIKE
Issues:GATE

☒ Stem Map Req. Helper: alberto Olkowski

Stand Disturbance: 0 - No significant da Helper:

Notes To Crew:

F10-Toggle : Previous

Name Lists

S#:1376256 Select the crew responsible for tree

Survey Date: 2/23/23 Crew Leaders

End Date: 2/23/23 Tree: Aixa Romon

BEC: MS xv

Site Access

Types:TRUCK,HIKE
Issues:GATE

☒ Stem Map Req. Helper: alberto Olkowski

Stand Disturbance: 0 - No significant da Helper:

Notes To Crew:

F10-Toggle : Previous

Stand Disturbance

S#:1376256 Select a Stand Disturbance.

Survey Date: 2/23/23 Crew Leaders

End Date: 2/23/23 Tree: Aixa Romon

BEC: MS xv

Site Access

Types:TRUCK,HIKE
Issues:GATE

☒ Stem Map Req. Helper: alberto Olkowski

Stand Disturbance: 0 - No significant da Helper:

Notes To Crew:

F10-Toggle : Previous

Click on the *Type/Issues* button for a selection screen. Use the **ARROW** keys to select the *Access Type* and *Access Issue*, click **ENTER**. then click **ESC** to return to the *Header* screen. More than one selection is allowed for both *Access Type* and *Access Issue*.

Access Type	Access Issue
☒ Truck	☐ Inside a park
☐ All terrain Vehicle	☐ Across private land
☐ Helicopter	☐ On private land
☐ Boat	☒ Gate
☐ Airplane	☐ Across a reserve
☐ Bicycle	☐ On a reserve
☒ Hike > 1km	☐ Across federal land
☐ Other type of access	☐ On federal land
	☐ Other type of land

Comments can be added to most screen types. Click **F12** from a screen to open the comments screen.

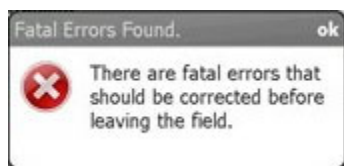
Comments: Site Visit Comments

Current: Site Visit

Press ESC key to Exit. F10-Toggle : Previous

Click **ESC** to return to the main screen.

When exiting a data screen, a *Validation Results* screen may appear showing a description of errors or warnings about the data in the exited screen. Use the **ARROW** keys to navigate the list and click **ENTER** to go to the cell containing the error or warning. Or click **ESC** to continue.



Click **ENTER** or screen-click **OK** to leave the screen and proceed to the main screen.

Navigation Screen

From the *Header Forms* pop-up menu, use the **ARROW** keys to navigate to *Navigation* and click **ENTER**, screen-click on the menu item, or click **4** to enter.



Navigation

Access Point: E:487585 N:5841860 z: u:10

Tie Pt.	SPP	Diam	Azim	Dist.	Tie Point GPS:
PL			125	1.53	E:487622 N:5841772 z:1321 u:10
Ref. Pt.	PL		125	1.53	

Offset Reference Pin: F10-Toggle : Previous

— IPC

AP -> IPC:	Azim	Dist.	Calc. Date	Calc. Declin	Declin
	153	82	23/07/15	16.7	

Ref. Pt -> IPC: 0 15

Offset GPS Location: GPS Type: GPS Identifier:

Intended IPC GPS Coordinates: E:487623 N:5841787 z:1326 u:10

Actual IPC GPS Coordinates: E: N: z: u:10

Click **ENTER** on the *SPP* cells to open the species list. Click on the first letter of the intended species to jump to that section of the list. Use the **ARROW** keys to navigate to the species. Click **ENTER** to select.

Azimuth and *Distance* refer to the bearing and distance from the reference tree to the reference pin.

In many cases the *Tie Pt* tree and the *Ref Pt* tree are the same. Click on the green arrow to copy data from the *Tie Pt* to the *Ref Pt*.

AP to IPC is automatically calculated when coordinates are entered for both the *Access Point* and the *IPC*.

Ref Pt to IPC is the bearing and distance from the reference point to the *IPC* pin. Generally these points are 15 metres at 0 degrees.

GPS Type is the type of GPS unit used to collect the coordinates at the IPC location. The options are:

- *DGPS* – data captured with a resource grade GPS unit
- *RGPS* – data captured with a recreation grade GPS unit
- *Intended* – unable to collect GPS data

GPS Identifier is the filename the data is saved as on the GPS unit. This must be entered.

GPS Coordinates:

- *Access Point* – can be collected with a recreation grade GPS unit and entered in the field
- *Actual IPC GPS Coordinates* – always entered at the office after data is differentially corrected
- *Tie Point GPS* – automatically entered; data is derived from the IPC and *Ref Pt* to *IPC* information

Click the *Access Point* box to open the screen to enter coordinates. *UTM*, *Easting*, *Northing*, and *Elevation* are require fields. Click *Set GPS* after the data is entered, and click **ESC** to return to the previous screen.

Update Time: 1/1/01 12:00:00 AM		
Satellites	HDOP	PDOP
0	NA	NA
Current	Average	
UTM: NA	NA	Copy 10
Easting: NA	NA	Cur. F5 487585
Northing: NA	NA	Copy 5841860
Elevation: NA	NA	Avg. F6
Reset Avg F3		

Plot Cluster Screen

Note: *Plot Cluster* data must be completed before *Tree Data* is accessible.

From the *Header Forms* pop-up menu, use the **ARROW** keys to navigate to *Plot Cluster* and click **ENTER**, screen-click on the menu item, or click **1** to enter.

7 Header
4 Navigation
1 Plot Cluster

Check if Walkthrough plot.

Plot Radius **Status**

☒ **Walkthrough Plot?**

Slope % **Aspect** **Pin Offset**
 Azim. **Dist.**

Subplot Radius **Subplot Area**

F10-Toggle : Previous

Plot Radius is completed by the Project Coordinator, and is 11.28 for CMI, YSM, and NFI.

Status is *Nil Tally* if there are no trees in the sample. Otherwise, the status is *Collected*.

Walkthrough Plot is checked if the sample is a YSM and it meets the requirements to be a walkthrough plot.

Enter *Slope %* and *Aspect*. Enter *Pin Offset* data, if applicable.

Subplot Radius and *Subplot Area* are already completed by the Project Coordinator.

Click **ESC** to return to the main screen.

Walkthrough Screen

YSM samples only.

From the *Header Forms* pop-up menu, use the **ARROW** keys to navigate to *Walkthrough* and click **ENTER**, screen-click on the menu item, or click **0** to enter.

7 Header
4 Navigation
1 Plot Cluster
0 Walkthrough

Note: The *Walkthrough Plot?* box must be checked in the *Plot Cluster* screen.

Enter bearing to plot center					
Bearing	Distance	Pin1	Pin2	Pin3	Pin4
51	0.26	50.3	231.7	49.7	232.3
73	10.29	45.9	280.1	7.2	318.8
121	6.76	103.6	318.4	84.2	337.8
176	7.81	155.7	16.3	132.2	39.8
212	6.35	195.7	48.3	177.7	66.3
216	6.62	198.9	53.1	180.1	71.9
236	2.94	228.5	63.5	220.9	71.1
328	6.64	310.9	165.1	291.9	184.1

Enter the *Bearing* and *Distance* then **TAB** through pins 1 to 4 or click the down **ARROW** key to add more *Bearings*.

If a sample was a walkthrough plot at a previous measurement, the data from the last measurement will be visible on the screen. It should be reviewed during the current measurement.

Click **ESC** to return to the main screen.

Click F12 to access a comment screen for each screen type (e.g. Header, Plot Cluster, Trees, etc.).

Tree Data



When *Tree Data* is highlighted, click **ENTER**, screen-click on the button, or click number **4** to enter.

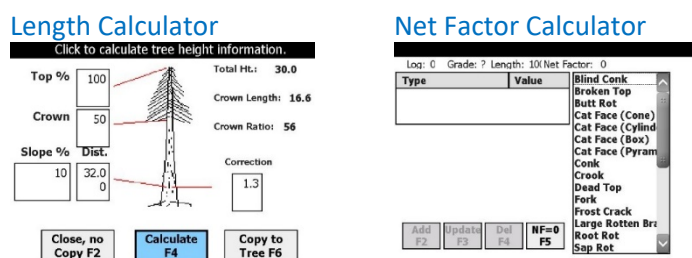
Note: *Plot Cluster* data must be completed before *Tree Data* is accessible.

See the *Appendix* for *Base Station* and *EFR Quick Navigation Keys*.

Data cells can be selected by screen-clicking on them, clicking right/left TAB to advance/reverse cells. Cells with drop-down lists are activated by clicking ENTER, ARROW key to navigate, then ENTER to select.

Click CTRL S at any time to save data.

Calculators are available by clicking **ENTER** on the *Length*, *Height to Live Crown*, or *Net Factor* cells:

Two screenshots of calculator screens. The "Length Calculator" screen shows fields for Top % (100), Crown (50), Slope % (10), Dist. (32.0), Total Ht. (30.0), Crown Length (16.6), Crown Ratio (56), and Correction (1.3). It has buttons for "Close, no Copy F2", "Calculate F4", and "Copy to Tree F6". The "Net Factor Calculator" screen shows a table with "Type" and "Value" columns, a list of tree damage types on the right, and buttons for "Add F2", "Update F3", "Del F4", "NF=0 F5", and "Sap Rot".

Top %	100	Total Ht.	30.0
Crown	50	Crown Length	16.6
Slope %	10	Crown Ratio	56
Dist.	32.0	Correction	1.3

Type	Value
Blind Conk	
Broken Top	
Butt Rot	
Cat Face (Cone)	
Cat Face (Cylind)	
Cat Face (Box)	
Cat Face (Pyram)	
Conk	
Crook	
Dead Top	
Fork	
Frost Crack	
Large Rotten Br	
Root Rot	
Sap Rot	

A drop-down list of options is available by clicking **ENTER** on the following cells:

- Species
- L/D/S/F
- Crown class
- Damage agent
- Loss indicator

Species lists can be navigated quickly by entering the first letter of the species code. The list will jump to species that start with that letter (listed alphabetically), then ARROW down to the specific selection. For example, Douglas fir. Open the species list, click F, then ARROW down to FD, click ENTER to select.

All cells can be directly filled by entering the alpha codes on the keypad.

L/D/S/F and *Crown Class* can be quickly selected from the cell by selecting numbers **7**, **4**, **1**, or **0**. For example, enter number **7** in *L/D/S/F* and *L/S* will be entered. For *Crown Class*, enter number **0** and *S* is entered. The highest numbers correspond to the highest status code in each cell and each decrease, respectively.

Click **ENTER** the following cells to toggle the options available:

- DBH M/E
- Len M/E
- Brkn Top
- Res.
- Walk
- Mode

Tree List Screen

The tree list screen shows some details for several trees on the screen. The black banner at the top of the tree list screen shows a description of the cell highlighted. The current row is shown in blue.

Tree List

IPC #1 3/124 Tree Species Value:PL Desc.:lodgpole

Tree	S	SPP	L/D S/F	DBH	DBH M/E	Len	Len M/E	CC	Ht. L.C.	Brkn Top	Res.	Walk
76	1	PL	LS	9.1	M	11.6	M	I	9	N	-	
76	1	PL	LS	14.0	M	16.0	M	I	9	N	-	
77	1	PL	DS	17.9	M	8.3	M	-	-	Y	-	
77	1	PL	DS	17.9	M	8.3	M	-	-	Y	-	
78	1	PL	DS	11.5	M	7.8	M	-	-	Y	-	
78	1	PL	DS	11.5	M	7.8	M	-	-	Y	-	
79	1	PL	LS	14.1	M	13.2	M	C	8	N	-	
79	1	PL	LS	14.1	M	13.2	M	C	8	N	-	
80	1	PL	DS	12.6	M	12.8	M	-	-	N	-	

Tree Notes

TAB to advance to the next cell or click **F4** to skip to the next section. Click **F6** to toggle between *Tree Attributes*, *Loss Indicator*, *Damage Agent*, and *Net Factor* views. The main tree measurements remain visible on all screens.

Loss Indicator

IPC #1 3/124 Enter the frequency.

Tree	S	SPP	L/D S/F	DBH	DBH M/E	Len	Len M/E	Loss Ind	Loss Ind	Loss Ind	Loss Ind
76	1	PL	LS	9.1	M	11.6	M	CRO	10.3	1	SCA
76	1	PL	LS	14.0	M	16.0	M	CRO	10.3	1	SCA
77	1	PL	DS	17.9	M	8.3	M	BTP	8.3	1	
77	1	PL	DS	17.9	M	8.3	M	BTP	8.3	1	
78	1	PL	DS	11.5	M	7.8	M	BTP	7.8	1	
78	1	PL	DS	11.5	M	7.8	M	BTP	7.8	1	
79	1	PL	LS	14.1	M	13.2	M	SCA	1.2	7.5	9
79	1	PL	LS	14.1	M	13.2	M	SCA	1.2	7.5	9
80	1	PL	DS	12.6	M	12.8	M	SCA	0.9	1.8	4

Tree Notes

Damage Agent

IPC #1 3/124 Damage Agent Value:UBT Desc.:Unknown

Tree	S	SPP	L/D S/F	DBH	DBH M/E	Len	Len M/E	Damage Agent	Damage Agent	Damage Agent	Damage Agent
76	1	PL	LS	9.1	M	11.6	M	UCR	DSG	SC	
76	1	PL	LS	14.0	M	16.0	M	UCR	DSG	SC	
77	1	PL	DS	17.9	M	8.3	M	IBM	GY	UBT	
77	1	PL	DS	17.9	M	8.3	M	IBM	GY	UBT	
78	1	PL	DS	11.5	M	7.8	M	IBM	GY	UBT	
78	1	PL	DS	11.5	M	7.8	M	IBM	GY	UBT	
79	1	PL	LS	14.1	M	13.2	M	U	DSG	SC	
79	1	PL	LS	14.1	M	13.2	M	U	DSG	SC	
80	1	PL	DS	12.6	M	12.8	M	U	SO		

Tree Notes

Net Factor

IPC #1 3/124 Enter percent sound.

Tree	S	SPP	L/D S/F	DBH	DBH M/E	Len	Len M/E	Log 1	Log 2	Log 3	Log 4
76	1	PL	LS	9.1	M	11.6	M	99	100		
76	1	PL	LS	14.0	M	16.0	M	99	100		
77	1	PL	DS	17.9	M	8.3	M	99	99		
77	1	PL	DS	17.9	M	8.3	M	99	99		
78	1	PL	DS	11.5	M	7.8	M	99	99		
78	1	PL	DS	11.5	M	7.8	M	99	99		
79	1	PL	LS	14.1	M	13.2	M	7	100	99	100
79	1	PL	LS	14.1	M	13.2	M	7	100	99	100
80	1	PL	DS	12.6	M	12.8	M	99	100		

Tree Notes

Residual and *Walkthrough* cells are accessed by clicking **TAB** from the *Brkn Top* cell.

IPC #1 59/65 Tree Details

Tree	S	SPP	L/D S/F	DBH	DBH M/E	Len	Len M/E	CC	Ht. L.C.	Brkn Top	Res.	Walk
742	7	SX	LS	10.5	M	6.5	M	S	1	N	-	
742	7	SX	LS	15.0	M	11.0	M	S	1	N	-	W
743	7	SX	LS	10.7	M	7.4	M	C	1	N	-	
743	7	SX	LS	15.0	M	12.0	M	C	1	N	-	O
744	7	SX	LS	11.8	M	7.7	M	C	1	N	-	
744	7	SX	LS	11.8	M	7.7	M	C	1	N	-	
745	8	SX	LS	15.2	M	8.2	M	C	1	N	-	
745	8	SX	LS	15.2	M	8.2	M	C	1	N	-	
746	8	SX	LS	10.6	M	7.1	M	C	1	N	-	

Tree Notes

Stem mapping cells are available by clicking **TAB** right from Walkthrough or click **CTRL-A** for a stem mapping screen that locks out all other cells. Click **CTRL-A** to return to the tree list screen.

Use **ARROW** keys up or down to navigate to the next or previous tree. **ARROW** down to add a tree to the end of the list. Click **CTRL-N** to insert a tree in an existing list. Click **CTRL-L** to delete a highlighted tree.

Click **ESC** to return to the main screen.

Tree Details Screen

Click **F5** from the *Tree List* screen to open the *Tree Details* screen for a tree. The tree details screen shows all attributes for a single tree on one screen. The black banner at the top of the tree details screen shows a description of the cell highlighted.

Tree Details

Enter the percent sound.

Tree	Res	Wal	Plan	T. S.	Species	L/D	DBH	M/ft	Len
76				1	PL	L S	14.0	M	16.0
M/ft	CC	Ht.	LC	Brkn Tp	Ctrl-F5 Sample		Azim	H. Dist	
M	I	9	N				28	5.18	

Loss Indicators			
Code	From	To	Fq
CRO	10.3		1
SCA	9.1	9.2	1

Damage Agents		Net Factor	
Dmg	Sev	Len	%s
UCR		99	100
DSG	SC		

Mode

Tree Notes

TAB to advance or click **F4** to skip sections. Click **F4** to toggle between *Tree Attributes*, *Damage Agents*, *Net Factor*, and *Loss Indicators*.

Click **F9** to advance to the next tree. Click **F8** to return to the previous tree. Click **F3** to add a tree.

Click **F5** to return to the *Tree List* screen.

Click **ESC** to return to the main screen.

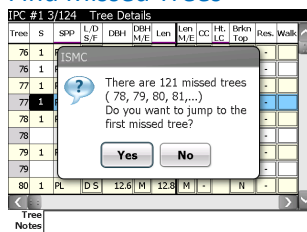
Form Commands – F1 Screen

From the tree list or tree details, click **F1** for the following options:

Find Missed Trees 9			
Leading Sp. Calc. 4	Stem Map Gfx 5	Plot Notes 6	
Insert Tree 1	Delete Tree 2	Tools 3	
Canned Notes 0			
Copy Down F3	Next Section F4	Detail View F5	

The following options are available on *Form Commands – F1 Screen*:

Find Missed Trees



Leading Sp. Calc.

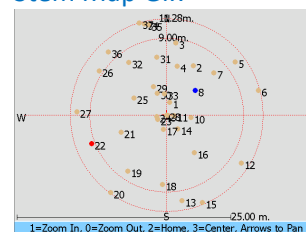
Top: N/E #74 PL Dbh 16 SPP%: PL100

Quadrant	Type	Sector	Tree#	Species	DBH	CC
N/E	T	1	74	PL	16.0	C
N/E	L	2	90	PL	21.0	C
S/E	L	3	67	PL	23.0	C
S/W	L	5	60	PL	20.0	C
N/W	L	6	57	PL	18.0	C

Displayed Quadrant: **All F2** N/E F3 S/E F4 S/W F5 N/W F6

Press ESC to exit. Ctrl-F5 => Sample Tree

Stem Map Gfx



Plot Notes

Comments: Tree Damages Comments 5:37

Parent: Plot Measurement
Current: Tree Detail - Tree#: 8, Species: WS

What a wonderful day.

Plot Meas. F4

Press ESC key to Exit. Toggle Status

Canned Notes

Notes (ENTER to select, ESC to cancel)

Height checked

DBH checked

Loss Indicator checked

Species checked

Tagging sector checked

Damage agent checked

Lean

Insert Tree

Insert (F3)
1

Delete Tree

Delete Tree
2

Tools

Tools
3

F Key Commands

Prev Tree F8	Next Tree F9	Next Section F4	Detail View F5	
-----------------	-----------------	--------------------	-------------------	--

Leading Species Calculator (LSC) provides the species composition for the plot, and a list of suggested sample trees. The LSC only suggests the trees. The trees must be identified as sample trees in the sample tree screen. Click **CTRL-F5** on a tree in the LSC to open the sample tree screen. Click **F1** and select *Leading Sp. Calc.* to return to the LSC list.

Plot Notes opens notes for a specific tree. Click **F4** to open notes for the plot level. Notes can also be access from the tree list or details screens by clicking **F12**.

From the *Form Commands* page, click *Tools*, or click **3** for tools options.

Slope Calculator 7	Butt Rot Guide Table 8	Random Numbers 9
Net Factor Calculator 4	(5)	(6)
(1)	Auto generate Azimuth 2	(3)
(0)	(-)	(.)

The following options are available in *Tools*:

Slope Calculator

Enter the slope distance.

Slope Distance	Slope %
Horiz Dist. () from	
Slope Dist. () from	

Butt Rot Guide

ButtRotGuide

Ratio	Length	Deduction	Gade-Cons.
1/4	1.8 - 2.4m	0.2m	0.6m
1/2	3.6 - 4.2m	0.4m	1.8m
3/4	5.4 - 6.0m	1.2m	3.6m
4/4	7.2m	2.4m	4.2m

Press ESC to exit.

Random Number Table

Random Numbers

Plot Seed: 91 Bearing: 76 Bearing +90: 166

Random 1...

14	11	3	1	15	12	18	10	6	9
11	12	13	14	15	16	17	18	19	20
13	5	16	19	2	17	20	8	7	4

pit r10 Brg B90 1 2 3 4 5 6 7 8 9 10 11 12

78	13	76	196	14	11	5	1	15	12	18	10	6	9	17
92	62	36	126	13	15	14	19	10	12	1	8	11	4	5
93	25	227	317	12	2	19	11	14	10	16	9	15	3	20
94	35	342	72	20	4	19	11	6	8	9	10	15	16	5

The net factor calculator is only available in the *Tools* menu if the cursor is in *Len* or *%S*.

Net Factor Calculator

Log: 0 Grade: ? Length: 10 Net Factor: 0

Type	Value
Blind Conk	
Broken Top	
Butt Rot	
Cat Face (Cone)	
Cat Face (Cylind	
Cat Face (Box)	
Cat Face (Pyram	
Conk	
Crook	
Dead Top	
Fork	
Frost Crack	
Large Rotten Br	
Root Rot	
Sap Rot	

Add F2 Update F3 Del F4 NF=0 F5

Click **ESC** to return to the tree screen.

Leading Species Calculator

The Leading Species Calculator is accessible from the tree list, tree detail, or sample tree screens. Click **F1** to open the Form Commands screen, then click **4**. Click **TAB** and **ARROW** keys to navigate to a listed tree, then click **CTRL-F5** to open the Sample Tree Screen.

To return to the Leading Species Calculator, click **F1**, then click **4**. To return to the original screen, click **CTRL-F5**.

Sample Tree Screen

The sample trees screen is accessible from any tree screen by clicking **CTRL F5**. This screen is used to enter sample tree data.

Click to mark this tree as a top height tree.

☒ ☐ L ☐ S ☐ O ☐ X ☐ V

Tree No.	Species	Crown Class	T. S.	Asimuth	Distance
8	WS	D	2	49	4.41

DBH	Bored Diam.	Bored Height	Length	Height Suitable?	Age Suitable?	SI Suitable?
18.2	18.2		18.5		N	N

Measure Code	Prorate Length	Field Age	Missed Years	Office Age	Lab Missed Years

Use this screen to identify sample trees by clicking on the sample tree type on the top of the screen.

Click to mark this tree as a leading species tree.

☐ T ☒ L ☐ S ☐ O ☐ X ☐ V

Enter the *Bored Diam.* and *Bored Height*. Toggle the options for *Height Suitable?*, *Age Suitable?*, and *SI Suitable?* cells.

DBH	Bored Diam.	Bored Height	Length	Height Suitable?	Age Suitable?	SI Suitable?
18.2	18.2		18.5		N	N

Enter the *Measure Code* from a pop-up list, then the *Prorate Length* (if required), *Field Age*, and *Missed Years* (if required). The *Office Age* may be entered later in Base Station or EFR after microscope counting.

Measure Code	Prorate Length	Field Age	Missed Years	Office Age	Lab Missed Years
PTH		215	14	244	12

Click **ENTER** on the *Measure Code* for a pop-up list of options.

PTH: Pith obtained

NOP: Pith missed

ROT: Rot in center

CRC: Cannot reach center

OUT: Core from out-of-plot tree

WHO: Whorls above BH

Once sample trees are identified, they are also accessible from the *Sample Tree Summary* button on the main menu screen.

Click **F5** to return to the tree details screen. Click **CTRL-F5** to return to the tree list screen. Click **F1** and select *Leading Sp. Calc.* to return to the LSC list.

Click **ESC** to return to the main screen.

Sample Tree Summary



When *Sample Tree Summary* is highlighted, click **ENTER**, screen-click on the button, or press number **5** to open the screen. The *Sample Tree Summary* screen is used for two purposes.

IPC #1 1/4 ToolTips

Tree	S	Quad	Type	SPP	DBH	Len	CC	Azim	Horiz. Dist.	Mer Code	
98	2	N/E	L	PL	21.0	18.0	C	48	5.96		
673	3	S/E	L	PL	23.0	20.0	C	107	11.18		
660	5	S/W	TL	PL	20.0	18.0	C	186	1.37		
574	8	N/W	L	PL	18.0	17.0	C	340	9.15		

Tree Notes

1. Review all the trees that have been identified as sample trees in the current measurement. If edits need to be made, **CTRL-F5** on a selected tree will open the sample tree screen for that tree. Click **CTRL-F5** to return to the *Sample Tree Summary*.

Click to mark this tree as a top height tree.

☒ T ☐ L ☒ S ☐ O ☐ X ☒ V

Tree No. Species Crown Class T. S. Azimuth Distance

14 HXM 0 4 143 2.09

DBH Bored Diam. Bored Height Length Height Suitable? Age Suitable? SI Suitable?

92.8 92.8 1.3 10.9 Y N Y

Measure Code Prorate Length Field Age Missed Years Office Age Lab Missed Years

CRC 6.9 62 13 68 12

2. Review the sample trees from the last measurement to see if any of the suggested trees from the Leading Species Calculator qualify as previously measured trees (PRE). Click **F10** on the sample tree summary to toggle between the current and previous measurement.

The Leading Species Calculator is accessible from the tree list, tree detail, or sample tree screens. Click **F1** to open the *Form Commands* screen, then click **4**. Click **TAB** and **ARROW** keys to navigate to a listed tree, then click **CTRL-F5** to open the Sample Tree Screen.

To return to the Leading Species Calculator, click **F1**, then click **4**. To return to the original screen, click **CTRL-F5**.

Click **ESC** to return to the main screen.

Small Tree Dot Tally



When *Small Tree Dot Tally* is highlighted, click **ENTER**, screen-click on the button, or click number **6** to enter.

Enter number to select row

#	SPP	F7 10-29cm	F8 30-130cm	F9 >130cm
7	FDC	4	1	1
4	HW	22	11	6
1		0	0	0
0		0	0	0
8		0	0	0
5		0	0	0
2		0	0	0
9		0	0	0
6		0	0	0
3		0	0	0

Status:

Radius:

Plot Size:

Plot Type:

Press Enter to Count, Press ESC to exit.

The screen is not active unless *Status* is changed to *Collected*.

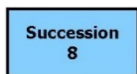
TAB to *Status*, *Radius*, *Plot Size*, and *Plot Type* and select from drop-down lists. Click **ENTER** on a *SPP* cell for a species list. Click **F7** (10-29cm), **F8** (30-130cm), or **F9** (>130cm) to enter tree size classes. Click **ENTER** to add one tree to the highlighted cell. **ARROW** down in the tally columns to add a species.

Species picklists that don't have a scroll bar can be navigated quickly by entering the first letter of the species code. The list will jump to species that start with that letter (listed alphabetically), then **ARROW** down to the specific selection. For example, Douglas fir. Open the species list, click **F**, then **ARROW** down to **FD**, click **ENTER** to select.

F6 changes the trees being added or subtracted on each **ENTER** click.

Click **ESC** to return to the main screen.

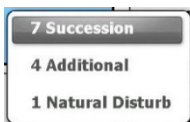
Succession



When *Succession* is highlighted, click **ENTER**, screen-click on the button, or click number **8** for a pop-up menu. Use **ARROW** keys to navigate and click **ENTER** or screen-click on the menu item to open the data cells.

Succession Screen

When *Succession* is highlighted in the pop-up menus, click **ENTER**, screen-click on the button, or click number **7** to enter.



Disturbance Value:Fs Desc.:severe surface fire.

Factors Influencing Vegetation Establishment				Tree SPP Succession			
FI 1	FI 2	FI 3	FI 4	Previous		Current	
Spp 1	Spp 2	Spp 1	Spp 2				
FS	Aw	Sr		BL	CW	BL	SX
Tree Harvesting: P				Tree age for species, site series: I			
Snags (> 25cm DBH): S				Tree size for species, site series: I			
Snags/CWD - all stanges/sizes: S				Old Growth Forest: N Structural Stages: MF			
Canopy gap due to tree mortality: S				Old Tree Counts: % Old Live			
Vertical Structure: M				Live: I Fallen: I Dead: I Stumps: I Trees: I			
Successional Stability: I				Comments: I			
				succession note			

Use the **TAB** keys to navigate between cells. Click **ENTER** on cells with arrows for a drop-down menu. Click **ENTER** on grey cells to toggle between selections.

Click **ESC** to return to the main screen.

Additional Succession Screen

From the *Succession* pop-up menu, use the **ARROW** keys to navigate to *Additional* and click **ENTER**, screen-click on the menu item, or click number **4** to enter.

7 Succession
4 Additional
1 Natural Disturb

Succession Stand Structure Value:SNGL Desc.:Single

Stand Structure	Successi Staoe:	Wetland Class
SNGL	MS	N

Tree Cover Origin			Plot Tree Treatment		
Origin	Type	Year	Type	Year	%Ext
HARV	PLA	1972	FT	2010	100

Use the **TAB** keys to navigate between cells. Click **ENTER** on cells with arrows for a drop-down menu. Click **ENTER** on *Origin* and *Type* cells for a menu.

Click **ESC** to return to the main screen.

Natural Disturbance Screen

From the Succession pop-up menu, use the **ARROW** keys to navigate to *Natural Disturb* and click **ENTER**, screen-click on the menu item, or click number **1** to enter.

7 Succession
4 Additional
1 Natural Disturb

Enter comments for this disturbance.					
Agent	Year	%Ext	%Mort	Basis	
FIRE	2015	30		SBA	
<div style="border: 1px solid black; height: 100px; width: 100%;"></div>					

Use the **TAB** keys to navigate between cells. Click **ENTER** on *Agent* and *Basis* for a menu.

Click **ESC** to return to the main screen.

Tree Shrub Herb Moss



When *Tree Shrub Herb Moss* is highlighted, click **ENTER**, screen-click on the button, or click number **9** for a pop-up menu. Use **ARROW** keys to navigate and click **ENTER** or screen-click on the menu item to open the data cells.

Species picklists that don't have a scroll bar can be navigated quickly by entering the first letter of the species code. The list will jump to species that start with that letter (listed alphabetically), then **ARROW down to the specific selection. For example, poison ivy. Open the species list, click T, then **ARROW** down to TOXIRYD, click **ENTER** to select.**

When *Tree and Shrub* is highlighted, click **ENTER**, screen-click on the button, or click number **7** to enter.



Enter the estimated tree percentage.											
Overall Cover Lyr:		A		B1		B2		Seedlings < 2 Yr old (5.64m plot)			
Layer Estimated %:		30.0		4.0		1.0					
Layer Calculated %:		30.0		4.0		66H					
		A		B1		B2					
		> 10m		2-10m		< 2m		Dh		Dw Dr	
#	Species	Tree %	Tall Sh. %	Tall %	Low Sh. %	Low %	Soil %	Wood %	Rock %		
1	AMELALN	0.0	0.0	10T	0.2	0.0	0.0	0.0	0.0		
2	JUNICOM	0.0	0.0	50T	0.3	0.0	0.0	0.0	0.0		
3	JUNISCO	0.0	2.5	5.5	30H	0.5	0.0	0.0	0.0		
4	PSEUMEN	30.0	1.5	8.5	0.0	0.0	0.0	0.0	0.0		
5	RIBELAC	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0		

F5 - Herb and Moss

Use the **TAB** keys to navigate between cells. Click **ENTER** on *Species* for a menu. Enter the first letter of the species code to jump to that section of the list, then **ARROW** down to the selection.

Click **F5** to toggle to the *Herb and Moss* screen.

Click **ESC** to return to the main screen.

Herb and Moss Screen

From the *Tree Shrub Herb Moss* pop-up menu, use the **ARROW** keys to navigate to *Herb and Moss* and click **ENTER**, screen-click on the menu item, or click **4** to enter.

7 Tree and Shrub

4 Herb and Moss

1 Shrubs

Enter the herbs estimated percentage.

Overall Cover Lyr:

C layer	Dh	Dw	Dr
Layer Estimated %:	20.2	7.0	2.0
Layer Calculated %:	18.1	6.3	0.0

Herb	Soil	Wood	Rock
------	------	------	------

#	Species	Herbs %	Soil %	Wood %	Rock %
1	ACHIMIL	1.5	0.0	0.0	0.0
2	ACHINEL	20H	0.0	0.0	0.0
3	ALLICER	0.0	0.0	0.0	0.0
4	ANTEMIC	1.3	0.0	0.0	0.0
5	ANTENEG	10H	0.0	0.0	0.0

F5 - Herb and Moss

Use the **TAB** keys to navigate between cells. Click **ENTER** on *Species* for a menu. Enter the first letter of the species code to jump to that section of the list, then **ARROW** down to the selection.

Click **F5** to toggle to the *Tree and Shrub* screen.

Click **ESC** to return to the main screen.

Shrubs Screen

From the *Tree Shrub Herb Moss* pop-up menu, use the **ARROW** keys to navigate to *Shrubs* and click **ENTER**, screen-click on the menu item, or click **1** to enter.

7 Tree and Shrub

4 Herb and Moss

1 Shrubs

Enter the frequency.				
Number	Sp	Status	Basal D. Cl.	Freq
1	ARCTCOL	LV	1	26

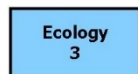
Status: Collected

The screen is not active unless *Status* is changed to *Collected*.

Use the **TAB** keys to navigate between cells. Click **ENTER** on *Species* and *Basal D. Cl.* for a menu. Enter the first letter of the species code to jump to that section of the list, then **ARROW** down to the selection. Click **ENTER** on *Status* to toggle between options.

Click **ESC** to return to the main screen.

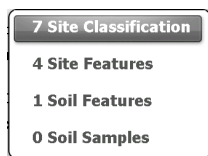
Ecology



When *Ecology* is highlighted, click **ENTER**, screen-click on the button, or click number **3** for a pop-up menu. Use **ARROW** keys to navigate and click **ENTER** or screen-click on the menu item to open the data cells.

Site Classification Screen

When *Site Classification* is highlighted, click **ENTER**, screen-click on the button, or click number **7** to enter.



Site Classification									
Map Based BEC:			Observed BEC:			Uniformity			
BEC: ICH mw 1 0			BEC: ICH mw 1 0			5			
Ecosystem Location									
Site Series					Land Cover Classification				
Location	SNR	SNR	%	L1	L2	L3	L4	L5	
Plot Centre	8	A	40	V	N	U	HE	SP	
Site Two	8	A	95	V	T	U	TC	DE	
Site Three									

Use the **TAB** keys to navigate between cells. Click **ENTER** on *Observed BEC* for the following screen. Click **ENTER** on cells with arrows for a drop-down menu.

Zone

Observed BEC: CWH xm 2 0

Zone Coastal Western Hemlock ▾

Subzone Very Dry Maritime ▾

Variant Thompson ▾

Phase ▾

Ok
Cancel

Click **ESC** to return to the main *Site Classification* screen.

Click **ENTER** on any cells in *Plot Centre*, *Site Two*, or *Site Three* for the following screen. Click **ENTER** on cells with arrows for a drop-down menu.

Site Moisture Regime

Plot Centre L1 Vegetated ▾

L2 Non-Treed ▾

SMR Hydric ▾ L3 Upland ▾

SNR Very Poor ▾ L4 Herb ▾

% 40 L5 Sparse ▾

Ok
Cancel

Click **ESC** to return to the main *Site Classification* screen.

Click **ESC** to return to the main screen.

Site Features Screen

From the *Ecology* pop-up menu, use the **ARROW** keys to navigate to *Site Features* and click **ENTER**, screen-click on the menu item, or click **4** to enter.

7 Site Classification

4 Site Features

1 Soil Features

0 Soil Samples

Enter Slope %

Pin Location

Slope %: Aspect: Elevation (m):

Flood Hazard: Meso Slope: Rock Substrates (% Cover)

Flood Hazard: Microtopography: Cobbles/Stones: Bedrock:

Open Water (% Cover) Slope Failure Within Integrated Gullies Within Main Plot:

Flowing: Standing:

F6 - Dominant Stratum

Comments:

Use the **TAB** keys to navigate between cells. Click **ENTER** on cells with arrows for a drop-down menu. Click **ENTER** on grey cells to toggle between selections.

Click **F6** to add a screen for *Dominant Stratum*. Click **F6** to return to the *Pin Location*.

Click **ESC** to return to the main screen.

Soil Features Screen

From the *Ecology* pop-up menu, use the **ARROW** keys to navigate to *Soils* and click **ENTER**, screen-click on the menu item, or click **1** to enter.

7 Site Classification

4 Site Features

1 Soil Features

0 Soil Samples

Enter the organic horizon.

Pin Location

Pred. Surf. Material: Drainage: Humus Form:

Sec. Surf. Material: Moisture: Colour:

Classification:

Depth to (cm): ☒ Not Applicable Pit Bottom:

Water Table: Mottles: Root Rest:

Bedrock: Frozen Layer: Carbonates:

Organic Layers:				Mineral Layers:			
Horizon	Depth	Horizon	Depth	Colour	Texture	Total Percent	Gravel Percent
DOP	0.0	B	100.0	M	LS	85	15

Use the **TAB** keys to navigate between cells. Click **F4** to advance from *Organic Layers* to *Mineral Layers*. Click **ENTER** on cells with arrows for a drop-down menu. Click **ENTER** on *Colour* and *Texture* cells for a menu.

Click **ESC** to return to the main screen.

Soil Samples Screen

From the *Ecology* pop-up menu, use the **ARROW** keys to navigate to *Soil Samples* and click **ENTER**, screen-click on the menu item, or click **0** to enter.

7 Site Classification
4 Site Features
1 Soil Features
0 Soil Samples

Enter the horizon designation.

Status:

Collected

Soil Sample

Loc.	SMP Meth	Type	Horz Msr.	WD	Len	Top Dep	Bot Dep	Vol.
MP1	C	FF	D	55	65	15.0	50.0	125125

Horizons

DSGN

The screen is not active unless *Status* is changed to *Collected*.

Use the **TAB** keys to navigate between cells. Click **F4** to advance from *Horizons* to *Soil Sample*. Click **ENTER** on *Location*, *Sample Method*, *Type*, and *Horz Msr.* cells for menu screens.

Click **F6** to add a screen for *Dominant Stratum*. Click **F6** to return to the *Pin Location*.

Click **ESC** to return to the main screen.

Transects

Transects
2

When *Transects* is highlighted, click **ENTER**, screen-click on the button, or click number **2** for a pop-up menu. Use **ARROW** keys to navigate and click **ENTER** or screen-click on the menu item to open the data cells.

Coarse Woody Debris Screen

When *Coarse Woody Debris* is highlighted, click **ENTER**, screen-click on the button, or click number **7** to enter.

7 Coarse Woody Debris
4 Range
1 Surface Substrates

Enter the shape.

Coarse Woody Debris Transect 1 (F6 - 2)

Azm. 199 Tot. Len. 24.0 CWD Obs. Len. 24.0 SWD Obs. Len. 6.0

Shape	Species	Diam. or H. Length	Depth	Length	%DC 1	Class Other	Tilt	Merch
R	BL	8.9			95	2	34	N
R	S	15.4			45	3	15	N

< >

Decay Class	1.1 to 3.0 cm.	3.1 to 5.0 cm.	5.1 to 7.5 cm.
2	2	6	0

Use the **TAB** keys to navigate between cells. Click **ENTER** on *Shape*, *Class Other* and *Decay Cl. Piece* for a menu. Click *Merch* and *P/R* to toggle selections.

Click **F4** to advance to the small woody debris cells and comments box on the bottom of the screen.

Click **F6** to toggle between transect 1 and 2.

Click **ESC** to return to the main screen.

Range Screen

From the *Transects* pop-up menu, use the **ARROW** keys to navigate to *Range* and click **ENTER**, screen-click on the menu item, or click **4** to enter.

7 Coarse Woody Debris

4 Range

1 Surface Substrates

Indicate if forbs are collected.

Plot Shape: FULL

☒ Graminoids Collected:

Graminoids Weight:

☒ Forbs Collected:

Forbs Weight:

Use the **TAB** keys to navigate between cells. Click **ENTER** on *Plot Shape* to select from a list. Click on *Graminoids Collected* and *Forbs Collected* to toggle on or off. Enter weights into the boxes.

Click **ESC** to return to the main screen.

Surface Substrates Screen

From the *Transects* pop-up menu, use the **ARROW** keys to navigate to *Surface Substrates* and click **ENTER**, screen-click on the menu item, or click **1** to enter.

7 Coarse Woody Debris

4 Range

1 Surface Substrates

Enter the station number.

Surface Substrate Transect 1

Azm. 199 Obs. Len. 24.0 Tot. Len. 24.0

Station	Type	Limit	Depth
1	DW	2	45
2	BR	2	0

Comments

Use the **TAB** keys to navigate between cells. Click **ENTER** on *Type* and *Limit* for a menu. Click **F4** to advance to the *Comments*.

Click **F6** to toggle between transect 1 and 2.

Click **ESC** to return to the main screen.

Access Notes

Access Notes

(.)

When *Access Note* is highlighted, click **ENTER**, screen-click on the button, or click the decimal symbol to open the screen. Click **TAB** and Enter 0 in the *Inter.* cell then click **F4** to advance to the *Comments*. Enter the start position information for access.

Enter comments for this point.

Cumul.	Inter.
	0.0

Comments

Start at junction of Hwy 18 and Buffalo Road north of Raspberry. Proceed west on Buffalo Road.

Reset to 0 F2 Ins. Above F3 Ins. Below F5 Delete F6

Click **F5** to insert a row below the start position to enter the next landmark. Click **TAB** from the *Cumul.* cell to the *Inter.* cell. Then enter the kilometres since the start and click **F4** for *Comments* and enter the landmark.

Enter comments for this point.

Cumul.	Inter.
0.0	0.0
1.4	1.4

Comments

Turn right on FSR Catfish Lake.

Reset to 0 F2 Ins. Above F3 Ins. Below F5 Delete F6

Click **F2** to reset the *Cumul.* distance to zero and start additional access notes.

Enter comments for this point.

Cumul.	Inter.
0.0	0.0
1.4	1.4
17.2	15.8
22.8	5.6
22.8	0.0

Comments

Reset odometer at CP400.

Reset to 0 F2 Ins. Above F3 Ins. Below F5 Delete F6

Click **F3** to insert a distance above the row the cursor is on.

Enter comments for this point.

Cumul.	Inter.
0.0	0.0
1.4	1.4
17.2	15.8
22.8	5.6
0.0	0.0
4.5	4.5
10.2	5.7

Comments

Hydro transmission lines.

Reset to 0 F2 Ins. Above F3 Ins. Below F5 Delete F6

Click **F6** to delete an entry. Click Yes to delete the entry.

Enter comments for this point.

Cumul.	Inter.
0.0	0.0
1.4	1.4
17.2	15.8
22.8	5.6
0.0	0.0
4.5	4.5
10.2	5.7

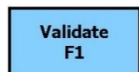
Comments

Hydro transmission lines.

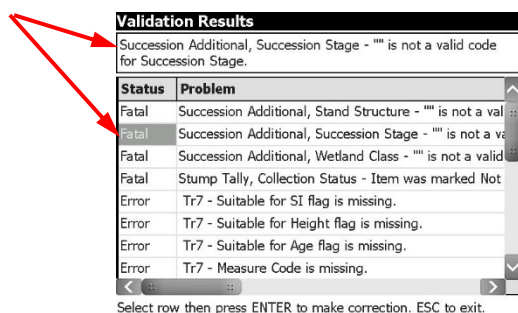
Reset to 0 F2 Ins. Above F3 Ins. Below F5 Delete F6

Click **ESC** to return to the main screen.

Validate



When *Validate* is highlighted, click **ENTER**, screen-click on the button, or click **F1** to open the screen. Validation will start immediately.

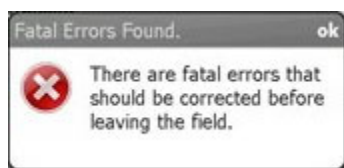


Validation results will list *Fatal*, *Error*, and *Warning* results.

Use the **ARROW** keys to navigate the list and click **ENTER** to go to the screen containing the error or warning. A full description of the selected error is shown in the top screen.

Validation results do not have to be corrected in the EFR to export the sample to Base Station.

Click **ESC** to return to the main screen. After clicking **ESC**, an additional error message may appear indicating fatal errors in the data.



Click **ENTER** or screen-click **OK** to leave the screen and proceed to the main screen.

Validation Issues in Variable Radius Plots

Some variable radius plots may show incorrect validation errors for trees that are measured 'out'. Validation errors indicate that tree attributes are missing. Use the following procedure to clear the error for each tree showing an incorrect error.

1. Click on the tree and record the horizontal distance. Temporarily change the distance to 1.0 metre.
2. **TAB** to the *Mode* cell and change to 'blank'.

3. **TAB** back to horizontal distance and enter the original distance.
4. **TAB** out of the horizontal distance cell.
5. **ESC** from trees and run validation.

View Comments



When *View Comments* is highlighted, click **ENTER**, screen-click on the button, or click **0** to open the screen.

Current Site Visit - Some sign of historic forest fire but not stand origin.

IPC Plot - Slope and aspect are highly variable. Bedrock dominated site.

Tree #13 - Sheep rubbing damage. Lots of wool on bark.

Tree #20 - Residual tree. Fire damage on bark.

This screen shows all comments in the sample except for access notes. Click **F10** to view comments from the previous measurement.

Click **ESC** to return to the main screen.

Exiting a Sample

When exiting a sample, the *Validation Results* screen may appear showing a description of errors or warnings about the data in the exited screen.

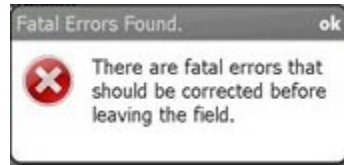
Validation Results	
Succession Additional, Succession Stage - "" is not a valid code for Succession Stage.	
Status	Problem
Fatal	Succession Additional, Stand Structure - "" is not a valid code for Stand Structure.
Fatal	Succession Additional, Succession Stage - "" is not a valid code for Succession Stage.
Fatal	Succession Additional, Wetland Class - "" is not a valid code for Wetland Class.
Fatal	Stump Tally, Collection Status - Item was marked Not Collected.
Error	Tr7 - Suitable for SI flag is missing.
Error	Tr7 - Suitable for Height flag is missing.
Error	Tr7 - Suitable for Age flag is missing.
Error	Tr7 - Measure Code is missing.

Select row then press ENTER to make correction. ESC to exit.

Use the **ARROW** keys to navigate this list and click **ENTER** to go to the screen containing the error or warning. Or click **ESC** to skip this screen and address the errors later.

After clicking **ESC**, an additional error message may appear indicating fatal errors in the data. Click **ENTER** or screen-click *OK* to leave the screen and proceed to the *Exit the Sample* screen.

Note: Errors and warnings do not have to be corrected on the EFR to export to the Base Station.



A screen will appear when exiting a sample prompting the status of the sample. To address the errors, click **F5 Stay** and return to the sample screens.

Exit the sample?

Current Survey Status: Partially Complete

New Survey Status:

To leave the sample, change the *New Survey Status* by selecting from a drop-down menu.

Exit the sample?

Current Survey Status: Partially Complete

New Survey Status:

Click **F2 Exit** to leave the sample and return to the ISMC Mobile home screen.

Remeasurement Samples

Remeasurement samples include the data from the last measurement. Click **F10** on most screens to toggle between the current and previous measurement. Current measurement screens have a white background and previous measurement screens have an orange background.

Current Measurement

Notes to the crew for this Site.

Survey Date: 3/12/21 Tree: Aixa Romon

End Date: 3/12/21

BEC: IDF dk 3

Site Access

Types: TRUCK

Issues:

☒ Stem Map Req. Helper: Margarete Denty

Stand Disturbance: 0 Helper:

Notes To Crew:

F10-Toggle : Previous

Previous Measurement

Notes to the crew for this Site.

Survey Date: 8/16/15 Tree: Graciosa Pignatal

End Date: 8/16/15

BEC: IDF dk 3

Site Access

Types:

Issues:

☒ Stem Map Req. Helper:

Stand Disturbance: 0 Helper:

Notes To Crew:

F10-Toggle : Current

The tree list screens show previous and current measurements on the same view. Previous measurements are shown with a yellow background.

Tree List

IPC #1 4/27 Enter the tagging sector number.

Tree	S	SPP	L/D S/F	DBH	DBH M/E	Len M/E	CC	Ht. LC	Brkn Top	Res.	Wall
151	1	PLI	LS	7.4	M	9.0	M	I	1	N	-
151	1	PLI	LS	13.4	M	12.7	M	I	1	N	-
152	1	PLI	LS	6.0	M	8.1	M	I	2	N	-
152	1	PLI	LS	10.2	M	11.8	M	I	2	N	-
153	1	PLI	LS	5.6	M	7.5	E	I	1	N	-
153	1	PLI	LS	9.5	M	11.3	E	I	1	N	-
154	1	PLI	LS	6.0	M	6.0	E	S	1	N	-
154	1	PLI	LS	9.0	M	7.5	M	C	1	N	-
155	1	PLI	LS	9.0	M	7.5	M	C	1	N	-

Tree Notes

Click **F5** from the tree list screen to switch to the tree detail screen showing the current measurement. Click **F10** to view the previous measurement details screen for the tree.

Current Measurement

Enter the percent sound.

Tree: 151 Res: 1 Wal T. S.: 1 Species: PLI L/D: LS DBH: 13.4 M/E: M Len: 12.7

M/E: CC: M Ht. LC: 1 Brkn Tp: N

Ctrl-F5 Sample

Loss Indicators

Code	From	To	Fq
SCA	3.0	3.0	1

Damage Agents

Dmg	Sev
DSG SC	
DFE 1	

Net Factor

Len	%S
99	100

Mode: ☐

Tree Notes:

Previous Measurement

Tree Details

Tree: 151 Res: 1 Wal T. S.: 1 Species: PLI L/D: LS DBH: 7.4 M/E: M Len: 9.0

M/E: CC: M Ht. LC: 1 Brkn Tp: N

Ctrl-F5 Sample

Loss Indicators

Code	From	To	Fq
SCA	3.0	3.0	1

Damage Agents

Dmg	Sev
DSG SC	
DFE 1	

Net Factor

Len	%S
99	100

Mode: ☐

Tree Notes:

See *Working with a Sample on the EFR* for additional instructions.

Permanent Sample Plots

PSP's have some slightly different screens than other sample types to align with historical data collection procedures.

Header

S#:2 Enter the current date.

Current Date: 3/2/18 Crew Leaders

End Date: 3/15/18 Tree: Robert Brady

BEC: MS dm 2

Site Access

Types: TRUCK, ATV, HIKE
Issues: OPL, AFL, OTHER

Stem Map Req.

Helper: Robert Brady

Helper: Betty Jefferson

Notes To Crew:

Looks like this will take a while.

F10-Toggle : Previous

Navigation

Navigation

Tie Pt. SPP: HW Diam: 67.7

Tie Point GPS: E:572164 N:6316941 z:6303 u:9

F10-Toggle : Previous

IPC

TP -> IPC: Azim: 238 Dist: 359 Calc. Date: 23/07/15 Calc. Declin: 29.4 Declin: -3.6

Offset GPS Location: 196 40.10 GPS Type: RGPS

GPS Identifier: gps filename

Actual IPC GPS Coordinates: E:571859 N:6316751 z:1126 u:9

The *Navigation* screen is similar to the CMI screen. Tie Point GPS is the same as Access Point on a CMI plot. The coordinates can be captured using a recreation grade GPS. The TP to IPC coordinates will be derived from the IPC and TP coordinates.

The *Plot Cluster* screen changes based on the type of PSP being remeasured.

1. Circular PSP plot radius values are provided from the previous measurement. Slope and aspect may have to be entered for the current plot.

Enter Fixed plot radius (m)

Plot Shape: CI Plot Radius: 11.26

Plot Area: 0.0400 Slope %: 12 Aspect: 223

Subplot Radius: 5.64 Subplot Area: 0.0000

F10-Toggle : Previous

2. Square or rectangular PSP's may not show the length and/or width values and must be completed during the current measurement. Plot Corners is the azimuth and distance from the centre pin to the corner pins. This information must be completed.

Enter Plot Length

Plot Shape: SQ Plot Length: 31.62

Plot Area: 0.1000 Slope %: 10 Aspect: 245

Subplot Radius: 5.64 Subplot Area: 0.0000

F10-Toggle : Previous

Plot Corners

#	Azimuth	Distance

Tree List and *Tree Details* screens are modified for PSP data collection attributes. The *Tree List* is divided into 'pages' to manage memory.

Tree List

1/37 Enter the tagging sector number.

Tree	S	SPP	L/D S/F	DBH	DBH M/E	Len	Len M/E	CC	Ht. LC	Brkn Top	Res.	Azim
1	1	ZC	LS	79.3	M	32.3	M	S	23	N	-	-
2	1	RA	LS	76.9	E	24.1	M	D	8	N	-	1
3	1	RA	LS	52.8	E	34.1	E	D	10	N	-	3
4	1	RA	LS	146.1	E	28.9	E	D	16	N	-	3
5	2	RA	LS	33.8	M	22.4	E	D	14	N	-	7

Tree Notes

Trees Details

Enter the tagging sector number.

Tree	Res	T	S	S	Species	L/D	DBH	M/E	Len
1	-	1	1	BA	LS	127.3	E	50.4	

M/E CC Ht. LC Brkn Tp Azim H. Dist

M D 39 N Ctrl-F5 Sample 18 8.64

Loss Indicators

Code	Loc.
CRO	7
DRR	6
DDF	5

Damage Agents

Drng	Sev
NCB	100
CYX	52
IA	

Mode

Tree Notes

What a wonderful day.

See *Remeasurement Samples* and *Working with a Sample on the EFR* for additional instructions.

PSP Remeasurement Tree List Paging

PSP remeasurement samples divide groups of trees into 'pages' of consecutive trees to manage EFR memory. The minimum page size is one sector.

NOTE: This is only used for the Allegro2.

The tree list will display and perform the same way except when the last tree on the page is reached. When the down **ARROW** is clicked on the last tree, a window will prompt you to *Fetch the next sector(s)?*. Click *Yes* and the next page will load. Select *No* to remain on the same page.

87/700 Enter the tagging sector number.

Tree	S	SPP	L/D S/F	DBH	DBH M/E	Len	Len M/E	CC	Ht. LC	Brkn Top	Res.	Azim
84	1	OK	DS	34.6	E	16.7	M	-	N	-	-	3
84	1	T	ISMC									3
85	1	OK										1
85	1	QV										3
86	1	QV										-
86	1	OK										2
87	1	OK										R
87	1	T	LF	15.8	E	8.9	M	-	N	-		-

Fetch the next sector(s)?

Yes No

Tree Notes

I don't have a clue about this.

When scrolling up a tree list and the up **ARROW** is clicked, the prompt will appear again. Click *Yes* to go to the previous page.

Changing Page Size

The number of trees on each page can be changed by modifying a file on the EFR. The minimum page size is one sector, but the upper limit can be changed to add additional trees on each page.

1. Exit out of ISMC on the EFR.
2. Connect the EFR to a PC.
3. Open File Explorer and locate the following directory:
Juniper Systems Allegro\Program Files\ISMC

4. Select *App.config* and open in a text editor, such as Windows Notepad.
5. On approximately line 32 of the code is the page size:
`<add key="TreeListPageSize" value="10" />`
6. Change the value inside the quotes (shown as 10 above).
7. Save the file and exit.

Do not change any other characters in the App.config file.

VRI Samples

VRI samples have identical screens to other samples except for the *Plot Cluster* screen and the *Tree Data* plot selection.

Plot Cluster

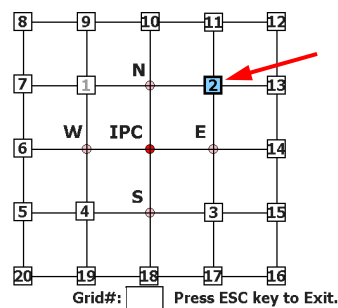
Select IPC Plot				
Plot Type	BAF	PRFc	PRFf	Band
Variable Radius	9	0.1667	0.1617	3.00
☒ Use Dead/Fallen Trees				
Aux Plot Spacing: 50				
IPC Plot				
Slope %	Aspect	Status		
20	0	Collected		
Plot	Plot Type	Bdr/Split	Pin Offset	
FULL	NORM	Azimuth	Azim. Dist.	
IPC Plot				
N Plot				
E Plot				
S Plot				
W Plot				

The *Plot Cluster* screen includes details about the IPC and each auxiliary plot. Use the **TAB** keys to navigate between cells. Click **ENTER** on *IPC Plot*, *N Plot*, *E Plot*, *S Plot*, and *W Plot* to change the screen and complete the information for each plot.

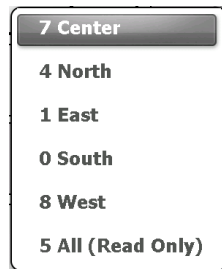
Select N Plot				
Plot Type	BAF	PRFc	PRFf	Band
Variable Radius	9	0.1667	0.1617	3.00
☒ Use Dead/Fallen Trees				
Aux Plot Spacing: 50				
North Plot				
Slope %	Aspect	Status		
20	75	Collected		
Grid	Plot	Plot Type	Bdr/Split	Pin Offset
2	HALF	SPLIT	Azimuth	Azim. Dist.
IPC Plot				
N Plot				
E Plot				
S Plot				
W Plot				

Complete the status, grid position (if moved), plot (full/half/quarter), plot type (normal, boundary/split), boundary/split azimuth, and pin offset details for the IPC and each auxiliary plot.

Click on *Grid* and the grid selection screen opens. Forward **TAB** through the grid options available. Click **ENTER** on the first occurrence that can be sampled. The selected position is transferred to the *Plot Cluster* screen for the plot.



Click the *Tree Data* button for a list of *Center (IPC)*, *N Plot*, *E Plot*, *S Plot*, and *W Plot* screens.



When *Tree Data* is highlighted, click **ENTER**, screen-click on the button, or click number **4** for a menu of plots. Use **ARROW** keys to navigate and click **ENTER** or screen-click on the menu item to open the plot.

Click *All (Read Only)* or click number **5** for a combined list of trees in all plots.

Click *All (Read Only)* is also available in *Sample Tree Summary*.

The *Leading Species Calculator* is not available for VRI samples.

See *Working with a Sample on the EFR* for additional instructions.

Validation Issues in Variable Radius Plots

Some variable radius plots may show incorrect validation errors for trees that are measured 'out'. Validation errors indicate that tree attributes are missing. Use the following procedure to clear the error for each tree showing an incorrect error.

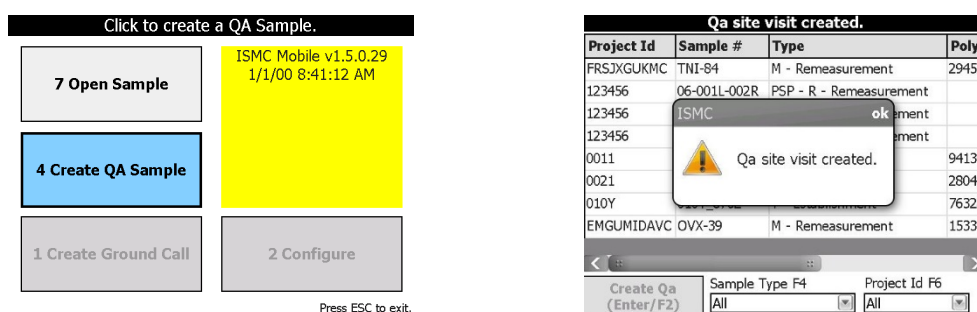
1. Click on the tree and record the horizontal distance. Temporarily change the distance to 1.0 metre.
2. **TAB** to the *Mode* cell and change to 'blank'.
3. **TAB** back to horizontal distance and enter the original distance.
4. **TAB** out of the horizontal distance cell.
5. **ESC** from trees and run validation.

Quality Assurance Samples

Quality assurance samples can be created in two ways.

1. Quality assurance samples can be created in Host from existing samples and uploaded to Base Station and the EFR. These samples can be opened in Base Station or the EFR from the *Open Sample* button. See the *ISMC Host User Guide* for more details on creating a QA sample in Host.
2. Quality assurance samples can be created in the EFR from existing samples using the *Create QA Sample* button.

Create a QA sample from the main screen when *Create a QA Sample* is highlighted, click **ENTER**, screen-click on the button, or click number **4** to enter. From the sample list, select a sample for QA and click **ENTER** or **F2**. Once the QA sample is created, return to the sample menu, and open the *QA Sample Type* of the sample.



QA samples appear like remeasurement samples and include the original measurement data. Click **F10** on most screens to toggle between the QA and original measurement. Current measurement screens have a white background and previous measurement screens have an orange background.

The tree list screens show original and QA measurements on the same view. Original measurements are shown with a yellow background.

See *Remeasurement Samples* and *Working with a Sample on the EFR* for additional instructions.

Ground Calls

Ground call samples can be created in two ways.

1. Ground call samples can be created in Host and uploaded to Base Station and the EFR. The samples can be opened in Base Station from the sample list or the EFR from the *Open Sample* button on the main screen. See the *ISMC Host User Guide* for more details on creating ground call samples sample in Host.

Open a sample.					
Project Id	Sample #	Type	Msr.	Status	Last
99LA21	5055063	XGV EST	1	New	3/18,
99LA21	5055064	XGV EST	1	New	3/18,
99LA21	5055065	XGO EST	1	New	3/18,
99LA21	5055066	XGO EST	1	New	3/18,
99LA21	5055067	XGO EST	1	New	3/18,
JGKTest999	9990997	L EST	1	New	3/18,
JGKTest999	9990998	Q EST	1	New	3/18,
JGKTest999	9990999	O EST	1	New	3/18,

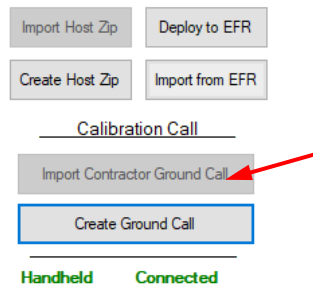
< >

Sample Type F4 Project Id F6

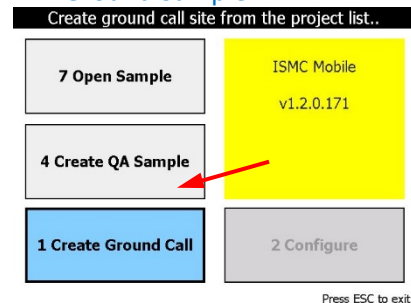
Open (Enter/F2) [All] [All]

2. A ground call project can be created in Host and uploaded to Base Station and the EFR. The samples can be created in Base Station or the EFR using the *Create Ground Call* button. See the *ISMC Host User Guide* for more details on creating a ground call project in Host.

Base Station Ground Sample



EFR Ground Sample



Creating a Ground Call Sample

Click on the *Create Ground Call* button on the main screen.

From the *Create Ground Call Record* screen. Use the **ARROW** keys to select the *Ground Call Project* and click **ENTER**. Screen-click the *Call Type*. **TAB** to the *Ground Call Number* and enter a unique sample number.

Click *Begin Data Entry* to go to the ground call sample main screen. Click *Create Another* to add a ground call sample or click *Exit to Home* to return to the ISMC Mobile main screen.

Ground call samples created in Base Station or the EFR will be displayed in the sample list upon exit.

Working with a Ground Call Sample

Click on the sample from the sample list screen or *Begin Data Entry* from the create a ground call screen. When the sample is opened, the main menu screen will show the sample menu buttons. Screen-click, **TAB, ARROW** key, or enter the number of the button on the menu to open the main sample screen.

Header Forms

When *Header* is highlighted, click **ENTER**, screen-click on the button, or click number **7** for a pop-up menu. Use **ARROW** keys to navigate and click **ENTER** or screen-click on the menu item to open the data cells.

Header Screen

When *Header* is highlighted in the dropdown menu, click **ENTER**, screen-click on the button, or click number **7** to enter.

Enter comments.

Site Access: Types:HELL Issues:

Start Date: 12/31/20 Cruiser: Aixa Romon

Location: Coast Helper: Elia Haitcock

Azim Dist. 35 65.2 GPS Type: DGPS

Tie Point Coordinates: Not Set

Comments:

Use the **TAB** keys to navigate between cells. Click **ENTER** on cells with arrows for a drop-down menu. Click **ENTER** on the *Types: Issues:* button for a screen with options. Click on Location to toggle between *Coast* and *Interior*.

Click **ENTER** on *Tie Point Coordinates* for a pop-up window with GPS functions. **Note: Standard Juniper GPS devices may not be suitable for collecting sample coordinates.**

Update Time: 2/25/21 11:26:12 PM

Satellites	HDOP	PDOP
9	3.64	5.91

	Current	Average	Copy
UTM: 10	10		10
Easting: 420475	420475		Cur. F5 420475
Northing: 5455042	5455038		Avg. F6 5455038
Elevation: 84	68		68

Reset Avg F3

As data is collected, click the *Cur. F5* button to use the data shown under the *Current* column, or click the *Avg. F6* button to use the data shown under the *Average* column. Click **ESC** to return to the *Header* screen.

Click **ESC** to return to the main screen.

Plot Cluster Screen

7 Header

1 Plot Cluster

When *Plot Cluster* is highlighted, click **ENTER**, screen-click on the button, or click number **1** to enter.

Click to set GPS coordinates for the selected plot.

Plot Type	BAF	PRFc	PRFf	Band
Variable Radius	9	0.1667	0.1617	3.00

Plot	M/C	Elev.	Easting	Northing	Azim. to next	Dist. to next
1	M	95	420482	5455052	90	50.00
2	M					

Set Plot GPS (F5)

Use the **TAB** keys to navigate between cells. Click **ENTER** on Plot Type to toggle between *Variable Radius* and *Fixed Radius*. Click **ENTER** on cells with arrows for a drop-down menu. Click **ENTER** on *M/C* to toggle between measure and count.

With the cursor in a plot row, click **F5** or screen-click **ENTER** on *Set Plot GPS* for a pop-up window with GPS functions. Click **F5** or **F6** and the GPS coordinates will be transferred to the plot row on the *Plot Cluster Screen*. **Note: Standard Juniper GPS devices may not be suitable for collecting sample coordinates.**

ARROW down on the plot list to add additional plot information.

Enter the tie line bearing to the next plot.

Plot Type	BAF	PRFc	PRFf	Band
Variable Radius	9	0.1667	0.1617	3.00

Plot	M/C	Elev.	Easting	Northing	Azim. to next	Dist. to next
1	M	95	420482	5455052	90	50.00
2	M	101	420432	5455063	90	50.00
3	M	107	420382	5455074		

Set Plot GPS (F5)

Click **ESC** to return to the main screen.

Tree Data

Tree Data
4

When *Tree Data* is highlighted, click **ENTER**, screen-click on the button, or click number **4** to enter the plot selection screen.

Select Plot Number

Plot Number:

1
2
3

OK

Cancel

Use the **ARROW** keys to navigate the plot numbers. Click **ENTER** or click the **OK** button to enter the tree data screen.

Ground Call #1						Pith obtained						
Tree	SPP	Lyr	DBH	DBH M/E	Ht	Ht M/E	Cc	Mbr Code	Cntd Age	Missed Yrs		
1	FDC	1	25.5	M	25.1	M	C					
2	HW	1	31.2	M	29.9	M	D					
3	FDC	1	23.4	M	23.1	M	C					
4	FDC	1	28.4	M	26.0	M	C	PTH	38			

[illegible]

Species picklists that don't have a scroll bar can be navigated quickly by entering the first letter of the species code. The list will jump to species that start with that letter (listed alphabetically), then ARROW down to the specific selection. For example, Douglas fir. Open the species list, click F, then ARROW down to FD, click ENTER to select.

Code	Description
D	Dead Layer
1	Highest Layer
2	High Layer
3	High-Mid Layer
4	Mid-High Layer
5	Mid Layer
6	Mid-Low Layer
7	Low-Mid Layer
8	Low Layer
9	Lowest Layer

PRF to

Tree is IN

PRF	DBH	Slope	Dist.	Horiz. Dist.
Face F2	0.1617	19.0	0	2.74

Critical Distance = DBH × PRF = 3.07

Apply - F4 Cancel - ESC

- D: Dominant**
- C: Co-dominant**
- H: High Intermediate**
- I: Intermediate**
- S: Suppressed**

Ground Call

Ground Call
1

7 Ecology

4 Summary

59

Enter Cover Percent

Surface Expression Site Position Meso Non-Vegetated Cover

Land Cover Class Modifying Process

Shrubs

Height Closure %

Herbs

Cover Type Cover % Bryoid %

Soil

Moisture Nutrient

Category	Cover Percent
SP	8

Use the **TAB** keys to navigate between cells. Click **ENTER** on *Site Position Meso*, *Cover Type*, *Moisture*, *Nutrient*, and *Cat.* cells for menu options.

Click **ESC** to return to the main screen.

Summary Screen

When *Summary* is highlighted, click **ENTER**, screen-click on the button, or click number **4** to enter.

Enter Species 4.

Layer	Species Comp	Age 1	Ht 1	Age 2
1	FDC 60 DR 20 HW 20			24.7

< :: >

Layer	SP1	%	SP2	%	SP3	%	SP4	%	SP5	%
1	FDC	75	HW	20	DR	5				

< :: >

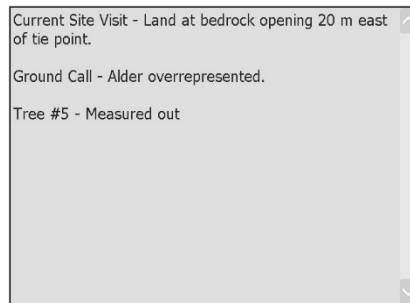
The top of the screen shows species percent by layer from the plot data. Scroll right to see ages, heights, BA, and SPH. **Only trees with Dominant, Codominant, and High-intermediate crown classes are displayed in the Species Comp summary.** Layers without these crown classes will be listed without *Species Comp*, *Age*, or *Ht* data.

Use the **TAB** keys to navigate between cells. Enter observed percentages in the lower screen. Click **ENTER** on *Layer* and any *Sp.* for menu options.

Click **ESC** to return to the main screen.

View Comments

When *View Comments* is highlighted, click **ENTER**, screen-click on the button, or click number **0** to enter.

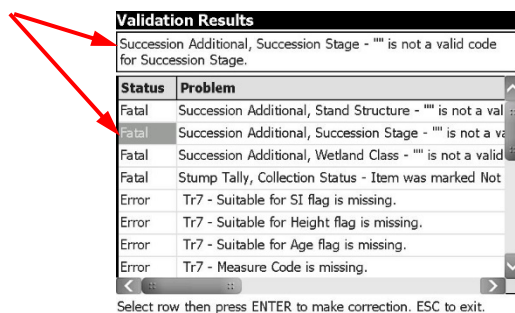


Comments from all sample screens can be observed on this screen.

Click **ESC** to return to the main screen.

Validate

When *Validate* is highlighted, click **ENTER**, screen-click on the button, or click **F1** to open the screen. Validation will start immediately.

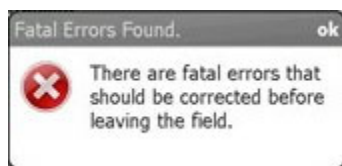


Validation results will list *Fatal*, *Error*, and *Warning* results.

Use the **ARROW** keys to navigate the list and click **ENTER** to go to the screen containing the *Fatal*, *Error*, or *Warning*. A full description of the selected error is shown in the top screen.

Validation results do not have to be corrected in the EFR to export the sample to Base Station.

Click **ESC** to return to the main screen. After clicking **ESC**, an additional error message may appear indicating fatal errors in the data.



Click **ENTER** or screen-click **OK** to leave the screen and proceed to the main screen.

Validation – Base Station

This section is for Base Station validation. Validation errors, warning, and information are the same on the EFR, but only Base Station allows for addition problem descriptions, acceptance comments, and general comments. See *Validate in Working with a Sample on the EFR* for instructions specific to the EFR.

When a sample is selected in Base Station from the top-left screen, the screen on the top-right side may show sample validation results. Click **F1** to refresh validation.

Three types of validation rule notices are used. **Errors must be corrected before submitting to Host.**



Error

Status	Problem	Form	Id	Acc.	Date
	Succession Additional, Stand Structure - "" is not a valid code...	Succession History	SCS022	☐	



Warning

	Tr7 - Measure Code is missing.	Sample Tree	BR198.5	☐	
---	--------------------------------	-------------	---------	--------------------------	--



Information

	Tr7 - Office Age is required.	Sample Tree	BR267	☐	
---	-------------------------------	-------------	-------	--------------------------	--

Problem Description

Click on a validation result and the bottom-right screen of Base Station shows validation descriptions and comments about validation exceptions.

Problem Description

Stump Tally, Collection Status - Item was marked Not Collected but data was collected.

Acceptance Comments

Acceptance Comments

General Comments

General Comments

Correcting Validation Results

Double-click on a validation result and the centre screen will display the page with the validation error. The cursor will be in the cell that failed validation.

Correct the validation error, click **CTRL-S**, then **ESC** to the main screen. Repeat this procedure until all validation errors are cleared. Click **F1** to refresh validation.

Validation Issues in Variable Radius Plots

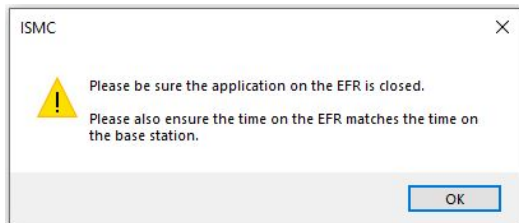
Some variable radius plots may show incorrect validation errors for trees that are measured 'out'. Validation errors indicate that tree attributes are missing. Use the following procedure to clear the error for each tree showing an incorrect error.

1. Click on the tree and record the horizontal distance. Temporarily change the distance to 1.0 metre.
2. **TAB** to the *Mode* cell and change to 'blank'.
3. **TAB** back to horizontal distance and enter the original distance.
4. **TAB** out of the horizontal distance cell.
5. **ESC** from trees and run validation.

Managing Sample Data

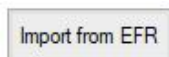
Importing Samples from EFR

The Base Station must be open and the EFR successfully connected by *Windows Mobile Device Center* to the desktop to perform these tasks. **The EFR ISMC application must be closed.**

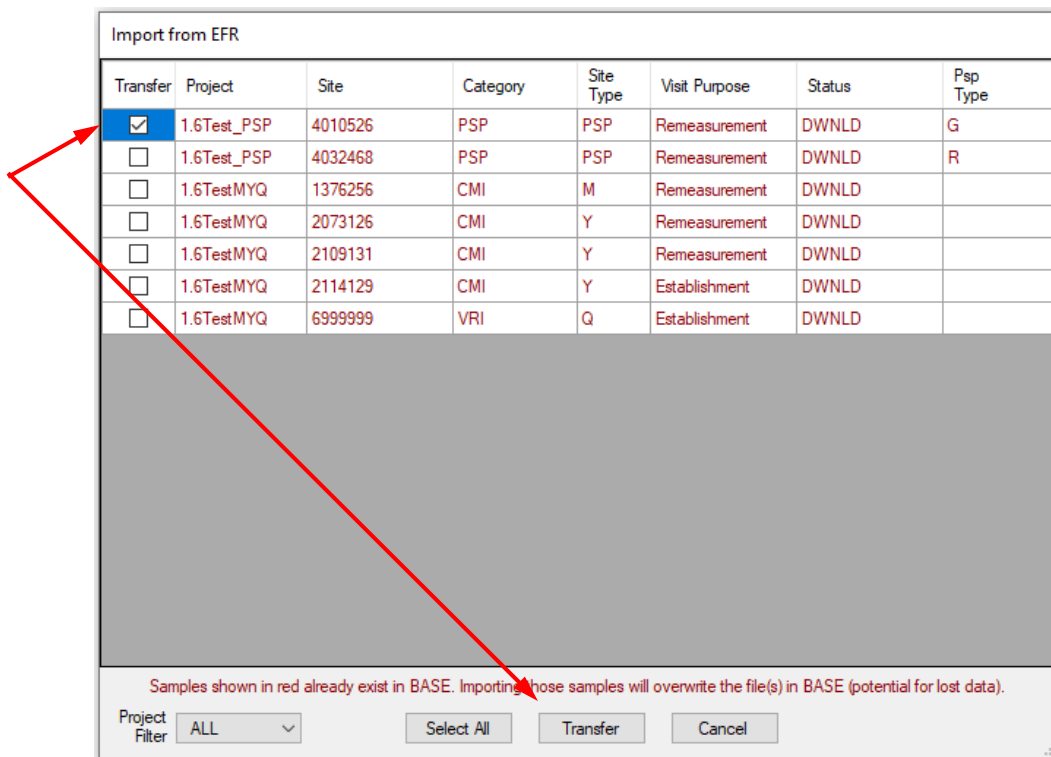


From Base Station:

1. Click on the *Import from EFR* button in the bottom-left corner of Base Station, or **CTRL-M**.



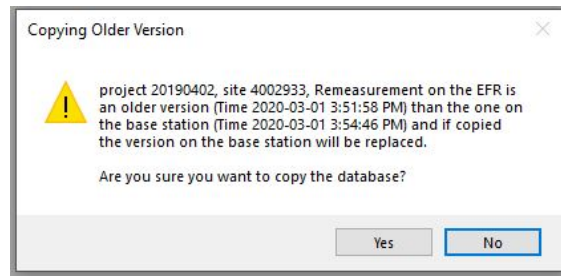
2. When the *Upload from Handheld* window opens, select samples to upload to Base Station by clicking on the *Transfer* box, or click the *Select All* button, then click the *Transfer* button at the bottom of the window.



3. The window closes when the file is transferred.

Files that appear in red text are files that already exist in Base Station. Importing files from the EFR will overwrite samples on Base Station.

If a sample is imported from the EFR and its an older version than the one on Base Station, a warning will pop up.

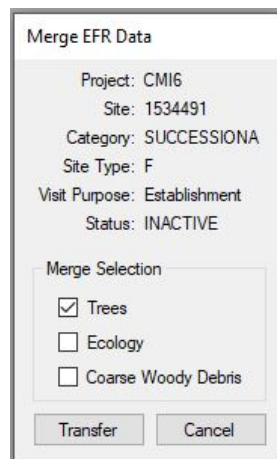


Click *Yes* to continue with the EFR sample transfer, or *No* to cancel the transfer.

Merging Samples from EFR

Type F and O samples can be merged if different samplers collected the trees, ecology, and/or coarse woody debris data.

Follow the directions in *Importing Samples from EFR*. When the *Transfer* button is clicked, a pop-up window will appear prompting the selection of the data to download.

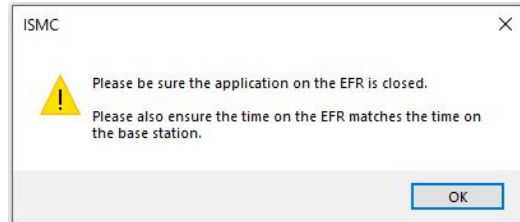


Select the data to import from the EFR, click *Transfer* and the pop-up window will disappear. Click *Transfer* again on the main *Upload from Handheld* window. The imports of trees, ecology, and coarse woody debris will merge into one sample in Base Station.

Note: Header and Access Notes are only attached to Trees data.

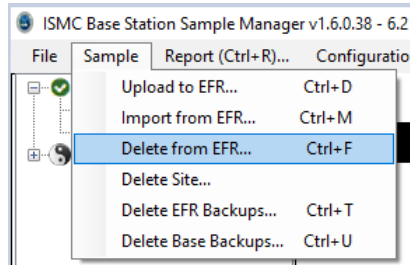
Deleting Samples from EFR

The Base Station must be open and the EFR successfully connected by *Windows Mobile Device Center* to the desktop to perform these tasks. **The EFR ISMC application must be closed.**

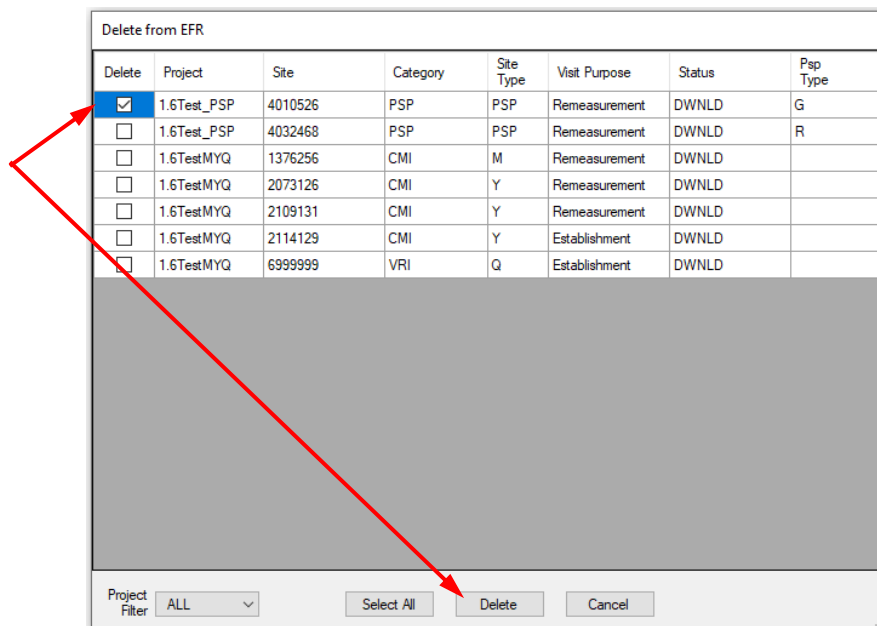


From the Base Station:

1. Click on the *Sample* menu then *Delete from EFR* or **CTRL+F**.



2. When the *Delete from Handheld* window opens, select samples to delete from the EFR by clicking on the *Delete* box, or click the *Select All* button, then click the *Delete* button at the bottom of the window.



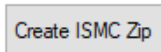
3. The window closes when the file is deleted.

Creating a Host Zip

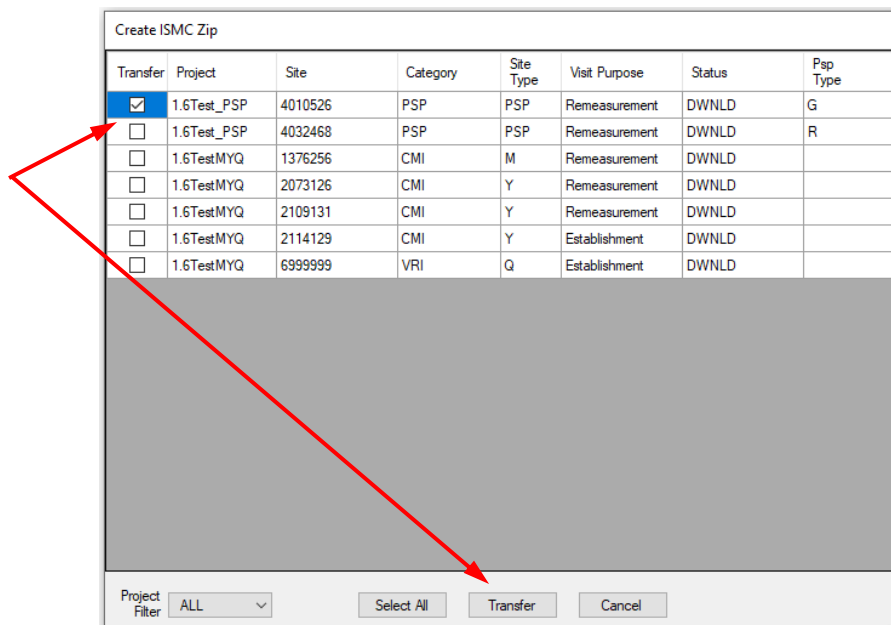
When a sample is complete and all validation errors have been corrected, it can be prepared for delivery to the Ministry Coordinator by creating a Host ZIP file. Multiple samples can be included in the same ZIP file.

From Base Station:

1. Click on *Create Host Zip* button in the bottom-left corner of Base Station or **CTRL-E**.



2. When the *Upload to Host* window opens, select samples to upload to Host by clicking on the *Transfer* box, or click the *Select All* button, then click the *Transfer* button at the bottom of the window.



3. The window closes when the file is transferred to a ZIP file.

A ZIP file with selected samples is created in:

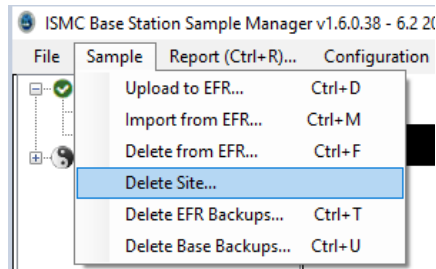
C:\ProgramData\ISMIC\Zips\Upload

ZIP files can then be transferred to the Ministry Coordinator from this folder.

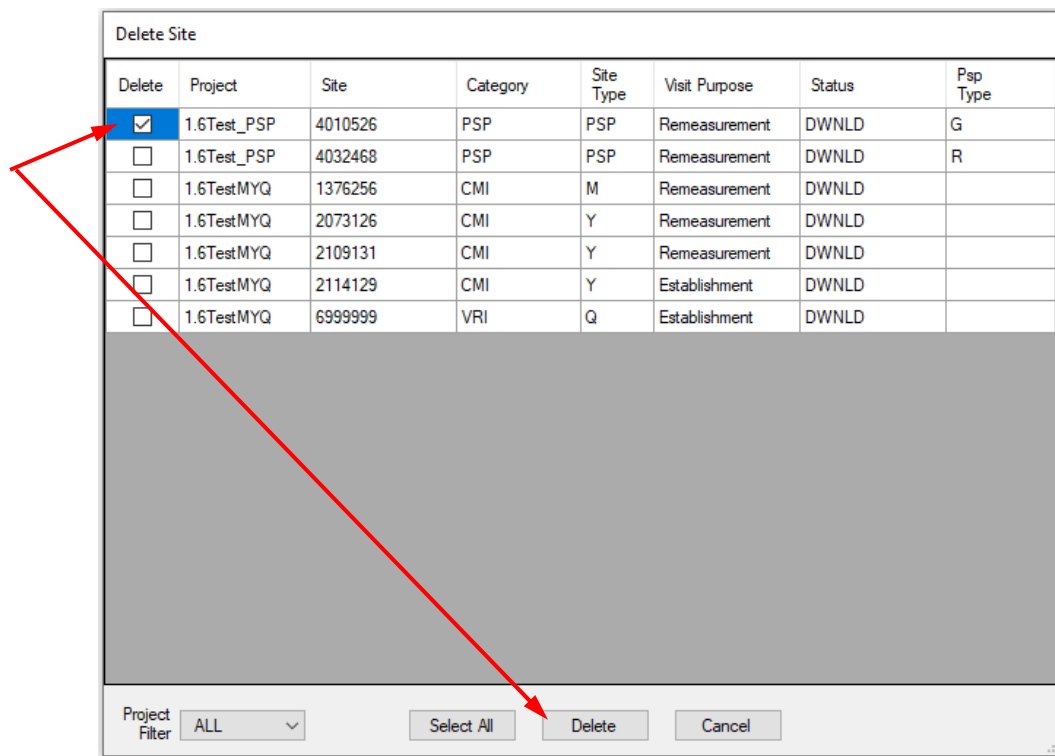
Deleting Samples from Base Station

This function will **permanently delete** a sample from Base Station.

1. Click on *Sample* then *Delete Site*.



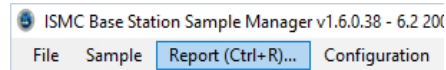
2. When the *Delete Site* window opens, select samples to delete from Base Station by clicking on the *Delete* box, or click the *Select All* button, then click the *Delete* button at the bottom of the window.



3. The window closes when the file is deleted.

Reports

Reports can be generated in Base Station by sample, or a batch of samples uploaded into Base Station. Click on *Report* in the upper left menu, or **CTRL-R**, for the report window.



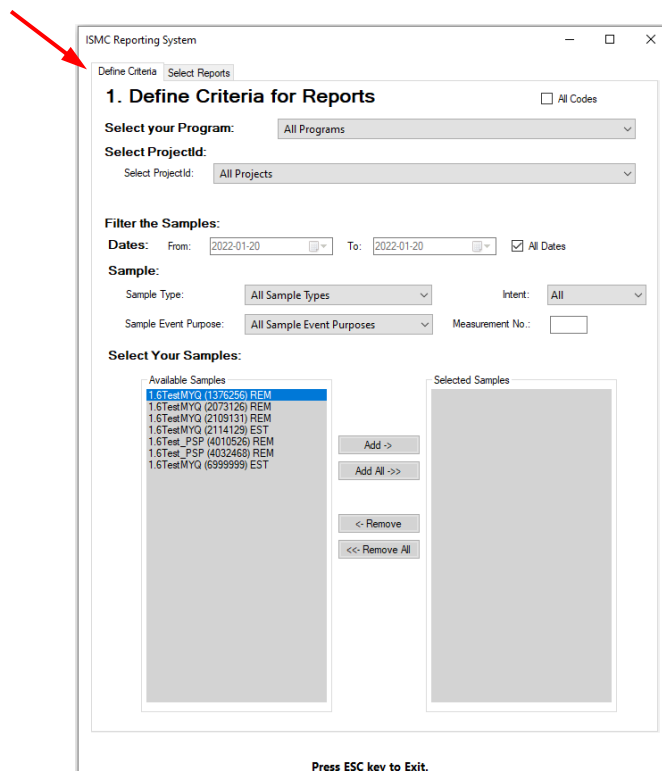
Steps to create reports.

1. Define criteria.
2. Select reports.
3. Select output method.

Define Criteria

A pop-up window to define the criteria for reports will open. You can define the program, project ID, sample type, sample purpose, measurement number, and individual sample(s) to generate reports.

Define Criteria:



ISMC Reporting System

Define Criteria | Select Reports

1. Define Criteria for Reports

☐ All Codes

Select your Program: All Programs

Select ProjectId: All Projects

Filter the Samples:

Dates: From: 2022-01-20 To: 2022-01-20 ☒ All Dates

Sample:

Sample Type: All Sample Types Intent: All

Sample Event Purpose: All Sample Event Purposes Measurement No.:

Select Your Samples:

Available Samples

- 1.6TestMYQ (136256) REM
- 1.6TestMYQ (2073126) REM
- 1.6TestMYQ (2109131) REM
- 1.6TestMYQ (2114129) EST
- 1.6Test_PSP (4010526) REM
- 1.6Test_PSP (4032468) REM
- 1.6TestMYQ (6999999) EST

Add ->

Add All ->

<- Remove

<<- Remove All

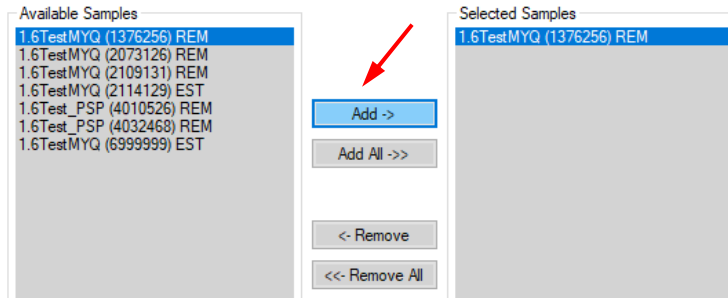
Selected Samples

Press ESC key to Exit.

When criteria for reports is defined, select samples to generate reports.

Click on *Available Samples* on the left screen and click *Add* to copy them to the *Selected Samples* on the right screen.

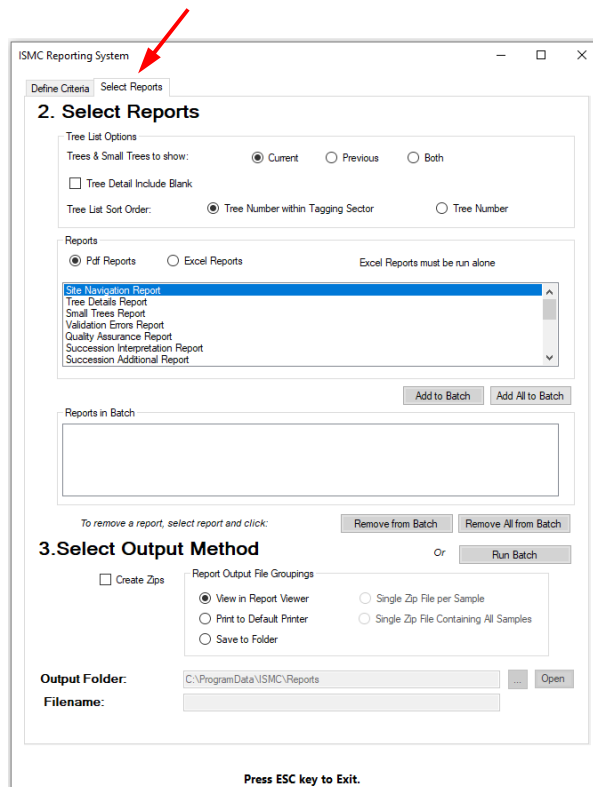
Select Your Samples:



Select Reports

Click on the *Select Reports* tab on the reports window to select the report types.

Select Reports:



Select the *Tree List Options* to include current, previous, or both measurements. Then select *PDF Reports* or *Excel Reports*. **Note: Excel Reports only create tree details and core reports.**

When reports have been selected in the reports window, click *Add to Batch*.

Select Output Method

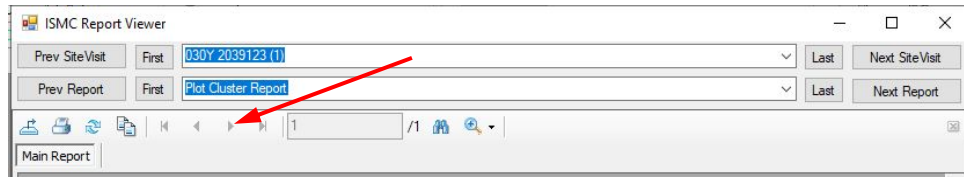
Reports can be produced in the report viewer in Base Station, printed to your default printer, or saved to your computer in PDF format in a ZIP file.

Report Output Options:

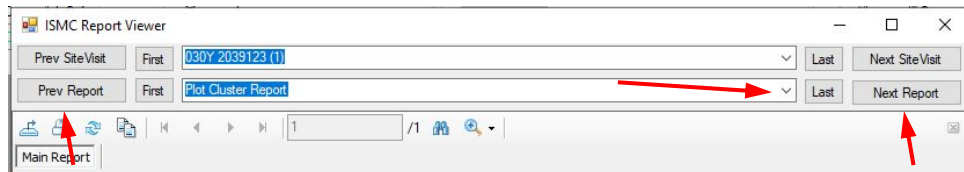
1. View in *ISMC Report Viewer*. Reports can be printed within *ISMC Report Viewer* but can only be saved in RPT format (Crystal Reports).
2. Print to your computer's default printer. **Note: Printer must be selected from the main Base Station screen under *Configuration* before running reports.**
3. Save to a folder on your computer. The location defaults to **C:\ProgramData\USMC\Reports**. The location can be changed by clicking on the ... button.
4. Create Zip files by clicking the *Create Zips* box, then select *Single Zip File per Sample* or *Single Zip File Containing All Samples*.

Report Viewer

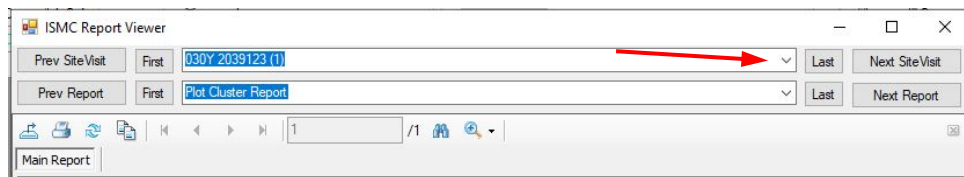
Reports can be viewed in the report viewer from Base Station. For multiple page reports in the report viewer, click the right or left arrows in the upper-left corner of the report window to change pages.



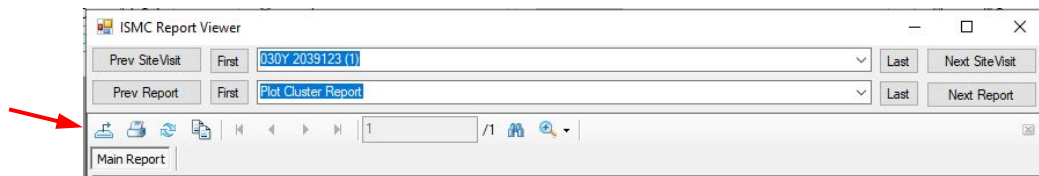
For multiple report types, click on the down arrow to select the report type to view, or click *Next Report* or *Previous Report* to move through the samples for the selected report type.



For multiple samples, click on the down arrow to select the sample to view.



Other features in Report Viewer:



1. Save in RPT format (Crystal Reports).
2. Print to a printer of your choice.
3. Refresh reports.
4. Copy.

Report Formats:

Crystal Reports

Project		URI Ground Sampling	Site Navigation Report		
Project ID: 170350		Project Name: 170350	Instrument Date: 2023-03-21	Report Type: CHS(M)-V	Sample Date/Time: 2023-03-21 15:00
Draw 1		Draw 2		Draw 3	Draw 4

NAVIGATION					
UTM COORDINATES					
	Z	E	N	Elev	GPS
Access Point	10	437185	5841860		
Tie Point	10	437622	5841772	1321	
Intersection	10				

ACCESSION NOTES	
Count	Comments
0.0	0.0 START AT SYLVIA CAFE ON NAZKO RD. GO WHE
0.0	0.0 ST ON NAZKO
0.0	0.5 TURN LEFT ON TABLES
0.0	0.0 RESET
0.0	0.7 30M START DIRT ROAD
0.0	0.0 15 YAM SWW RIGHT
0.0	0.0 10 BM ROAD BECOMES 3300 RD-4R4
0.0	0.0 20 DM AT 21 KM BOARD
0.0	0.2 20 BM WALK ON TO 3800PC AR-10
0.0	0.0 RESET
0.0	0.0 SWW ON MAIN
0.0	0.0 4 BM SWW LEFT R-388
0.0	0.0 6 BM SWW LEFT
0.0	0.0 18 BM CROSS BRIDGE
0.0	0.0 18 YAM SWW LEFT AT 3815 BOARD
0.0	0.0 17 YAM SWW LEFT
0.0	0.0 18 YAM SWW LEFT
0.0	0.0 18 YAM SWW RIGHT
0.0	0.0 18 DM SWW STRAIGHT
0.0	0.0 20 DM SWW RIGHT
0.0	0.0 20 BM 40M ON LEFT AT ROAD JUNCTION
0.0	0.0 PC AT 75M AT 14 DEG OR FOLLOW BLUE RIBB
0.0	0.0 ON

REFERENCE POINT DETAILS					
	Species	Dist (m)	As Tree To Pin	Dist (m)	Tag#
Tie Point	PL	125	1.53	18708	
Reference Point	PL	125	1.53	18708	

STRAIGHT LINE BEARING & DISTANCE FROM ACCESS POINT TO IPC	
As	Distance (m)
88	82

Page 1 of 2

Software Version (m): v1.2.1.8

Report Generated On: 2023-03-15 13:44:59(M)

STRAIGHT LINE BEARING & DISTANCE FROM REFERENCE POINT TO P/C		
Az	Sight (PC)	Dist Used
°	°	m

POINT LOCATION COMMENTS

SAMPLE SITE VISIT COMMENTS

PLOT LAYOUT (PSP or CMI YAWLICircle)

Plot Shape	Plot Radius	Plot Area
○	11.28	0.440

Slope %	Aspect

Subplot Radius	SubPlot Area

DIAGRAM:

BEC DATE DETAILS

MAP-0A502			
Zc	SubZc	Ypr	Ph

OBSERVATION COMMENT

WALK THRU

Azimuth	Loc To Be Rd	Pin 1	Pin 2	Pin 3	Pin 4

Page 2 of 2

Software Version (VPR) v1.2.0.6

Report Generated On: 2023-09-10 10:44:19AM

Excel Tree Details Report

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X						
1	Sort	PlotCat	PlotSampleNo	Sample	Measur	Base	PlotCat	Number	Tagging	Species	Tree	Ext	Diamet	Total	Crown	C	S	Broke	Residus	Walkthr	Azimuth	Distanc	Tree	Los	Damage	Tree	Sitc	Near	Tree	Com	
2	P	IPC	2109131	Y	2	IPC	685	1	AT	LS		18.70	15.20	D	N	-	-	-	0	0.00											
3	C	IPC	2109131	Y	2	IPC	685	1	AT	LS		23.00	20.00	D	N	-	-	-	0	0.00											
4	P	IPC	2109131	Y	2	IPC	686	1	SX	LS		4.30	3.90	S	N	-	-	-	0	0.00											
5	C	IPC	2109131	Y	2	IPC	686	1	SX	LS		9.00	8.00	S	N	-	-	-	0	0.00											
6	P	IPC	2109131	Y	2	IPC	687	1	AT	LS		14.00	14.00	D	N	-	-	-	0	0.00											
7	C	IPC	2109131	Y	2	IPC	687	1	AT	LS		19.00	19.00	D	N	-	-	-	0	0.00											
8	P	IPC	2109131	Y	2	IPC	688	1	SX	LS		13.40	8.60	C	N	-	-	-	0	0.00	DTP				IWS						
9	C	IPC	2109131	Y	2	IPC	688	1	SX	LS		18.00	13.00	C	N	-	-	-	0	0.00	DTP				IWS						
10	P	IPC	2109131	Y	2	IPC	689	1	SX	LS		10.50	7.60	C	N	-	-	-	0	0.00											
11	C	IPC	2109131	Y	2	IPC	689	1	SX	LS		15.00	12.00	C	N	-	-	-	0	0.00											
12	P	IPC	2109131	Y	2	IPC	690	2	AT	LS		15.50	14.30	D	N	-	-	-	0	0.00											
13	C	IPC	2109131	Y	2	IPC	690	2	AT	LS		20.00	19.00	D	N	-	-	-	0	0.00											
14	P	IPC	2109131	Y	2	IPC	691	2	AT	LS		17.00	14.20	D	N	-	-	-	0	0.00											
15	C	IPC	2109131	Y	2	IPC	691	2	AT	LS		22.00	19.00	D	N	-	-	-	0	0.00											
16	P	IPC	2109131	Y	2	IPC	692	2	SX	LS		14.80	7.30	S	N	-	-	-	0	0.00											
17	C	IPC	2109131	Y	2	IPC	692	2	SX	LS		19.00	12.00	S	N	-	-	-	0	0.00											
18	P	IPC	2109131	Y	2	IPC	693	2	AT	LS		14.40	13.90	D	N	-	-	-	0	0.00											
19	C	IPC	2109131	Y	2	IPC	693	2	AT	LS		19.00	18.00	D	N	-	-	-	0	0.00											
20	P	IPC	2109131	Y	2	IPC	694	2	AT	LS		12.90	12.10	D	N	-	-	-	0	0.00											
21	C	IPC	2109131	Y	2	IPC	694	2	AT	LS		17.00	17.00	D	N	-	-	-	0	0.00											
22	P	IPC	2109131	Y	2	IPC	695	2	SX	LS		12.70	8.80	S	N	-	-	-	0	0.00											
23	C	IPC	2109131	Y	2	IPC	695	2	SX	LS		17.00	13.00	S	N	-	-	-	0	0.00											
24	P	IPC	2109131	Y	2	IPC	696	2	SX	LS		9.40	6.50	I	N	-	-	-	0	0.00											
25	C	IPC	2109131	Y	2	IPC	696	2	SX	LS		14.00	11.00	I	N	-	-	-	0	0.00											
26	P	IPC	2109131	Y	2	IPC	697	2	SX	LS		10.50	7.00	I	N	-	-	-	0	0.00											
27	C	IPC	2109131	Y	2	IPC	697	2	SX	LS		15.00	12.00	I	N	-	-	-	0	0.00											
28	P	IPC	2109131	Y	2	IPC	698	2	AT	LS		8.30	10.40	C	N	-	-	-	0	0.00											
29	C	IPC	2109131	Y	2	IPC	698	2	AT	LS		13.00	15.00	C	N	-	-	-	0	0.00											
30	P	IPC	2109131	Y	2	IPC	699	2	AT	LS		5.70	7.80	I	N	-	-	-	0	0.00											
31	C	IPC	2109131	Y	2	IPC	699	2	AT	LS		10.00	12.00	I	N	-	-	-	0	0.00											
32	P	IPC	2109131	Y	2	IPC	700	2	AT	LS		12.60	13.20	D	N	-	-	-	57	0.60											
33	C	IPC	2109131	Y	2	IPC	700	2	AT	LS		17.00	18.00	D	N	-	-	-	57	0.60											
34	P	IPC	2109131	Y	2	IPC	701	2	AT	LS		4.40	7.10	S	N	-	-	-	0	0.00											
35	C	IPC	2109131	Y	2	IPC	701	2	AT	LS		9.00	12.00	S	N	-	-	-	0	0.00											
36	P	IPC	2109131	Y	2	IPC	702	3	SX	LS		12.30	7.80	S	N	-	-	-	0	0.00											
37	C	IPC	2109131	Y	2	IPC	702	3	SX	LS		17.00	12.00	S	N	-	-	-	0	0.00											
38	P	IPC	2109131	Y	2	IPC	703	3	AT	LS		10.40	12.00	C	N	-	-	-	0	0.00											
39	C	IPC	2109131	Y	2	IPC	703	3	AT	LS		15.00	17.00	C	N	-	-	-	0	0.00											
40	P	IPC	2109131	Y	2	IPC	704	3	AT	LS		7.80	8.50	I	N	-	-	-	0	0.00											
41	C	IPC	2109131	Y	2	IPC	704	3	AT	LS		12.00	13.00	I	N	-	-	-	0	0.00											
42	P	IPC	2109131	Y	2	IPC	705	3	SX	LS		10.20	6.90	S	N	-	-	-	0	0.00											
43	C	IPC	2109131	Y	2	IPC	705	3	SX	LS		15.00	11.00	S	N	-	-	-	0	0.00											
44	P	IPC	2109131	Y	2	IPC	706	3	AT	LS		4.10	6.50	I	N	-	-	-	0	0.00											

How to Report Errors

If an error occurs:

- What measurement type (e.g., CMI, PSP, QA, etc.)
- Application platform (Host, Base Station, EFR)
- What Screen: (e.g., *Tree Detail* List, or screen number on the bottom of the screen for Host)
- What action was being performed: (e.g., hitting the **TAB** key when moving from cell A->B)
- A screen shot of the error (include the picture of the whole screen if possible)
- Is the error reproducible?

Additional information about the error can be provided by copying the sample and log files from Base Station and EFR errors.

EFR Files

Connect the EFR with Windows Mobile Device Center to your PC.

For the sample, navigate to **Juniper Systems Allegro/Application Data/ISMC/Databases** and copy the sample the issue occurred in. Paste the sample in a folder on your computer.

For the logs, navigate to **Juniper Systems Allegro/Application Data/ISMC/Logs** and copy both log files. Paste the logs in a folder on your computer.

Send the sample and log files to the contract manager.

Base Station Files

For the sample, navigate to **C:/ProgramData/ISMC/Databases** and copy the sample the issue occurred in. Paste the sample in a folder on your computer.

For the logs, navigate to **C:/ProgramData/ISMC/Logs** and copy both log files. Paste the logs in a folder on your computer.

Send the sample and log files to the contract manager.

Appendix

Base Station Shortcut Keys

These shortcut keys are specific to Base Station administrative tasks only. Working in an open sample in Base Station uses the same shortcut keys as the EFR in *Base Station and EFR Quick Navigation Keys*.

ESC	Return to previous screen
CTRL-D	Deploy to EFR
CTRL-E	Export (Create Host Zip)
CTRL-F	Delete from EFR
CTRL-H	Install ISMC on EFR
CTRL-I	Import ZIP into Base Station
CTRL-L	Delete sample from Base Station (Inactive; use Sample/Delete Site)
CTRL-M	Import from EFR
CTRL-O	Data collection mode (eliminates sample selection screen)
CTRL-P	Printer setup
CTRL-Q	Exit Base Station
CTRL-R	Report
CTRL-S	Saves at any time without exiting screen
CTRL-T	Delete EFR backups
CTRL-U	Delete Base backups (Inactive)

Base Station and EFR Quick Navigation Keys

MAIN SCREENS

F1	Form Commands/ Tools	Trees	Leads to other options, shows F commands available, tools menu
F2	<i>Inactive</i>		
F3	Copy Down	Any List	Copies down the data from the row above
F4	Next Section	Trees	Move to next section on screen
F5	Toggle Tree View	Trees	Toggles between Tree List and Tree Detail screens
F6	Toggle Tree Lists	Tree List	Toggles between tree, loss, damage, and grade
F7	<i>Inactive</i>		
F8	<i>Inactive</i>		
F9	<i>Inactive</i>		
F10	History View (remeasure, QA)	Most Forms	Toggles to 'previous' data for that screen
F11	<i>Inactive</i>		
F12	Comments	Most Forms	Add a comment to the current screen
[ESC]	Escape Screen	All	Returns to previous screen
[ENTER]	Enter/Activate Cell	All	
[TAB]	Next Cell	All	
[SPACE]	Drop-down Lists	Any List	Opens box drop-down lists (e.g., L/S/D/F, M/E, CC)
[ZERO]	Edit Alpha Cells	Any List	Allows editing in alpha cells; cursor enters cell
CTRL-F5	Sample Tree	Trees	Toggles between Sample Tree and Tree screen
CTRL-A	Stem Map Only	Tree List	Locks screen for azimuth and distance only
CTRL-G	"Go To"	Tree List	Search and go to a tree or sector
CTRL-L	Delete Row/Tree	Any List	Deletes the current row you are on
CTRL-N	Insert Row/Tree	Any List	Inserts a row after the current one you are on
CTRL-S	Save	All	Saves at any time without exiting the screen
CTRL-Z	Undo	Most Forms	Deletes the most recent change to data
CTRL-.	Hotkey	Trees	Press to select default value as follows: Live/Dead/Standing/Fallen = L/S Measured/Estimated = M Broken Top = No NF% = 100

TREE DATA

Same as 'MAIN SCREEN' except

F8 (SHIFT-F2)	Previous Tree	Trees	Moves from current tree to previous in list
F9 (SHIFT-F3)	Next Tree	Trees	Moves from current tree to next in list
F3	Add Tree	Trees	Adds a tree; highest tree number +1

SAMPLE TREE SUMMARY

F2	Suggest Samples	Sample Tree	Sample tree screen shows trees identified as sample trees. F2 shows additional suggestions
CTRL-F5	Sample Tree	Sample Tree	Toggles between Sample Tree and Sample Tree Summary screen

SMALL TREE

F7	10-29cm Column	Sm. Tree	Goes to 10-29cm column on current row
F8	30-130cm Column	Sm. Tree	Goes to 30-130cm column on current row
F9	>130cm Column	Sm. Tree	Goes to >130cm column on current row
F6	Toggles Add/remove	Sm. Tree	F6 changes ENTER to subtract or add by 1
[ENTER]	Add Tree to Cell	Sm. Tree	Adds/subtracts tree to the current cell

ACCESS

F2	Reset Row to 0	Access	Resets current row cum. and inter. distance to 0
F3	Insert Above	Access	Adds and enters a row above current row
F4	Next Section	Access	Skips to com
F5	Insert Below	Access	Adds and enters a row below current row
F6	Delete	Access	Deletes current row

TREE SHRUB HERB MOSS

F5	Toggle Screen	Tree Shrub	Toggles between Tree/Shrub and Herb/Moss screen
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TRANSECTS

F6	Toggle Screen	Transect	Toggles between transect 1 and 2
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Allegro2 Keypad

