

Application of Data Collection for **PL series pipeline & cable locator**

PL-AP OPERATION MANUAL

FOR THE PL-G PIPE LOCATOR

FOR ANDROID 9 AND BELOW

PL-G MAX Receiver



INTRODUCTION

This is the operation manual describing the Android application **PL-AP** that connects with the **PL-G-MAX** pipeline & cable locator, to collect data, and create reports.

This manual details the many features of the **PL-AP** application. There are accompanying videos for each chapter of the manual. **The PL-G-MAX pipe locator may also be referred to as the RECEIVER in this manual.**

The Android device may also be referred to as the DEVICE in this manual.

OPERATING ENVIRONMENT

Supported Android Versions are currently: **Android 6 up to Android 9 Smartphone or Tablet.**

1. Bluetooth and Wi-Fi functionality is required to fully benefit from this PL-AP
2. A USB Connection Cable is needed to connect to an external PC for data collection
3. Wi-Fi: Wi-Fi is used for reading data
4. Bluetooth: Bluetooth is used for reading data
5. Once the **PL-AP** Application has been installed on an Android Device, the Device can Pair with the PL-G-MAX Receiver .

PL-G-MAX Operating Instructions Detailed Operating Instructions for the PL-G-MAX can be found in the separate publication: **PL-G-MAX OPERATION MANUAL.**

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1. UNDERSTANDING THE BASICS

1-1. UNDERSTANDING THE TABLET

This section of the manual only applies to those using a Samsung Galaxy Tab A, the tablet used by Fuji Pipe Locators. For those using their own Android device, please skip to section (1-2) of the manual.

The tablet is a Samsung Galaxy Tab A (2019). Below is a diagram displaying its various buttons and their corresponding functionality:



Functionality




- ① - The power button controls the power of the tablet. press to sleep / wake the device, or hold to shut-down / turn-on the device.
- ② - The volume buttons control the volume of the tablet.
- ③ - The charging port is where you plug the charging cable into. You can also use this to connect to external devices, such as a Windows PC.
- ④ - The SIM card tray is where you can insert a SIM card for the device. **It is not necessary to have a SIM card installed to use the PL-AP app.**
- ⑤ - The audio jack is used for external audio devices such as a headset.

1-2. UNDERSTANDING ANDROID OS

This section of the manual will briefly go over the Android operating system (OS) and how to use it.

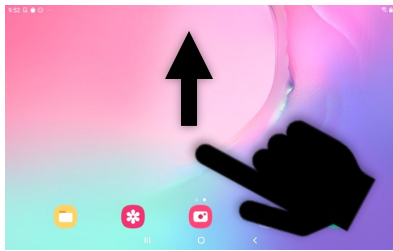
Navigating Android

Most Android devices use three buttons for navigation. These buttons are usually found at the bottom of the screen. The order and design may vary.

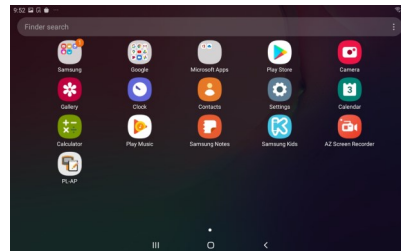
-  The button in the center is the home button.
-  The button that looks like an arrow is the back button.
-  The remaining other button is the app-view button.

The App Drawer

The App drawer is where all your installed Apps can be found. Apps from the App drawer can be added to the home screen and organized in any way.



Home Screen



App Drawer

To find an installed App, open up the App drawer and enter the App name into the search bar at the top.

Bluetooth Settings

Bluetooth is a wireless connection method that connects two devices together.

To access this, find the **Settings** app on your Android device, then look for **“Bluetooth”**. Some brand’s have Bluetooth already accessible from the main **Settings** page, while other brands place the Bluetooth setting inside a **“Connections”** page or similar. The Bluetooth settings allows you to enable/disable Bluetooth, and choose which device to connect to via Bluetooth.

2. INSTALLING THE PL-AP APP

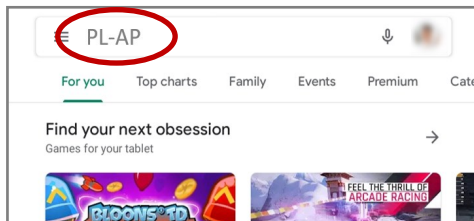
2-1. INSTALLING THE PL-AP APP

The **PL-AP app** is pre-installed on Tablets supplied directly by Fuji Pipe Locators. Those using their own Android devices will need to download and install the PL-AP application (app).

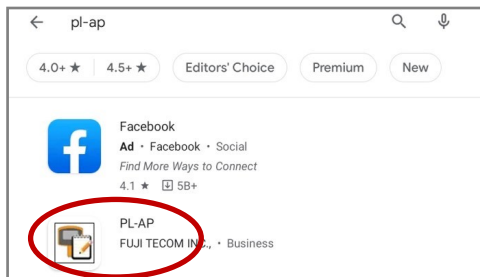
In order to download the app, you will need to have access to a Google account (e.g. Gmail).

The PL-AP app will only work on ANDROID 9 OR LOWER.

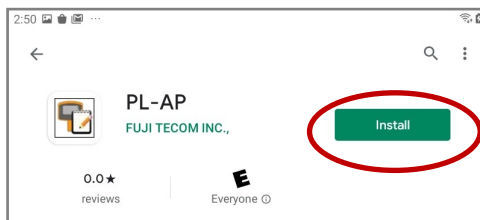
1. Open the app drawer and search for the Play Store app. Open it. To learn how to search for apps, refer to section (1-2) of the manual.
2. If prompted, sign into your Google account. Then, search for “**PL-AP**” in the search bar up top.



3. Select the **PL-AP** app from the list of results.



4. Select the Install button on the **PL-AP** app.

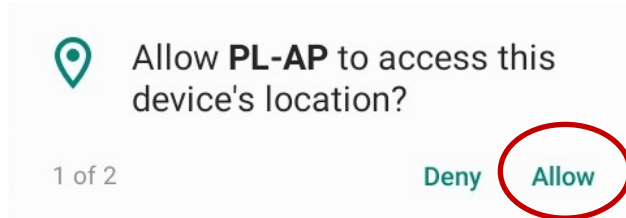


It may take a short while to install. Once it has been installed, you will be able to find the **PL-AP** app in your app drawer.

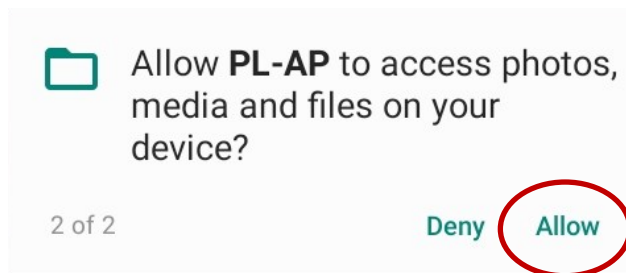
2-2. ENABLING PL-AP APP PERMISSIONS

The PL-AP requires access to certain permissions for it to function correctly. Please ensure you perform the following instructions accurately.

When opening the app for the first time, you will be prompted to give **PL-AP** access to your device's location. Select **Allow**.



Then, you will be prompted to give PL-AP access to your device's media and files. Select **Allow**.



Ensure that you select Allow for these permissions. Selecting Deny will result in the app not functioning properly, and you will need to re-install the **PL-AP app**.

Why Does PL-AP Need This?

GPS information is needed for **PL-AP** because it needs to know where you are scanning for pipes. This data is also used in the reports.

File access is needed for **PL-AP** because it needs to access your storage in order to create reports.

2-3. UNDERSTANDING THE PL-AP APP

This section of the manual will only briefly go over the app and its functionality. The manual will explain how to fully use the app in later sections. Please refer to the contents page for more details.

The **PL-AP app** is the companion app to the PL-G-MAX receiver. This app allows the collection of data from the PL-G-MAX Receiver when Connected/ Paired, and lets the user share this data via Reports that can be created within the **app**.

Home Screen

To the right is the main screen of the **app**.

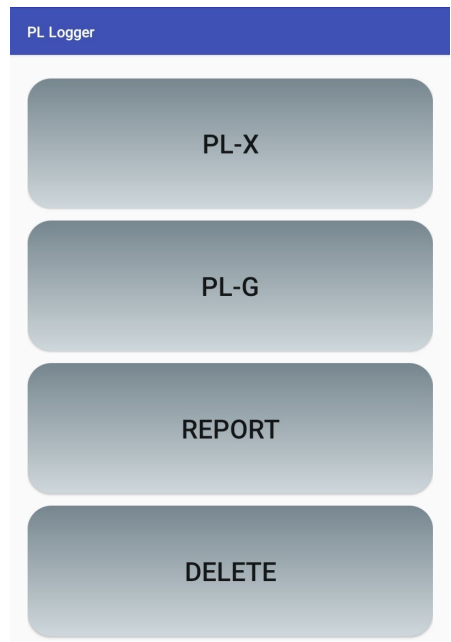
The four buttons are for accessing different functionalities of the **app**.

The PL-X is currently not available.

PL-G: This button is used to connect the **PL-G-MAX** Receiver and collect data in real-time.

REPORT: This button is used to view the collected data and generate Reports.

DELETE: This button is used to delete data.



Accessing The Buttons

To access the **PL-G** button, the **Tablet** must be connected to the PL-G receiver via Bluetooth. (refer to table of contents for instructions)

To access the **REPORT** button, the **app** must have collected data to view. This button will remain blocked if there is no data to view.

To access the **DELETE** button, the **app** must have collected data to delete. This button will remain blocked if there is no data to delete.

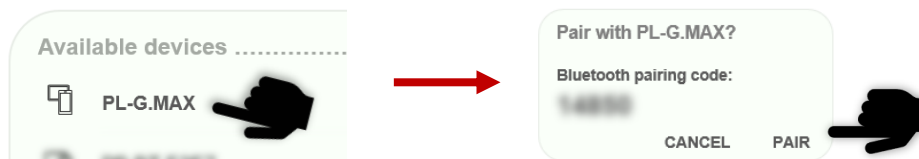
3. USING THE PL-AP APP AND PL-G RECEIVER

3-1. HOW TO CONNECT & USE A DEVICE WITH THE RECEIVER

Connecting

The PL-G-MAX Receiver will begin operating immediately after connecting with the Android device.

1. Open Bluetooth settings on your Android device and **have it ready**. Make sure it is still **OFF** in this step. Refer to page 6 to learn how to find the Bluetooth settings.
2. Turn on the PL-G Receiver by pressing the red power button, and wait until “Processing” is complete.
3. Hold down the “Depth” button on the PL-G until it says “<<Bluetooth>> Wait Connection”.
4. **Quickly**, on your Android device, turn your Bluetooth on and connect to “PL-G.MAX” as soon as it appears. If prompted, confirm the connection by selecting PAIR or OK.



5. **Quickly** find and open the PL-AP app and select “PL-G”.
6. **Quickly** Select the “Data Transfer” button. This button should then turn into a “Stop Transfer” button
7. The PL-G receiver will now say “Established Connection”, and you will be instructed to immediately begin operating the Receiver.

Important Note

You must complete steps 4-6 within 60 seconds of completing step 3. This is because the PL-G Receiver only gives you 60 seconds to perform the connection process. The connection will fail to connect otherwise.

Go to the next page for measuring multiple times without disconnecting.

Using The Receiver With Bluetooth

Once connected to an Android device, the PL-G receiver will immediately begin operation in Depth mode.

The PL-G receiver will automatically connect to it's most recently connected Android device automatically on start-up (as long as the Android Device has been Bluetooth enabled). This means that next time you connect to the Receiver, you may only have to enter Bluetooth pairing mode on the Receiver. Open the PL-AP app and select the "Data Transfer" button.

Measuring Multiple Depths

The PL-G receiver can only measure the depth once per connection. To use the PL-G receiver multiple times consecutively without disconnecting from the Android device, follow these instructions:

1. Directly after your first measurement using Bluetooth (page 9), ensure the PL-AP app is open and still on the PL-G screen, and the button still displays "Stop Transfer".
2. Restart the PL-G receiver by pressing the power button to turn it off and then on again.
3. Hold down the "Depth" button on the PL-G Receiver until it says "<<Bluetooth>> Wait Connection". It should soon automatically change to "<<Bluetooth>> Established Connection" if step 1 was performed correctly.
4. The PL-G receiver will be ready to perform another measurement.

If you **do not** need to measure the depth multiple times consecutively without disconnecting, perform the instructions on page 9 instead.

3-2. HOW TO ACCESS COLLECTED DATA WITHIN THE PL-AP APP

To find where the data is stored in the **app**, find and open the **PL-AP app** and select the “**REPORT**” button. You will then see the screen below.

The screenshot shows the 'REPORT' screen with three filter sections. The 'Model' section has three buttons: 'All', 'PL-X', and 'PL-G', with 'PL-G' selected. The 'Unit No.' section is a list with '84:DF:C4' highlighted in green, and other entries are 'E3:EE:2C', 'F6:12:B5', 'AB:F2:1E', and '16:0B:FF'. The 'Date' section shows a date range from '02/16/2021' to '02/16/2021', with vertical ellipsis between the dates and calendar icons on the right. At the bottom are 'CREATING' and 'SELECT' buttons.

Ensure this is set to “**PL-G**”. This ensures correct formatting of the report when generated.

This is a list of ID’s representing PL-G Receivers that have connected to the device and gathered data. To find the ID number of your PL-G receiver, look below the receiver’s handle.

This is a range of dates that you can modify by pressing the calendar icons. Only data collected within the range of dates will appear.

Ensure the range of dates is correctly set to the dates you want. Then, tap on the PL-G Receiver you want to view the data from, and then tap “Select”.

The screenshot shows the 'REPORT' screen displaying a list of data entries. Each entry includes a number (No. 6, 5, 4, 3), a location (lat. N44° 13'48.6, lon. W-77° 30'2.0), a receiver ID (PL-G 84:DF:C4), a date and time (Date 02/16/2021 18:33:20), and a depth (Depth 2.59m). A Google Maps icon is visible next to each location. The entries are separated by horizontal lines.

This will take you to a screen where you can view the data collected within the range of dates you selected from the chosen receiver.

3-3. HOW TO DELETE COLLECTED DATA WITHIN THE PL-AP APP

To DELETE data collected, find and open the **PL-AP app** and select the **“DELETE”** button. The screen below will be displayed.

Model
All PL-X PL-G

Unit No.
84:DF:C4
E3:EE:2C
F6:12:B5
AB:F2:1E
16:0B:FF

Date
02/16/2021
⋮
02/16/2021

DELETE DATA SELECT

Ensure Model is set to either “ALL” or “PL-G”.

This ensures data from a **PL-G Receiver shall be displayed.**

This is a list of ID’s representing PL-G Receivers that have previously been connected to the Device. Each PL-G has a unique ID pairing-number associated to your PL-G-MAX Receiver

This is a range of Dates that you can modify by pressing the calendar icons. Only data collected within the range of dates will appear.

1. Select the Range of Dates of the Data you want to Delete.
2. Select the Receiver you want to Delete data from.
3. **If you want to delete all the Data** collected from that receiver, select **“Delete Data”**.
4. **If you want to delete specific Data** from that receiver, select **“Select”**. This will lead you to the screen shown on the right.
5. Select the specific data you want to delete by tapping it (you may select multiple), and then select **“Delete”** on the bottom left.

DELETE

No.6	lat. lon.	N44° 13'48.6 W-77° 30'2.0	
PL-G		84:DF:C4	
Date		02/16/2021 18:33:20	
Depth		2.59m	
No.5	lat. lon.	N44° 13'48.6 W-77° 30'1.9	
PL-G		84:DF:C4	
Date		02/16/2021 18:13:34	
Depth		1.52m	
No.4	lat. lon.	N44° 13'48.6 W-77° 30'1.9	
PL-G		84:DF:C4	
Date		02/16/2021 18:11:58	
Depth		---	

DELETE DELETE ALL

3-4. HOW TO CREATE REPORTS OF COLLECTED DATA

To find where the data is stored in the app, find and open the PL-AP app and select the “REPORT” button. You will then see the screen below.

Ensure this is set to “PL-G”. This ensures correct formatting of the Report when generated.

This is a list of ID’s representing PL-G receivers that have previously connected to the Device and gathered data. To find the ID number of your PL-G receiver, look below the receiver’s handle.

This is a range of dates that you can modify by pressing the calendar icons. Only data collected within the range of dates will appear.

1. Select the range of dates of the data you want to have in the Report.
2. Select the Receiver of the data you want to have in the Report
3. **If you want to create a Report of all the data** collected by that specific PL-G receiver, select “Creating”.
4. **If you want to create a report using specific data** from that PL-G receiver, then select “Select”. This will lead you to the screen shown on the right.
5. Then, select the specific data you want added to the report by tapping it (you may select multiple), and then select “Filing” at the bottom.

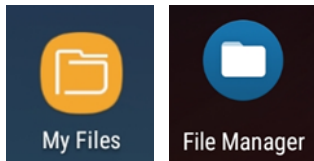
4. MODIFYING REPORT FILES ON ANDROID

4-1. HOW TO ACCESS REPORT FILES ON ANDROID

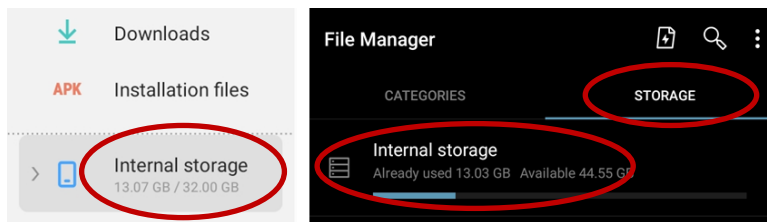
This section will show you where to find the generated Report files on your Android Device. To learn what these files are, please refer to section (6).

Every Android device has a **File Manager app**. The app name differs from device brands, but are often named “**My Files**”, “**Files**”, or “**File Manager**”. To learn how to search for apps, refer to section (1-2 Pg. 6) of this manual. For Samsung devices, look for the app named “**My Files**”.

1. Find and open your file manager app on your Android device. Below are examples of what the app may look like, depending on the brand:



2. If there is an “Internal Storage” or “Storage” option, select it. Below are examples of what this option may look like, depending on the brand:



3. Then, find and open the “PL_AP” folder.
4. Lastly, open the “Report” folder. This folder contains all report files.

Every time a Report is created, the app will generate two files as shown:

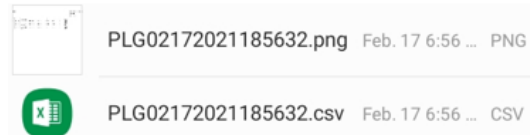


To learn what these different files are and how to use them, please refer to section (6) of the manual;

Understanding The Report Files (Pg. 24)

4-2. HOW TO TRANSFER / SHARE REPORT FILES ON ANDROID

This section will show you how to transfer/share report files on an Android device. To learn how to access these files, refer to section (4-1 Pg.15) of manual. To learn what these files & contents are, refer to section (6 Pg. 24) of manual. After following the instructions in section (4-1 Pg. 15), you will be able to see the report files, such as the screenshot below.



Keep in mind that different device brands have different types of android, so specific instructions/screenshots may vary slightly.

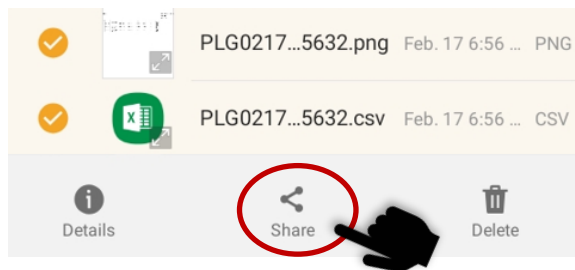
1. Press and hold down the file you want to share. After a couple seconds, checkboxes will appear next to the file names.



2. Once the checkboxes appear, select any additional files you want to share. You may select multiple files.



3. Some Devices, such as Samsung devices, will allow you to share the file(s) once the checkboxes appear. If visible, select the share option.



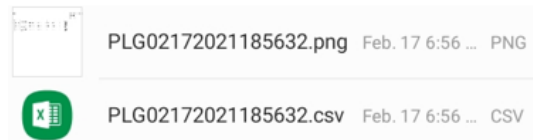
4. If your Device does not display a share option, tap on the triple-dot icon on the top right of the screen, and then select share. You can choose your sharing platform of choice.



4-3. HOW TO RENAME REPORT FILES ON ANDROID

This section will show you how to rename report files on an Android device. To learn how to access these files, refer to section (4-1 Pg.15) of manual.

After following the instructions in section (4-1 Pg.15), you will be able to see the report files, such as the screenshot below.

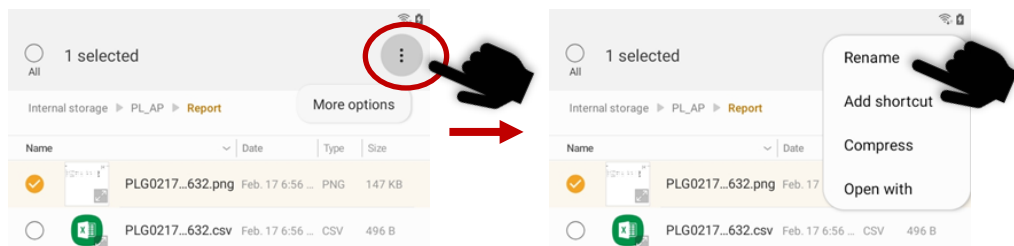


Keep in mind that different device brands have different types of android, so specific instructions/screenshots may vary slightly.

1. Press and hold down the file you want to rename. After a couple seconds, checkboxes will appear next to the file names.



2. Some devices will allow you to modify the file name once the checkboxes appear. If visible, select the “Rename” option and type in your desired file name.
3. If your device does not display a renaming option, such as Samsung devices, tap on the triple-dot icon on the top right of the screen, and then select “Rename”.



Important Note:

Do not change any letters after the period. For example, if a file is named “**PLG02172021.csv**” do not modify the “.csv” or else the file will break.

4-4. HOW TO DELETE REPORT FILES ON ANDROID

This section will show you how to delete the report files on an Android Device. To learn how to access these files, refer to section (4-1 Pg.15) of manual.

After following the instructions in section (4-1 Pg.15), you will be able to see the report files, such as the

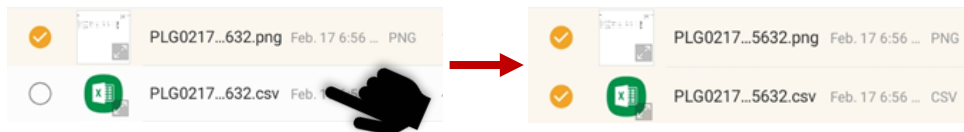


Keep in mind that different device brands have different types of android, so specific instructions/screenshots may vary slightly.

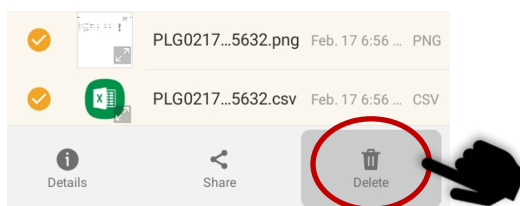
1. Press and hold down the file you want to delete. After a couple seconds, checkboxes will appear next to the file names.



2. Once the checkboxes appear, select any additional files you want to delete. You may select multiple files.



3. Some devices, such as Samsung devices, will allow you to delete the file(s) once the checkboxes appear. If visible, select the delete/trash option to delete the chosen file(s). This button may be anywhere on the screen.



4. If your device does not display a delete option, tap on the triple-dot icon on the top right of the screen, and then select delete.



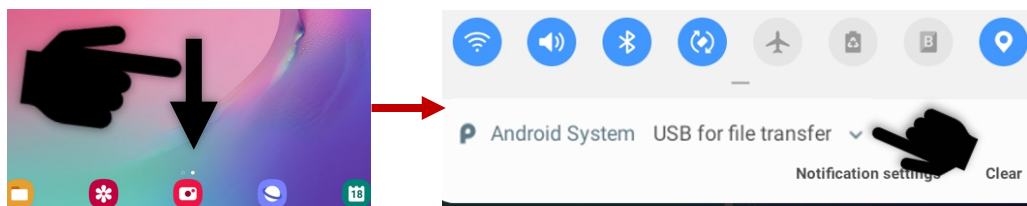
5. MODIFYING REPORT FILES ON PC

5-1. HOW TO ACCESS REPORT FILES ON PC

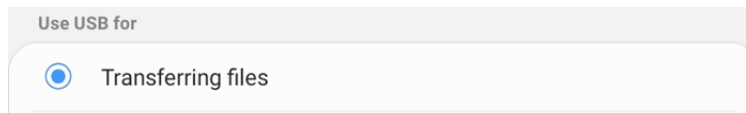
This section will show you where to find the generated report files on your Android device using a Windows PC. To learn what these files are, please refer to section (6 Pg.24). This manual assumes you are using Windows 10

To access files from your Windows PC, you will need your Android charging cable. Keep in mind that specific instructions may vary for different brands.

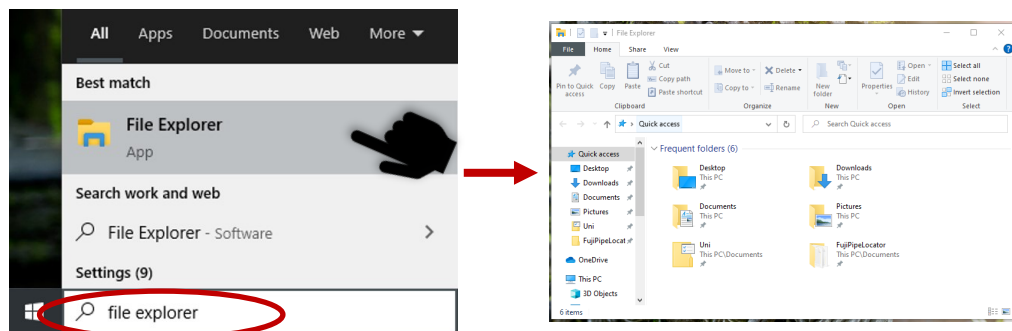
1. Use your Android device's charging cable and connect your Android device to your PC.
2. Once connected to your PC, swipe down from the home screen of your Android device, and look for a notification that starts with: "Android System USB ..." Select and open the notification.



3. Then, select "File transfer" or similar. This will allow your PC to access your Android device's files.

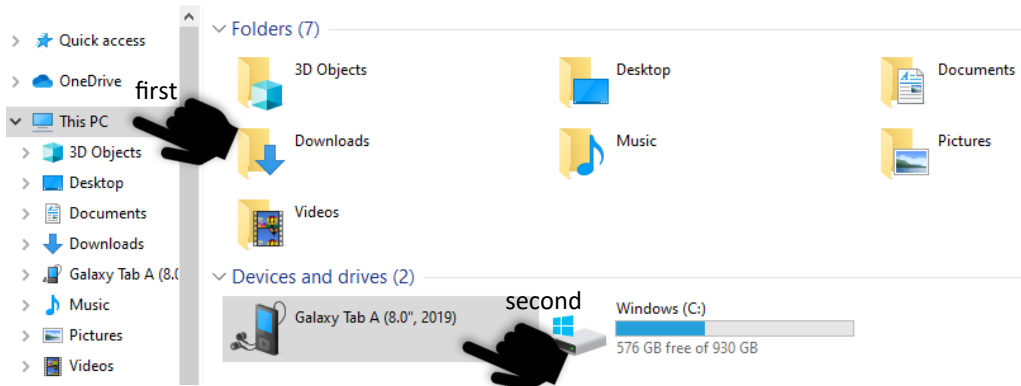


4. Now, go to your Windows PC and search "file explorer" using the search bar on the bottom left. Open it, this should open a window.

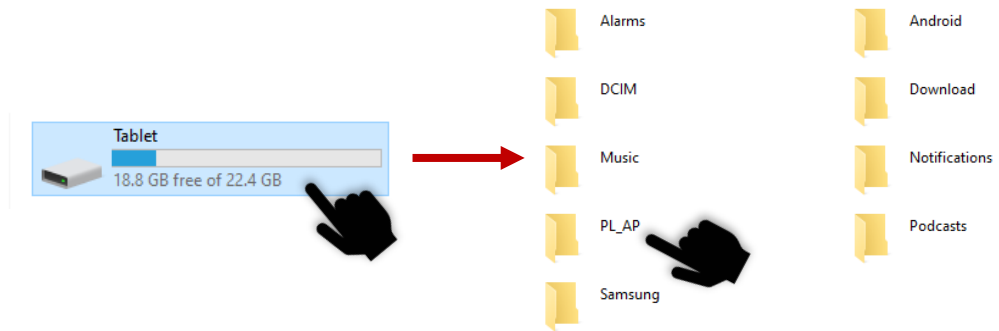


Instructions continue on the next page...

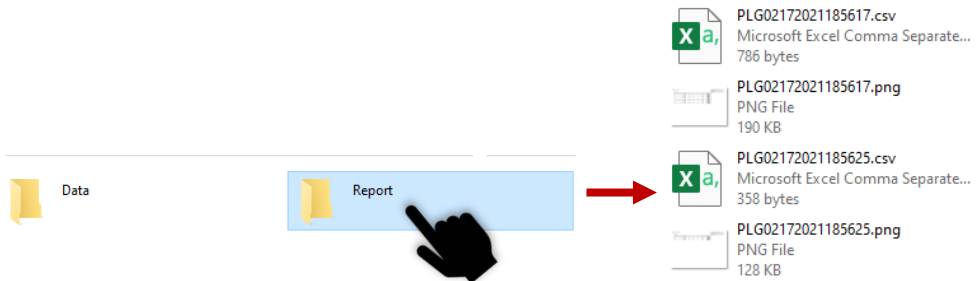
- In the file explorer, select “This PC” on the left sidebar, then open your Android device. This manual uses a Samsung Galaxy Tab A tablet.



- Open the first inner folder, and then find and open the “PL_AP” folder. The first inner folder will vary in name due to different devices/brands.



- Lastly, open the “Report” folder. This folder contains all report files.

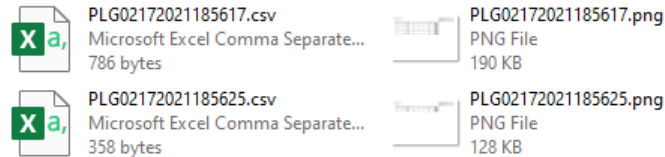


**To learn what these different files are and what they contain, please refer to section (6 Pg.24) of the manual;
Understanding The Report Files**

5-2. HOW TO TRANSFER/SHARE REPORT FILES ON PC

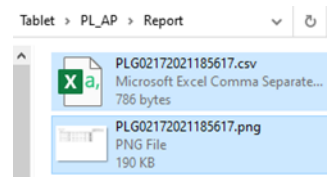
This section will show you how to transfer/share report files from an Android device to a Windows PC. To learn what these files and its contents are, refer to section (6 Pg. 24) of manual.

After following the instructions in section (5-1 Pg.19), you will be able to see the report files in the file explorer, such as the screenshot below.

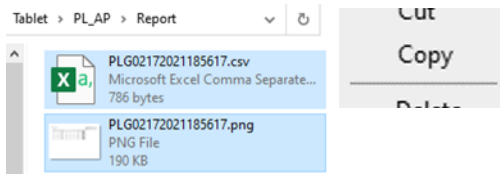


There are various ways to share files from a Windows PC. The following instructions will show you how to copy and paste the files from your Android device to your Windows PC, so reports can be accessed from both systems.

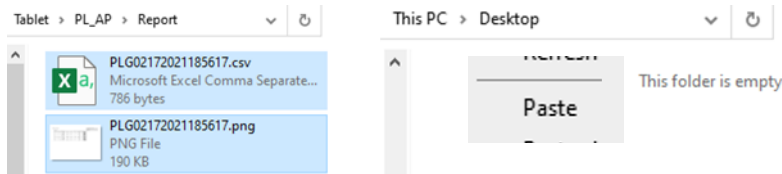
5. Select the files you want to copy to your PC by left-clicking on the first file you want to copy. Then, simultaneously hold down the “CTRL” key on your keyboard while selecting any additional files.



6. Once the files you want to copy have been selected, right-click on one of the files and select “Copy”.



7. Find where you would like to place these files on your PC, then right-click in that place and select “Paste”.



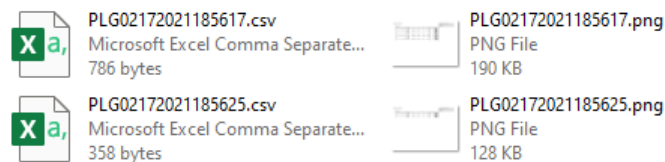
8. You have successfully copied the files to your PC once your files appear in the new place.

5-3. HOW TO RENAME REPORT FILES ON PC

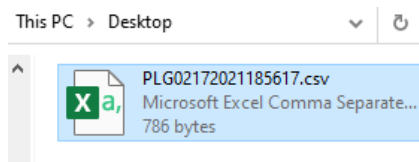
This section will show you how to rename report files from a Windows PC. To learn what these files and its contents are, refer to section (6 Pg.24) of manual.

If your files are only on your Android device, refer to section (5-2 Pg.21) to learn how to transfer them to your PC. If you don't want to transfer the files to PC but want to rename them using a PC, refer to section (5-1 Pg.19) to learn how to access the files.

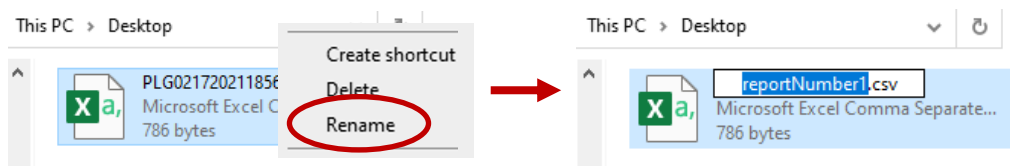
Navigate to where your files are, so you can view them similar to the screenshot below.



5. Select the file you want to rename on your PC by clicking it once.



6. After selecting it, right click on the file and select “rename”. Then you will be able to type in whatever you want.



7. Once you have typed in the new name, press the “Enter” key on your keyboard, or click somewhere else to confirm the new name.

Important Note:

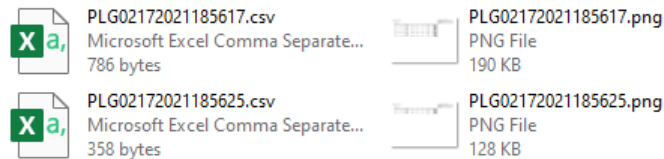
Some computers may or may not display a file extension in the name such as “.csv” or “.png”. Do not change any letters after the period. For example, if a file is named “**PLG02172021.csv**” do not modify the “.csv” or else the file will break.

5-4. HOW TO DELETE REPORT FILES ON PC

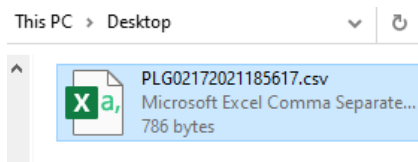
This section will show you how to delete report files from a Windows PC. To learn what these files and its contents are, refer to section (6 Pg.24) of manual.

If your files are only on your Android device, refer to section (5-2 Pg.21) to learn how to transfer them to your PC. If you don't want to transfer the files to PC but want to delete them off your Android device using a PC, refer to section (5-1 Pg.19) to learn how to access the files.

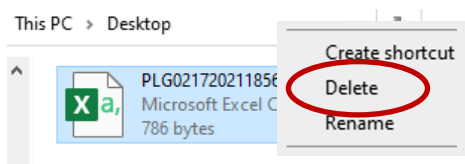
Navigate to where your files are, so you can view them similar to the



5. Select the file you want to delete on your PC by clicking it once.



6. After selecting it, right click on the file and select "Delete". Then you will be deleted.



6. UNDERSTANDING THE REPORT FILES

6-1. UNDERSTANDING THE TYPES OF REPORT FILES

This section of the manual will only go over the types of files created when generating a report, and the naming of those files. Please refer to the Table of Contents Pg.3 for more information regarding Reports.

The app will generate two (2) files for every report created. These files will be named using the following format:

TYPE / MM / DD / YYYY / hh / mm / ss

TYPE: selected model when viewing data (**ALL / PL-X / PL-G**)

MM: the month

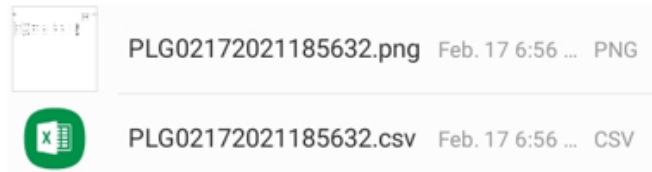
DD: the day

YYYY: the year

hh: the hour

mm: the minute

ss: the seconds



Report Files On Tablet

Above is a screenshot of the two files created from one report. The first one is a **CSV** file, and the second is a **PNG** file.

Understanding The Files

CSV: A **Comma-Separated Values (CSV)** file is a spreadsheet file that can be opened by any spreadsheet software such as Microsoft Excel.

This is the report file and contains all report data. You can view or modify the values within this file.






PNG: A **Portable Network Graphic (PNG)** file is an image file that can be opened by any image viewing software.

This is an **image version of the CSV file**, ensuring you are still able to view the contents of the report even if you do not have access to spreadsheet

6-2. UNDERSTANDING THE CONTENTS OF REPORT FILES

This section of the manual will go over the contents of the report files under the assumption that PL-G was selected as the model when creating a report. If the default report file name does not start with “PLG” then the content may differ slightly. To understand the different types of report files, refer to section (6-1 Pg. 24) of the manual.

PNG Report File

Measurement report										Report Date :02/17/2021 18:56
Location :										Reported by :
										Measured by :
No.	Model	Unit No.	Measured Date	lat.	lon.	Depth	Freq.	Sens.	QR Code	
1	PL-G	84:DF:C4	02/17/2021 18:51:58	N44° 13'48.5	W-77° 30'1.8	1.75m	83KHz	34		
2	PL-G	84:DF:C4	02/17/2021 18:52:46	N44° 13'48.6	W-77° 30'2.1	1.01m	83KHz	34		
3	PL-G	84:DF:C4	02/17/2021 18:53:30	N44° 13'48.6	W-77° 30'2.1	1.93m	83KHz	33		
4	PL-G	84:DF:C4	02/17/2021 18:54:13	N44° 13'48.6	W-77° 30'2.1	1.79m	83KHz	34		
5	PL-G	84:DF:C4	02/17/2021 18:54:52	N44° 13'48.6	W-77° 30'2.1	0.69m	83KHz	34		

Above is an example of a **PNG report file** with 5 measurements. In a PNG report file, you can see all the data laid out nicely for each measurement, up to 15 measurements per page.

There is a **QR code** on the right side of each measurement. A **QR code** is a visual pattern that can be scanned by your phone and translated to text.

In these reports, the **QR codes** represent a location in google maps where the measurement took place using the latitude and longitude values. Your phone/scanner will interpret this as a website link and re-direct you.

If your phone finds quotation marks “” surrounding the link upon scanning the **QR codes**, you can copy the link and paste it in your web browser, and remove the quotation marks for the link to work.

The QR codes make the PNG version of the report file ideal for use out in the field, since it enables you to quickly scan it on your phone while not near your computer.

CSV Report File

	A	B	C	D	E	F	G	H	I	J
1	No.	Model	Unit No.	Measured	lat.	lon.	Depth	Freq.	Sens.	MapURL
2	1	PL-G	84:DF:C4	02/17/202	N44° 13'48"	W-77° 30'	1.75m	83KHz	34	http://ma
3	2	PL-G	84:DF:C4	02/17/202	N44° 13'48"	W-77° 30'	1.01m	83KHz	34	http://ma
4	3	PL-G	84:DF:C4	02/17/202	N44° 13'48"	W-77° 30'	1.93m	83KHz	33	http://ma
5	4	PL-G	84:DF:C4	02/17/202	N44° 13'48"	W-77° 30'	1.79m	83KHz	34	http://ma
6	5	PL-G	84:DF:C4	02/17/202	N44° 13'48"	W-77° 30'	0.69m	83KHz	34	http://ma

Above is an example of a **CSV report file** with 5 measurements opened in **Microsoft Excel**. In a CSV report file, the data is separated using the grids, similar to the PNG report file.

Unlike the PNG report file, the CSV report file does not contain a QR code for each measurement. Instead, it has the link to the Google Maps location directly copied in.

This makes the CSV report file perfect for sharing digitally, since you can just click on the link on your computer and it will take you directly to the location.

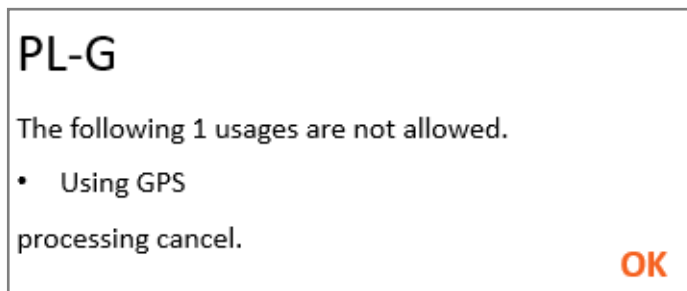
7. TROUBLESHOOTING

This section of the manual will go over common problems and how to resolve them. If you can't find your problem here, please contact your nearest distributor.

PL-AP APP CAN ONLY FUNCTION ON ANDROID 9 OR LOWER AT THE TIME OF THIS PUBLICATION. UPDATED ANDROID VERSIONS CAN BE FOUND IN THE APP STORE AS THEY BECOME AVAILABLE. CONTACT YOUR FUJI DISTRIBUTOR

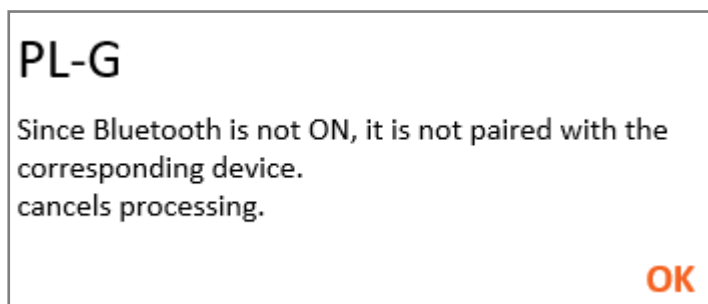
7-1. PL-AP APP GPS ERROR MESSAGE

If your PL-AP application is displaying the following GPS error message while trying to access the PL-G page, please follow the instructions below.



This error message means that the PL-AP app does not have permission to use your phone's GPS. Please re-install the app using instructions outlined in section (2-1 Pg.7) and make sure to also follow section (2-2 Pg.8) of the manual.

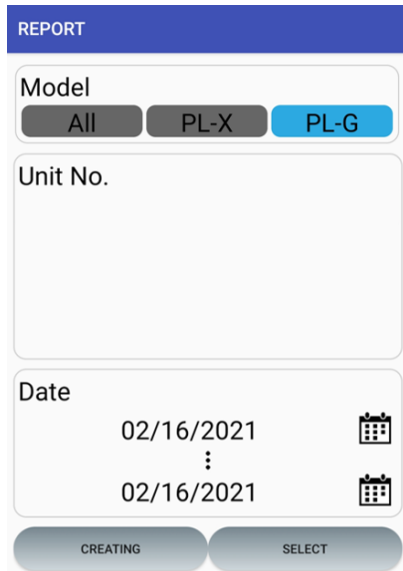
7-2. PL-AP APP BLUETOOTH ERROR MESSAGE



This error message means that either your Bluetooth settings are off, or that you have not yet connected to a PL-G receiver using Bluetooth. To learn how to connect to a PL-G receiver using Bluetooth, please refer to section (3-1 Pg.10) of the manual.

7-3. PL-AP APP NOT SHOWING ANY RECEIVER ID'S

If your PL-AP application is not displaying any receiver ID's in the reports or delete section of the app, similar to the screenshot below, please follow the following instructions.



This issue is likely due to the range of dates not being correctly selected. The range of dates directly affects the receiver's that will appear. If a receiver only collected data outside of the range of dates selected, then the receiver will not appear.

To fix this, select the calendar icons at the bottom of the screen and select the correct range of dates that includes the receiver data you are looking for.

7-4. PL-G RECEIVER NOT APPEARING IN BLUETOOTH SEARCH

There are a number of possible solutions If your PL-G receiver is not appearing in the Bluetooth search screen. Please try the following.

1. Ensure that the PL-G receiver is on and in pairing mode. The PL-G receiver should be displaying “<<Bluetooth>> Wait connection” if it is. Refer to section (3-1 Pg.10) for more details on how to connect.
2. PL-G receiver's automatically try to connect to their most recently connected Android device by default. Ensure nearby Android devices are not connected to that PL-G receiver. Then, try to connect again.
3. Check if your Android device has a “Previously Connected” section under Bluetooth. Then check if PL-G-MAX is there. Select the PL-G-MAX and then select “Forget”. Then, try to connect again.
4. Restart your Android device by holding the power button for 5 seconds and selecting “Restart”. Then, try to connect again.

7-5. PL-G RECEIVER KEEPS DISPLAYING FAILED CONNECTION

Remember that you must fully perform the connection process within 60 seconds of the PL-G receiver entering Bluetooth pairing mode. **Refer to section (3-1 Pg.10) of the manual.**

Keep in mind that pairing with the PL-G receiver through only the Bluetooth settings on your Android device is not all the steps. **As mentioned in section (3-1 Pg. 10), you must pair via Bluetooth AND open the PL-AP app with Data Transfer enabled.**

If the PL-G receiver still displays “Failed Connection” after following section (3-1 Pg.10) of the manual, then check to ensure no other Android device is trying to automatically connect to the receiver, and then restart your Android device.

7-6. ANDROID DEVICE NOT DISPLAYING USB NOTIFICATION PC

If your Android device does not display a USB usage notification when connected to your PC, try the following.

1. Try perform the rest of the instructions in the manual and ignore any sections that involve that notification. Some brands of Android Devices may automatically allow file transfer without the notification.
2. Un-plug the Android Device from your PC and restart the Android Device. Then, plug it back into the PC once the Android Device has restarted.
3. Un-plug the Android Device from your PC and restart the PC. Then, plug the Android Device back in once the PC has fully restarted.

If the notification still does not appear, and you are unable to proceed with instructions regarding file transfer to PC, please check with the manufacturer of your Android device on how to connect to PC.