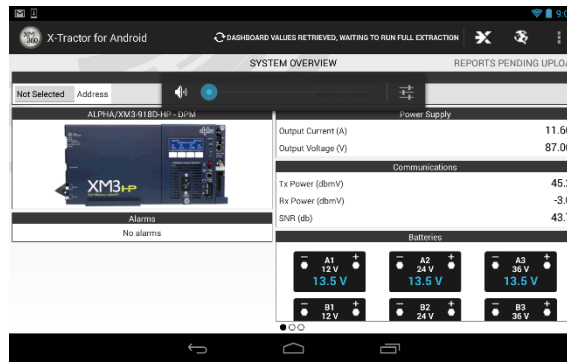


XM360 X-Tractor Android Tablet Tutorial

1. Connect the TP Link WIFI key to the power supply via the Ethernet port on the transponder. Turn the WIFI key on by moving the button on the side of the WIFI device. You will see the lights illuminate on the top of the device.
 - ✓ **NOTE:** An Ethernet port is required on the transponder in order to use the TP Link WIFI key.
2. Turn on the Android tablet by pressing the button on the top of the tablet. Unlock the tablet.
3. Press the WIFI signal in the bottom right of the screen and select the TP Link WIFI option.
4. Confirm that GPS is enabled.
 - Depending on the version on Android, this can be found in the top right menu, similar to the WIFI. Regardless of version, it can be found by opening *SETTINGS* and clicking on *LOCATION* (under the *PERSONAL* heading). Make sure that the screen indicates *ON* and *MODE* is set to *Device Only*.



5. Press the XM360 icon to load XM360 X-Tractor for Android.
6. After the loading screen is complete, the System Overview page will appear. The System Overview page provides a snapshot of the vital components of the power system. It will refresh every 20 seconds.
 - ✓ **NOTE:** Depending on the type of transponder present, it can take up to 30 seconds to load data into the *System Overview* page.
 - ✓ **NOTE:** If the power system information does not load, make sure all connections are secure and adequately fastened and then press the *Refresh* button. If it still does not load, please contact your Project Manager.
7. Once system information has loaded on *System Overview* page:
 - If any alarms are present, they will be listed under the *Alarm* header. Clear all alarms indicated on *System Overview* page before running an X-Traction and then click the *Refresh* button on the top of the screen.
 - ✓ **NOTE:** There are some alarms that may not be cleared before proceeding. For example, if X-Tractor indicates a "BATT TEMP PROBE" alarm and there is no battery temperature probe in the power system, then you can proceed without clearing the alarm.
 - Ensure RF (Rx and Tx) levels are optimal to the transponder.
 - ✓ **NOTE:** If you see a red or yellow exclamation point, this is an indication that your RF levels are out of range and should be corrected before proceeding.

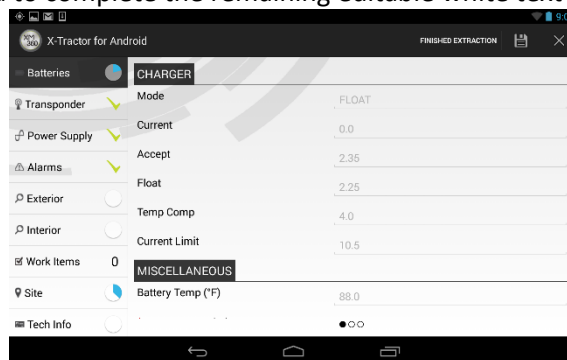


8. Click the **X-Tractor** icon at the top right corner of the screen and select *Run An Extraction*. You will automatically progress to the *Battery* page. The program will begin pulling information from the transponder and auto-populating some of the fields. The number of fields that auto-populate from the extraction will vary depending on the type of transponder in the system.

- ✓ **NOTE:** Blue and green status indicators are present in navigation bar on the left to communicate how much information needs to be completed before finishing a report. You will notice that several sections are already partially complete due to the X-Traction auto-populating many fields. A blue pie chart indicates incomplete and a green check mark indicates complete. You will notice a number for the *Work Items* page which indicates the work that was completed on-site.
- ✓ **NOTE:** You will notice a red asterisk next to certain text boxes. The red asterisk indicates a required field. If the status indicator is not a green check mark, verify that all required fields are complete.

9. You can begin manually completing the remaining fields. The small circles at the bottom of the page indicate that you need to scroll right to complete that part of the form. For example, there are three pages within the battery form.

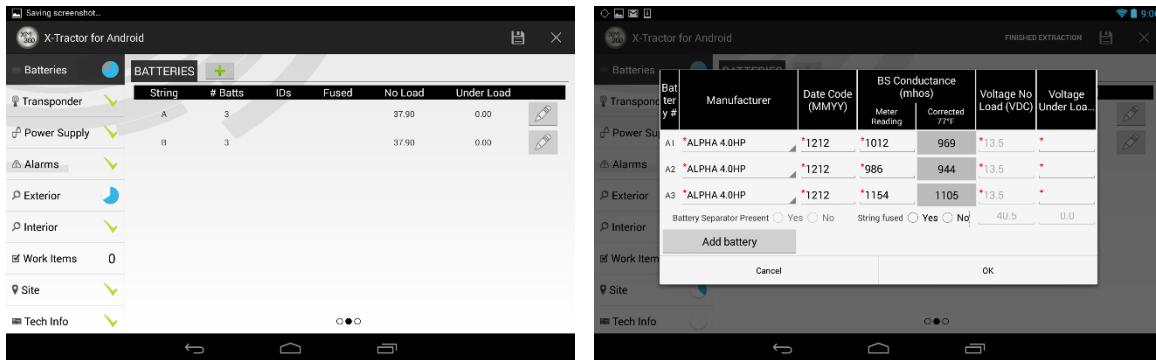
- ✓ **NOTE:** As you begin to complete the form, notice that certain text boxes are already populated and appear in grey, those values cannot be modified. They have been pre-populated from the X-Traction and you can proceed to complete the remaining editable white text boxes.



10. The second page of the battery tab is required to collect the battery manufacturer, date code, conductance values and voltages. To enter the appropriate information, press the pencil button.

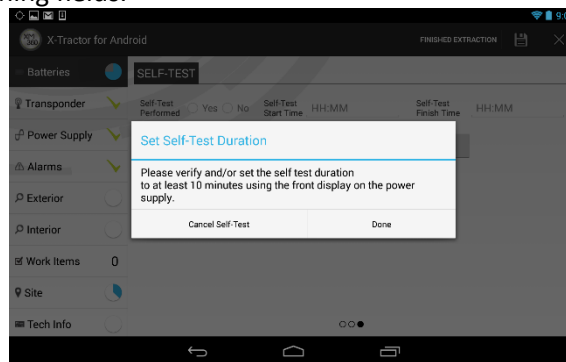
- To enter the battery manufacturer, tap the white space for battery A1 and a dropdown box will appear. Select the correct battery type. When you select the first battery type, the program will automatically populate the other battery models because most systems have the same batteries.
- ✓ **NOTE:** Please verify that all batteries are the same model before proceeding to enter the date codes.
- Enter battery date codes by tapping the space in that column. The keyboard will appear which will allow you to enter the four-digit numerical value, format MonthMonthYearYear. You will need to manually enter each battery date code.
- ✓ **NOTE:** The most common battery date codes are formatted as MMY or YMM. You may encounter other formats in the field, but please enter the date code as MMY.

- Enter any battery ID numbers if they are present by tapping the white space in this column.
 - ✓ **NOTE:** Some companies have unique ID tags for all components of the power system. This section provides an opportunity to reference the specific battery ID, but it is not a required field.
- Turn battery breaker to the OFF position.
- Perform a conductance test on each battery.
- Enter conductance readings in appropriate fields in the *Meter Reading* section on the *Battery* page.
 - ✓ **NOTE:** The conductance readings may vary considerably depending on the battery type and they will be automatically temperature corrected within XM360.
- Turn battery breaker back to the ON position.
 - ✓ **NOTE:** The *Voltage No Load* and the *Voltage Under Load* appear as required fields, but they will be automatically populated.
- Tap the OK button to close that window. Slide the screen to right again to begin the self-test.



11. Tap the *Run Self-Test* button to begin the self-test.

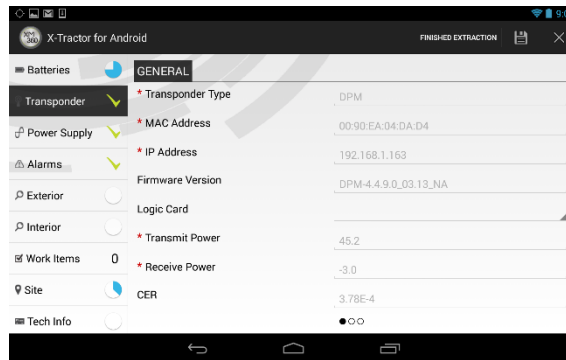
- ✓ **NOTE:** The self-test is a 9 minute test that will continue to run as you complete the rest of the PM procedure. A pop-up will also appear to notify you the self-test is complete, regardless of which page you are currently working on.
- ✓ **NOTE:** The status of the *Battery* page will remain blue (incomplete) until the self-test is complete and populates the remaining fields.



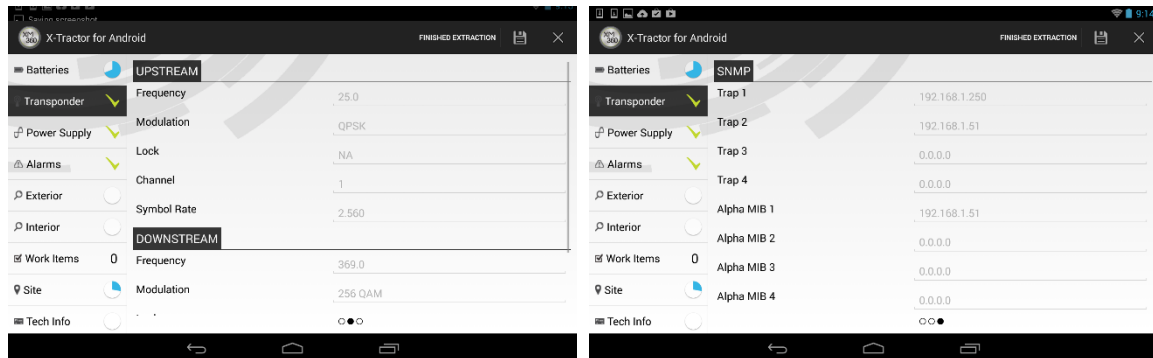
12. To advance to the next page in the report, tap the row headers on the left side of the screen.

13. The next tab is the *Transponder* information.

- ✓ **NOTE:** When using a DSM3 transponder, you will notice that the X-Traction typically auto-populates the entire page, notice the green check on your status indicator. You can advance to the *Power Supply* page.
- ✓ **NOTE:** When using a DSM1, DSM2, EDH4 or other models, all of the fields may not automatically populate. This can be result of the information not being available due the type of transponder and power supply. If you can manually retrieve any incomplete fields, you will want to do so now to complete this page.

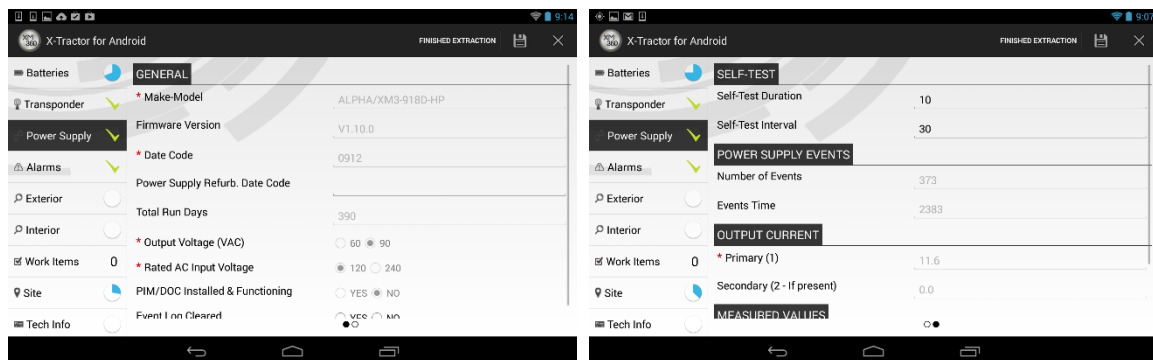


✓ **NOTE:** There is a 2nd and 3rd page on the *Transponder* tab.

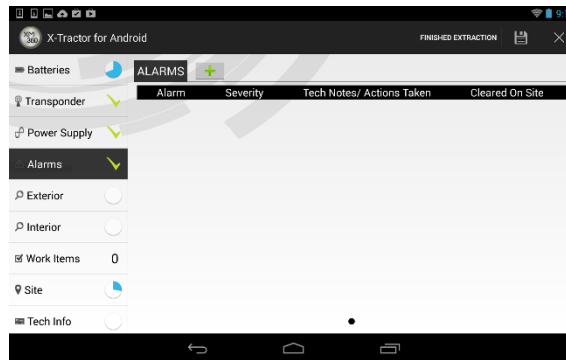


14. Tap the *Power Supply* header to move to that page. Begin completing any remaining required fields by tapping the space provided to type, or tapping the appropriate button.

✓ **NOTE:** There is a second page on the *Power Supply* tab. Make sure all required fields are complete before proceeding.

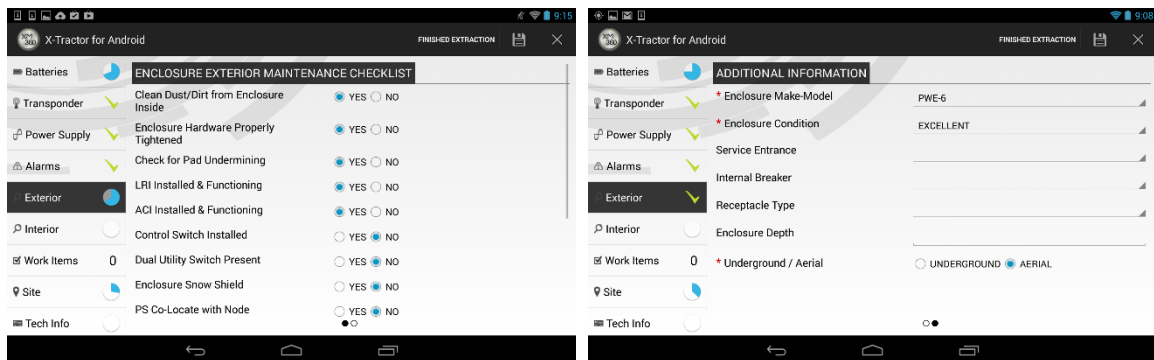


15. If no alarms were present upon arrival, you will not need to complete anything on the *Alarms* page. If alarms were present upon arrival, although it is not required, you can use the drop down box to indicate what action was taken to clear the alarm. You can also manually add an Alarm if it was not captured during the automatic extraction.



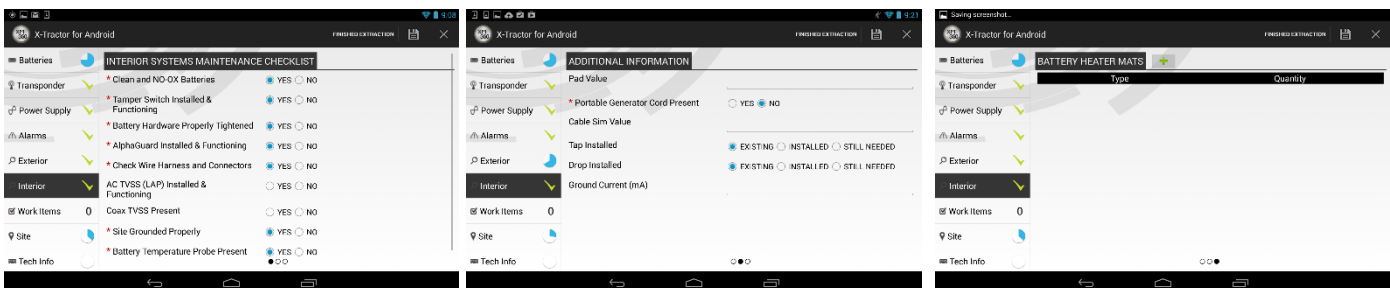
16. When you advance to the *Exterior* tab, this is the time to check the exterior physical condition of the system and take inventory of what is currently in that system.

✓ **NOTE:** There is a second page to the *Exterior* tab.

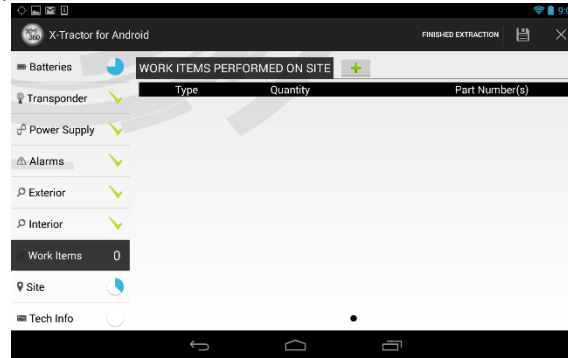


17. When you advance to the *Interior* tab, this is the time to check the interior physical condition of the system and again take inventory of the interior elements of the system.

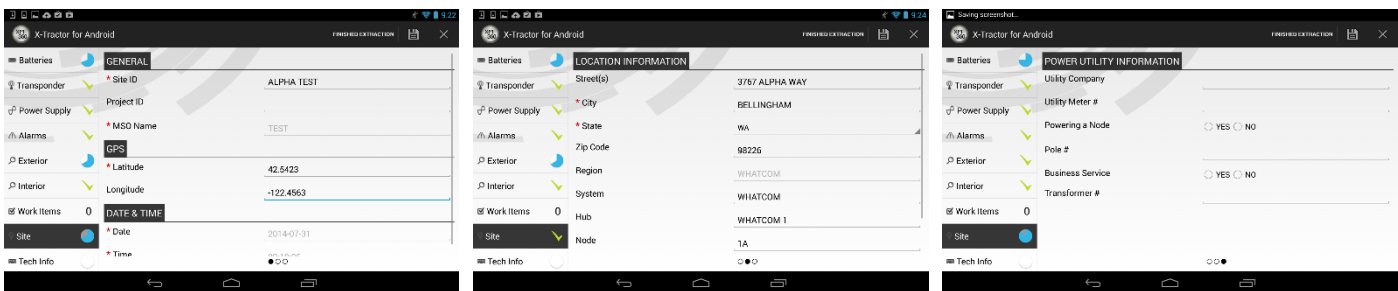
✓ **NOTE:** There are three pages within the *Interior* tab.



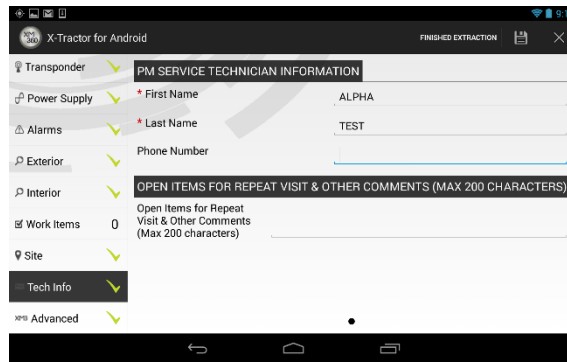
18. If there is a generator onsite, a *Generator* tab may be present to capture that information.
19. The *Work Items* tab serves as a reference to the primary reason for your visit. From the list of work items, select any items that you completed, provide a correlating quantity after you select the work item and select the specific parts that were installed.
- ✓ **NOTE:** Work items and parts can be assigned specifically for each job.
 - ✓ **NOTE:** Instead of a green checkmark appearing when this tab is complete, a number will show depicting how many work items were selected.



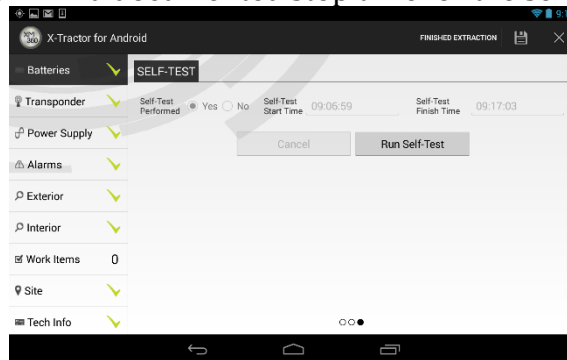
20. The *Site* page serves as a unique identifier for the particular site you are servicing.
- Under the *General* tab, you will enter the *Site ID* and *Project ID*, as well as the select the MSO for which you are performing the PM. There is a drop-down box for your convenience.
 - The tablet is equipped with GPS and will automatically enter the GPS coordinates as long as there is a strong signal. The GPS coordinates must be represented in decimal degrees.
 - Scroll to the right to complete the two additional pages of the *Site* tab. The *Location* page provides an area for you to enter the detailed site location information, such as Address, Region, System, Hub and Node (provided by the MSO).
 - The *Power Utility Information* page provides a place for you to enter utility information if required.
 - Once the *Site* tab has been completed and the status indicator shows a green check, you can proceed to the *Tech Info* tab.



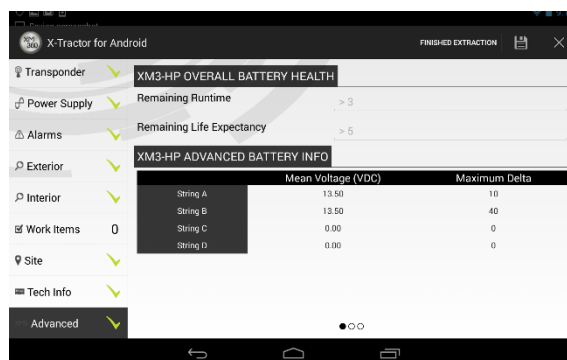
21. The *Tech Info* tab requires that you enter a first and last name. The *Open Items*, *Contractor ID*, and *Phone Number* are optional fields.



22. By this time, the 9 minutes self-test should have completed. Click the Batteries tab and scroll to the second page and select the pencil again to confirm that the *Voltages Under Load* populated. Finally, scroll to the third page to confirm a documented stop time for the self-test is present.

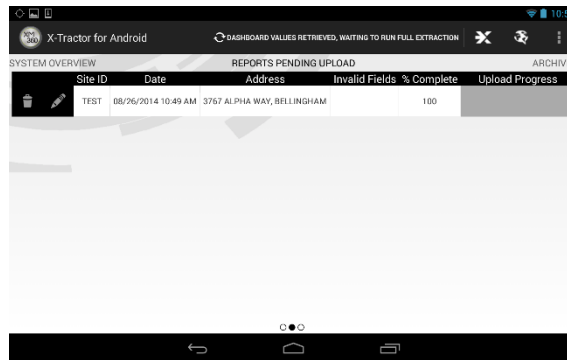


23. If you are using an XM3 with a DSM3, you may have access to advanced diagnostics while using XM360 X-Tractor. There will be up to two additional pages available, *Advanced* and *Discharge*. If the XM3 has an AlphaApps card, more information will appear on these screens. These are only available if you are using the transponder firmware 3.11 and AppCard firmware 1.06.

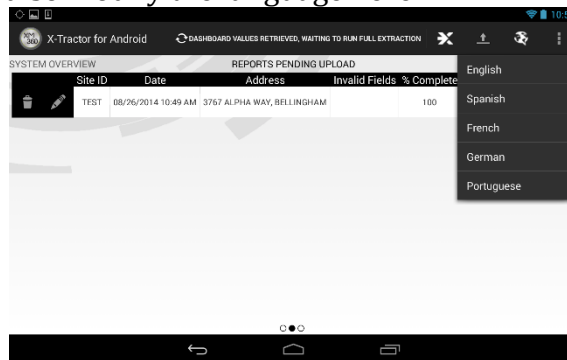


24. When a green check mark is present for all status indicators, the report is almost complete. You will now tap the button in the top right corner that looks like a disk. This will save the report.

25. After a report has been saved, you will return to the home screen. Scroll to the right to view the saved reports. From here, you can tap the trash can to delete a report, tap the eye icon to view the Pdf of the PM Cert Report that was generated, or tap the Site ID if you need to go back and edit information within the report.



26. Disconnect the TP Link WIFI key from the transponder and the site visit is complete.
27. When an internet connect is made at the end of the day, or throughout the day, you can upload you complete reports to the database by tapping the icon like this at the top right corner of the screen. The Upload Progress on the far right side of the screen will complete and then disappear as the report is uploaded. You can also modify the language here.



28. To access previous PM Cert Reports in the archives, scroll to the right one final time and it will show any reports that have been uploaded.



***There are many steps outlined in this tutorial, but after practicing a few times, you will have the ability to easily operate X-Tractor to be more quick and efficient with your preventative maintenance visits.