Tablet Memory Tire Pyrometer

OPERATING INSTRUCTIONS

App version 1.0

ON Button (on side)
Hold 3 seconds to turn tablet on. Tap once to put into 'Sleep' mode (display off – app open or closed). Hold 3 seconds to turn tablet off, tap "Power off". then "OK".

Control Buttons

Active tire temp
"No Data" means probe is either not on or has lost pairing.

Temps just taken
You must Save these to a Memory # or Erase them before you can take any more temps

Memory temps
Swipe up/down to scroll (Memory # is in the middle)

Outside	Center	Inside		Inside	Center	Outside
98	105	94	1	123	115	108
67	64	61	2	98	89	87
74	79	83	3	109	101	94
98	105	94	4	123	115	108
98	105	94		123	115	108

102	95	105		125	117	111
102	95	105	4	125	117	111
94	102	105	3	120	124	131
87	92	83	2	92	97	94
102	95	105	1	125	117	111
Outside	Center	Inside		Inside	Center	Outside

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PROBE ● BATT

Default order of taking temps is RF (outside, middle, inside), RR, LR, LF

To take temps in a different order push the LF, RR, etc. button by the car icon.

This tablet uses the Android® operating system and uses a touch screen to operate.

Control Buttons

Notes
Tap to go to a page where you can take on screen notes linked to the memory number.

Back Up
If you want to erase just the last temp recorded, tap once.

Tap and HOLD to erase all current temps.

Save
Saves an entire set (or less) of temps just taken. The app will ask you to select a memory #.

Erase
Will erase all temps in the Memory location selected.

Quick Start

Press and hold the ON button (upper right side) for 3 seconds to turn on the tablet. Tablet takes about 15 seconds to load the Android® operating system.

Tap the round Pyrometer app icon on the Home Page to launch the *Memory Tire Pyrometer* app.

While the app is loading push the *READ* button on the probe body (black tube). When the active temp comes up on the tablet (large number – upper right), you are ready to begin taking temps. The **LED** just above the *READ* button will flash green.

This pyrometer uses our exclusive **"Anticipation Mode"** to speed your temp measurements. You don't need to wait for the temps to stabilize before moving to the next one. The **Pyro** app software does this for you, more quickly (very important) and more accurately.

Start taking temps at the **RF outside**. Push the probe into the tire and <u>immediately push the *READ* button</u>. After a second or two the **LED** will flash red, and then return to green. This indicates that the temp has been read. You will see it on the **Temps Just Taken** line. Move to the center of the tire and push *READ* again. Repeat for the inside. Now move to the **RR** and again start at the outside, center, then inside. Finish with the **LR** then **LF**. All 12 temps will be displayed on the **Temps Just Taken line**.

The default order of taking temps is **RF**, **RR**, **LR** & **LF**. If you wish to take them in a different order tap the wheel buttons in the middle – **LF**, **LR**, etc.

When done with all 12 temps **you must save them** to **Memory** **or** **Erase** them before you can take any more temps. To save, scroll and tap to highlight a **Memory** number. Then tap *Save* on the screen to save those temps to that memory number. If you do not want to save them tap *Erase*, then *Erase Current* and *Yes*. You can now take another set of temps. The app will hold 100 sets of temps (the current set of temps taken plus 99 memory numbers). Swipe up or down to scroll and access all of the memory sets.

To turn off pyrometer, close app. Power off tablet if needed. Press and hold the *ON* button for 3 seconds. Tap **Power off** and then **OK**. The Probe will turn off by itself.

After 30 minutes without use the tablet will go into *Sleep Mode* (display dark). Tap the *ON* button to wake the tablet and push *READ* to restart the Probe. To save tablet battery power you can put it into *Sleep Mode* by tapping the *ON* button.

The tablet has a rechargeable battery which lasts approximately 8 hours, recharger included. The probe uses 3 AA batteries which will last approximately 35 hours. Remove the black end cap and the Phillips head screw to change. See location and polarity on the side.

Re-pairing: The control box and tablet are connected wirelessly via Bluetooth®. Occasionally the pairing between the two will be lost and you will need to re-pair. This is a very simple process that takes less than a minute. Refer to page 14 for pairing instructions.

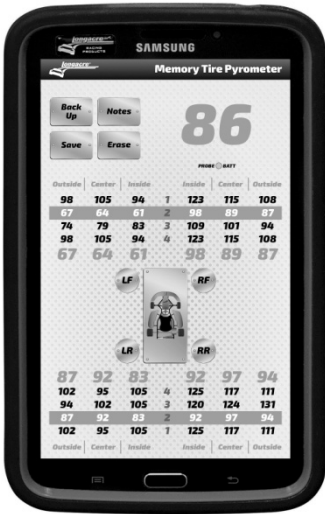*Maximum Temperature:* Max temp for the pyrometer is 350° F.

Tire Temp Averages

Swipe to the left to view the Tire Temp Averages screen. Swipe to scroll and select the Memory Number for a set of saved temps and view the averages.

Display shows current memory set selected, averages for all 4 tires, left side, right side, front and rear.
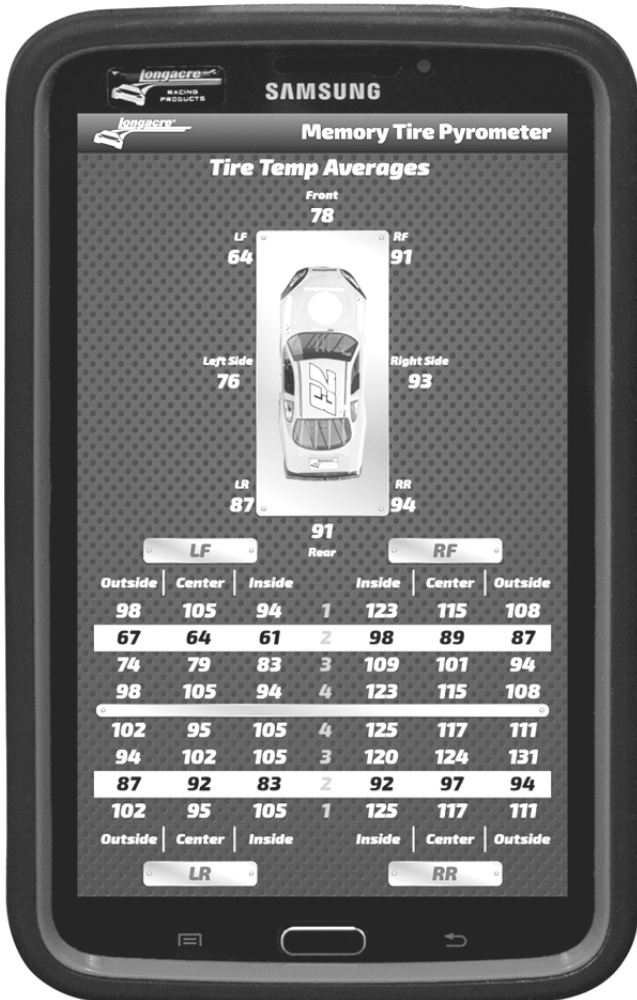
Bright Sunlight Screen

Swipe to the right to change the main display to a high contrast screen that works well in bright sunlight.

Settings Screen

Swipe to the left twice (once past the Averages screen) to display the Settings screen. Here you can change the temperature units between English (°F) and Metric (°C), choose your car icon, save your stored temps and notes to file or save only your selected temps to file.

You may also turn off Anticipation Mode if you wish. With this feature off the pyrometer will record the actual temperature when you push the READ button rather than the max temp.

Additional Features Overview

- **Low Battery Indications:**
  Tire Probe battery indication is shown on the tablet display just under the active tire temperature. **PROBE ● BATT** When the batteries get low it will change to **red**. The probe uses 3 AA batteries which will last approximately 35 hours. Remove the black end cap and the Phillips head screw to change. See location and polarity on the side.

  Tablet battery indication is shown in the upper right corner of the Android® tablet screen. You can tap and slightly pull down from the top of the screen when the app is running to see the battery status or tap the Home button to return to the Home screen and then tap the App icon to return to the app. Recharge the tablet with the included charger.

- **Setup Screen:** Swipe your finger right-to-left twice to enter Setup Mode

  DO NOT alter Pyrometer System Secret Code on the setup screen. This involves the System ID security code. If this is altered the pyrometer will not function without re-entering the SysID. See instructions enclosed.

- **'Car' icon on screen:** There are 4 standard choices: Stock Car, Indy/F1, Modified and Kart. You can also personalize your tablet and have a picture of your car as the icon. Details are included in this manual for a Custom Car Icon or call the factory.

- **Units of Temperature:** Select between English in Degrees Fahrenheit or Metric in Degrees Celsius.

- **Save to File / Save Selected Temps to File:** Tap *Save to File* to copy all your temps and any notes you have entered for all 99 memory locations (plus your current data) to file. Tap *Save Selected Temps to File* to copy your current Memory location only to file. Files have been saved when you hear the sound of tapping the buttons.

  The application will create (or overwrite) the comma delimited (.csv) file **LongacreTempDumpAll.csv** in the Longacre folder on the tablet when you tap *Save to File*. It will create a file using the current Memory number in the Longacre folder when you tap *Save Selected Temps to File.* If the same file name already exists it will overwrite it. Details are included in this manual for emailing, uploading or downloading these files to PC.

Note Taking

Scroll to a memory number saved set of temps and tap the **Notes** button to enter the Note Taking screen.

At the very top is the Memory number you selected for reference (in yellow).

Under that is a narrow text box called *Memory Name*. Tap this box to enter. An orange border will confirm the box is selected. This is where you will name this Memory number – title, date, track, etc. – your choice. 15 characters maximum. Naming the location is optional.

Next below is the *Notes* box. Tap on this box – orange border confirms the box is selected. Assuming this is empty you can begin typing notes (it begins in the middle of the screen). There is almost no limit to the notes and data you can enter. If you fill the screen up it will scroll for more space. Use your fingers or the stylus. To correct errors or edit your notes tap the screen where you want to edit. A blue arrow will appear to indicate your location. Back up (use the tablet back space button) and retype as needed. If you want to start over hold your finger or stylus on the copy until the entire word is highlighted. Then go to the top and tap **Select All**. Re-enter notes. The original notes will be erased.

To take notes by voice go to the second box from the left at the bottom of the keyboard. This should have a microphone 🎤 icon (if it has anything else in this box tap and hold – another box will appear above it with the microphone icon – tap on that). When you tap this icon the keyboard will disappear and the 🎤 icon will appear in the center with "Speak Now" above it. Speak directly into the tablet microphone at the bottom. Speak slowly and clearly. There should not be any significant background noise. Your words will appear on the screen. This is an Android® function and works well with some practice but is not always perfect. Even if it gets a few words wrong you can edit to correct the errors. This can still be faster than typing. This voice recognition improves with use as the tablet 'learns' to understand you better.

To pause speaking tap the 🎤 icon. "Tap to speak" will appear. Tap again to resume speaking. Close the voice input box with the keyboard icon (or X on some Android® versions) and the full keyboard will reappear. If needed edit your voice notes and save.

When done tap *Save Name & Notes*. The app will take you back to the main screen. To view these notes again scroll to select the memory number and tap the *Notes* button again. You can edit these notes at any time or you can erase them completely for other future use.

Name your memory locations to easily keep track of your setups

Enter notes about your setup - The screen will scroll if you need more space - Use the keyboard or microphone for voice input

Enter notes with voice input. Tap microphone to record – tap again to pause. Tap keyboard (or X in upper right corner) to close voice input

Hold down to get options if the microphone isn't showing

Install Custom Car Display Icon

You can have a picture of YOUR car as the display icon: First send us a high quality, high resolution picture of your car in a jpg or other image format. An overhead shot is needed from straight above the car. This will require shooting from a second story or using a drone. Shots taken from a ladder may not look as expected.

Connect the tablet to your PC with a USB connector (at the bottom of the tablet where the charger connects). Tablet must be powered on. Don't open the app at this time.

On the PC, browse to your '**Computer'** or '**My Computer'** folder. You will see '**SM T210'** or similar designation for the tablet. Double click on this to open and then double click on **Tablet**.

Look for a folder named '**Longacre'**. If there is not one, right click to create one and name it **Longacre**.

On your PC save the **customcar.png** icon file we email to you to your **Desktop or Documents** folder and then drag and drop it into the **Longacre** folder on the tablet.

Disconnect the USB cable and launch your *Memory Tire Pyrometer* app.

Swipe to the setup page, scroll down to **Car On Display** and select **Custom**. Swipe back to the main screen and your custom car icon will appear and function just like the others. It will stay until you change it.

Accessing Saved Files

Tap the Longacre folder icon on the Home screen of the tablet (or browse to the Longacre folder using the My Files or other file management app) to locate the saved files. If you have WiFi access you can easily email the files. Tap and HOLD the file you want to select until a box with a check mark appears. You can then select additional files if desired. Tap the Share icon at the top to open the Share Via options.

Tap the Share icon to open the Share via options

Tap and HOLD the file you want to share until the selection box appears
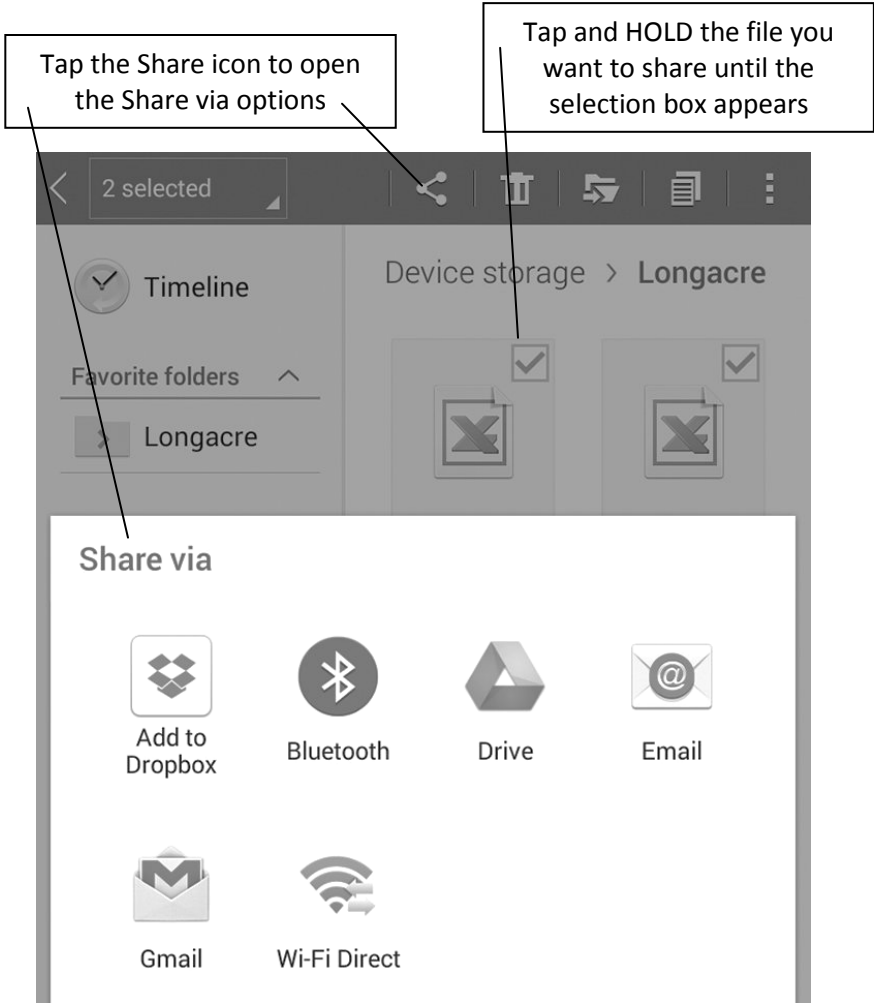
To download the files to a PC connect the tablet to your PC with a USB connector (at the bottom of the tablet where the charger connects). Tablet must be powered on.

On the PC, browse to your '**Computer'** or '**My Computer'** folder. You will see '**SM T230NU'** or similar designation for the tablet. Double click on this to open and then double click on **Tablet**. Look for a folder named '**Longacre'** and open it. Drag any of the .csv files that you want to save to your PC Desktop or other folder.

Wireless Pyrometer Use

Use the probe away from the tablet: You can remove the pyrometer (black tube) and use it separately without the tablet. You won't be able to watch the temps as they are recorded but if you use "Anticipation Mode" the LED will flash red when the temp is taken. You will need to have the tablet app running and near the car (put it on the hood or roof). The pyrometer sends the temps to the tablet via Bluetooth®. Remove the 2 screws on the bottom.

Miscellaneous Notes

Pyrometer Probe Tip: To give a rapid response the tip of the probe must be small which leaves it vulnerable to damage from mishandling. A bent or broken probe tip cannot be repaired and will not be warrantied. We supply a yellow vinyl tip protector.

General Precautions: ● Do not drop the tablet or pyrometer (they have electronics). ● The Pyrometer and Tablet are not water/weatherproof. Keep them clean and dry. ● Do not expose to excess heat or cold: 32° F (0° C) to 120° F (38° C). ● Max temp for pyrometer probe is 350° F ● Keep the tablet away from strong magnetic fields (caster camber gauge?). ● Clean the tablet as needed with a soft cloth only. Use no cleaners or chemicals. ● Be cautious if you are doing anything in the Settings section of the tablet OS (not part of the app). If you turn Bluetooth® function off or un-pair the probe the pyrometer will not operate. Restoration is easy.

Leave WiFi off unless you specifically need it: This choice is accessed in the Settings section of the tablet OS (not the app). If WiFi is left on the tablet battery life will be less before needing to be charged. Also if you are in a WiFi hotspot and turn the tablet on it may attempt to upgrade the Android® operating system to the latest version. This is an Android ® function.

You can allow the tablet to upgrade the operating system if you wish. In the Settings section turn WiFi on. NOTE: When you update the OS you may need to re-enter your SysID security number and/or re-pair the pyrometer to the tablet. If your system does not function after the update see the enclosed instructions for re-entering the SysID. This is simple and takes less than 1 minute. When the OS update is done we recommend that you turn WiFi off. This system operates on Bluetooth® and does not need WiFi in regular use.

Simple Troubleshooting

Be sure the Bluetooth® icon shows before launching the app.

If you launch the app *Memory Tire Pyrometer* before Bluetooth® is running (shown by icon at top of device screen) Android® may ask you, **"Do you want to connect to this device?"** Even if you answer **"Yes"** it may not connect, in which case you may need to re-boot the app.

Bluetooth® icon

Must be on before launching app. This takes about 4 seconds after the Home page appears when powering up the tablet.

'Pairing' the pyrometer with the tablet: On rare occurrences the connection between the pyrometer and the tablet – 'Pairing' – will get broken. See instructions on page 14 for re-pairing. This is simple and takes less than 2 minutes. This will be necessary if you change devices.

Tablet battery: If your tablet will not turn on and you have had the charger connected, try another charger and/or USB cable. Most chargers with USB connections put out the same voltage and can be interchanged. If the charger is functioning you can tap the ON button and a battery image will appear and show the charge state. If it does not, the charger is probably not functioning and the tablet will not operate.

Service: If service is needed please call or email first for an RMA #. Be sure to send the pyrometer probe and the tablet.

Serial Number & System ID: The serial number is located on a tag on the inside of the case leg on the back of the tablet or on the back of the board holding the pyrometer. The Pyrometer System Secret Code (SysID) is recorded in this booklet and is also on the circuit board inside the pyrometer.

Install (or re-install) SysID (System ID - Secret Code)
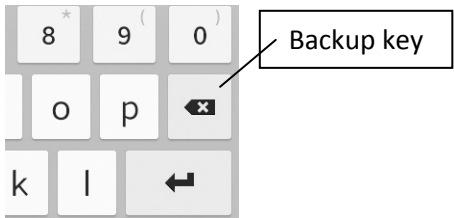
Your SysID

Your Serial Number

From the main display swipe right to left twice to the Setup Screen. -- Tap on *CHANGE*
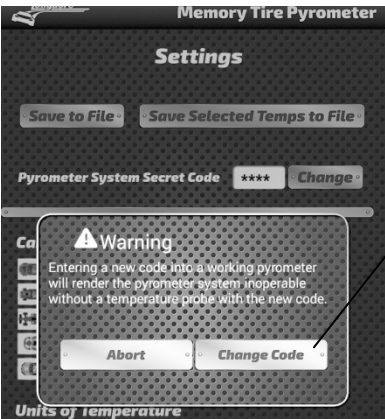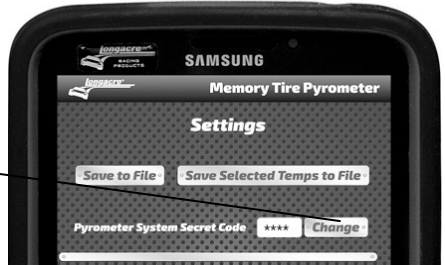
Warning message comes up. Tap *Change Code*. Display changes and keyboard appears at the bottom.

Tap on white area of the box to the right of **** and tap Backup key to erase current SysID. Blue arrow shows where the cursor is. All **** must be gone.

Backup key

Enter new SysID on keyboard – 4 characters (may be all numbers or letters, not case sensitive). After you enter the last number or character you are done. Swipe back to the main screen.

Pairing the Pyrometer with the Tablet

The pyrometer probe and tablet are connected wirelessly via Bluetooth®. Occasionally the pairing between the two could be lost and you will need to re-pair them. This is a very simple process that takes less than a minute.

PREPARE: Close the Memory Tire Pyrometer app (if open).

START: Tap the **Settings** icon ⚙ to get to the settings page, tap Connections at the very top left, then tap the **Bluetooth®** icon (be sure **Bluetooth®** is on – slide green bar to the right ▮▮|) .

At the upper right in **_MY DEVICE_** tap the empty box on the right. This temporarily allows connection to unpaired devices – your pyrometer. You have 2 minutes to complete the pairing process (plenty of time). See the countdown timer. If you do not get the pyrometer paired in this time you will need to start over. (NOTE: Newer versions of Android® may not require this step and are immediately ready to pair with the steps below.)

Once you tap this box and the timer has started, press and HOLD the Pyrometer **_READ_** button. The LED will turn red. At this point release the READ button and momentarily push it again. The LED will go out, and then come back on steady green. In a few seconds the tablet will 'whistle' and a message will come up "**_DO YOU WANT TO PAIR WITH THIS DEVICE?_**" Tap **_OK_**. Now open the Memory Tire Pyrometer app. Within 5-10 seconds the connection will be made and the active temp should display.

If it still does not function – display active temp – your security system ID (SysID) may have been corrupted. See **_Enter SysID_** section on page 13 and re-enter it. This is very quick and simple.

App Updates

App updates for your Memory Tire Pyrometer system are free. You can download the latest app versions from the Google Play Store. You can also find other Longacre apps like COMPUTERSCALES XLI™ in the Play Store. (Free Google account is required to download apps from the Play Store.)

COMPUTERSCALES XLI™ app is pre-installed for full systems that include a tablet. Try it out by opening the app and tapping DEMO Mode. If you decide to purchase these state-of-the-art scales you can save money because you already have the tablet.

Pyrometer Temp Taking Tips

Proper depth and location

- For consistent and relative tire temperature readings you should insert the probe as near to the cord as possible. You must also insert the probe to the same depth at all locations at each and every tire.

- Temperatures should be taken at 3 locations on each tire. Take one reading at the outside approximately 1.5" from the edge, one reading in the middle, and one reading approximately 1.5" from the inside edge. Do every tire the same way at the same depth and location.

Adjustable tip probes

- When using a pyrometer with an adjustable tip probe you can set the probe to match the rubber gauge (thickness) for the different tracks that you run. The adjustable tip allows you to bury the needle of the probe all the way to the housing to insure that you are at the same depth each time. Repeatability increases dramatically and the relativity is better because you are always down near the cord with your probe tip.

Getting to the tires quickly

- You should always get to your car as quickly as possible to take tire temperatures. Each time the tires roll across the pavement the cooler pavement is sucking heat from the tires, which can skew your readings.