Setup & Operation

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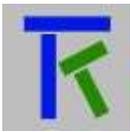
1. **Introduction**

   The following document contains information about setting up and using the Takano smartphone/tablet application. The app is freely available on both Google play and Apple store. It is an easy-to-use, intuitive and useful application to seamlessly connect and exchange data with the Takano cloud-based platform. The application also allows its user to receive push notifications from the platform. This app is user-customizable, offering a number of graphic user interface items to display the data sent by the platform and to convey user commands back to the platform. When launched, the app constantly sends refresh commands to update its display to the user, and immediately sends back to the platform any user entered command. The platform on the other hand stores the last user command and sends it back to the hardware whenever it is connected to the platform. The platform stands as a man-in-the-middle between the platform and the user, reading the data from both, storing it in the cloud, and then sending the user data to the hardware and the hardware data to the user.

2. **Setup Takano**

   After installing and launching Takano app for the first time, the user is presented with a blank page with a setup button on the lower right corner as in Fig 1.

Fig 1.
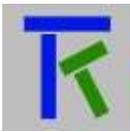
The pics in this document are taken from the Android app, Ios app might slightly differ in some of the pics. Pushing on this button will present the user with the setup form as in Fig 2. The user is prompted to fill this form. The first field is the email he entered in the Takano platform setup under the 'Users' tab, for example: johndoehorse@gmail.com. Then he saves the email by pressing the 'Save Email' button. The second field is the <u>user registration key</u> that was generated by the Takano platform under the 'Users' tab: xxci1zlqmxry (not to be confused by the hardware registration key). Then he chooses a descriptive name for that hardware, like 'Mountain_house' and saves them by pressing on the 'Save/Scroll Reg.Key'.

Fig 2.

The user Reg.Key and Hardware Name fields are cleared to allow the user to enter additional hardware credentials if needed. For the current time, we will content ourselves with a single hardware which we already entered. The user should press on the 'Save/Scroll Reg.Key' again the show the entered fields. The form should look now as in Fig 3.
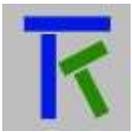
Fig 3.

The user Reg.Key and Hardware Name fields are cleared to allow the user to enter additional new hardware and their credentials if needed. For the current time, we will content ourselves with a single hardware which we already entered. The user should press on the 'Save/Scroll Reg.Key' again to show the entered fields. The form should now look like Fig 3. Pressing on the 'Choose Parameter Display' button will show a list of graphical items to choose from as in Fig 4. We will briefly go through each of them. Each item chosen by the user must have a unique name to distinguish it from the other items. Fig 5 is for the user to send an ON or OFF digital command to turn a motor or light on or off for example. Fig 6 is a slider for the user to send an analog command to dim a light or increase a temperature set point for example. The minimum and maximum of the slider can be user set, like -20 and 99 for example. Fig.7 is a linear progress bar which value is sent by the hardware to the user app to show that a work or function is in progress. The minimum and maximum can be also be set by the user. Fig 8 is also a progress display but with a circular shape. This circular progress has also a user entered minimum and maximum but in addition can display the progress value that is sent by the hardware. Fig 9, 10 and 11 display a needle type analogue value. They can be ideal for representing voltage, current, frequency or temperature or humidity or rpm etc… . We will explain the different user entered fields by referring to the pic in Fig 9.The ticks field allows the user to enter the number of ticks on the scale (between 3 and 20), in the picture
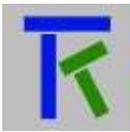
shown in Fig 9, it is 10 (10, 20, 30, 40, 50, 60, 70, 80, 90 and 100, 0 is not counted). The green minimum is the lowest value of the scale, that is 0. The green maximum is set to 10. The orange minimum is set to 70 and the orange maximum is set to 85. The red minimum is set to 85 and the red maximum which must be the maximum value the analog value should reach is set to 100. Fig 9 shows a lamp which is either lit or off. It represents a value of 0 or 1 sent by the hardware to represent the on or off state of a switch or button for example. Fig 13 shows an input text filed that allows the user to send any text message to the hardware. Fig 14 shows a label display that displays any hardware sent text message.
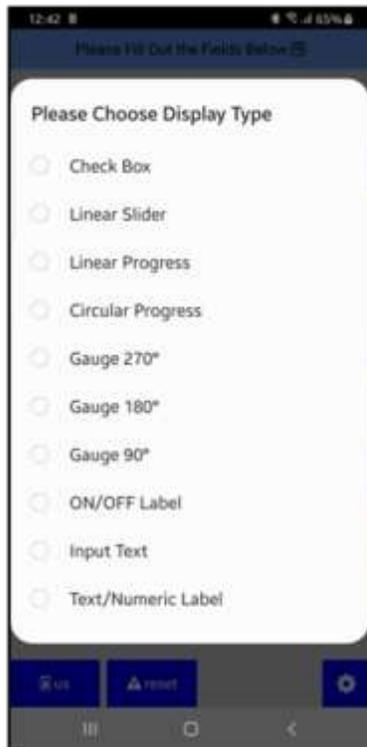

Fig 4.

Fig 5.

Fig 6.
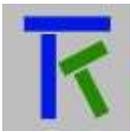
Fig 7.

Fig 8.

Fig 9.

Fig 10.

Fig 11.

Fig 12.
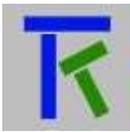
Fig 13.   Fig 14

We will demonstrate with a small example. We will start by pressing on 'Gauge 270' and fill the following entries:

Name: V

Ticks: 10

Minimum: 0

Maximum: 50

Minimum: 70

Maximum: 90

Minimum: 100

Maximum: 140

Then press on 'Save/Scroll' button.

Next press on 'Insert/Delete' to insert a new parameter just after voltage, and choose 'Check Box'. Enter L as name.

Then press on 'Save/Scroll' button.

Next press on 'Insert/Delete' to insert a new parameter just after L, choose 'ON/OFF Label' and fill the following entries:

Name: P

Next press on 'Insert/Delete' to insert a new parameter just after P, and choose 'Text Numeric Label'. Enter T as name.

Then press on 'Save/Scroll' button.

Next press on the gear (setup) button on the lower right corner. And then 'SAVE All & Go TO RUN MODE' button. You should see a page similar to Fig 15.
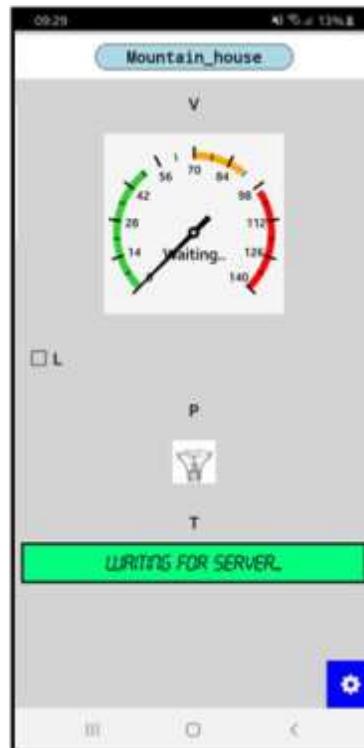

Fig 15.

Now if your hardware and platform account were already successfully setup, then you should see the data sent by your hardware being displayed according to Fig 15. One word about the input text control (Fig 13): this field when empty at run mode does not send an empty text to the cloud. A minimum of 1 character is send. For example if the user type character 'A', then 'A' is sent to the cloud, but when the user deletes 'A', then nothing is sent to the cloud.

3. **Run Takano**

   Supposing your hardware is not setup yet, but your platform is already setup, then you can start testing your application immediately via any browser. We will consider that the hardware Reg.Key is: witjmvmox0x9, then enter the below URL.
   http://iotsprint.com/tk.php?r=witjmvmox0x9&m=V=110,P=1,T=32.5
   The needle of V has moved to 100, P is now lit, and T has displayed the value of 32.5 as in Fig 16.
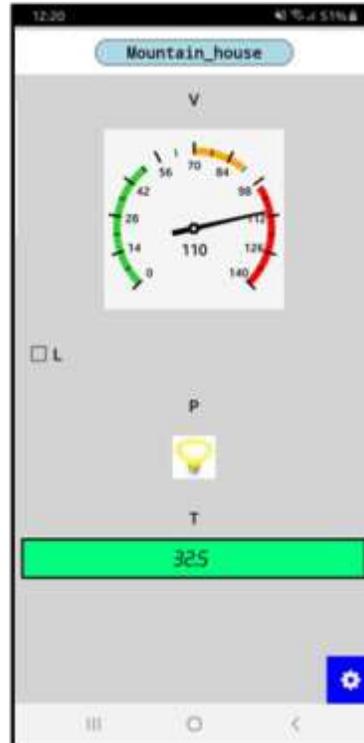
Fig 16.

Remember that L is an on/off command that the user sends from the app to the hardware.

4. Back-up/Download parameters

Takano app offers the user the ability to back-up the setup data he entered to the cloud. This feature is particularly useful if he decides to change his phone for example, or lost his phone or simply wishes to have a Takano app on an additional phone/tablet and even on another os (for example his first phone is Android and now he wants to have the same setup on an Ios tablet). From the setup page (Fig 3), the user presses on the 'Save To Cloud' button (Fig 17). Here the user is prompted to enter his Takano password, i.e the password he uses to sign in to the Takano. After entering it and pressing on the 'SAVE TAKANO PASSWORD', he should press on 'Save To Cloud' button. If the password is correct and the phone/tablet has an internet connection then a message informing the user that the data was successfully backed-up to the cloud should pop-up. Now in order to download the setup from the cloud to a Takano app, the same procedure as above, but instead of pressing on the 'Save To Cloud' button the user has to press on the 'Download From Cloud' button. In either case, the user has to restart app for the step to take effect.

Fig 17.

The user also has the ability to delete all the parameters he has entered and bring Takano to its pristine condition. For that he has to press on 'reset' button in the setup page (Fig 3). A pop-up screen with a message that this step is irreversible will show on the screen. If 'Yes' is pressed, then the page will look like Fig 18. All what is left to do is to for the user to enter his email and press 'RE-ENTER EMAIL THEN CLICK ME' button. If the email is correct then the data is deleted. User has to restart app for the step to take effect.
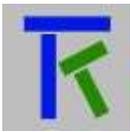
Fig 18.

5. Contact information

For more information or comments, please do not hesitate to contact the Takano technical team by email at: info@iotsprint.com
We are available from 8:00AM (GMT+3) to 6:00PM (GMT+3).