Auto-Pharm Technology

Instruction Manual for

Auto-Pharm

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Contents

1. About the Product

Auto-Pharm is a remote pill dispenser designed to help senior patients reduce drug noncompliance, including overuse, forgetting, and alterations of scheduled dosages. Auto-Pharm was created to automate the operations for the senior users to the machine, and reduce the probability of human error. The machine has 3 rotatable containers, and each container contains 30 slots. User can fill in 3 types of different pills in 3 different containers, each slot containing only one pills. After manually filling in the pills, there is a self-check function to check if the pills are filled in correctly. The caregivers can set the medication dosages and schedules via the Auto-Pharm Web App. The main function of the device is preparing the correct dosage for senior patients automatically at the specific time set by the caregivers.

2. How to use the web application?

Step 1:
Enter the uniform resource locator (URL) in your browser at

http://auto-pharm.web.app/

Figure 1: Website Login Page (1)

Step 2:

  I. For the first time using, enter a valid Gmail address on the "Username" slot and the proper password.
  II. Click on the "Sign Up" button to navigate to the "Log In" page.
  III. If this is not the first login, enter your username and password and click the "Sign In" button.

Figure 2: Website Login Page (2)

Step 3:

  I. Enter the email address and the password again on the related entries.
  II. Click on the "Sign In" button, navigating to the "Link" page and bind with the specific Machine Code, as shown in figure 3.
  III. Press "Add Machine Code" for binding at the first time, and click on the "Link" button after the machine code is added.
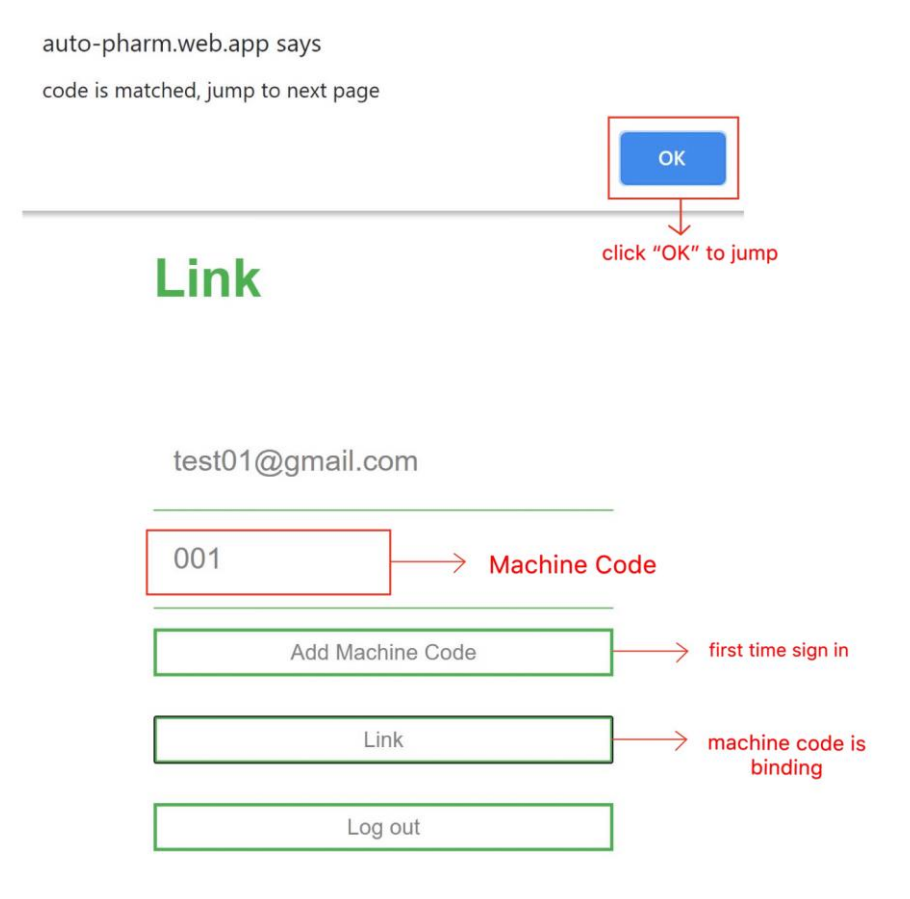
Figure 3: Website Link Machine Code Page

Step 4:

I. After the window pop up "code is matched, jump to the next page", click on the "OK" button.

II. Navigating to the "Setting" section, clicking on the "Type", "Hour", "Minute", "Dosage" slot, the drop-boxes will pop up. Choose the proper type, time, dosage from the drop boxes, as shown in figure 4.
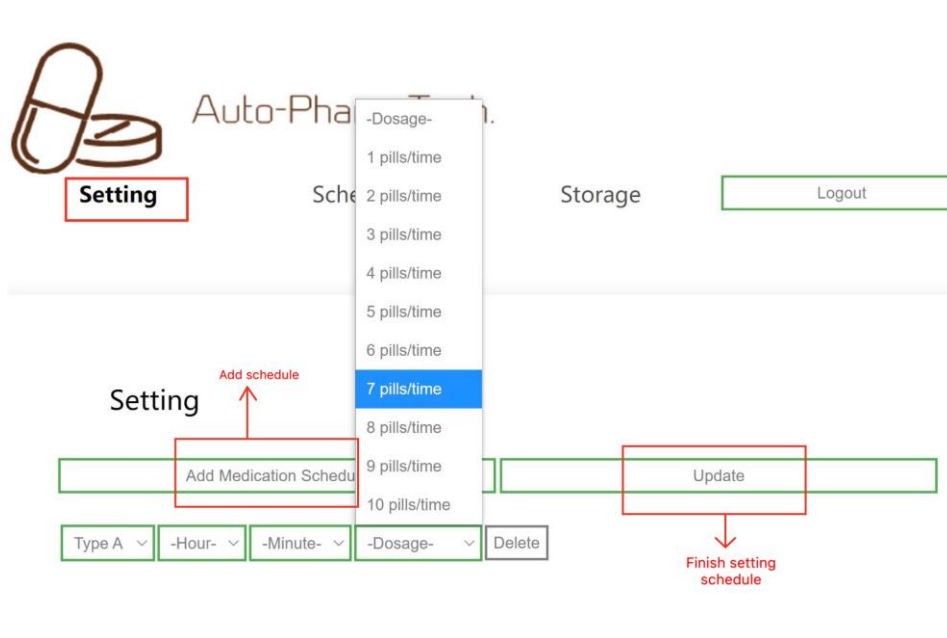
Figure 4: Website Timetables Setting Page

Step 5:

I. Click on the "Add Medication Schedule" to add another medication schedule, as shown in figure 4.

II. Click on the "Update" button to update the medication schedule and dosage in the database, as shown in figure 4.

III. Click on the "Delete" button to remove a needless schedule.

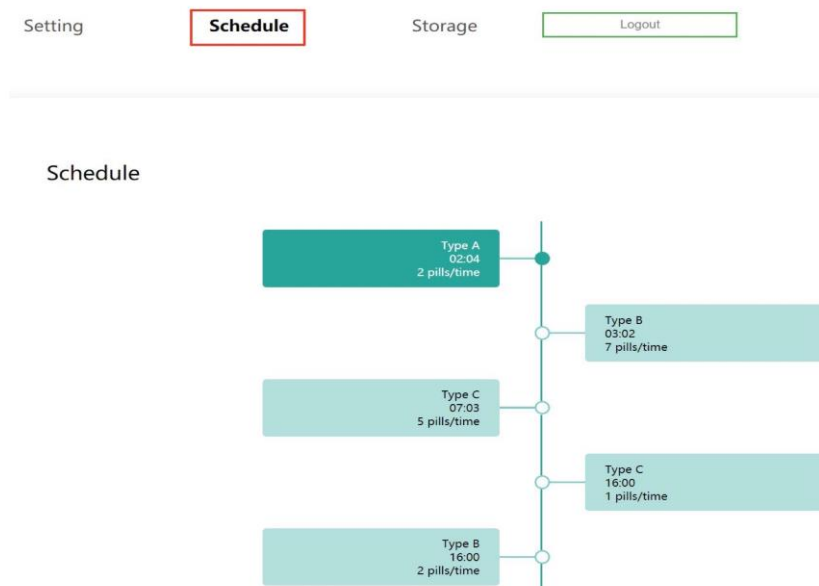IV. Navigate to the "Schedule" section to perform a double-check on the schedule setting.

Figure 5: Website Schedule Page

Step 6:
Navigate to the "Storage" section to check the current number of pills stored in the machine.
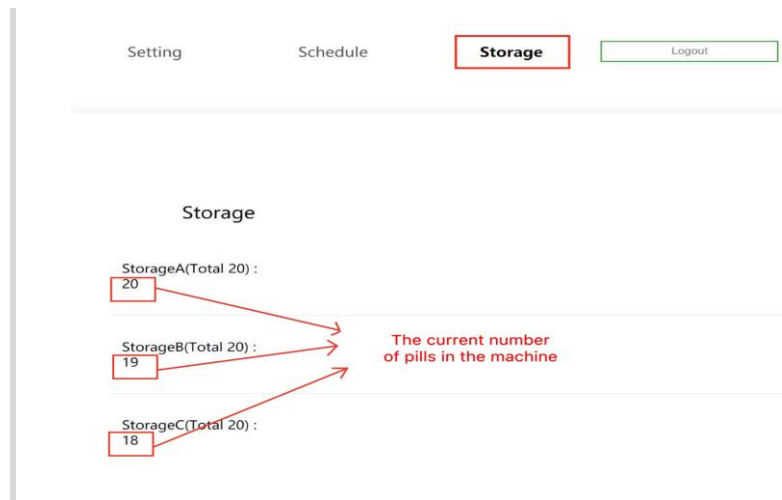

Figure 6: Website Storage Page

3. How to set up the device?

Step 1:
Find out the bundled sold power charger, which is the same as figure 7 shown.

Step 2:
Find out the USB type C port on the device and press the switch on the charger, the port is located at the backside of the device, as figure 8 shown.

Step 3:
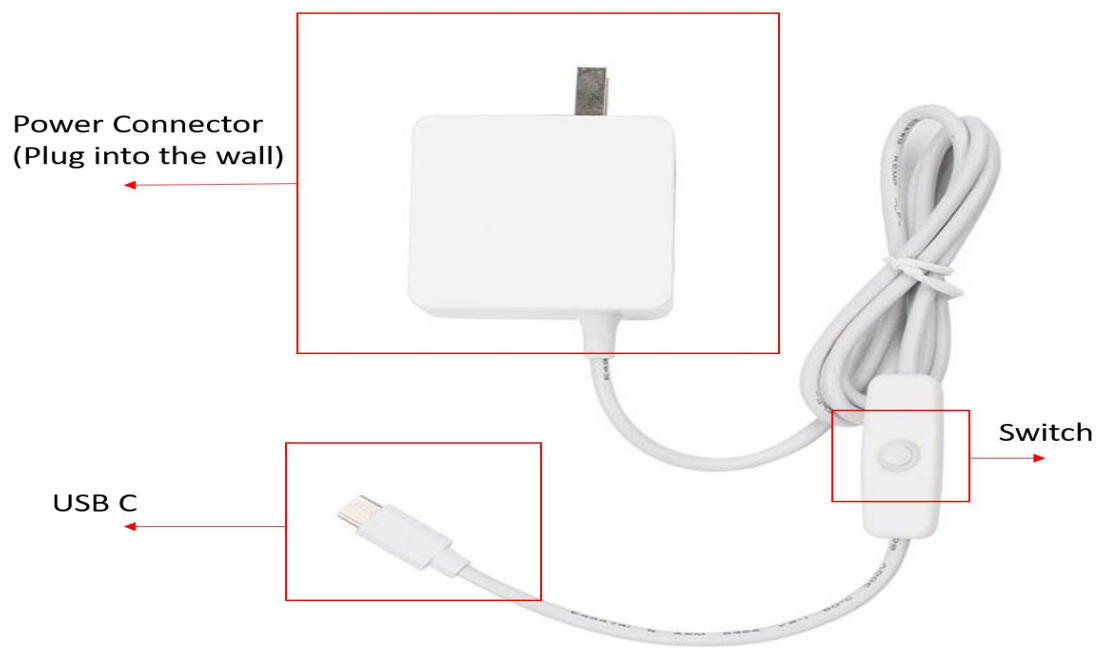Go to the user web application, set up the dosage and schedule.

Figure 7: 5V 3A Power Charger

Figure 8: Backside of the Instrument with the Port of USB type C

Extreme cases and handling (The containers did not set up properly):

There is a small possibility that the container will fall off during the transportation of the instrument.

Step A:
Do not need to panic.

Step B:
Locate the container and reinstall them on the motor (the circled cylinder in red is used to express the upwards of the turntable that is not connected to the motor).

Step C: Rotate the cover to protect the turntable again. All containers should be installed as shown below, users can follow the arrows listed in figure 9 to check the turntables.
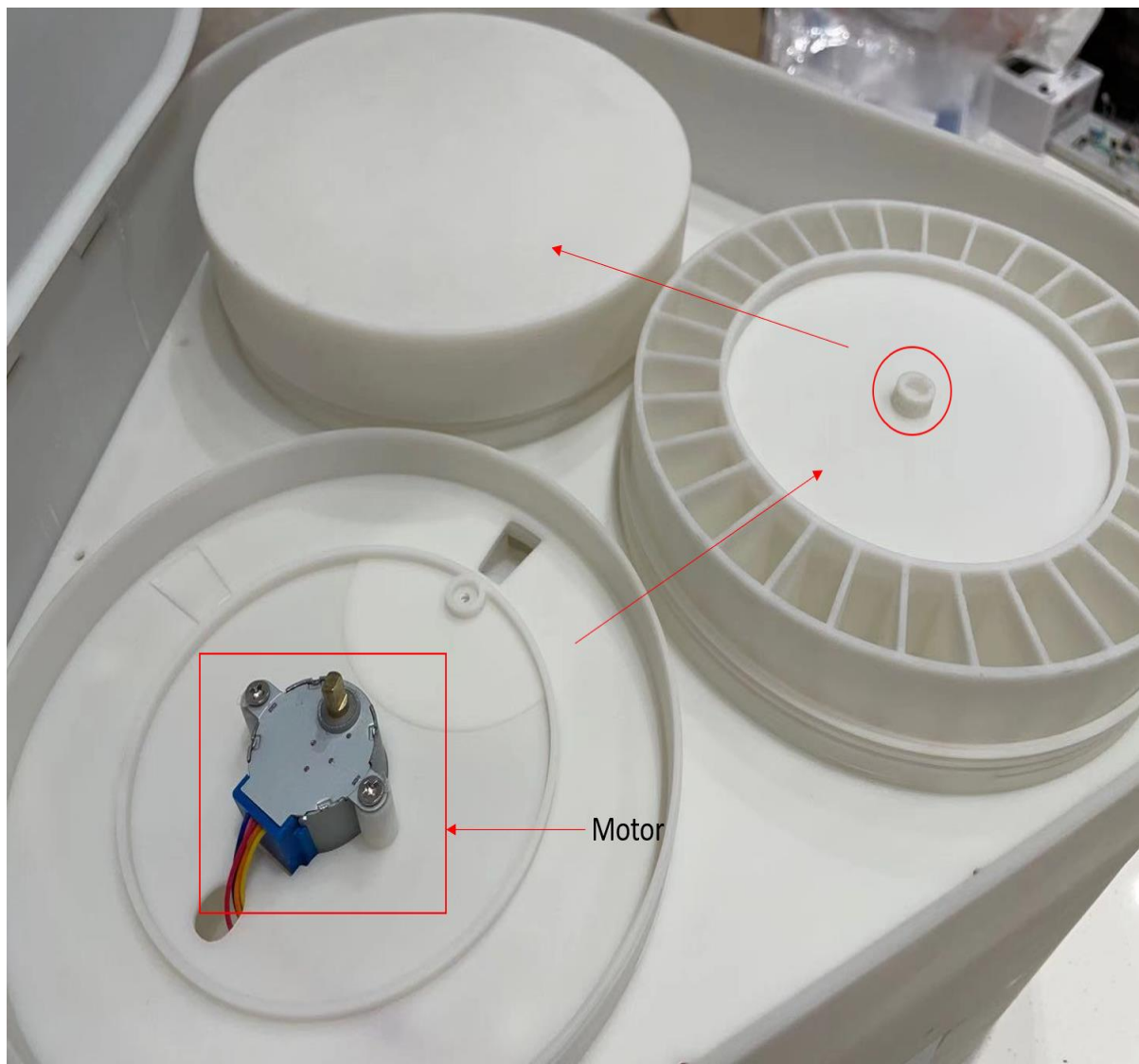

Figure 9: Medicine Container

4. Self-Checking & Detailed Operations

Notice: Each slot only allows to place one pill, therefore, please classify medicines according to their types and fill them in manually!

Once you finish manually filling, you can press the <u>self-checking button</u> to utilize the machine to help you check whether the pills are filled correctly or not.

Important: Container will rotate by themselves during self-checking, please do not open the cover or turn off the machine during this time!
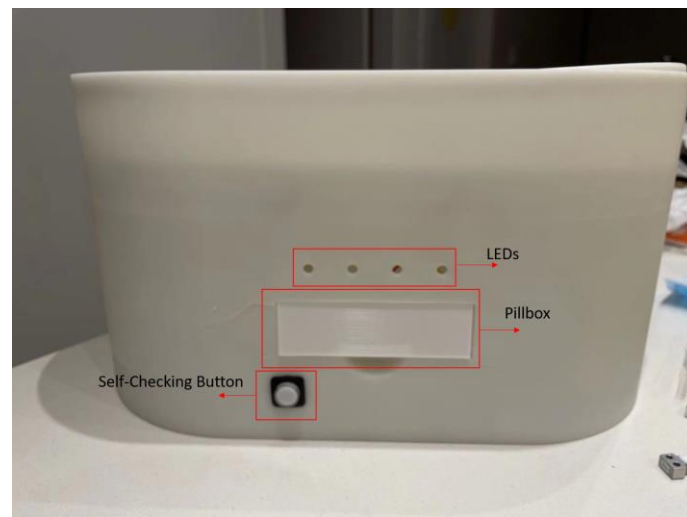

Figure 10: Side of the Machine with Pillbox

The machine contains three LED lights to remind you about the situation of this device. You will notice the green, yellow, or red light from the device. Green responds to "Power". Yellow means "Low Storage" warning, and red means "Alarming".
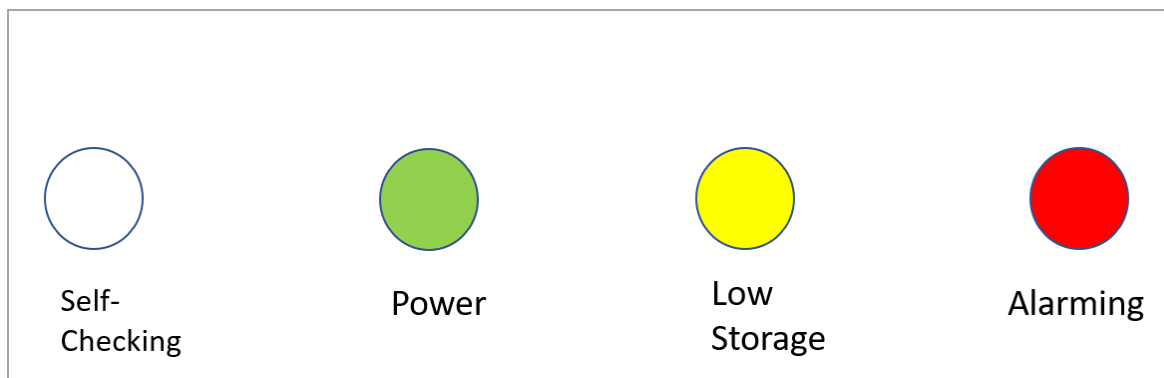

Figure 11: LEDs Front Panel (Left to Right: Self-Checking, Power LED, Low Storage LED, Alarming LED)

The yellow light reminds you to manually refill pills and the red LED will light up when your setting times pre-entered on the website are reached. Meanwhile, the buzzer inside the instrument will alarm to remind the patients.

The senior patient can get their drugs from the pillbox directly.

!Important: If the senior patient does not get the pills after 30 minutes' alarming, you will receive the below email. Please pay attention and contact the patient in time to check the patient's safety.
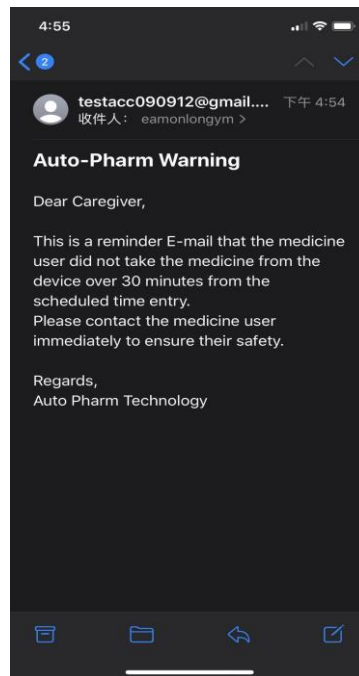

Figure 12: Emergency Notification Message after 30 minutes' alarming