

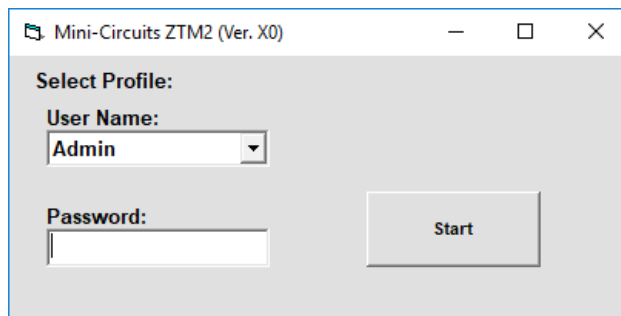
# ZTM2 Series



## Introduction

The purpose of these instructions is to introduce the user to Mini-Circuits' ZTM2 Series GUI. This GUI is meant to be used in conjunction with our ZTM2 line of modular test systems.

When you first open the GUI, you'll see the above window. By default, only the Admin Profile is available and no password is required. You can create more later from within the GUI when you're signed in as the Admin.



Once signed on, the main screen of the GUI will appear. There are multiple sections to this GUI which will be explained below.

The Current Switch States section simply shows all the switches in the connected unit and their current states.

The screenshot shows the 'Main Control' interface of the Mini-Circuits ZTM2 GUI. It includes several key sections:

- Unit/Connection Information:** Fields for Model Name (ZTM2), Serial Number (Demo Model), Protocol, IP, Password, and Connection Status (Demo Mode). Buttons for Firmware Upgrade and Ethernet Config are also present.
- Switch Buttons:** A grid of 24 buttons labeled Switch 1 through Switch 24, arranged in 6 rows and 4 columns.
- Manual Commands:** A section for entering commands, including dropdowns for Switch Commands, Switch State Queries, Switch Counters, and System Queries, along with a Command History list and a SEND button.
- Admin Settings:** A sidebar area containing 'Change User Profile' and 'Profile Management' options.
- Current Switch States:** A table displaying the status of 24 switches, including their type, state, and count.

Switch	Type	State	Count
1: Switch 1	SPDT	1: Port 1	-
2: Switch 2	SP4T	0: Disconnected	-
3: Switch 3	MTS	1: Port 1	-
4: Switch 4	SP6T	0: Disconnected	-
5: Switch 5	SP8T	8: Port 8	-
6: Switch 6	SPDT	1: Port 1	-
7: Switch 7	SP4T	0: Disconnected	-
8: Switch 8	MTS	1: Port 1	-
9: Switch 9	SP6T	0: Disconnected	-
10: Switch 10	SP8T	8: Port 8	-
11: Switch 11	SPDT	1: Port 1	-
12: Switch 12	SP4T	0: Disconnected	-
13: Switch 13	MTS	1: Port 1	-
14: Switch 14	SP6T	0: Disconnected	-
15: Switch 15	SP8T	1: Port 1	-
16: Switch 16	SPDT	1: Port 1	-
17: Switch 17	SP4T	0: Disconnected	-
18: Switch 18	MTS	2: Port 2	-
19: Switch 19	SP6T	0: Disconnected	-
20: Switch 20	SP8T	5: Port 5	-
21: Switch 21	SPDT	1: Port 1	-
22: Switch 22	SP4T	0: Disconnected	-
23: Switch 23	MTS	2: Port 2	-
24: Switch 24	SP6T	0: Disconnected	-

**Temperature / Fans Status**

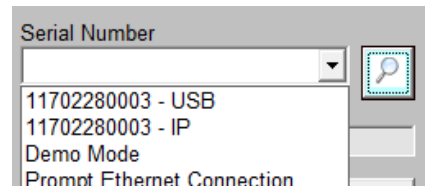
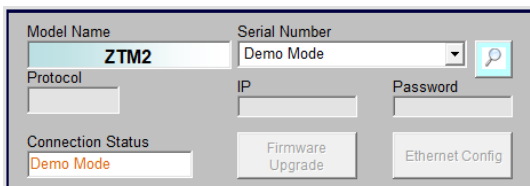
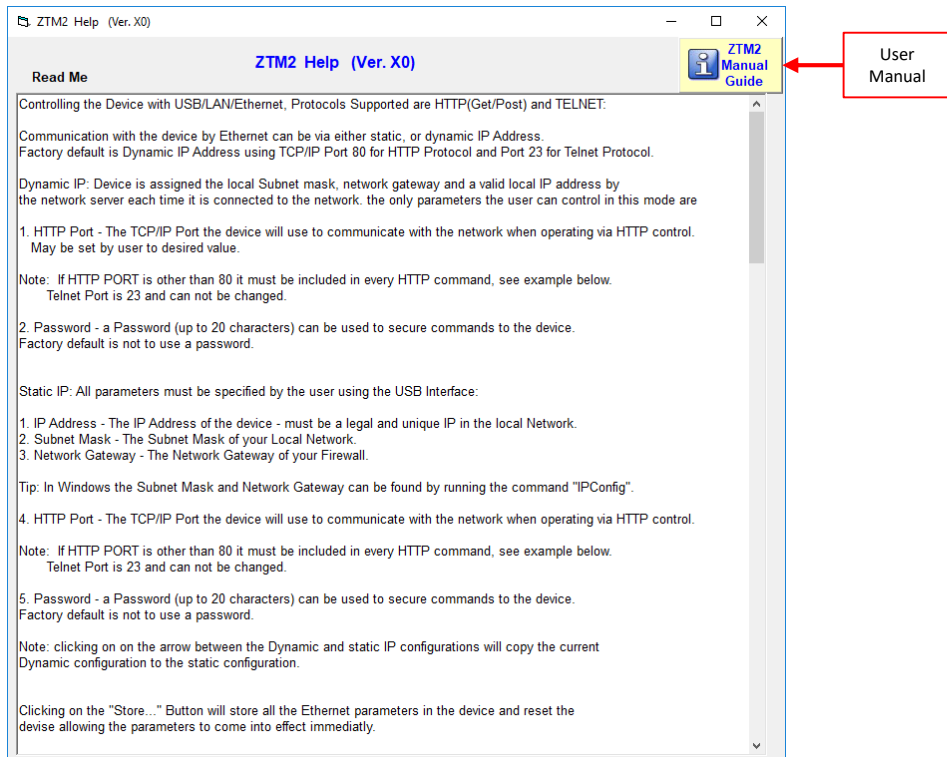
Temperature	Normal
Fan1 operation	OK
Fan2 operation	OK
Fans state	OFF

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## Main Control

Help

The **Help** button brings at the top of the GUI brings up the below window with instructions on how to connect to the unit via Ethernet and some example commands to control the unit, it also includes a button to bring up the unit's User Manual.



The top left of the GUI is the Unit/Connection Information. This section provides useful information involved with the unit connected and how it's connected. It is also where you'll select the unit you wish to connect to and via which Protocol.

Pressing the **Magnifying Glass** button expands the drop down menu with available connection options. If you have the unit connected, the available serial number / connection protocol combinations will be shown so you can initiate the connection. You can also select to go into Demo Mode to evaluate the software without a unit connected.

When connected via USB, you can upgrade the firmware and edit the Ethernet configuration of the unit. Please contact Mini-Circuits ([testsolutions@minicircuits.com](mailto:testsolutions@minicircuits.com)) for firmware upgrade requirements.

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All ZTM2 Series modular switch systems are configured with DHCP enabled by default so in most cases a dynamic IP address will be issued by the network's DHCP server on connection. If you wish to change the system's Ethernet configuration (for example to assign a static IP address) then you need to connect the system via the USB connection and click on the GUI's **Ethernet Config** button to bring up the Ethernet Device – Configuration window.

In this window you can either select DHCP or set a static configuration. If DHCP is enabled but the IP Address in the Current Configuration section states “0.0.0.0” it indicates that the system has not yet been assigned an IP address by the network; wait a moment and then click the **Refresh** button to try again. If an IP address still cannot be retrieved, please check the Ethernet connection and consult your network administrator.

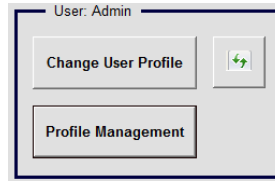
The Ethernet configuration screen also allows you to change the TCP/IP Port of the connection and set a password.

Once everything is properly set, please press the **Store...** button so that your settings are saved.

When you choose to connect via Ethernet on the main screen, the window on the left will appear. This screen is where you'll type in the password for your unit (if set). The IP and Port should auto populate, but if you see an error you can change it to the correct values.

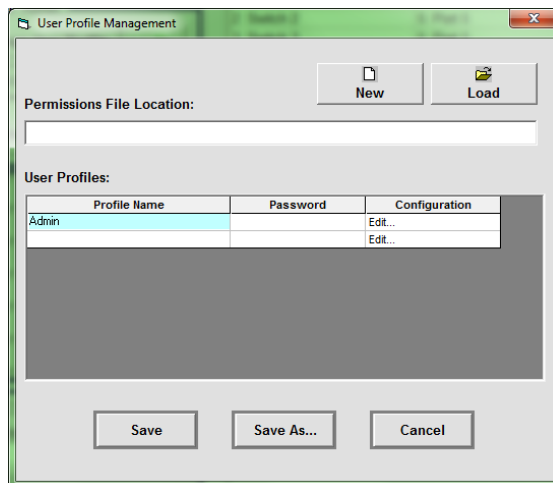
You can also choose to control it via HTTP or by Telnet here.

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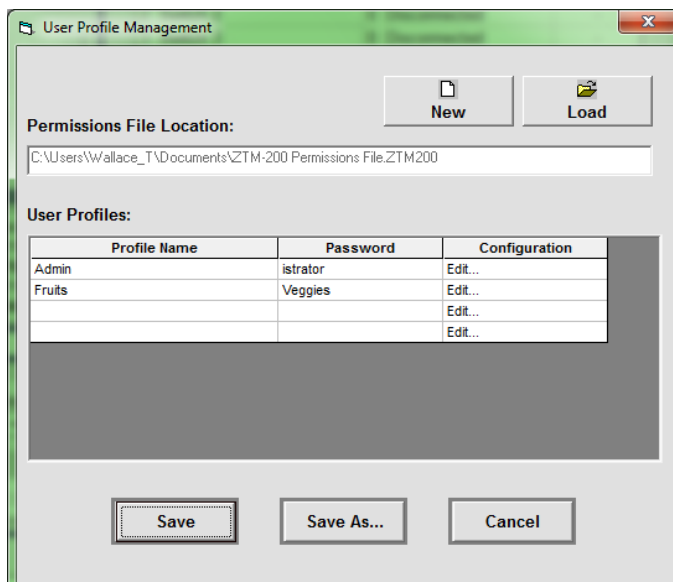


The User Profile Settings is where you can refresh, edit, and change your profile, edit your switch and port names, as well as set up your switch sequences.

As the Admin, when you press the **Profile Management** button, the below window comes up. This is where you can create new Profiles, set passwords for these profiles, and also edit the switches available to each profile.

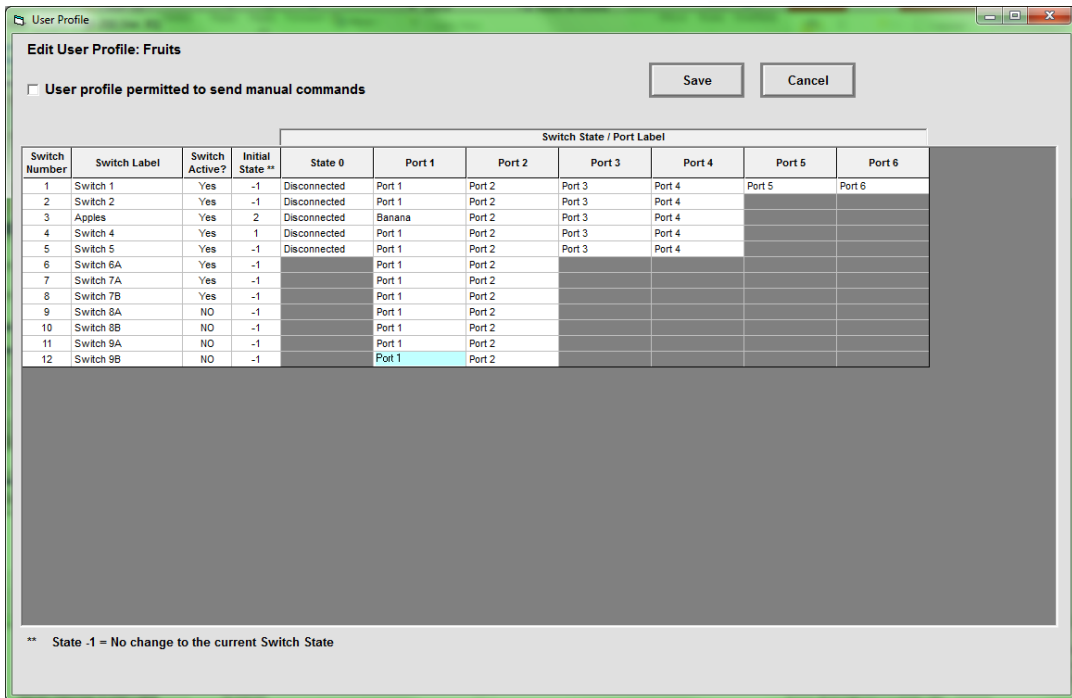


Initially you'll have to press **Save** to create a new permissions file. You'll also have to select the location to save this file. To clear the current settings and create a new permissions file, simply press **New**. Press **Load** to load a pre-existing file or press **Save As...** to save the current permissions file in a new location and/or under a different file name.



In the above example, the permissions file has been saved as "ZTM2 Permissions File" in the local user's Documents folder. A password has been entered for the Admin Profile so that standard users are not able to log in and overwrite these settings. A new user profile (called "Fruits") has also been created by entering the username and password on one of the empty lines below the Admin user.

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Pressing the “Edit...” next to a profile brings up the above window. This shows the GUI settings created for the new user “Fruits”. The user is also able to access this screen directly by clicking the **GUI Configuration** button on the main GUI screen. The greyed out boxes simply indicate that that particular switch does not have those ports (Switch Number 12 is labelled Switch 9B, it’s a SPDT so it cannot disconnect and only has 2 ports).

The Admin can enable or disable access to each individual switch for any user profile by clicking in the “Switch Active?” column, toggling the state between “Yes” and “NO”.

You can change the initial states of each switch by clicking the corresponding numbers under the “Initial State” column. Selecting a port number (1 to 8) specifies which port the switch’s Com will connect to when the GUI is launched. Selecting -1 means the switch will remain in whatever state it was already in.

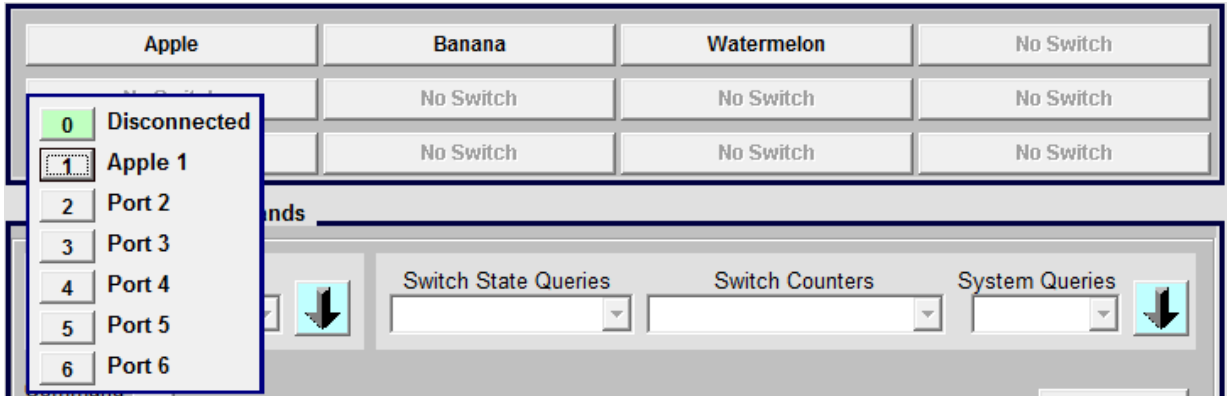
You can also change the label of each switch and their ports, just highlight the switch or port and then type in whatever label you wish to give it. For example, in the screenshot below Switch 1 has been renamed as “Apple”, Switch 2 as “Banana” and Switch 3 as “Watermelon”. The port names have also been updated to match. “Apple” has an initial state of -1 (will remain whatever state it was last set to), “Banana” is set to 0 (disconnect), and “Watermelon” is set to 1 (Port 1, labelled “Watermelon 1”).

Switch Number	Switch Label	Switch Active?	Initial State **	State 0	Port 1
1	Apple	Yes	-1	Disconnected	Apple 1
2	Banana	Yes	0	Disconnected	Banana 1
3	Watermelon	Yes	1	Disconnected	Watermelon 1

\*Please remember to press **Save** before closing the window, or else you’ll lose everything you’ve changed.\*

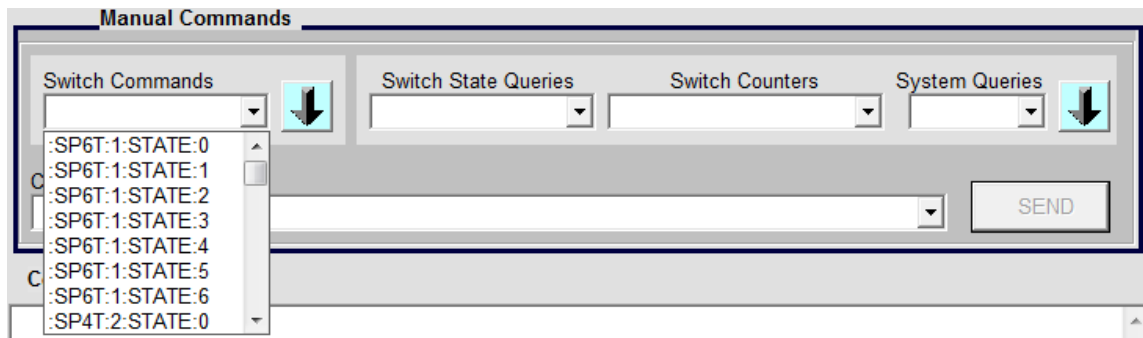
For Admins, at the top of the window you can decide whether or not to allow the user to use Manual Commands to control the switches. By default this is disabled for all users. This means, the user can only use the Switch Buttons available on the main screen or the Switch Sequence function.

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On the main GUI screen, the Switch Buttons section provides a simple method to control each switch manually. Simply press on the switch you wish to control, and then press on the port you want that switch to go to. The above window corresponds to the Ports of Switch 1. Currently, Switch 1 is set to Port 6.

Since the above examples is logged into the Fruits Profile, only the first 3 switches are visible (notice the labeling mentioned in the previous section. All other switches are inactive since this user profile does not have permission to access them.



The Manual Commands section is only active if the profile was given authority to access it via the GUI Configuration by the Admin. This section provides an interface for sending ASCII / SCPI text commands to the system directly. Most commands / queries can be accessed through the drop-down menus.

For a full description of the commands you can click on **Help** at the top of the main screen or consult the Programming Manual.

## Conclusion

This concludes the instructions for using the Multi-Switch Controller GUI. For further assistance please contact the following:

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