User Dashboards and Games Library

1. Introduction

Built-in games are showcased on the primary **Dashboard** through **Title images** accompanied by their corresponding **Title** (name). Upon selecting a game, an **Info image** is presented, offering supplementary details about the chosen game.

Players can initiate the game by touching the Start button, or alternatively, return to the main dashboard by selecting the Cancel button.

This concept can now be extended to all games stored on your SD card, enabling the creation of new Dashboards capable of accommodating up to 50 games each.

To facilitate this, a novel file format named ".ZTG" (ZX Touch Game) has been introduced. Alongside encapsulating the game in its original format (TAP, SNA, Z80, TRD), the ".ZTG" file incorporates additional metadata concerning the game. This includes the Title image and Title (name) for dashboard display, as well as the Info image and ZXT configuration.

This encapsulation format enables the inclusion of supplementary meta blocks, essential for forthcoming ZXT functionalities. The format's structure, composed of independent blocks that may or may not be present within the file, ensures seamless compatibility with upcoming iterations.

The process of creating ".ZTG" files is straightforward and can be executed entirely within the console itself, courtesy of the integrated conversion tool within the ZXT game browser. Upon conversion, games are automatically deposited into the **Games Library**, a designated folder located on the SD card at SD:/ZXT_SYSTEM/LIBRARY.

Games stored within the Games Library can then be organized onto Dashboards. Each Dashboard, represented by a separate file such as Dashboard1.dsh, Dashboard2.dsh, and so forth, is stored within the SD card directory at SD:/ZXT_SYSTEM/Dashboards. These Dashboard files contain references to the ".ZTG" games from the Games Library, along with their respective layouts. Everithing related to the Games Library and user-generated Dashboards are stored exclusively on the SD card within the SD:/ZXT_SYSTEM folder; none of this data is retained within the console itself. Consequently, by simply swapping the SD card, users can effortlessly adopt a completely new dashboard configuration. There's no need to manually create the SD:/ZXT_SYSTEM folder or its subfolders, as they are automatically generated when utilizing these functionalities.

2. Managing dashboards

2.1. Creating and navigating dashboards

To create a new dashboard, simply press and hold any empty space within the current dashboard. A small progress bar will appear just above the touchpoint, indicating the required duration for the hold. Once the progress bar is filled, a **dashboard menu** will appear, offering various options depending on the context. If you're creating your first dashboard, which also means you're currently on the primary dashboard, you'll see only one option: "New dashboard," alongside the "Exit" option. Additionally, the menu can be closed by tapping outside its boundaries, and it can be moved by grabbing its title and dragging it around.
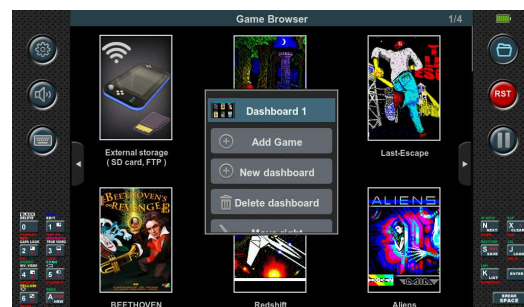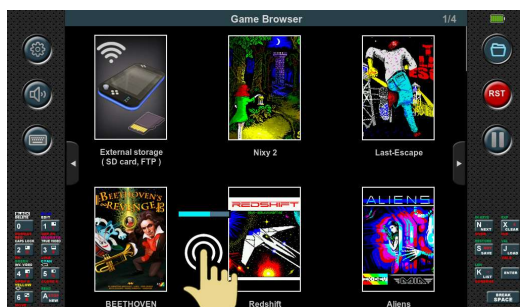
Upon selecting the "New dashboard" option, a fresh empty dashboard is generated, featuring only one icon—a familiar entry point to the SD card contents. This process can be repeated to create additional dashboards. An indicator emerges in the upper right corner of the Games Browser, displaying the current dashboard number out of the total. The primary dashboard is labeled as '0' while subsequent dashboards are sequentially numbered as '1', '2', '3' and so forth.
Navigation between dashboards is facilitated by buttons located on the left and right sides. Alternatively, users can navigate using a joystick or the left d-pad.

2.2. Removing and dashboard rearrangement

Just like creating a new dashboard, deleting one is also possible. However, the "Delete dashboard" option in the menu only functions when the dashboard is empty. Confirmation is required by pressing the 'Yes' button, which appears alongside a message at the bottom of the screen. Dashboards aren't fixed in order; they can be rearranged. This can be accomplished by selecting the "Move Left" or "Move Right" options in the menu whenever applicable.
The primary dashboard labeled as '0', which contains built-in games, cannot be deleted or moved.

2.3. Adding games to the dashboard

The "Add game" option is utilized to place games onto the dashboard that have been previously saved in the Games Library as ZTG files. Upon selecting this option, the contents of the Games Library are automatically displayed. Additionally, the chosen game from the Game Library is positioned at the end of the list. Alternatively, we can also add the game to the dashboard using the copy/paste functionality. This allows us to duplicate it from any dashboard, including the primary one labeled with '0'.

In the same way as the dashboard menu is opened (by pressing and holding on an empty space on the dashboard), the **game menu** can also be opened by pressing and holding on the title image of the game. If this is done on the built-in game on the primary dashboard, in addition to the options for "Exit" and "Start Game," the option "Copy" is offered. With this option, the game is saved to the clipboard, and it can be copied to any user dashboard using the "Paste" option in the dashboard menu. This copy/paste functionality can also be applied to games placed on user dashboards from the Games Library.

2.4 Removing games from the dashboard

Removing the game from the dashboard is achieved with the "Delete" option in the game menu. After selecting this option, the console indicates the selected game by flashing its title image. At the same time, a message is displayed on the screen that must be confirmed in order to actually delete the game. When a game is deleted from the dashboard, it does not mean that it is deleted from the Games Library. How the game is deleted from the Games Library will be explained in the next chapter.

2.5 Repositioning games within the dashboard

When adding a new game to the dashboard, it is automatically placed at the end of the list. However, this default order may not always be suitable. To customize the arrangement of games, you can use the "Move" option in the games menu. Upon selecting this option, the console highlights the chosen game by flashing its title image. The subsequent step involves selecting the desired location for the game. This is accomplished by tapping on the game located exactly where we want to place the selected game. Once we choose the location, the game is then positioned accordingly, causing all other games to shift forward by one place. Should you decide to cancel the movement, you can simply select the "Cancel" button, conveniently located at the bottom of the screen along with the prompt.

3. Adding games to Games Library

To add a game to the dashboard, it needs to be converted to ZTG format and then stored in the Games Library. ZXT provides a user-friendly tool for this purpose. Prior to conversion, it's advisable to adjust all necessary parameters in the ZXT configuration specific to the game, including physical key mapping, joystick settings, ROM options, ULAplus, and others.
Once the configuration is set, locate the game file on the SD card and press and hold the file name box, as illustrated in the image below. Once the progress bar completes, the file menu will be displayed.

The option "Add to Library" triggers the opening of the conversion tool.
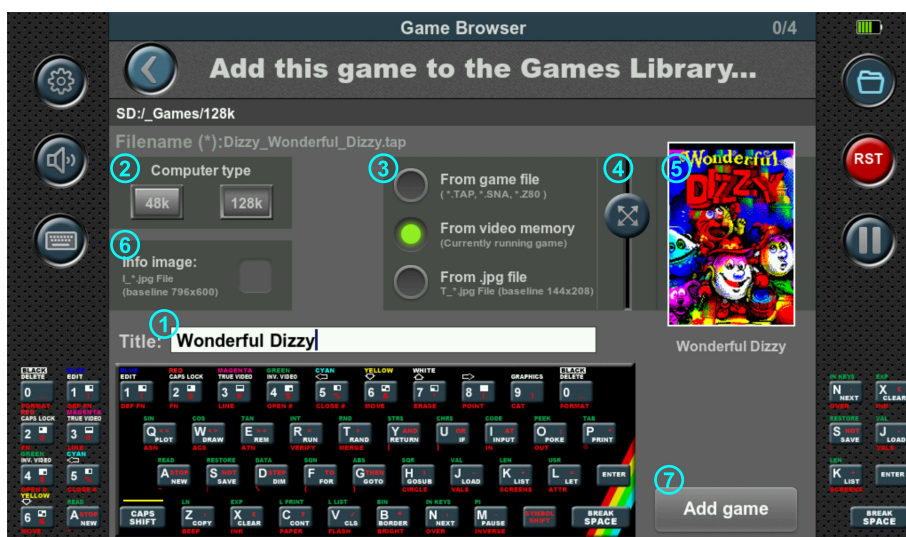
Using this simple yet effective tool, we're able to enrich the selected file (.TAP, .SNA, .Z80, .TRD) with essential metadata, like Title, Title image, Info image, and ZXT configuration. It effortlessly combines these elements into a unified ZTG file, automatically adding it to our Games Library so it can be placed to Dashboard.

3.1. Title of the game

The Title that will ultimately appear on the dashboard is entered in the white text edit box (1) using the keyboard. The edit box is automatically filled with the name of the file without the extension, but of course we can change it. On this keyboard, CAPS SHIFT and SYMBOL SHIFT are toggle keys for easier writing. When CAPS SHIFT is on, keys 5 and 8 can be used to move the cursor, while the zero key is then used to delete the text on the left side of the cursor. When SYMBOL SHIFT is lit, the zero key is used to delete the text on the right side of the cursor.
The text we edited is also printed below the Title image (5) formatted as we will see it on the dashboard.

3.2. Computer Type

In the 'Computer Type' section (2), you'll need to designate the type of computer the emulator will emulate for this game. Typically, in the ZXT console, the computer type parameter isn't included in settings saved under slots (default, slot1, etc.) or under 'Save current game settings.' Instead, it needs to be determined each time the game is launched from the SD card. However, in the ZTG file, this information is saved along with the entire current ZXT configuration.

3.3. Title image

When creating the title image, you have three different options available in section (3).

3.3.1. 'From game file'

If you select 'From game file', ZXT will attempt to extract an image from the selected file without launching the game. For .TAP files, it will search for a block the size of the ZX Spectrum screen and if there is any display it as an image within the frame. Snapshot files (.SNA, .Z80) always contain the screen content at the time the snapshot was taken. However, with TRD files, ZXT won't attempt to find such an image.

3.3.2. 'From video memory'

By choosing the second option, 'From video memory', ZXT will capture the current image displayed on the emulator screen. This means that if you start the game before opening this tool and pause it on a suitable screen for the title image, that image will be displayed within the frame. Additionally, if you press the button with the folder icon to hide the Game Browser and proceed with the emulation, then press it again to return to the tool, a new image will be captured from the video memory of the emulator. This allows for seamless updating of the title image based on the current state of the game.

In both cases, 'From game file' and 'From video memory', you can adjust the image by zooming and repositioning it within the white frame. Zooming is controlled by the slider on the left side of the Title image (4), and repositioning can be done by dragging the image within the frame. In the example shown, the title image is a zoomed and centered portion of the game's title image.

3.3.3. 'From .jpg file'

We can achieve the best results by using the third option 'From .jpg file'. However, it requires a little more effort than the previous two.
This option uses a pre-prepared image that needs to be saved on the SD card in ".jpg" format. In order for the image to be successfully accepted, it must be in the defined resolution of **144x208** and in the **baseline JPEG format**, not in the progressive JPEG format.

Baseline JPEG format decompresses the image from top to bottom in a single pass, and the entire image cannot be displayed until it's fully loaded. On the other hand, progressive JPEG format enables gradual loading of the image. It starts with a low resolution and progressively adds details until the image is fully loaded. This allows users with slower internet connections to recognize the content of the image before it's completely loaded.

Although baseline is the basic and original format, many applications used for image processing save images in the progressive format by default. But it is also always possible to adjust to baseline JPEG format when saving the file.

To ensure that ZXT locates the '.jpg' file, it should be positioned in the same folder on the SD card as the game itself. Furthermore, the image's name must match the game's filename, with the addition of the prefix 'T_' and the file extension '.jpg'. For example, if the game file is named JSW.TAP, the corresponding image should be labeled as T_JSW.jpg.

3.4. Info image

If you wish for the Info screen to appear when starting the game from the dashboard, you need to check the Info image section (6).
When you check this option, ZXT will search for the corresponding '.jpg' file on the SD card (it should be positioned in the same folder as the game itself) and display it on the screen. Upon confirming with the 'Confirm' button, the Info image will be included in the final ZTG file. Similar to the Title image, this JPEG file must be in the **baseline** format and have a resolution of **796x600**. Additionally, the image's name must match the game's filename, with the prefix 'I_' added and the file extension '.jpg'. For example, if the game file is named JSW.TAP, the corresponding image should be labeled as I_JSW.jpg.

3.5. Saving game to Games Library

Once everything is selected and adjusted, simply press the 'Add game' button(7). The tool will then save the game in the Games Library as a '.ZTG' file. Within the Games Library, the file name will remain identical to the original file name, with the '.ZTG' extension appended. For example, if the original name was JSW.TAP, the game will be represented as JSW.TAP.ZTG in the Games Library. If you repeat the conversion on the same original file, the game in the Games Library will be overwritten with the new one. To delete a game from the Games Library, navigate to the SD:/ZXT_SYSTM/Library folder, open the file menu of the desired game, and select the 'Delete' option. Please note that the 'Delete' option is only available within this folder and is not offered in other folders of SD card.