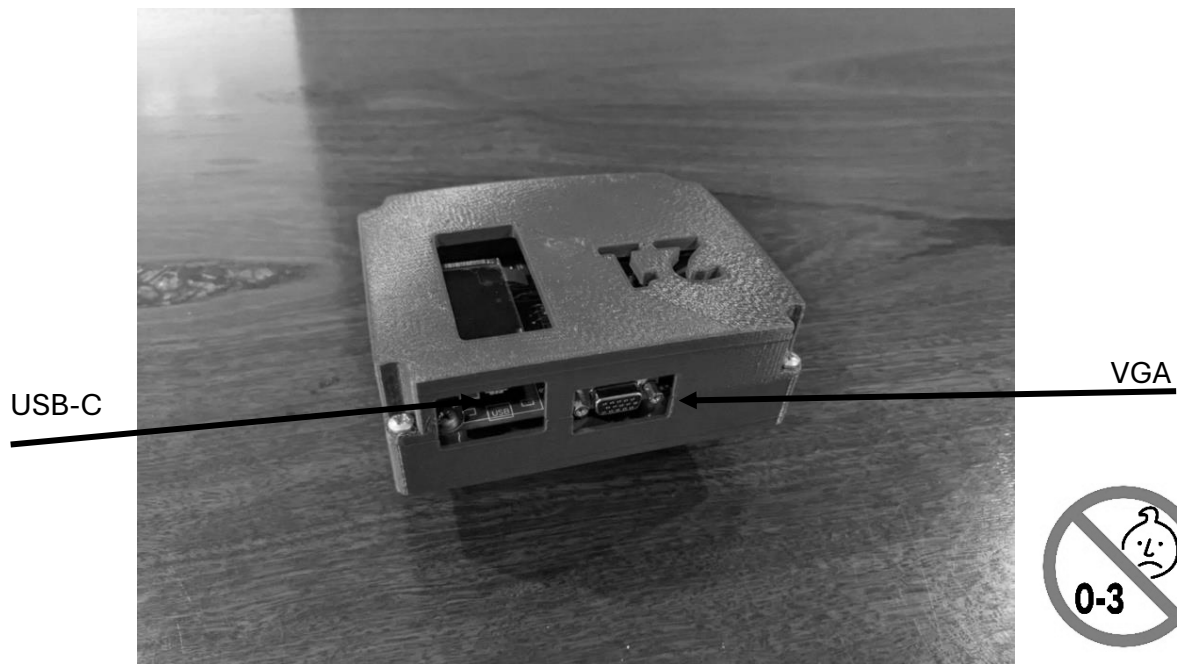


# Arcade 21

## USER MANUAL

### ¡MANUEL UTILISATEUR!



LilyGo T-Display S3s are all provided in the contents.

#### 1. Setting Up Console

- Unscrew the top of the 21 Arcade Machine console and insert one of the LilyGo T-Display S3 into the headers on the PCB.
- Connect the out-going USB-C socket with the provided cable to mains to keep the console powered.
- Plug the VGA cable into a monitor to get display from the console.

#### 2. Setting Up Controllers

- Connect another LilyGo T-Display S3 with the battery connector wires connected beneath the screen of the LilyGo T-Display S3 onto the headers of the PCB board on the controller.
- Place a 3.7V battery (provided) into the battery holder accordingly, ensuring correct orientation.
- Alternatively, you can connect the LilyGo T-Display S3 to a computer via a USB-C connector for battery-less playing.
- Toggle the switch to turn on the wireless controller and the LilyGo T-Display S3 should light up and connect!
- To charge the controller batteries, insert the batteries into a battery charger (sold separately).
- Player 1's controller lights up blue while Player 2's lights up red.

#### 3. Gameplay

##### a. PONG

- Each player can use one controller to control the paddles. Up on the joystick is moving the paddle up, and down likewise.

- If the ball makes its way past a player's paddle, the other player gains 1 point.
- The first player to achieve 11 points wins.

**b. DYNABROS. (Dynamite Brothers)**

- Select "1 Player" to play with one controller against a COM opponent.
- Select "2 Player" to play against another player with a controller.
- "Options" includes the ability to alter the number of COM opponents you play against.
- To play the game, the joystick moves your character, with button 2 (right button) placing a bomb.
- Do NOT place a bomb while standing still or you may get stuck and blow up with it!
- Destroy crates and opponents with your bombs, getting items from crates. Final player standing wins.

**Troubleshooting**

The controller isn't turning on:

- Check battery is oriented correctly and switched on.
- Check wires are not touching other objects.

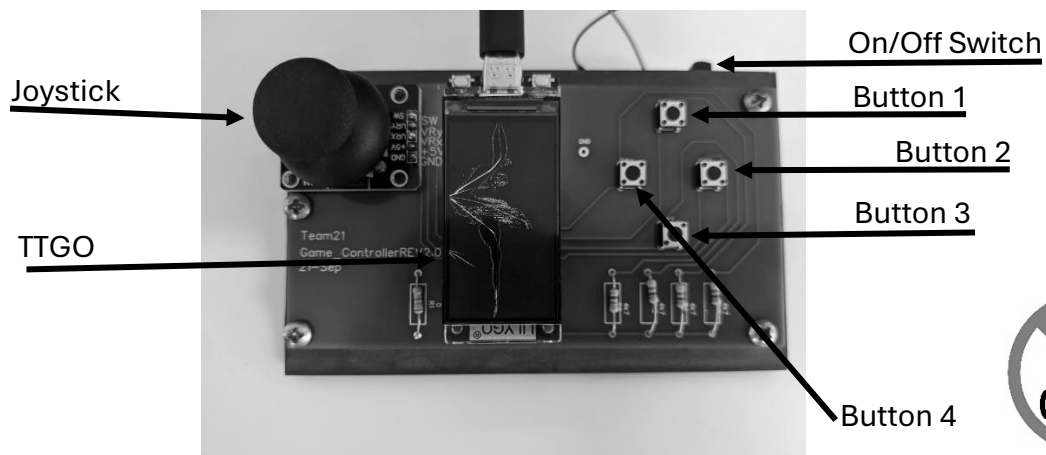
The console isn't turning on or the sound is not working:

- Unplug the console from power for 5 seconds and plug it back in.

If all else fails and you believe that the code has corrupted on the boards:

All code can be found here: [https://github.com/samuel-2004/ELEC3020\\_Project](https://github.com/samuel-2004/ELEC3020_Project) , ONLY if all else fails, reupload the code to the controllers and console, "console.ino" to console, "controller.ino" to controllers. To do so, plug a USB-C cable from a suitable computer and upload to the necessary component using the Arduino IDE, using LilyGo T-Display S3 as the board.

To test if the controllers are working, connect the controllers to a laptop and run "controller\_test.ino" (from the GitHub link) with Arduino IDE. Press the buttons and move the joystick to see if the LilyGo T-Display S3 picks up input. The button inputs should output "1" if pressed and "0" if not pressed. The joystick value VRx should be moving if moved horizontally, the value VRy should be moving if moved vertically and SW should output "1" if the joystick is pressed and "0" if not pressed.



**KEEP AWAY FROM WATER, EXPOSED WIRES, DUST, SMALL CHILDREN AND KIERAN**

