Team 14 Test Plan

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Part 1

Unit Tests

- Ensure Li-Po battery voltage is within spec (3.7-3.9V)
- Test the battery charging capabilities through USB port
- Test that voltage regulator is functioning correctly (3.3V from either USB or Li-Po power)
- Verify 3.3V power to the display board
- Show the display is initializing and functioning correctly (displays splash screen at power on)

Verification Tests

- All control buttons work as intended (ex: UP button moves up one selection)
- Switch turns the system on/off
- Power LED turns on when the system is powered
- Power works through both battery and via USB
- Menu navigation and selection works
- System can communicate with another matching system
- Hosting and joining a game remotely works
- Each game or program requires its own test plan - launching, win/loss conditions, exiting cleanly, loss of connection, etc.

Validation Tests

- System returns to “home” menu when the button is clicked
- Power can be switched on/off
- System is able to connect with another for multiplayer
- System is handheld and lightweight
- Controls are intuitive and easy to understand
- System has a selection menu with multiple games and features
- Buttons can be clicked through the enclosure
- Switch is accessible through the enclosure
- Display is legible through the enclosure

Part 2

Test Author: Joe Nahab					
	Test Case Name:	The Game-Man Game Console Of Gaming Test Case		**Test ID #:**	1
	Description:	*Testing PCB assembly, including simple control functions, and basic program testing*		**Type:**	☒ white box ☐ black box ☐ _____
Tester Information					
	Name of Tester:	Elliot Lamb		**Date:**	11/22/23
	HW/SW Version:	1.0e		**Time:**	2:23 PM
	Setup:	*Populated PCBA, multimeter*			

STEP	**Action**	**Expected Result**	**PASS**	**FAIL**	**N/A**	**Comments**
1	Switching Power	System Powers On / Green LED On OLED On / Menu Displays				
2	Control Up / Down	Scroll Up / Down on menu				
3	Control Confirm	Enter selected menu item				
4	Control Home	Reset / Return to main menu				Button not soldered
5	Switching Power	Power off system / OLED / LED				
	Overall test result:					

Part 2 Cont.

Test Author: Joe Nahab				
	Test Case Name:	Tic-tac-toe Functionality	**Test ID #:**	23
	Description:	Testing functionality of tic-tac-toe ensuring the game works as intended with proper win/loss/timeout conditions	**Type:**	☒ white box ☐ black box ☐ _____
Tester Information				
	Name of Tester:	Elliot Lamb	**Date:**	12-02-23
	HW/SW Version:	1.1e	**Time:**	4:20 PM
	Setup:	Two systems connected playing the same game		

TEST	**INPUTS**	**EXPECTED OUTPUTS**	**PASS**	**FAIL**	**N/A**	**Comments**
1	Switching on power	Powers on system - intro splash, menu, power indicator light				
2	Selecting Tic-tac-toe	Starts game with option to host or join				
3	Play the game	Indicates/respects player turn, follows game rules				
4	Win/loss/draw	Test each ending condition (win/loss/draw) screen, replay/quit prompt given				
5	Quit the game	Return to main menu				
6	Switching power	Powers off system				
	Overall test result:					