# Final GUI Interface Plan

## 1. SETTINGS TAB (Default Tab)

AWG Section

* - Desktop IP, AWG IP (Text Boxes)
* - Buttons: Connect, Disconnect, OUTPUT ON, OUTPUT OFF
* - Status: Connection status LED (🟢 = connected, ⚪ = disconnected)

DSO Section

* - Desktop IP, DSO IP (Text Boxes)
* - Buttons: Connect, Disconnect
* - Status: Connection status LED (🟢 = connected, ⚪ = disconnected)

POI Section

* - Reserved for future use

Log Section

* - Buttons: Print Log (shows current SCPI for AWG and DSO), Print Report (future)
* - Logs saved per run using format: awg\_<ddmmyyyyHHMM>.log, dso\_<ddmmyyyyHHMM>.log

## 2. AWG TAB

Header

* - Buttons: Run, Abort
* - LEDs: CH1–CH4 (colored), AWG Connection Status (🟢)
* - Tab is frozen if AWG not connected

Left Panel

* - Dropdown Options: Sine, LFM, OFDM, Upload Waveform Definition
* - Dynamic Form based on selection
* \* Sine: Frequency
* \* LFM: Chirp Rate, Pulse Width, Repetition, Power
* \* OFDM: Bandwidth, Center Frequency
* \* Upload: Upload button
* - Voltage & Power Form: Sync using V²/R, updates mutually

Right Panel

* - Waveform Plot based on user input
* - Real-time SCPI command log

## 3. DSO TAB

Header

* - Connection LED and Channel LEDs
* - Tab is frozen if DSO not connected

Left Panel

* - TDiv & VDiv: Input + Set buttons
* - Trigger Control: Type, Level, Set Trigger button
* - Save Output Button: Saves data to CSV

Right Panel

* - Live Plot from Oscilloscope
* - Pause and Resume buttons
* - SCPI Log Display (bottom right)

## 4. SWEEP TAB

* - Enabled only after AWG is connected
* - Header: AWG Connection LED

Left Panel

* - Sweep Types: Voltage, Frequency, Bandwidth
* - Each has value input and sweep button

Right Panel

* - SCPI Log Display
* - Reserved area for future

Note

* - Sweep logic implemented in GUI\_Interface, not in AWG\_Controller