

Reflowster_Reflow (Firmware v5)

void setup() - Gets executed at startup and contains self-test logic and setup logic
void factoryReset() - Clears all configuration saved to the EEPROM
void doReport() - Formats a report message to serial
byte debounceButton(int b) - Utility function to wait for a button to be released before continuing
void processCommands() - Handles serial commands received

void tone_error() - Plays an error tone
void tone_notice() - Plays a notice tone
void tone_success() - Plays a success tone
void tone_blip() - Plays a blip tone

int displayMenu(char * options[], int len, int defaultChoice) - Displays a generic menu
int chooseNum(int low, int high, int defaultVal) - Prompts for numerical input

void initProfile() - Executed at startup to load the currently selected profile
void loadProfile(byte profileNumber) - Loads a saved profile from EEPROM into RAM
void saveProfile(byte profileNumber) - Saves a saved profile from RAM into EEPROM

void writeConfig(int cfg, byte value) - Writes a configuration value at the specified location
byte readConfig(int cfg) - Reads a configuration value at the specified location
void ewrite(byte loc, byte val) - Wrapper function to write to the EEPROM for debugging

void loop() - Main loop, executes repeatedly while uC is powered
void tick() - Called periodically to handle "background" checks
void mainMenu() - Formats, displays, and handles responses to the main menu
void doReflow() - Perform a reflow soldering cycle
boolean openProfile() - Displays a menu to let the user choose a profile to open

int chooseTemp(byte storedTemp) - Converts temperature based on the current mode
boolean editProfile() - Manages editing of profile values

void doMonitor() - Monitor mode, records data via serial and displays to the display
void configMenu() - Displays the configuration menu
void thermostat() - An advanced mode that allows you to set a temperature and hold it

double ctof(double c) - Converts Celsius to Fahrenheit
double ftoc(double f) - Converts Fahrenheit to Celsius
double celsiusToFahrenheitIfNecessary(double c) - Converts Celsius only if mode is set
int reflowImpl(byte soakTemp, byte soakTime, byte peakTemp) - Handles the reflow process