

Pyr0-Piezo Z-Probe rev.1.x.x Marlin Config

Most mechanical endstops use “active low” logic, which requires Marlin to be configured for endstop pins to be pulled up, and the default logic to be inverted.

This methodology has been adopted as of Rev.1.0.2. All pyr0-piezo sensors will use active-low logic:

Step1 – Endstop Settings:

Comment #define ENDSTOPPULLUP_ZMIN (or other pin if using a different connection)
Set Z_MIN_ENDSTOP_INVERTING to “true”

```
//=====
//===== Endstop Settings =====
//=====

// @section homing

// Specify here all the endstop connectors that are connected to any endstop or probe.
// Almost all printers will be using one per axis. Probes will use one or more of the
// extra connectors. Leave undefined any used for non-endstop and non-probe purposes.
#define USE_XMIN_PLUG
#define USE_YMIN_PLUG
#define USE_ZMIN_PLUG
//#define USE_XMAX_PLUG
//#define USE_YMAX_PLUG
//#define USE_ZMAX_PLUG

// Enable pullup for all endstops to prevent a floating state
#define ENDSTOPPULLUPS
#if DISABLED(ENDSTOPPULLUPS)
  // Disable ENDSTOPPULLUPS to set pullups individually
  //#define ENDSTOPPULLUP_XMAX
  //#define ENDSTOPPULLUP_YMAX
  //#define ENDSTOPPULLUP_ZMAX
  #define ENDSTOPPULLUP_XMIN
  #define ENDSTOPPULLUP_YMIN
  //#define ENDSTOPPULLUP_ZMIN
  //#define ENDSTOPPULLUP_ZMIN_PROBE
#endif

// Mechanical endstop with COM to ground and NC to Signal uses "false" here (most common setup).
#define X_MIN_ENDSTOP_INVERTING true // set to true to invert the logic of the endstop.
#define Y_MIN_ENDSTOP_INVERTING true // set to true to invert the logic of the endstop.
#define Z_MIN_ENDSTOP_INVERTING false // set to true to invert the logic of the endstop.
#define X_MAX_ENDSTOP_INVERTING false // set to true to invert the logic of the endstop.
#define Y_MAX_ENDSTOP_INVERTING false // set to true to invert the logic of the endstop.
#define Z_MAX_ENDSTOP_INVERTING false // set to true to invert the logic of the endstop.
#define Z_MIN_PROBE_ENDSTOP_INVERTING false // set to true to invert the logic of the probe.
```

Step 2 – Enable Interrupts*:

*This only applies if you are running Marlin v1.1.9 or later

Uncomment this line for best possible accuracy

```
// Enable this feature if all enabled endstop pins are interrupt-capable.  
// This will remove the need to poll the interrupt pins, saving many CPU cycles.  
#define ENDSTOP_INTERRUPTS_FEATURE
```

Step 3 – Configure Z Probe Options:

- If using the Z_Min input, uncomment #define Z_MIN_PROBE_USES_Z_MIN_ENDSTOP_PIN
- Uncomment #define FIX_MOUNTED_PROBE
- Uncomment #define PROBING_FANS_OFF
- Uncomment #define DELAY_BEFORE_PROBING 250
- Set all probe offsets to 0
- Change Z_PROBE_SPEED_SLOW to match FAST
 - #define Z_PROBE_SPEED_SLOW (Z_PROBE_SPEED_FAST)
- *Optional: Uncomment #define MULTIPLE_PROBING 2
- Uncomment #define Z_MIN_PROBE_REPEATABILITY_TEST

Step 4 – Configure Bed Levelling:

- Choose your flavor of bed leveling and uncomment the line for it. Theoretically Unified Bed Levelling is the best choice for this kind of probe
- *Optional: Uncomment #define RESTORE_LEVELING_AFTER_G28 if you don't plan on doing a full G29 after each G28
- Uncomment and set #define MANUAL_Z_HOME_POS -0.15
- Uncomment #define Z_SAFE_HOMING
 - Default for this setting puts the nozzle in the center of the bed for G28Z, but you can define a corner offset if you wish. This will be performed before any bed levelling procedure