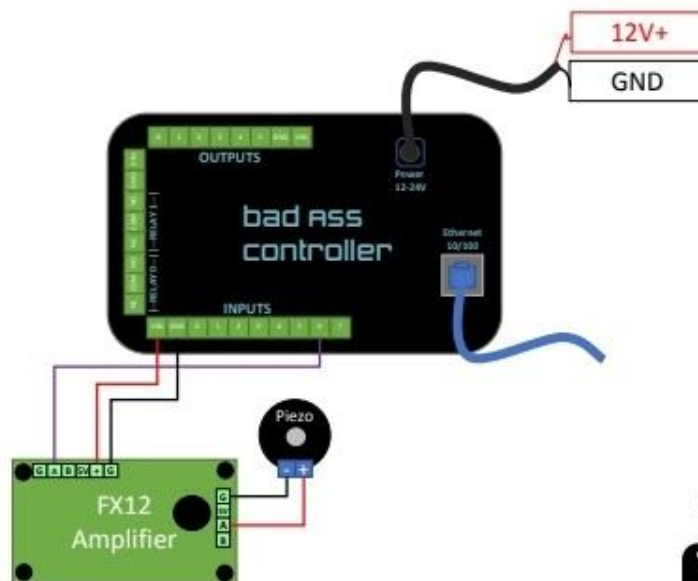# Knock Knock Game

Introduction

Detect a programmable knock pattern using a piezo mic

HARDWARE

- Piezo Mic
- ERT FX12 Signal Amplifier
- Bad ASS Controller (BAC)
- 12V Supply

Hardware Setup & Wiring

Piezo Orientation

Bad ASS Manager Software Setup

Knock Pattern Learning Procedure Overview

To learn a new knock pattern, click the "Learn" button on the game settings page. Start a learn sequence by clicking the "Begin Learning" button, knock the desired pattern, and then click the "End Learning" button to save.

Screenshots View

From the "Home" screen

From the "General" screen

bad ass manager

General	Game	Events	Hardware	Network	System

BAC0001, MyRoom, Knock Knock, SN: 0001

Selected Game

Knock Knock

> Select the Knock Knock Game from the dropdown box if it hasn't already been preselected and save

Selected Network

None ▼

Device Name

BAC0001

Room Name

MyRoom

[Save]

[Home]

[Manual (Cached)] [Manual (Live)]

From the "Game" Screen

bad ass manager

General	Game	Events	Hardware	Network	System

BAC0001, MyRoom, Knock Knock, SN: 0001

Input Pin:

Input 6

☐ Rescale Input
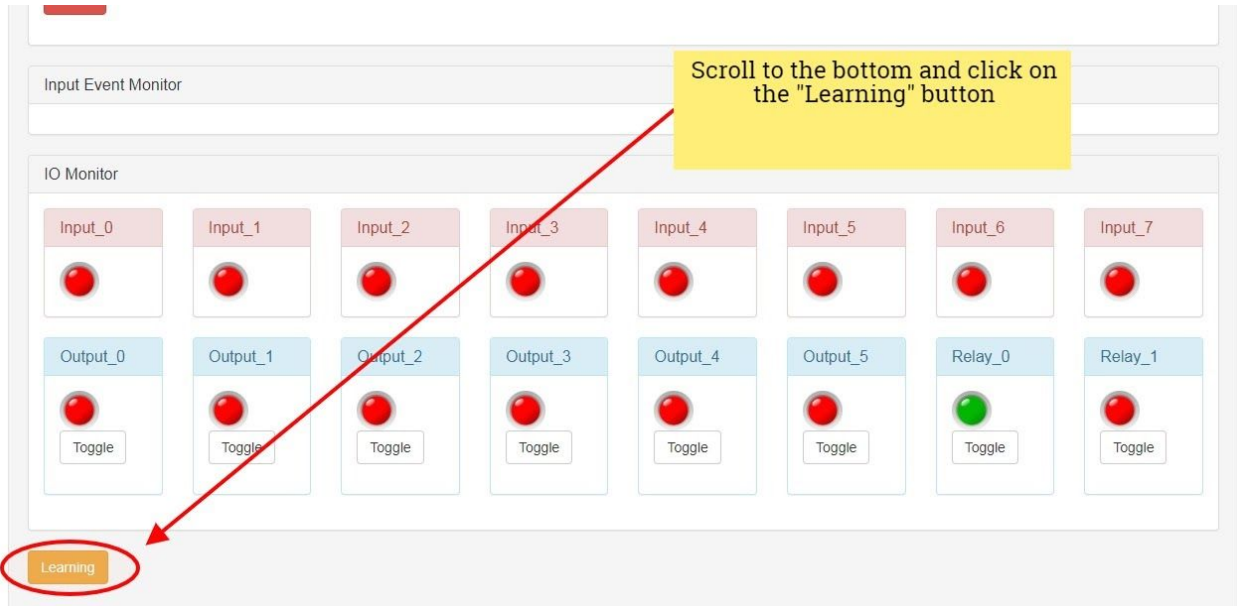
Knock Threshold (0-100)

50

Knock End Threshold (0-100)
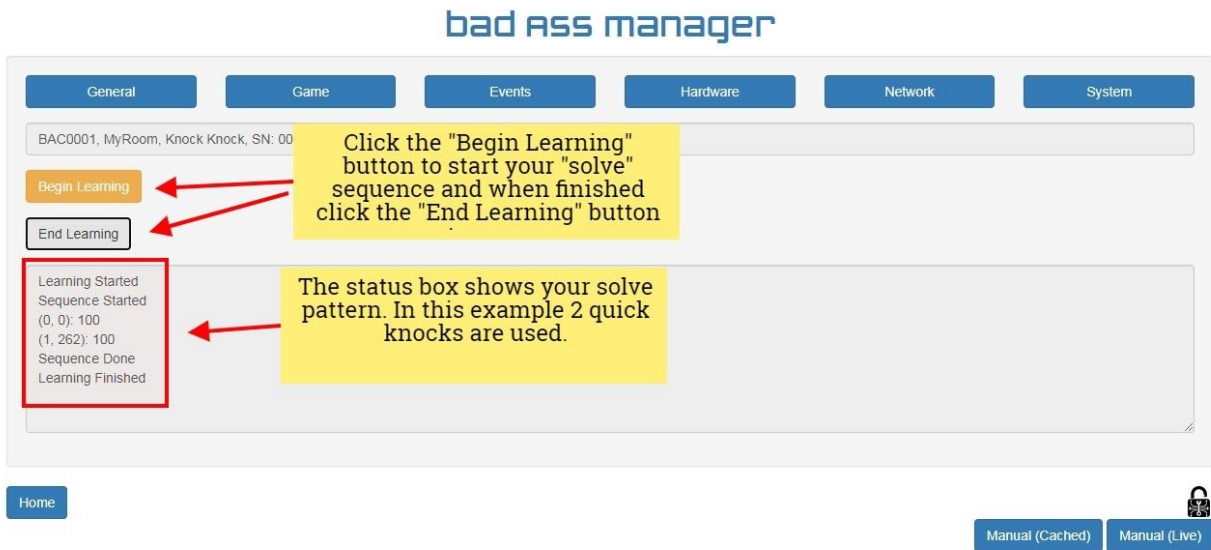
10

> Advanced Options

Timing Tolerance (%)

20

Sequence Timeout (ms)

1400

[Save]

From the "Learning" screen

Setup Complete!

TESTING Your Solve State

From the "Game" screen

From the Game screen, test your sequence. The correct sequence will trigger the game solve light from red to green

ADVANCED OPTIONS

Rescale Input (check box) - Scales the timing of the knocks to match solve pattern

Knock Threshold - Percentage value that must be reached to consider a knock valid. Proportional to knock strength. Experiment with your setup to determine a good value. Lower number more sensitive, higher number is less

Knock End Threshold - Percentage value that must be reached to consider a knock ended. Proportional to knock strength. Experiment with your setup to determine a good value. Low number less knock recognition, higher in greater

Timing Tolerance (%) - Variance between knocks. Percentage value that determines how far off the timing can be of the input compared to the solve pattern. For example, a value of 20 means that the timing can be up to 20% off and still be correct.

Sequence Timeout (MS) - The amount of time in milliseconds before the sequence is timed out between knocks.

TROUBLESHOOTING

No FX12 power light
      Check FX12 power connection from BAC
Not seeing knock status in status window
      Check FX12 data wire is connected to pin 6 on the BAC input
      Check Piezo sensor is connected properly
Can't get my Knock pattern to solve
      Try another pattern, some patterns don't solve consistently
      Check your Piezo sensor is not upside down
      Check the pattern and solution are the same
      Check that your solve time is not exceeding the Sequence Timeout