Software

Notes about software development

Files

TODO: explain difference between .h .cpp and .ino files

Including libraries

TODO: explain difference between these two lines

```
#include <Arduino.h>
#include "Arduino.h"
```

Data structures

```
// using a template datatype allows debugPrint to take in any datatype, like
// Serial.println(). it needs to be defined here in the header file so it
// compiles before anything else, since it's called in the Inst0.cpp file
template <typename T> void debugPrint(T message) {
    if (_serialDebugging) {
      Serial.println(message);
    }
  };
```

C++

We have a class called TinyTrainable, and subclasses for each of the other instruments.

We declare certain methods as protected instead of private, because if they were private, all the instrument classes that inherit TinyTrainable wouldn't have access to these anymore. If we want to make them private we'd have to make public getter/setter methods.

static void vs void

Peter's explanation: i used "static void" because you only need to run it once per arduino even if you have multiple instances of the instrument classes (it doesn't need to be an instance method).