# 1 The Control System

This section describes the embedded control system and user interaction. The latest system software and documentation can always be found on github at `https://github.com/hedj/fusion/`.

Flowcharts in this section use the visual language from the DRAKON project. See `http://drakon-editor.sourceforge.net/language.html` for details.

## 1.1 The Bank Controller

The bank controller is a Controllino Mega; an Arduino-based programmable-logic controller. The bank controller is in charge of the following functions:

- Capacitor-bank and HV pulse generation

- HV voltage control

- Capacitor bank charge control

- Audible alert before pulse

The top-level flow of the bank controller is shown in Fig. 1.

## 1.2 The Stepper Controller
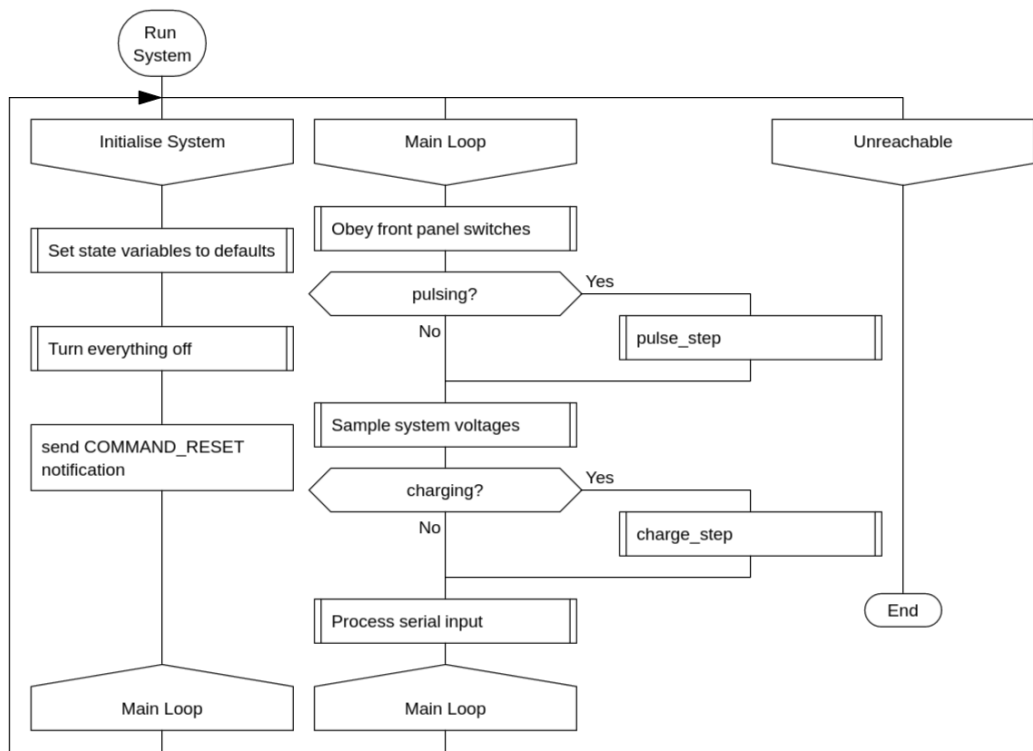
## 1.3 The IRC Server

## 1.4 The Agents

## 1.5 Using the System

Figure 1: Top-level flow of the bank controller