NOTE: Computer will reset the Arduino if connected and rx setup packet != tx setup packet

TRUE

TRUE

FALSE

FALSE

FALSE

TRUE

TRUE

FALSE

Reset upon opening COM port or power on

Send ID packet to computer

Check if rx byte is 0x00

Check retry counter

Flash panel LED 3x

Parse setup packet and load values

Load default setup values

Check if setup packet and values are valid

Reset retry counter

Clear rx serial buffer and set retry counter

Retrieve next byte in rx serial buffer

Retrieve all data in the rx serial buffer

Check if default setup values are valid

Repeat setup packet back to computer

Enter safe standby – give computer 1 s to check packets

Decrement retry counter

Open COM port connection to driver

Send setup packet

Load setup data from prefs

Load rx serial buffer data into circular buffer

Check circular buffer for valid ID packet

FALSE

Send a 0x00 byte to confirm receipt of a valid ID packet

TRUE

(ID Packet)

Load rx serial buffer data into circular buffer

Check circular buffer for valid ID or setup packet

FALSE

TRUE

Check that sent and received setup packets match

TRUE  
(Setup Packet)

Disconnect from COM port

Initialization complete

FALSE

TRUE