```c
1   /*
2   Serial packet handler library
3
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7   */
8
9   #include <Arduino.h>
10  #include <stdint.h>
11
12  #ifndef COMMUNICATION_H_
13  #define COMMUNICATION_H_
14
15  // Structure to handle the various outputs to the GUI
16  typedef struct TXDataPacket {
17      // Boolean data
18      uint8_t slot_encoder;
19
20      // Encoder data
21      int32_t encoder_count;
22      float encoder_velocity;
23
24      // Temperature sensor
25      uint8_t temperature;
26
27      // Ultrasonic sensor
28      uint16_t ultrasonic_distance;
29
30      // Flex sensor
31      uint16_t flex_sensor;
32
33      // Ouput servo angle
34      uint8_t servo_angle;
35  } __attribute__((__packed__));
36
37  // Structure to handle the various inputs from the GUI
38  typedef struct RXDataPacket {
39      // Enable for demo
40      uint8_t global_switch;
41
42      // State select
43      uint8_t state;
44
45      // Servo motor
46      uint8_t servo_angle;
47
48      // DC motor
49      int16_t motor_angle;
50      int16_t motor_velocity;
51
52      // Stepper motor
53      uint16_t stepper_value;
54      uint8_t stepper_dir;
55      uint8_t stepper_flag;
56  } __attribute__((__packed__));
57
58  extern TXDataPacket tx_packet;
59  extern RXDataPacket rx_packet;
60
61  void send_data();
62  bool recieve_data();
63
64  #endif
```