```c
// Preprocessor Directives to include the library only once
#ifndef _SONARSTATUS
#define _SONARSTATUS


// New defines:
#define ST_SETUP       0                              // Number associated with the setup mode.
#define ST_MANUAL      1                              // Number associated with the manual mode.
#define ST_AUTOMATIC   2                              // Number associated with the automatic mode.
#define POSITIVO       0                              // Number associated with the positive direction of the servo.
#define NEGATIVO       1                              // Number associated with the negative direction of the servo.
#define N_SAMPLES     32                              // Total number of samples of the sinusoidal signal.
#define Fpclk 25e6                                    // Frecuency of the peripherals by default.

// New struct:
struct sonar_status
{
  /*
    Structure that contains all
    the information of the Sonar
    and allows us to handle it
    in a simple way.
  */
  char  state;                                        // Contains the mode of the servo, modes allowed: Setup, Manual and Automatic.
  float distance;                                     // The distance measure by the UTS in cm.
  int   servo_pose;                                   // The position of the servo in degrees.
  int   servo_period;                                 // How many 0.5 cycles are equal to the period of the servo, this parameter can be configured via UART.
  int   servo_resolution;                             // Servo motion resolution,this parameter can be configured via UART.
  char  f_block_keys;                                 // Flag to prevent the Eints handlers being executed multiple times when the button is pressed.
  char  f_block_move;                                 // Flag that enables the movement of the servo in automatic mode, it can be modified via ISP.
  char  f_block_measure;                              // Flag that allows the distance measure in manual mode, it can be modified via ISP.
  char  f_block_transmision;                          // Flag that allows you to send information about measurements via UART.
};

#endif

```