

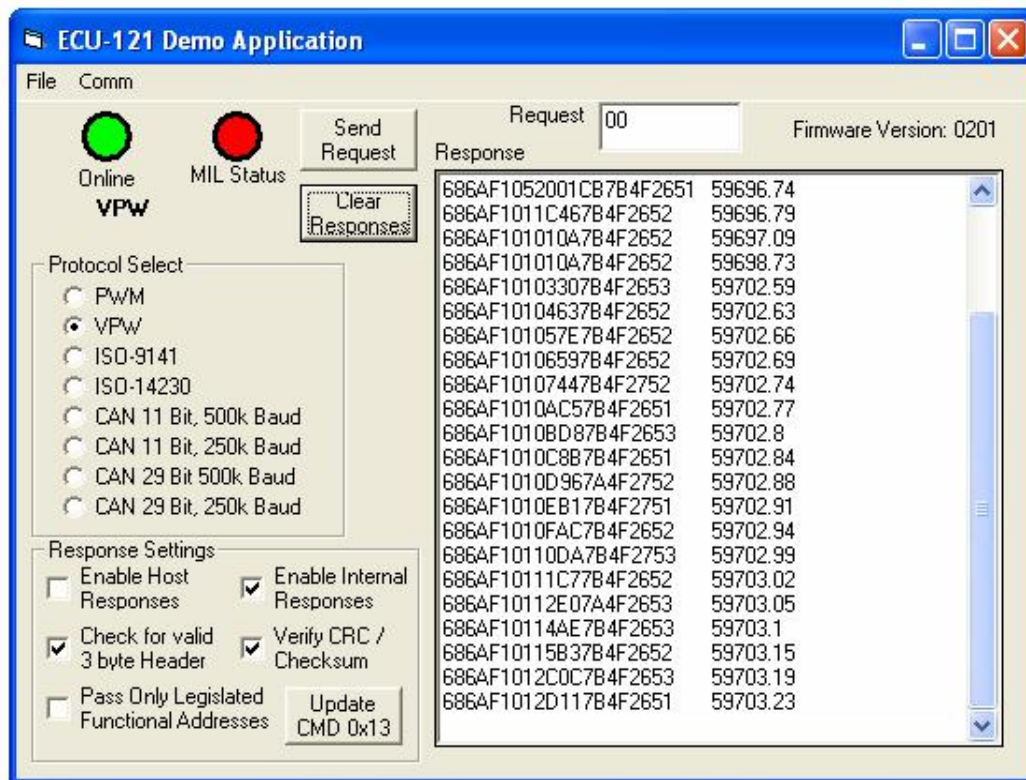


## ECU Simulator Demo Application

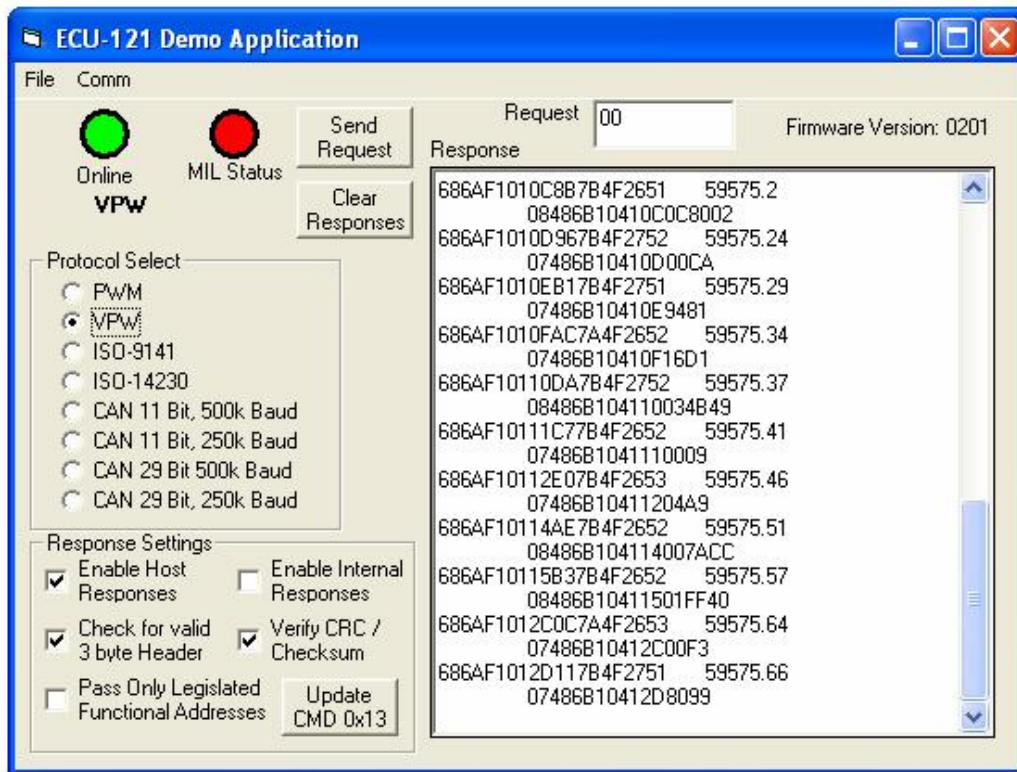
This application is meant to provide the user an example of a simple interface for simulating a vehicle ECU. As such, it provides limited functionality and only replicates the responses already available internally to the ECU Simulator. Other messages are easily implemented by the end user through custom programming.

The program begins by initializing the Com Port and testing for communication with the ECU Simulator. The Com Port must be selected manually using the 'Comm' menu. Once communications with the ECU Simulator is achieved, the program requests information through system commands to establish functionality. Com ports 1 – 8 are available for selection. The active protocol can be changed by clicking the protocol name in the Protocol Select box. Response Settings can be changed by checking or un-checking as needed then clicking the Update button. If both Host responses and Internal responses are unchecked, the ECU Simulator will not respond to any request.

Basically, there are two modes of function in this application. First, if the ECU Simulator is set to internally respond to requests (system command 0x13 bit 0 = set), this application merely displays those requests in the 'Response' box.



Second, if the ECU Simulator is set for host response enable (system command 0x13 bit 1 = set) then all responses sent to the tester are generated by the application. In this sample program, the commands and responses are stored in a file ('ECUData.cmd') and loaded into an array at program startup. Further, oxygen sensor simulation (PID \$14 and \$15) are calculated as they go, and MIL status is able to be reset for 10 seconds. As requests come in, the response is looked up in the array, or calculated immediately, and the reply is sent. The request and any/all responses are displayed in the 'Response' box. Time is of the essence in this routine. The ECU Simulator will only wait 100mS for a reply and then assume none is coming. If calculations will be complex, perform them elsewhere and update a table of response values. This table can be quickly read and transmitted. **Please note: This mode is not supported by the CAN protocols.**



Only system commands are allowed as requests and they can be entered in the 'Request' box at the top of the screen. Enter requests in two character HEX format only (i.e. 131C for command 0x13 value 0x1C). Once the request is entered, click 'Send Request' to transmit your message. The request and any replies will be displayed in the 'Response' box.

The 'Response' box is open to editing so you can type notes as you go, if needed. To clear the 'Response' box, click 'Clear Responses'. Use the 'File – Save' menu to save the 'Response' box as text file.