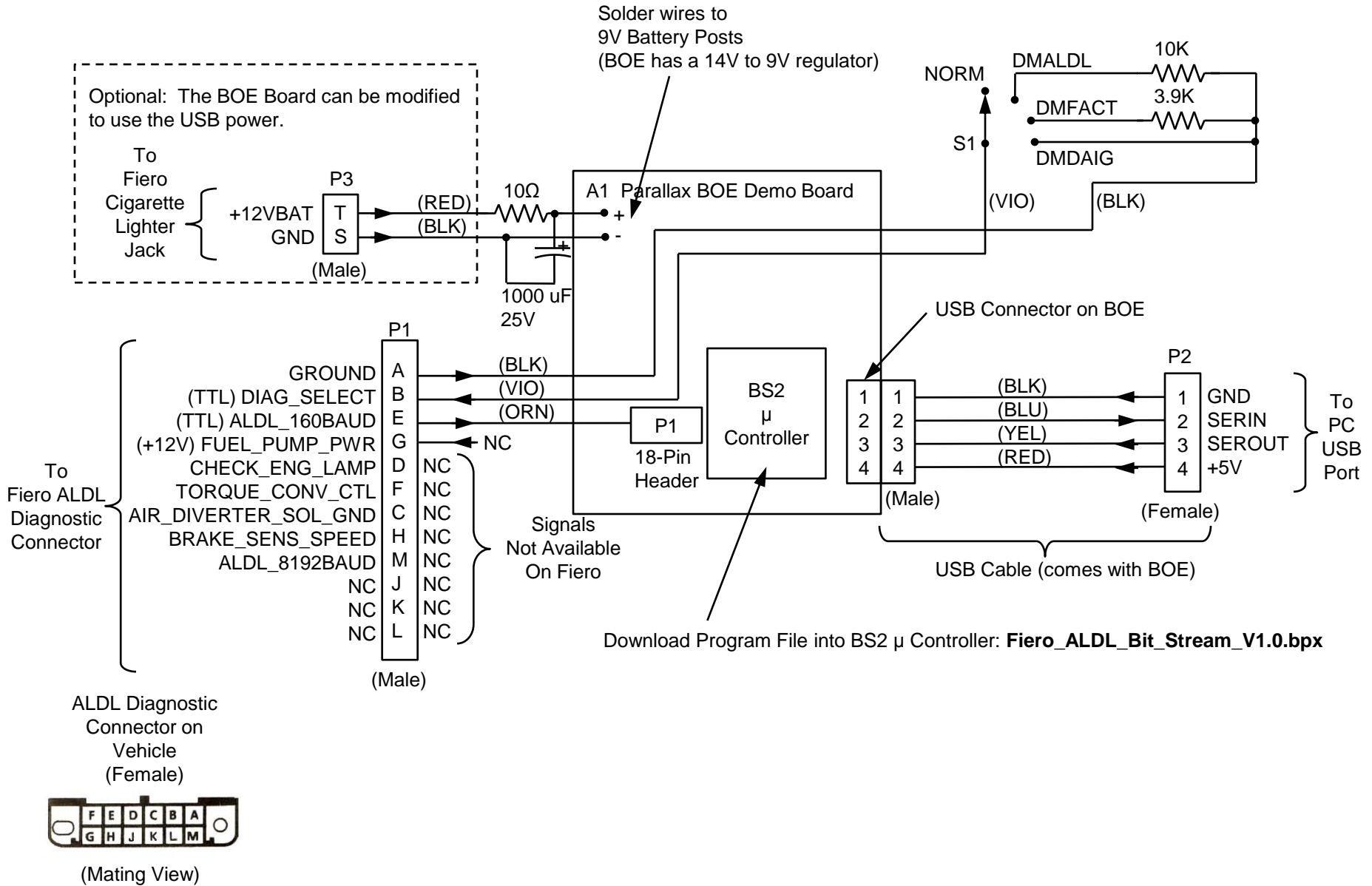


Fiero ALDL Adapter Schematic



```

.....
'
' Fiero_ALDL_Bit_Stream_V1.0.bpx
' Paul Romsky
' 12 AUG 2011
'
' Sample ALDL bit stream, convert to ASCII, and send over USB to be
' parsed by a GUI.
'
' This module provides the control code for the Parallax BS2 Pstamp
' Microcontroller Board of Education prototyping board. The BS2 Microcontroller
' and the board are used to provide a simple interface to the Fiero Test Connector
' which uses the General Motors (GM) Assembly Line Diagnostic Link (ALDL)
' protocol - which is a predecessor to the On-Board Diagnostics I and II
' (OBD-I and OBD-II) protocols.
'
' Revision History
'
' Ver Date      Author      Description
' -----
' 1.0 12 AUG 2011 P. Romsky   Initial coding
'
.....

' Estamp Comment-Directives
'
' {$STAMP BS2px}
' {$PBASIC 2.5}
' {$PORT COM3}

'
' EEPROM Data
'
Header DATA @ $0000, "Fiero ALDL Bit Stream V1.0 Copyright (c) 12 AUG 2011 ",
                    "Paul A. Romsky Jr."

Nulls DATA (9)

'
' Pin Assignments
'
ALDL PIN 1

'
' Pin Directions
'
INPUT ALDL
    
```

```

'
'
'          Start      Data      Stop
' 160 Baud 1 bit time = 0.500 ms + 4.750 ms + 1.000 ms = 6.250 ms
' Sample Point = 2.875 ms
' Mid Point    = 3.125 ms
'
'
' Main Entry Point
'
Main:
DO
DO
    ' Wait for signal to go low (Start)
    LOOP WHILE (ALDL = 1)

    PAUSE 3 ' Delay 3 ms for nearest possible sample of Mid Point

    IF (ALDL = 0) THEN
        ' Signal is still low - Data Bit detected is a '1'
        DEBUG "1"
        DO
            ' Wait for signal to go back high (Stop)
            LOOP WHILE (ALDL = 0)
        ELSE
            ' Signal went high - Data Bit detected is a '0'
            DEBUG "0"
        ENDIF
    LOOP

'
' End
    
```

Fiero ALDL Monitor GUI Main Screen

Fiero GT ALDL Monitor [Close] [Maximize] [Minimize]

```

Mode Word 2 0x020 032          DMALDL
PROM ID (MSB) 0x000 000      ~
PROM ID (LSB) 0x016 022      0x0016
IAC Present Motor Position 0x023 035      86.3 %
Coolant Temperature, A/D counts 0x097 151      176 Deg F
Speed in Miles Per Hour 0x019 025      25 MPH
Manifold Air Pressure Variable 0x032 050
Engine Speed in RPM 0x06A 106      2650 RPM
Throttle Position, A/D counts 0x038 056      7 %
Base Pulse (Fuel) Closed Loop Correction 0x079 121      -7 us
Oxygen Sensor Minor Loop Filtered Value 0x09A 154
Malfunction Flag Word 1 0x000 000
Malfunction Flag Word 2 0x020 032
Malfunction Flag Word 3 0x040 064
Mode Word 1 - Air/Fuel 0x0A1 161      CL_LOOP      O2_LEAN      CL/SLRL      LORPMHY
MCU I/O 1st Status Word 0x027 039      A/C_DIS      ?      COP2      IAC_ON      IAC_B      IAC_A
MCU I/O 2nd Status Word 0x01E 030
Battery Voltage in A/D Counts 0x084 132      13.2 V
Block Learn Multiplier, Base Pulse Fuel Correction 0x089 137
Oxygen Sensor Voltage Transition Counter 0x0B1 177      13 +Delta
Unlimited Spark Advance 0x062 098      33.858 Deg
EGR Duty Cycle 0x05B 091      35 %
Manifold Air Temperature, A/D Counts 0x0BA 186      186 F
Injector Base Pulse Width MSB 0x000 000      ~
Injector Base Pulse Width LSB 0x05D 093      0.093 ms
*****UPDATING*****
    
```

Playback

Stop


Playback

Monitor

Record


Capture

00000010




0001


RESET




Deg F




UNLEADED FUEL ONLY




RPM X 1000




VDC




PSI



Manifold Air Temp



Unlimited Spark Advance



MAP Variable

Exit