



Quantity	Part
1	LV-MaxSonar®-EZ1™
1	BS2 Basic Stamp- Parallax

REVISIONS		
		VISIO

TX – When the *BW is open or held low, the TX output delivers asynchronous serial with an RS232 format, except voltages are 0-Vcc. The output is an ASCII capital “R”, followed by three ASCII character digits representing the range in inches up to a maximum of 255, followed by a carriage return (ASCII 13). The baud rate is 9600, 8 bits, no parity, with one stop bit.

PW – This pin outputs a pulse width representation of range. To calculate distance use the scale factor of 147uS per inch.

RX – This pin is internally pulled high. The EZ1™ will continually measure range and output if the RX pin is left unconnected or held high. If held low the EZ1™ will stop ranging. Bring high 20uS or more for range reading.

```
'EZ1 TX
'{$STAMP BS2}
'{$PBASIC 2.5}
'Distance with Serial data
'LV-MaxSonar®-EZ1™ High Performance
'  Sonar Range Finder
'2/18/2010
'----- I/O -----
datain PIN 6  'RX pin on bs2--
              'connects to TX on sonar
pulse  PIN 5  'pulse out --connects
              'to RX on sonar
'----- Variables -----
distance VAR Word
'----- Main loop -----
DO
  GOSUB sonar
  PAUSE 50
LOOP
END
'----- Subroutines -----
sonar:
SERIN datain\pulse, 16468, [WAIT ("R"), DEC
distance]
DEBUG "Distance ",DEC distance, CR
PAUSE 50
RETURN
'----- No program follows -----
```

```
'EZ1 PW
'{$STAMP BS2}
'{$PBASIC 2.5}
'Distance with PW
'LV-MaxSonar®-EZ1™ High Performance Sonar Range Finder
'2/18/2010
'----- I/O -----
pulse  PIN 5  'RX on sonar -- controls TX & PW
PW     PIN 4  'produces a PW that is 147 us/inch
'-----Variables -----
wave VAR Word
'===== Main loop =====
DO
  GOSUB Pwave
  PAUSE 50
LOOP
END
'----- Subroutines -----
Pwave:
      'Max sends 147 µs per inch
      'BS2 reads for 2 µs
      'use 74 for scaler
HIGH pulse
PULSIN PW, 1, wave
LOW pulse
DEBUG "Pulse ",DEC5 wave, " =",DEC wave/74," Inches",CR
PAUSE 50
RETURN
'----- No program follows -----
```

TITLE		
'LV-MaxSonar®-EZ1™ with the BS2 Basic Stamp		
DATE 2/18/2010	SCALE none	Parallax BS2 program provided.
DRAWN BY Paul Ashley	PAGES 1 of 1	
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