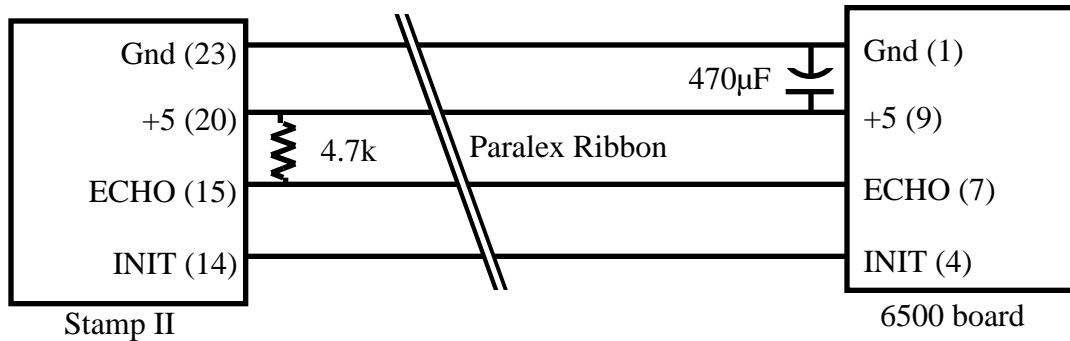


Interfacing the Polaroid 6500 Sonar Board to a Basic Stamp II

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Optional Modifications:

- Solder the pullup resistor directly to the Polaroid board to reduce the components on the Stamp carrier board.
- Use a 4-line stranded cable which allows better flexibility than the included Paralex Corp. 9-line cable.
- You may omit the capacitor on the 6500 board if the Stamp will use a separate power source. The capacitor smooths out the voltage drop which occurs when the 6500 board fires. Without it, the Stamp senses a brownout, and resets itself. Assure that the power supply you use can handle the 2 amp firing current of the 6500. A 4.8 volt Ni-Cad battery pack works well.

PROTECT THE STAMP (AND OTHER COMPONENTS) FROM THE 6500 BOARD'S HIGH VOLTAGE LEVELS! The 400 volts generated at transmit can damage the Stamp. Don't touch bare metal on the 6500.

```

TIMEOFFLIGHT var word
DISTANCE var word
ECHO con 15
INIT con 14
SETTLETIME con 1
CYCLEDELAY con 300

loop:

high INIT
  'see the 6500 app notes for timing info
  pause SETTLETIME

rctime ECHO,0,TIMEOFFLIGHT
  'waits for ECHO to go low,
  'which signals a return ping.
  'threshold is 1.4 volts.
  gosub ECHORECEIVED

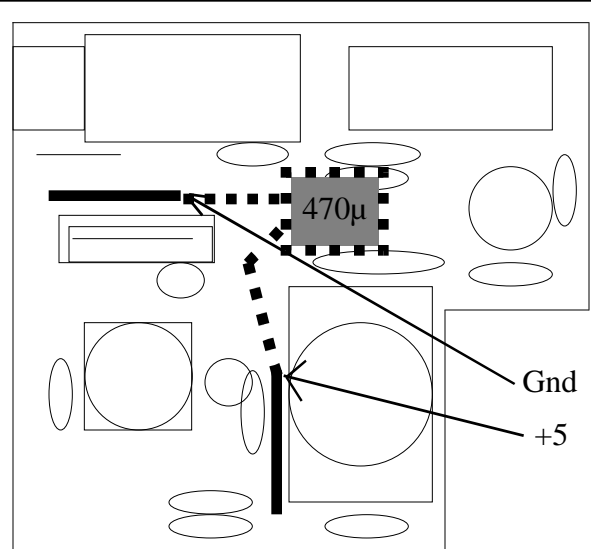
low INIT

pause CYCLE_DELAY

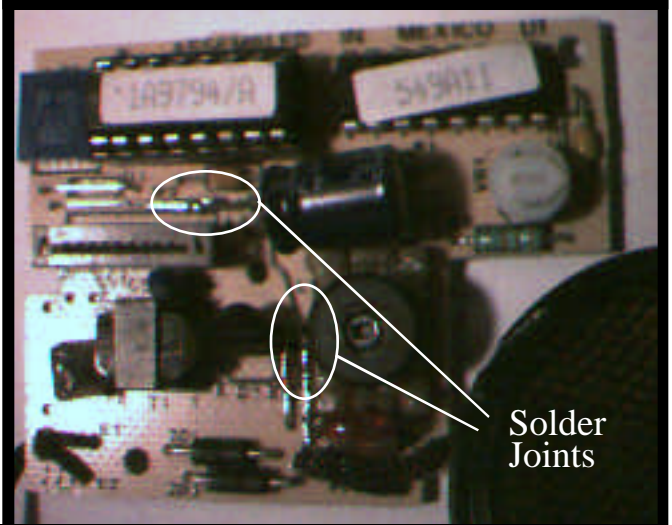
goto loop

.....
ECHORECEIVED:

DISTANCE = TIMEOFFLIGHT * 7 / 200 + 22
  'this conversion approximates centimeters,
  'accounting for the offset imposed by the
  'blanking signal generated by the 6500
debug dec? DISTANCE
  'print distance on screen
return
    
```



Suppression capacitor placement



Solder Joints