

K133. PIC16F84 TRAINER

This kit is a redesign of Kit 81 to include a Test setup as well as the Programmer all on the same PCB. The programmed PIC16F84 does **not** have to be removed from its socket to Test it. Just move the switch from Program mode to Test mode. Our first PIC program is just to flash 5 on-board LEDs. After programming push the switch from Program to Test and the LEDs should start to flash immediately. Revise the program then assemble and program for more variation of output, first on the LEDs and then on the other I/O lines which are all brought out to pads on the single-sided PCB. Test your new design immediately. Never has testing been so easy for the beginner.

The secret of the design is the small, pcb-mounted 4 pole/double throw switch which is used to isolate the Program circuit from the Test circuit. Also the use of two resistor networks saves valuable real estate. The PCB measures 2.1" x 2.95". There are four small links to add.

New software - assembler & programming - just for the PIC16F84 will come with the Kit. Power input may be AC or DC.

Prototype testing - 4/99

Release - 6/99

Tentative schematics for the PIC16F84 Trainer are on the following pages.

Pins brought out to pads are:

- RA0
- RA1
- RA2
- RA3
- RA4/RTCC
- RB0/INT
- RB1
- RB7
- RB2 to RB6 are dedicated to drive 5 LEDs. A GND pad is also provided.

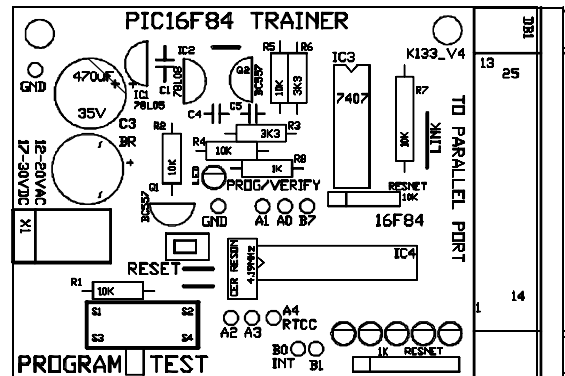
March 25, 1999.

Following active discussion with and suggestions from Russel McMahon and James Cameron two changes have been made.

First, a RESET circuit on pin 4 has been added for use in TEST mode. A 2 leg, pcb-mounted tact switch is used.

Second, a ceramic resonator (4.19MHz) has replaced the greater real estate demanded by the RC network. This gives greater reliability if the student uses the Trainer for RS232 work. And it also has the advantage for accurate timing purposes that it is 2^{22} . (One second is a binary multiple of 2.)

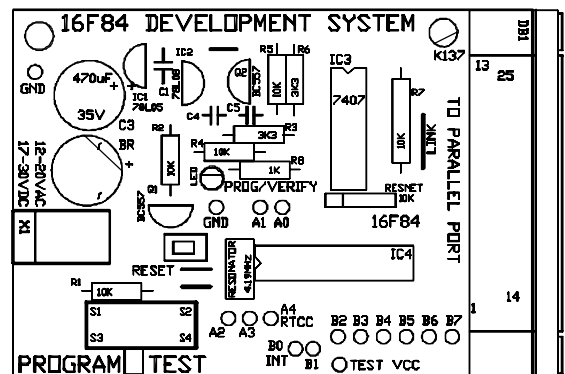
The schematics have been amended. The top overlay is as follows:



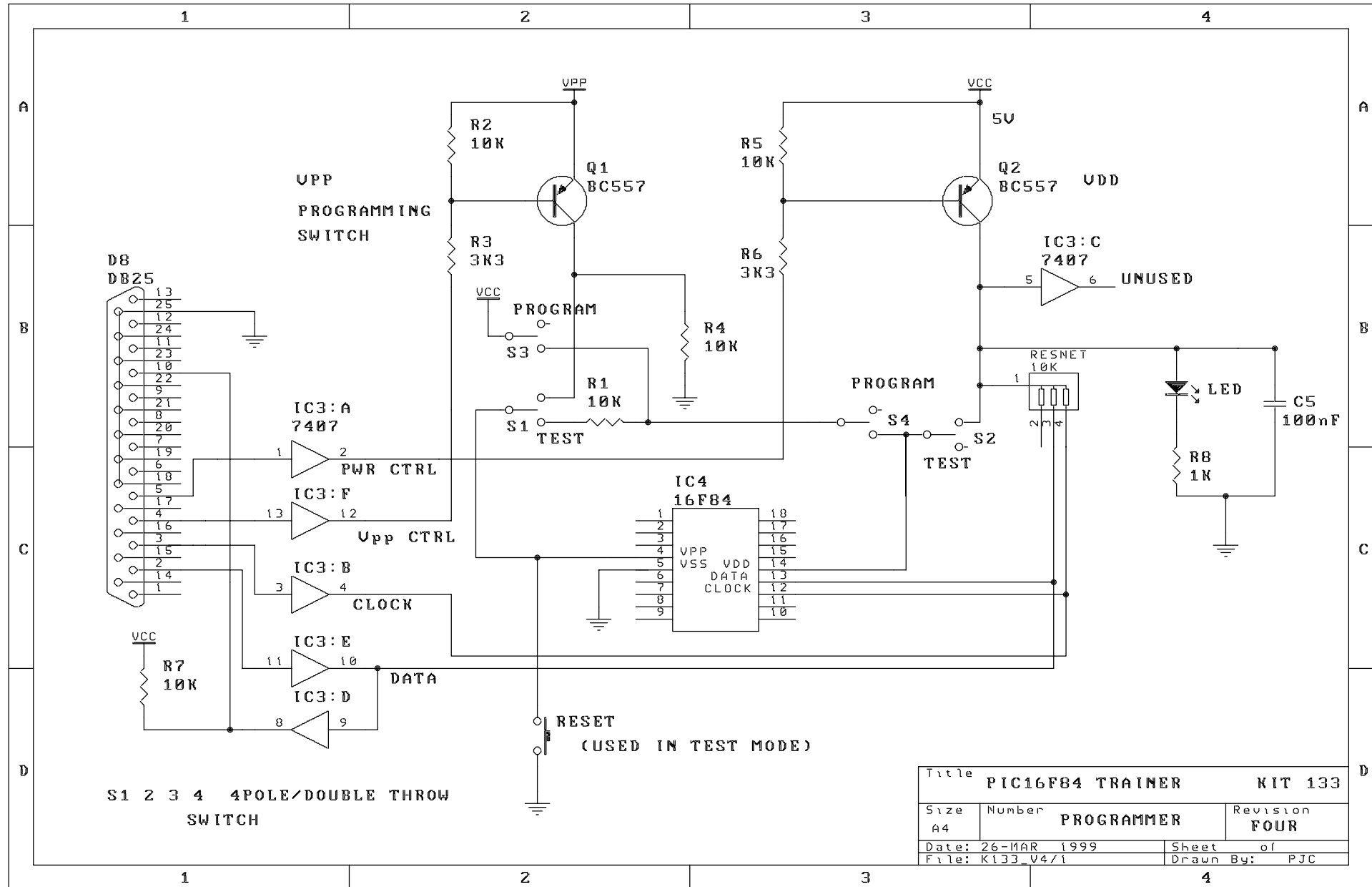
March 26, 1999.

If you remove the LEDs then you have a general purpose Development System. This may have application. On this version - Kit 137 - there are no LCDs but all the pads are brought out. Tentative at this time.

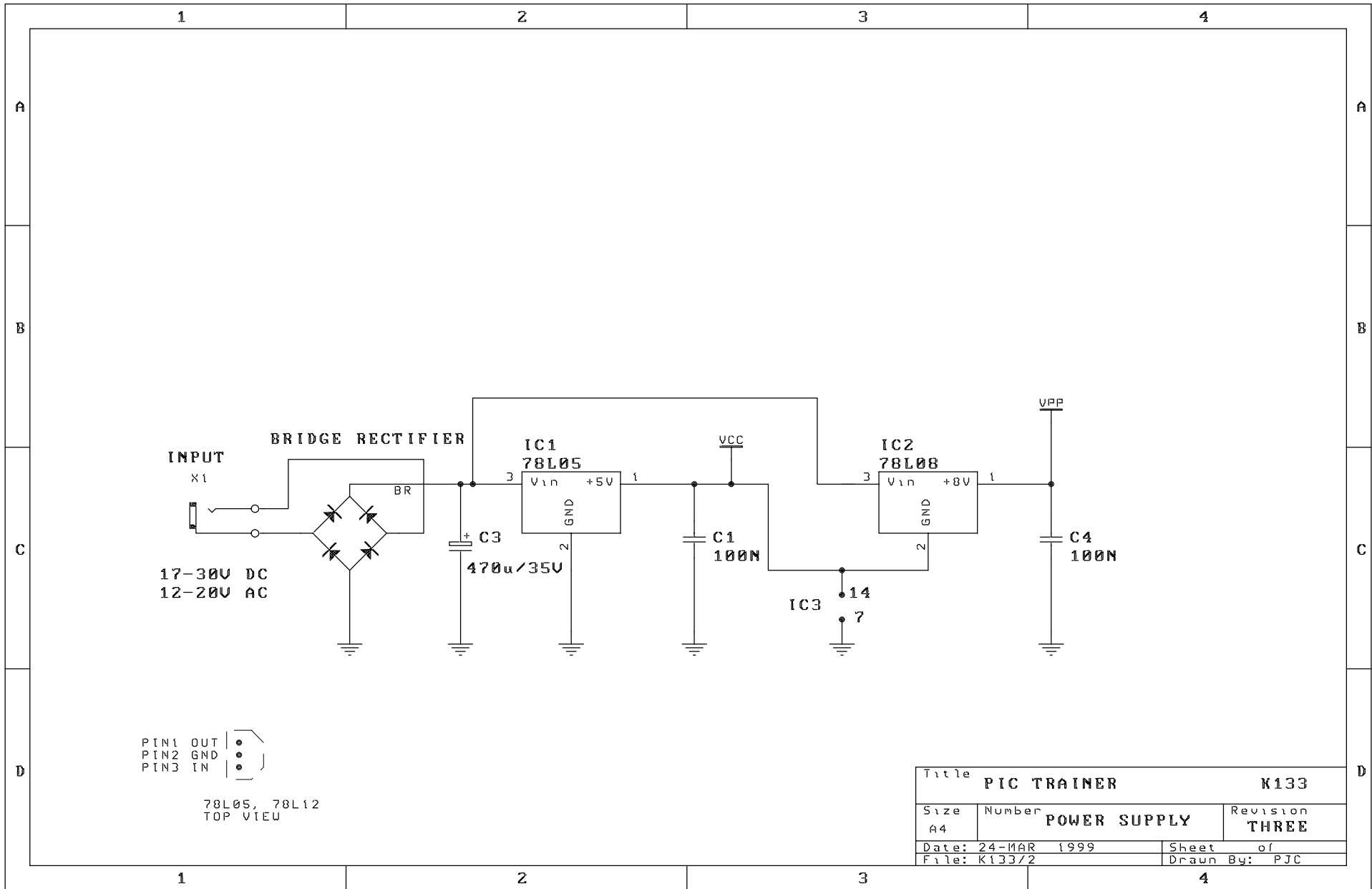
The K137 Test schematic has been added below.



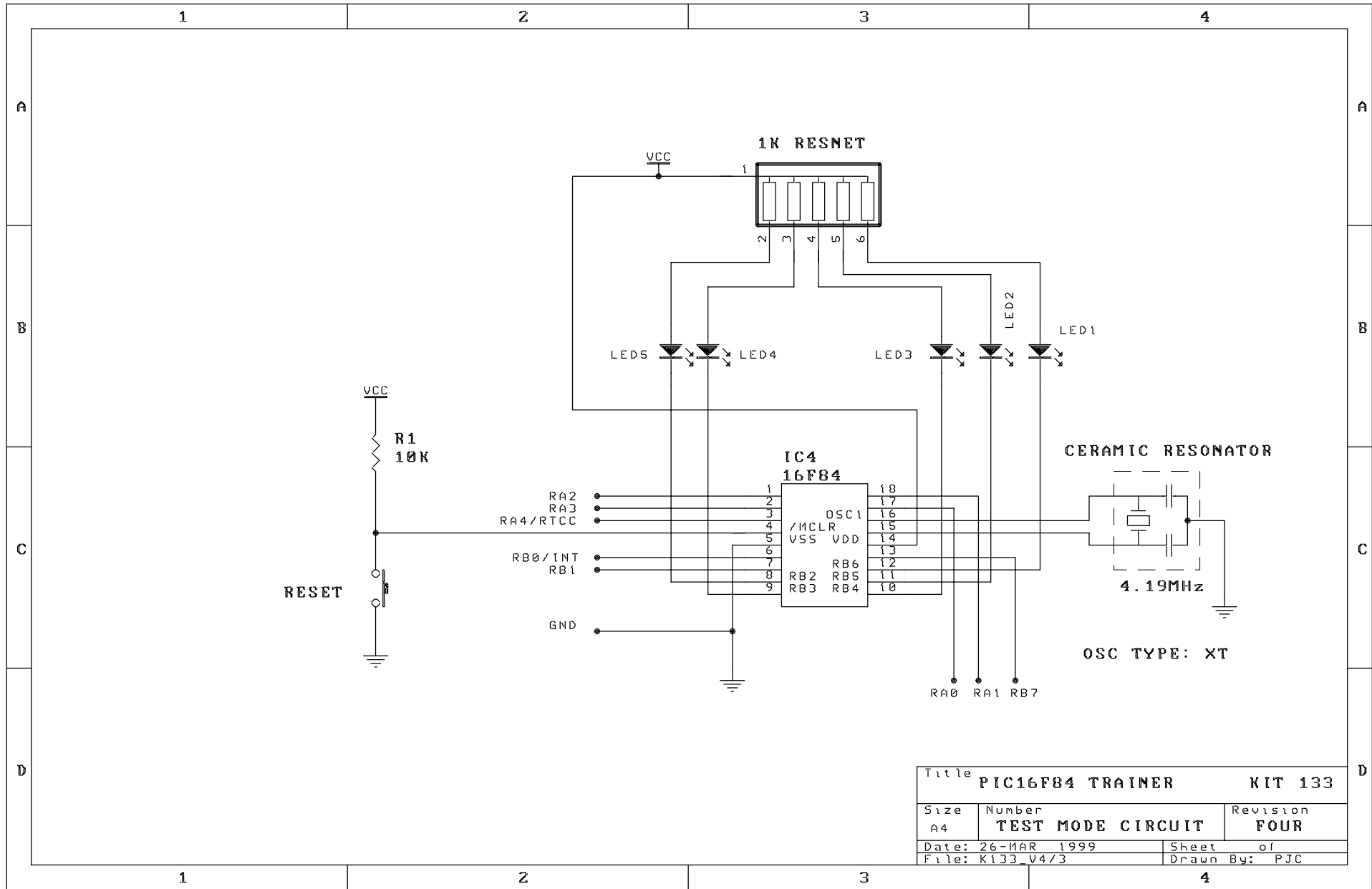
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Title		PIC16F84 TRAINER	KIT 133
Size	Number	Revision	
A4	TEST MODE CIRCUIT	FOUR	
Date: 26-MAR 1999	Sheet	of	
File: K133_V4/3	Drawn	By: PJC	

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