

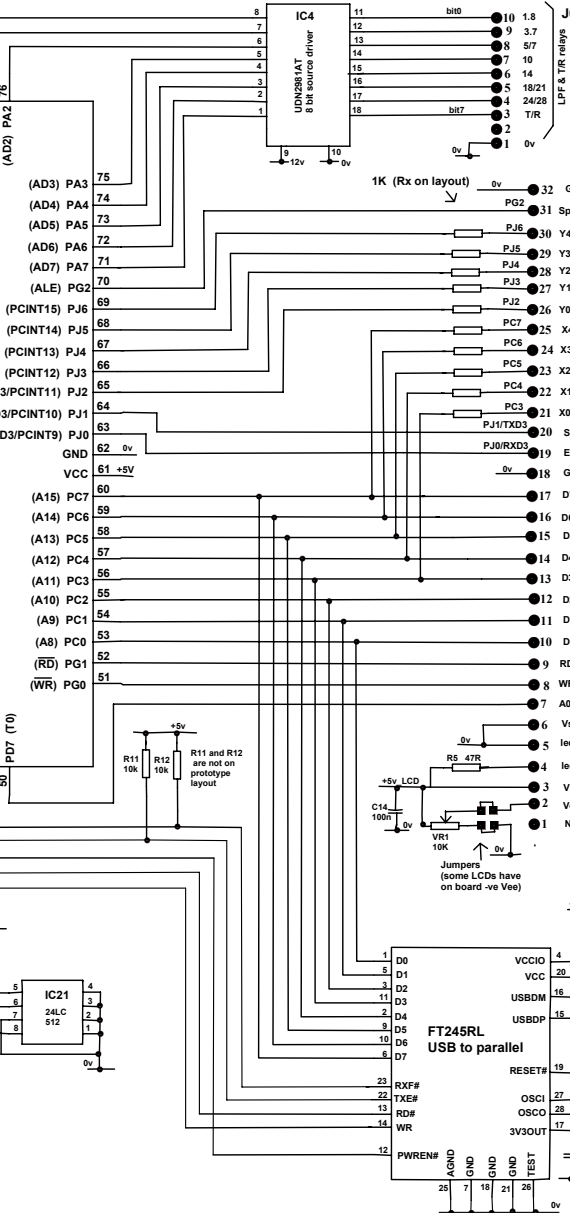
All digital and analog I/O lines which are connected direct to the processor to have series 100R resistor - marked Rx on layout drawing. (These are only shown here for keypad and SWR input) If you have already fitted 1k the replace the DDS control signal and display control signal 1k resistors with 100R.

Provision for 1206 decoupling to ground on all I/O connection - marked Cx on layout drawing. Mostly 100nF - but do not fit these on fast data line such as DDS, serial data, LCD drive, keypad. They should only be fitted for RF decoupling on low frequency switching signals such as BPF control.

If a pin is used for PWM DAC output then Rx and Cx to be appropriate values for R/C smoothing of the output.

No through links on DIL/SIL pins (solder underneath only)

All connectors and ICs on bottom. Atmega2560 on top. Rs and Cs (except R9 on bottom) NB bottom (green) and top (red) refer to Pad2Pad layout designations. (In practice, the board will be mounted with 'bottom' on top!)



J6 used in G3VPX prototype transceiver because Picstar Diode matrix used driven by Port K

J4 5 X 5 push button matrix or 5 x 4 matrix leaving PJ2 or XCK3 free (Pull-ups to be enabled on PJ2 - PJ6)

J4 Parallel graphics display - Epson 240320H with touch panel - S1D13700 controller - 7 = A0 (PD7) - 8 = WR (PG0) - 9 = RD (PG1) - also J3 pin 17 = RES\_ (PL6) J3 pin18 = CS\_ (PL7)

OR

HD44780 type LCD character display - 7 = RS (PD7) - 8 = R/W (PG0) - 9 = E (PG1)

To use both graphics and char displays (development option) - both: D0 - D7 and A0/RS in parallel - char display R/W J3 pin 15 (PL4) - char display E J3 pin 14 (PL3)

**Schematic of control board for transceiver AND/OR remote panel using ATmega2560. Ian Sumner G3VPX 17.03.2008 - 15.02.2009**

**Ver 05 15.2.2009**  
 Modified 29.11.2008  
 - Labelling of TrxAVR pin usage  
 - 6 pin AVR programming connector

Modified 10.01.2009  
 - Picstar pin allocations

Modified 10.01.2009  
 - RS and R/W swapped on J4  
 - Graphics display pin connections and dual display connections (development)  
 - Analogue: FWD & REFL swapped  
 - Pot A and Pot B swapped  
 - Pots C&D removed - not longer supported  
 - Touch pad X1,Y1,X2,Y2 labelled on ADC4 to ADC7

13.11.2009 - R5 adn R7 2k2. Rx changed to 100R  
 More info on I/O decoupling capacitor omission