

HOW TO CONNECT DISPLAYS TO Trxavrb WHEN USED WITH 'COMBO'

These drawings are currently DRAFT only versions.

They refer ONLY to the Trxavrb PCB which is supplied with the "Combo BB" panel. Note there are some variations to the connector pinout over that used on the Trxavrb panel supplied in 2009. I had to rationalise the pinout.

PLEASE verify pinout of the display you are using with these drawings before connecting them up.

Displays are expensive and you can easily destroy a display or even the Trxavrb PCB with incorrect interconnect.

Refer also to Ian, G3VPX's pages. Ian has found some displays have the 5v and gnd pins reversed, for example !

vk3pe

28th March 2010

DISPLAY INTERCONNECTION DETAILS FOR Trxavrb on COMBO panel only

SIMPLE Trxavrb (COMBO) TO 4X20 lcd DISPLAY

J6 on 'simple' Trxavrb on Combo Panel

NC	20	Vee
NC	19	PWM
NC	18	RS
NC	17	CS ?
16	16	GND (BL-)
15	15	BL+
14	14	D7
13	13	D6
12	12	D5
11	11	D4
10	10	D3
9	9	D2
8	8	D1
7	7	D0
6	6	E
5	5	R/W
4	4	A0
3	3	contrast
2	2	3v
1	1	GND

LCD THIS IS A GENERIC CONNECTION PINOUT

RUN BL-ve FROM DISPLAY TO J16 IF DIMMABLE BL REQUIRED

20pin dual row IDC socket

SIMPLE Trxavrb (COMBO) TO COLOUR (TFT) DISPLAY

DRAWING SOON BUT LINK BELOW IS OK.

Or, goto www.carnut.info, then select Trxavrb, and scroll down to the Interconnection area.

NOTE:- the other diagrams there will not suit Combo Trxavrb directly, as a different connector is fitted on Trxavrb (J6)

http://www.carnut.info/star-parts/TrxAvg_interface_pcb/Schematic/%27ASSEMBLY_ELECTRONICS%27-COLOUR_TFT_WIRING_DRAFT_270809.pdf

!! DISPLAYS ARE EXPENSIVE !!! VERIFY THIS INFORMATION WITH THE DISPLAY YOU ARE USING BEFORE CONNECTING TO Trxavrb

SIMPLE Trxavrb (COMBO) TO 128x64 GRAPHICS DISPLAY

THIS IS Lumex 'LCM-X12864GXX' PINOUT. CHECK YOURS !

J6 on 'simple' Trxavrb on Combo Panel

PL5
PL6
PL7

20	Vee	BACK LIGHT CATHODE	RUN BL-ve FROM DISPLAY TO J16 IF DIMMABLE BL REQUIRED
19	PWM (to Q3)	18	
18	RESET	17	
17	CS1 (CHIP SELECT)	15	
16	GND	16	
15	BL+ Anode Via R112/R113	19	1. SEE NOTE BELOW Ref J16
14	D7	18	
13	D6	17	
12	D5	15	
11	D4	14	
10	D3	13	
9	D2	12	
8	D1	11	
7	D0	10	
6	E	9	
5	R/W	8	
4	RS (REG SELECT)	7	
3	CONTRAST (FIT R108, DELETE R109)	6	
2	+5V LCD	5	
1	GND	4	

20pin dual row IDC socket

RUN WIRE TO POINT '6' ON Trxavrb PCB. This is pin 39 of 'IC1'

TO MAKE DISPLAY 'PLUG-ABLE':-

Some builders have cut the track on Trxavrb PCB that connects to J6-15, and then connected the line above (CS2) to J6-15

You then need to run a wire under Trxavrb PCB from point "G" to J6-15 ie. see below

'G' wire under pcb 15 16
cut existing track to J6-15
1. YOU WILL THEN NEED TO SUPPLY BACKLIGHT +VE TO THE DISPLAY FROM PIN 19 OR USE J16 Details to right>>>

SIMPLE Trxavrb (COMBO) TO 320 x 240 GRAPHICS DISPLAY

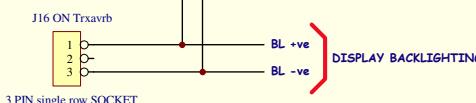
J6 on 'simple' Trxavrb on Combo Panel

PL5
PL6
PL7

On Trxavrb PCB, fit R108, delete R109
(Contrast uses Neg voltage from displays 'Vee')

20	Vee
19	PWM (to Q3)
18	
17	
16	GND
15	BL+ Anode
14	D7
13	D6
12	D5
11	D4
10	D3
9	D2
8	D1
7	D0
6	E
5	R/W
4	RS (REG SELECT)
3	CONTRAST (FIT R108, DELETE R109)
2	+5V LCD
1	GND

20pin dual row IDC socket



DRAFT ONLY 26th March, 2010

CONNECTORS SHOWN HERE ARE NOT IN THE BOM

CONNECTIONS NOT YET COMPLETED !

Sheet:	SCHEMATICS BY VK3PE & C.S.	
1 of 1	TITLE:- H:\COMBO-SCHEMATIC-PROJECT-121109\DISPLAY CONNECTION DIAGRAMS\	
	"VK3PE"	Vers DRAFT MARCH 2010

THIS WIRING IS FOR THE 'ELECTRONICS ASSEMBLY' TFT DISPLAY ONLY

This display has two 20 pin single in-line connectors.

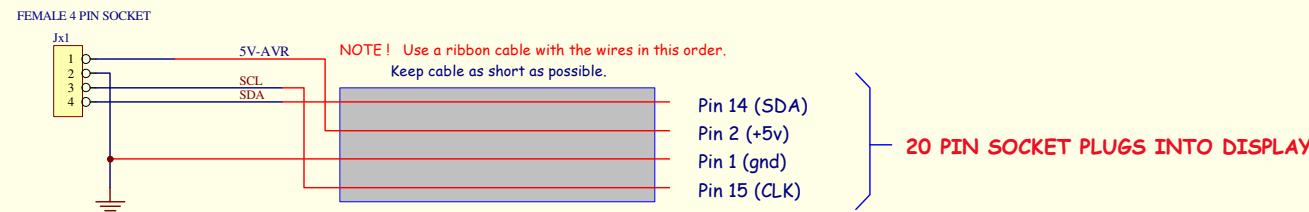
The Connector numbered 1-20 is used for connecting to TrxAVRB

PLEASE VERIFY CONNECTIONS WITH THE DATA SHEET FOR THE DISPLAY YOU HAVE.

IF IN DOUBT, PLEASE ASK !

A 4 WAY RIBBON CABLE CONNECTS FROM Jx1 ON TrxAVRB
TO THE 'ELECTRONICS ASSEMBLY' COLOUR TFT DISPLAY.)

PLUGS INTO 'Jx1' ON TrxAVRB PCB



Also:-

Pin 5 (reset) tie to +5v with 6k8 resistor.

Pin 12 (I2C mode), tie to GND

Option: Pin 16 can drive a buzzer, via a transistor for touchpad audio indication.

THE CONNECTORS SHOWN HERE ARE NOT ON THE BOM.

Trxavr COLOUR CONNECTIONS		
Size	Number	Revision
B		DRAFT
Date:	26-Aug-2009	Sheet of
File:	F:\TrxAVR PCB\Trxavr COLOUR CONNECTIONS_1.Sch	