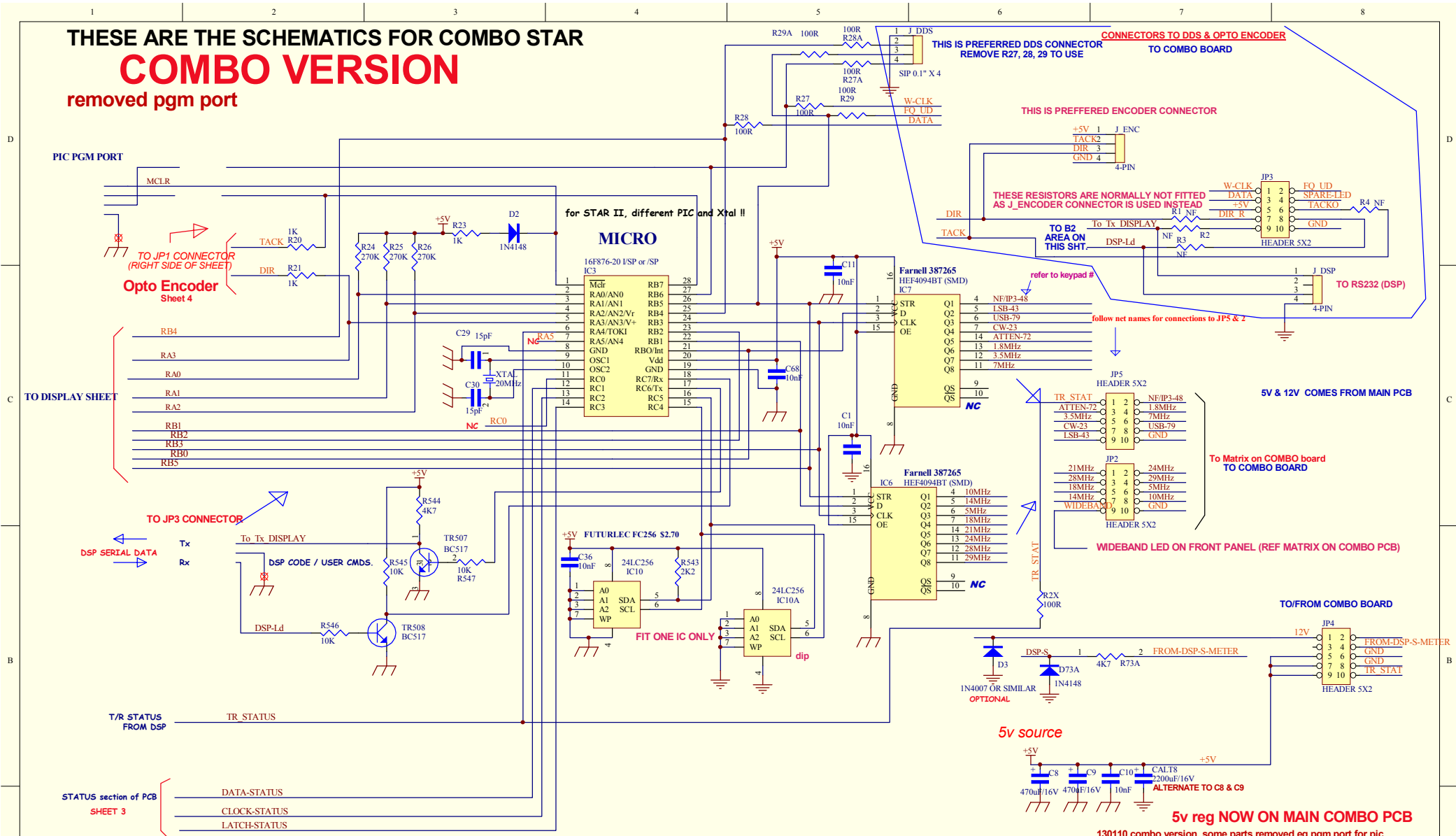


THESE ARE THE SCHEMATICS FOR COMBO STAR COMBO VERSION

removed pgm port



STATUS section of PCB SHEET 3

- DATA-STATUS
- CLOCK-STATUS
- LATCH-STATUS

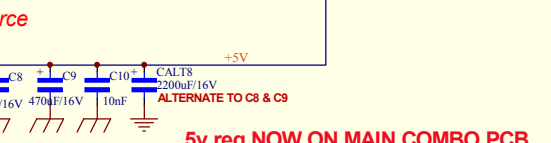
each box below is a sheet in PnM schematic

Name 13 PnM_Ver-a STATUS.SCH	Name 13 PnM_Ver-A DISPLAY.SCH

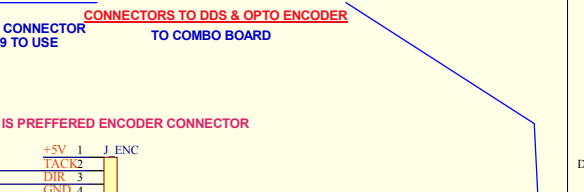
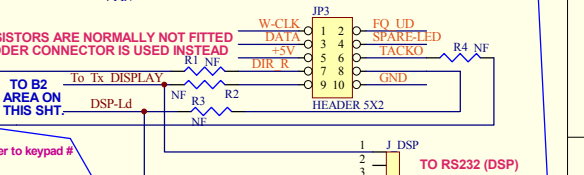
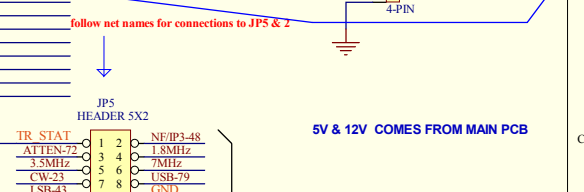
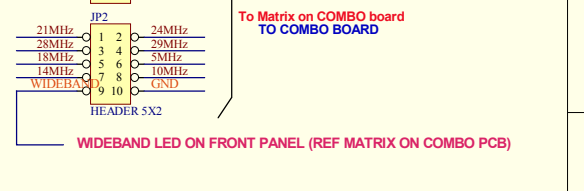
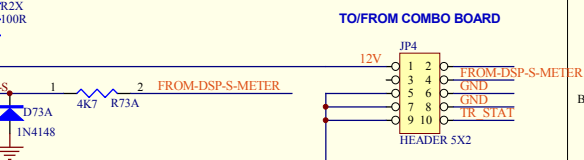
This schematic is a re-drawn version of the G3XJP PnM schematic who owns the (C). This schematic is provided for completeness only for the VK3PE & C.S. pcb.

NOTE: Text on connection lines is a Net Name. Nets with SAME name are joined together. PARTS PREFIXED WITH 500. HAVE BEEN ADDED. (star mods) There are 3 sheets in this project.

130110 combo version, some parts removed eg pgm port for pic
ORIG PCB IS "PnM_Ver-A_140907.PCB"
Update -4 see STATUS page
Update 2: note for leaded part "R2X" added and TR103 TIP122 correction
Update-1: C2 was shown on Butler sheet, now on this sheet to reflect where it is actually fitted.
NOTE: C18 is changed by group to 100nF for noise problems 15-03-07
21-07-06 UPDATED DDS TO DIF28



5v reg NOW ON MAIN COMBO PCB

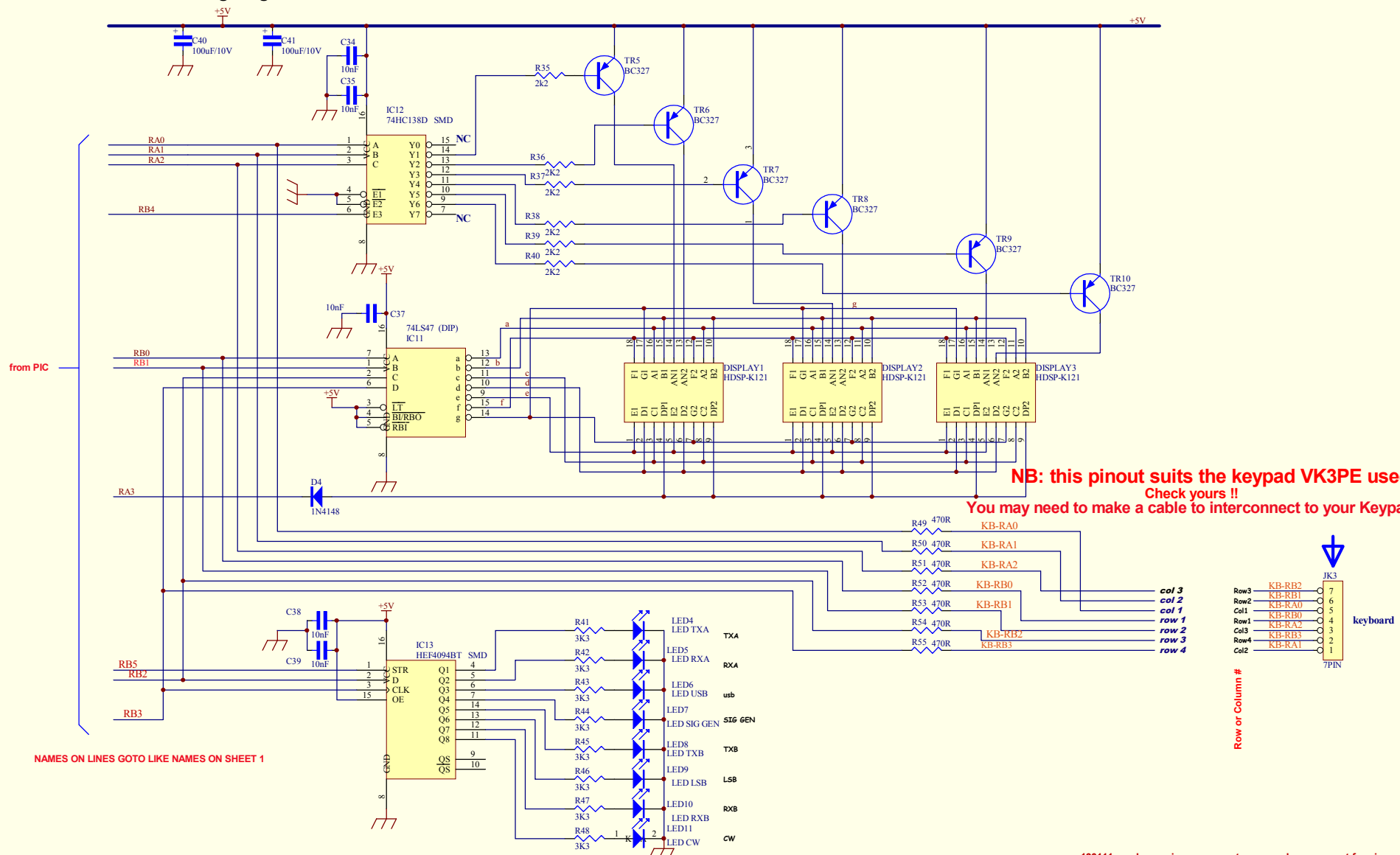


Sheet:	130110	Pic N Mix DDS	BY G3XJP
1	TITLE:-	PICaSTAR SCHEMATICS BY VK3PE & C.S. BASED ON ORIGINALS (C) BY G3XJP 09-06-06	
of	F:\STAR-single-pcb\Combo bd files\PnM 120109\130109\SHORT_PnM_130109_1A.sch	Pic N Mix	
5	For Oct 2007 "VK3PE PCBs"	Vers	Ver A Panel

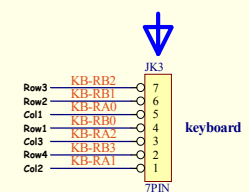
see Part 5 of picnmix for setup info

THESE ARE THE SCHEMATICS FOR COMBO STAR

+5v comes from voltage regulator on the main Combo PCB



NB: this pinout suits the keypad VK3PE used. Check yours!!
You may need to make a cable to interconnect to your Keypad.



NAMES ON LINES GOTO LIKE NAMES ON SHEET 1

This schematic is a re-drawn version of the G3XJP PnM schematic who owns the (C). This schematic is provided for completeness only for the VK3PE & C.S. pcb.

130111 combo version, some parts removed eg pgm port for pic

26-11-07 vk3pe

230707

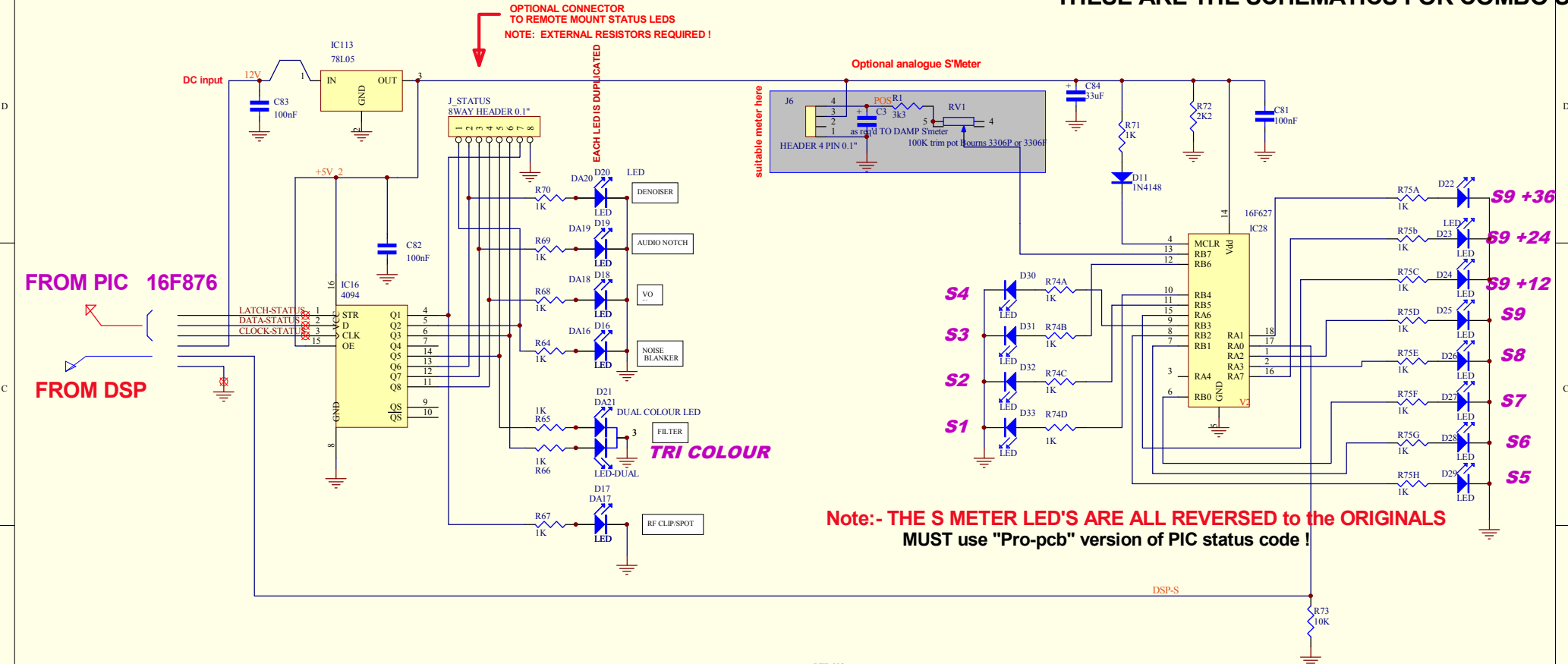
NOTE: Text on connection lines is a Net Name.
 Nets with SAME name are joined together.

Pic N Mix DISPLAY AND KEYBOARD INTERFACE

Sheet:	PICaSTAR SCHEMATICS BY VK3PE & C.S. BASED ON ORIGINALS (C) BY G3XJP	
2 of 4	TITLE:-	F:\STAR-single-pcb\Combo bd files\PnM 120109\130109\13_PnM_Ver-A_DISPLAY.S
	For Oct 2007 "VK3PE PCBs"	Vers A

There are 4 sheets in this project.

THESE ARE THE SCHEMATICS FOR COMBO STAR



FROM PIC 16F876

FROM DSP

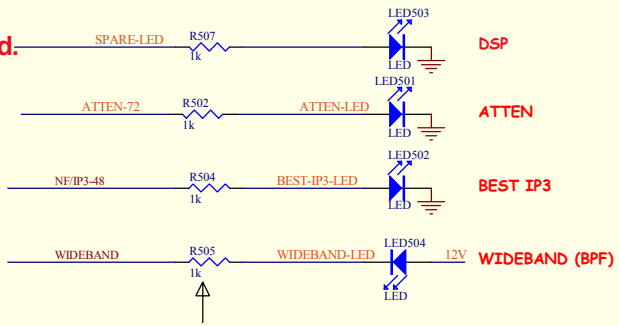
OPTIONAL CONNECTOR TO REMOTE MOUNT STATUS LED'S
NOTE: EXTERNAL RESISTORS REQUIRED!

EACH LED IS DUPLICATED

suitable meter here

Note:- THE S METER LED'S ARE ALL REVERSED to the ORIGINALS
MUST use "Pro-pcb" version of PIC status code !

This wire goes to the DSP LED on DSP mother board.



These LEDs are on display board to right of S Meter

06-03-09 changed these 4 res to 1k (were 3k3)

06-03-09 changed 4 LED res to 1k (were 3k3)
130109 combo version, some parts removed eg pgm port for pic
01-12-08 ADDED PARALLEL STATUS LED'S TO ALLOW ALT KEYPADS (LARGER)
30-01-08 Update 4:- S'Meter LED's are reversed to original PCB by Peter.

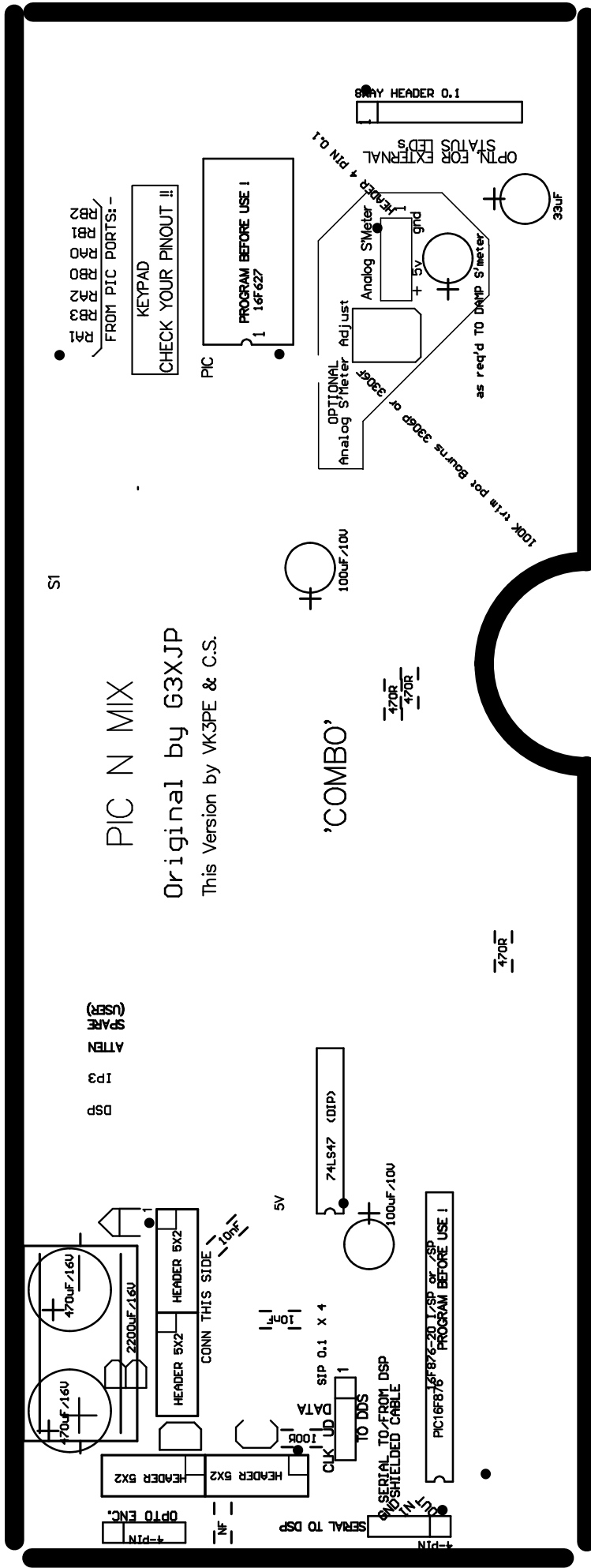
26-11-07 vk3pe

VK3PE 10-07-06

STAR STATUS (Part of PnM)

This schematic is a re-drawn version of the G3XJP PnM schematic who owns the (C). This schematic is provided for completeness only for the VK3PE & C.S. pcb.

Sheet:	PICaSTAR SCHEMATICS BY VK3PE & C.S. BASED ON ORIGINALS (C) BY G3XJP	
3 of	TITLE:-	F:\STAR-single-pcb\Combo bd files\PnM 120109\130109\13_PnM_Ver-a_STATUS.SC
4 of	For Oct 2007 "VK3PE PCB'S"	Vers A



PIC N MIX
Original by G3XJP
This Version by VK3PE & C.S.

'COMBO'

S1

SPARE (USER)
ATTN
IP3
DSP

FROM PIC PORTS:-
RA1
RA2
RA3
RA4
RA5
RA6
RA7
RA8
RB1
RB2

KEYPAD
CHECK YOUR PINOUT !!

PIC
PROGRAM BEFORE USE I
1
16F627

OPTIONAL Analog S Meter 3205f
Analog S Meter Adjust
+ 5V
grnd
as req'd TO DnHP S'meter

5-PIN SERIAL TO/ FROM DSP SHIELDED CABLE
OPTN FOR EXTERNAL STATUS LEDs
5-PIN SERIAL TO/ FROM DSP SHIELDED CABLE

470R

470R
470R

100uF/10V

33uF

100K trim pot Bourne 3305f or 3205f

Picnmx (combo)

PICnMIX FOR THE COMBO STAR PANEL

SHORT_PICNMIX_BOM_160209

Created on 16-02-09 by vk3pe

6th March, 2009

R502, 504, 505, 507 were 3k3 now 1k (LED resistors.)

Version suffix

2

Part Type	Designator	Footprint	Description
100K trim pot Bourns 3306P or 3306F	RV1	TRIM-BOURNS	TRIM POT BOURNS 3306P or 3306F STYLE
100nF X7R	C83	1206-0805	Capacitor
100nF X7R	C82	1206-0805	Capacitor
100nF X7R	C81	1206-0805	Capacitor
100R	R27	1206-0805	
100R	R28	1206-0805	
100R	R2X	1206-0805	
100R	R29	1206-0805	
100R	R28A	1206-0805	
100R	R29A	1206-0805	
100R	R27A	1206-0805	
100uF/10V	C41	RB.1/.2	polarized cap
100uF/10V	C40	RB.1/.2	polarized cap
10K	R547	1206-0805	
10K	R73	1206-0805	
10K	R546	1206-0805	
10K	R545	1206-0805	
10nF X7R	C35	1206-0805	Capacitor
10nF X7R	C10	1206-0805	Capacitor
10nF X7R	C36	1206-0805	Capacitor
10nF X7R	C38	1206-0805	Capacitor
10nF X7R	C1	0603	Capacitor check if 0603 !!

Picnmx (combo)

10nF X7R	C34	1206-0805	Capacitor		
10nF X7R	C39	1206-0805	Capacitor		
10nF X7R	C37	1206-0805	Capacitor		
10nF X7R	C11	1206-0805	Capacitor		
10nF X7R	C68	1206-0805	Capacitor		
15pF NPO	C29	1206-0805	Capacitor		
15pF NPO	C30	1206-0805	Capacitor		
16F627	IC28	DIP-18	PIC 16F627 must be programmed		
16F876-20 I/SP or /SP	IC3	DIP28	must be programmed		
1K	R75A	1206-0805			
1K	R74A	1206-0805			
1K	R71	1206-0805			
1K	R74B	1206-0805			
1K	R74D	1206-0805			
1K	R74C	1206-0805			
1K	R68	1206-0805			
1K	R69	1206-0805			
1K	R66	1206-0805			
1K	R67	1206-0805			
1K	R23	1206-0805			
1K	R70	1206-0805			
1K	R20	1206-0805			
1K	R21	1206-0805			
1K	R65	1206-0805			
1K	R75D	1206-0805			
1K	R75E	1206-0805			
1K	R75b	1206-0805			
1K	R75C	1206-0805			
1K	R75H	1206-0805			
1K	R64	1206-0805			
1K	R75F	1206-0805			
1K	R75G	1206-0805			
1k	R507	1206-0805			
1k	R502	1206-0805			
1k	R504	1206-0805			
1k	R505	1206-0805			

Picnmx (combo)

1N4007 OR SIMILAR	D3	AXIAL0.4	Diode optional rev. polarity (only useful on 12v line)
1N4148	D4	AXIAL0.4	Diode
1N4148	D11	AXIAL0.4	Diode
1N4148	D2	AXIAL0.3	Diode
1N4148	D73A	AXIAL0.4	Diode
20MHz	XTAL	HC49	
2200uF/16V	CALT8	AXIAL1.2	polarized cap alternate to using C8 and C9
24LC256	IC10	SO-8	fit IC10 or IC10A
24LC256	IC10A	dip8	fit IC10 or IC10A
270K	R25	1206-0805	
270K	R24	1206-0805	
270K	R26	1206-0805	
2K2	R36	1206-0805	
2K2	R37	1206-0805	
2K2	R38	1206-0805	
2K2	R39	1206-0805	
2k2	R35	1206-0805	
2K2	R543	1206-0805	
2K2	R72	1206-0805	
2K2	R40	1206-0805	
33uF	C84	RB. 1/.2	polarized cap
3K3	R45	1206-0805	
3K3	R44	1206-0805	
3K3	R46	1206-0805	
3K3	R48	1206-0805	
3K3	R47	1206-0805	
3K3	R43	1206-0805	
3k3	R1	1206-0805	
3K3	R41	1206-0805	
3K3	R42	1206-0805	
470R	R49	1206-0805	
470R	R53	1206-0805	
470R	R52	1206-0805	
470R	R55	1206-0805	
470R	R54	1206-0805	
470R	R51	1206-0805	

Picnmix (combo)

470R	R50	1206-0805			
470uF/16V	C9	RB.2/.4	polarized cap see also CALT8		
470uF/16V	C8	RB.2/.4	polarized cap see also CALT8		
4K7	R73A	1206-0805			
4K7	R544	1206-0805			
4-PIN header 0.1" pitch	J_DSP	SIP4			
4-PIN header 0.1" pitch	J_ENC	SIP4			
74HC138D SMD	IC12	SO-16			
HEF4094BT SMD	IC16	SO-16			
74LS47 (DIP)	IC11	DIP-16			
78L05	IC113	TO-92			
7PIN	JK3	SIP7			
8WAY HEADER 0.1"	J_STATUS	sip8			
as req'd TO DAMP S'meter	C3	rb.1/.2	polarized cap for mechanical S'meter only		
BC327	TR6	TO-92	PNP transistor		
BC327	TR5	TO-92	PNP transistor		
BC327	TR9	TO-92	PNP transistor		
BC327	TR10	TO-92	PNP transistor		
BC327	TR7	TO-92	PNP transistor		
BC327	TR8	TO-92	PNP transistor		
BC517	TR507	TO-92			
BC517	TR508	TO-92			
DUAL COLOUR LED	D21	DUAL-LED	3mm dual colour LED		
HDSP-K121	DISPLAY2	DIP18-DISPLAY	LED display 2 digit common anode		
HDSP-K121	DISPLAY3	DIP18-DISPLAY	LED display 2 digit common anode		
HDSP-K121	DISPLAY1	DIP18-DISPLAY	LED display 2 digit common anode		
HEADER 4 PIN 0.1"	J6	SIP-4			
HEADER 5X2	JP3	HEADER5X2			
HEADER 5X2	JP2	HEADER5X2			
HEADER 5X2	JP5	HEADER5X2			
HEADER 5X2	JP4	HEADER5X2			
HEF4094BT SMD	IC13	SO-16			
HEF4094BT (SMD)	IC7	SO-16			
HEF4094BT (SMD)	IC6	SO-16			
LED	DA17	LED-3	LED 3mm colour as required alt to D17		
LED	DA16	LED-3	LED 3mm colour as required alt to D16		

Picnmx (combo)

LED	D16	LED-3	LED 3mm colour as required		
LED	D30	LED-3	LED 3mm colour as required		
LED	D31	LED-3	LED 3mm colour as required		
LED	LED501	LED-3	LED 3mm colour as required		
LED	LED502	LED-3	LED 3mm colour as required		
LED	LED503	LED-3	LED 3mm colour as required		
LED	DA18	LED-3	LED 3mm colour as required alt to D18		
LED	DA19	LED-3	LED 3mm colour as required alt to D19		
LED	DA20	LED-3	LED 3mm colour as required alt to D20		
LED	D20	LED-3	LED 3mm colour as required		
LED	D27	LED-3	LED 3mm colour as required		
LED	D26	LED-3	LED 3mm colour as required		
LED	D29	LED-3	LED 3mm colour as required		
LED	D28	LED-3	LED 3mm colour as required		
LED	D23	LED-3	LED 3mm colour as required		
LED	D22	LED-3	LED 3mm colour as required		
LED	D25	LED-3	LED 3mm colour as required		
LED	D24	LED-3	LED 3mm colour as required		
LED	D19	LED-3	LED 3mm colour as required		
LED	D32	LED-3	LED 3mm colour as required		
LED	D18	LED-3	LED 3mm colour as required		
LED	D33	LED-3	LED 3mm colour as required		
LED	LED504	LED-3	LED 3mm colour as required		
LED	D17	LED-3	LED 3mm colour as required		
LED CW	LED11	LED-3	LED 3mm colour as required		
LED LSB	LED9	LED-3	LED 3mm colour as required		
LED RXA	LED5	LED-3	LED 3mm colour as required		
LED RXB	LED10	LED-3	LED 3mm colour as required		
LED SIG GEN	LED7	LED-3	LED 3mm colour as required		
LED TXA	LED4	LED-3	LED 3mm colour as required		
LED TXB	LED8	LED-3	LED 3mm colour as required		
LED USB	LED6	LED-3	LED 3mm colour as required		
LED-DUAL	DA21	DUAL-LED	LED 3mm alternate to D21 (depends on keypad used)		
NF	R3	1206-0805			
NF	R2	1206-0805			
NF	R4	1206-0805			

Picnmix (combo)

SIP 0.1" X 4	J_DDS	SIP4			
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