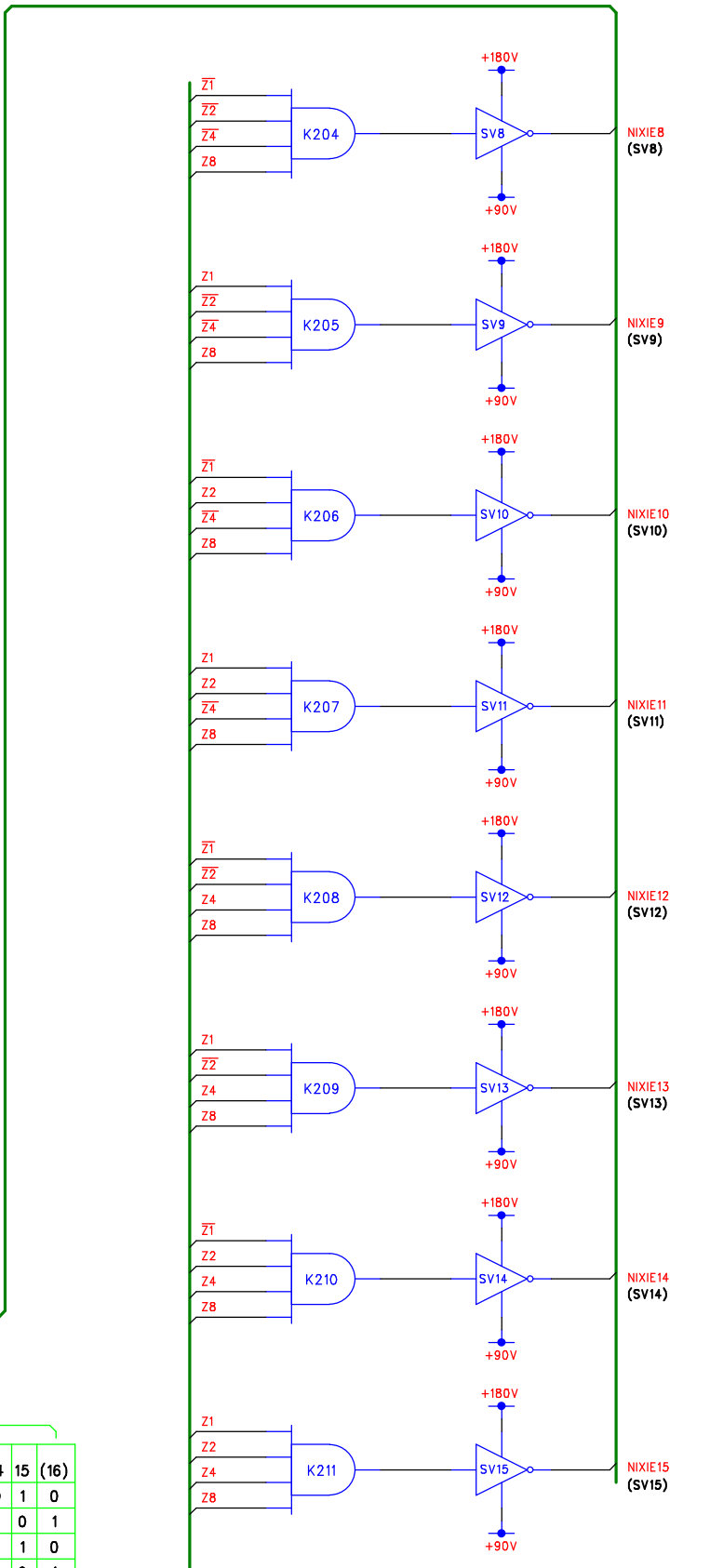
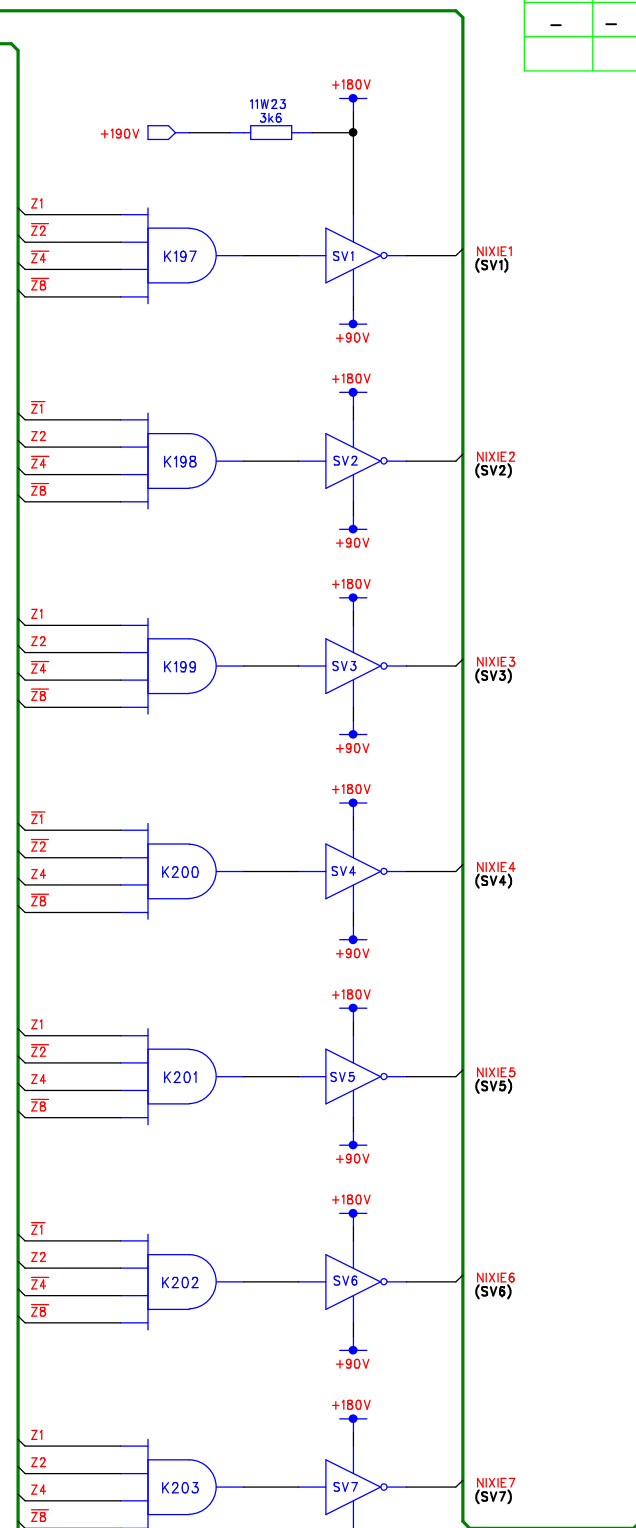
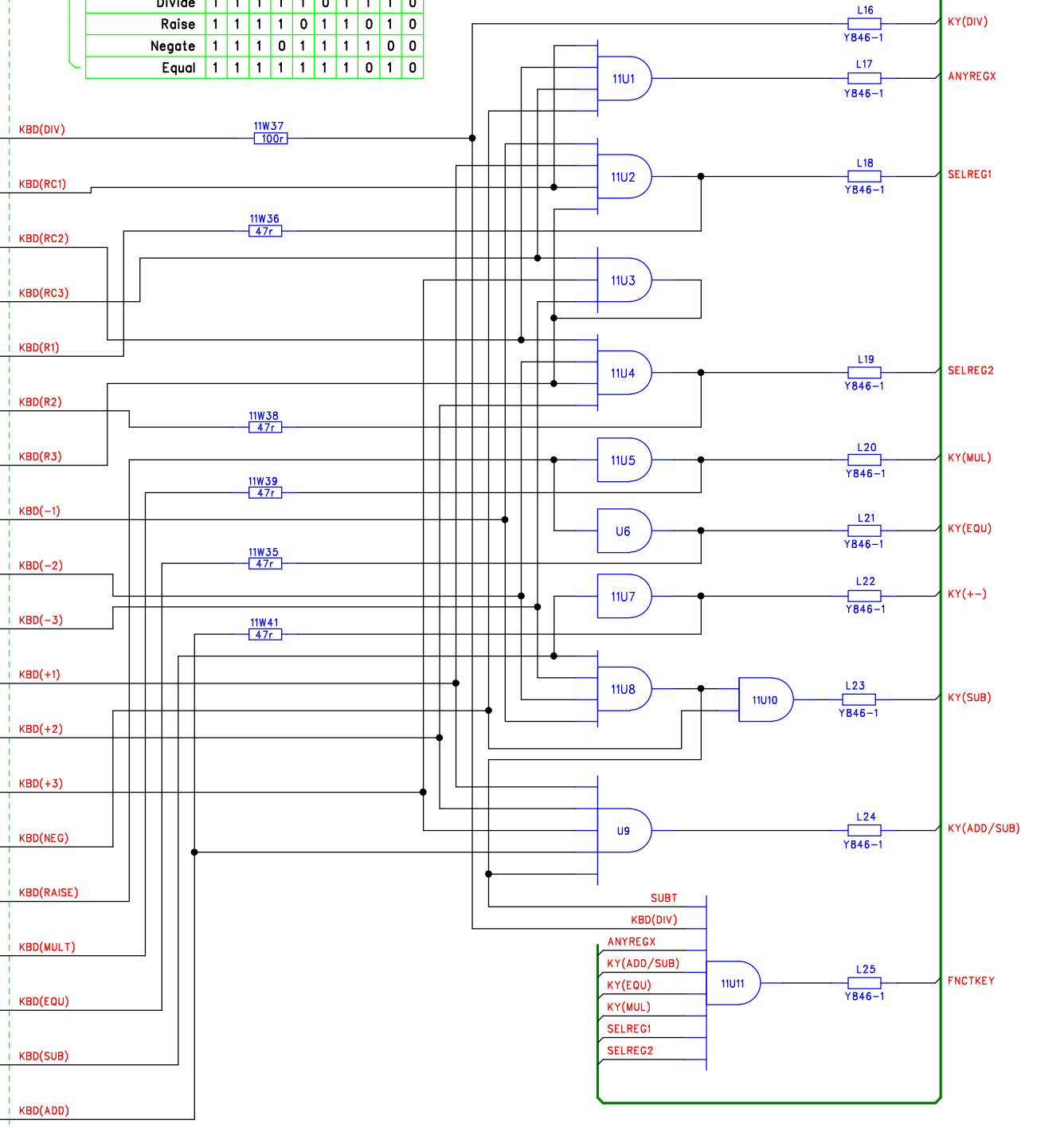
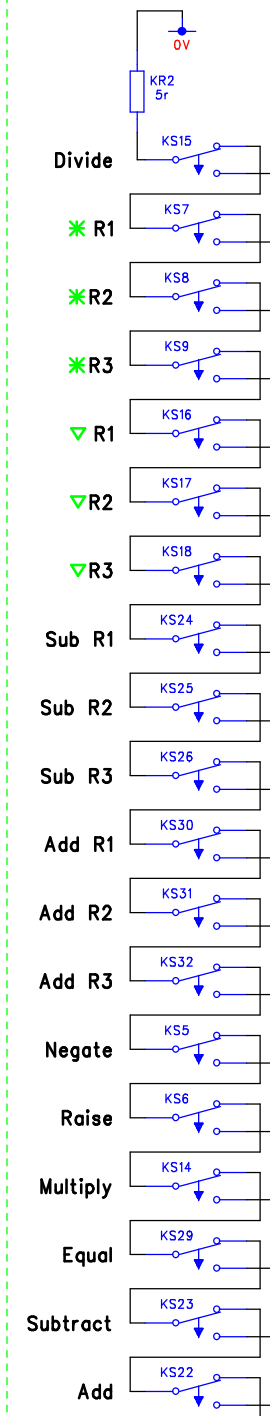


NIXIE[1:15] [12]  
 Z-COUNTER [5,6,7,8,9,10]  
 CONTROL [1,2,3,4,5,6,7,8,9,10]  
 ENCODED-FUNCTION [7,8,9]

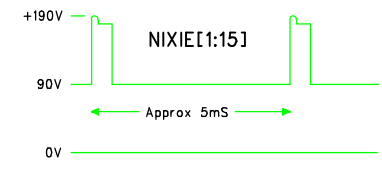
Signal	SELREG1	SELREG2	KY(ADD/SUB)	KY(SUB)	KY(MUL)	KY(DIV)	KY(+/-)	KY(EQU)	ANYREGX	FNCTKEY
Any key Reg 1	0	1	1	1	1	1	1	1	1	0
Any key Reg 2	1	0	1	1	1	1	1	1	1	0
Any key Reg 3	0	0	1	1	1	1	1	1	1	0
Any Reg + Key	x	x	0	1	1	1	1	1	1	0
Any Reg - Key	x	x	1	0	1	1	1	1	1	0
Any Reg *Key	x	x	1	1	1	1	1	1	0	0
Any Reg ▽Key	x	x	1	1	1	1	1	1	1	0
Add	1	1	0	1	1	1	0	1	1	0
Subtract	1	1	0	0	1	1	0	1	1	0
Multiply	1	1	1	1	0	1	1	1	1	0
Divide	1	1	1	1	1	0	1	1	1	0
Raise	1	1	1	0	1	1	0	1	1	0
Negate	1	1	1	0	1	1	1	1	0	0
Equal	1	1	1	1	1	1	1	0	1	0

0 = Key pressed (= 0V)  
 1 / x = No key (-12V)

**Keyboard**



Signal	Digit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	(16)
Z1		1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
Z1̄		0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
Z2		0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0
Z2̄		1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1
Z4		0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0
Z4̄		1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1
Z8		0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0
Z8̄		1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1



Keys are ordered for this diagram, not as they are wired, see circuit.

Negative logic referenced to 0V - Logical 1 = -12v, logical 0 = 0v



DM Associates  
 33, Northbrook Road  
 Aldershot, Hampshire. GU11 3HE  
 Email: mike@soemtron.org  
 www.soemtron.org

Pcb Dwg # =

Name	Date
Drawn MD Hatch	4/7/2008
Checked -	-

Scale	Nts
Sheet 11	11
Next Sheet	12
Drawing Number	

Title	Issue
Soemtron ETR 220 Calculator #11 - Digit Decode & Anode Drive Logic Diagram	A