Comp side
Solder side – 4636 05-224-7002-5 c
Date coded – 22/73

RevNo	Revision note	Date	By	Checked
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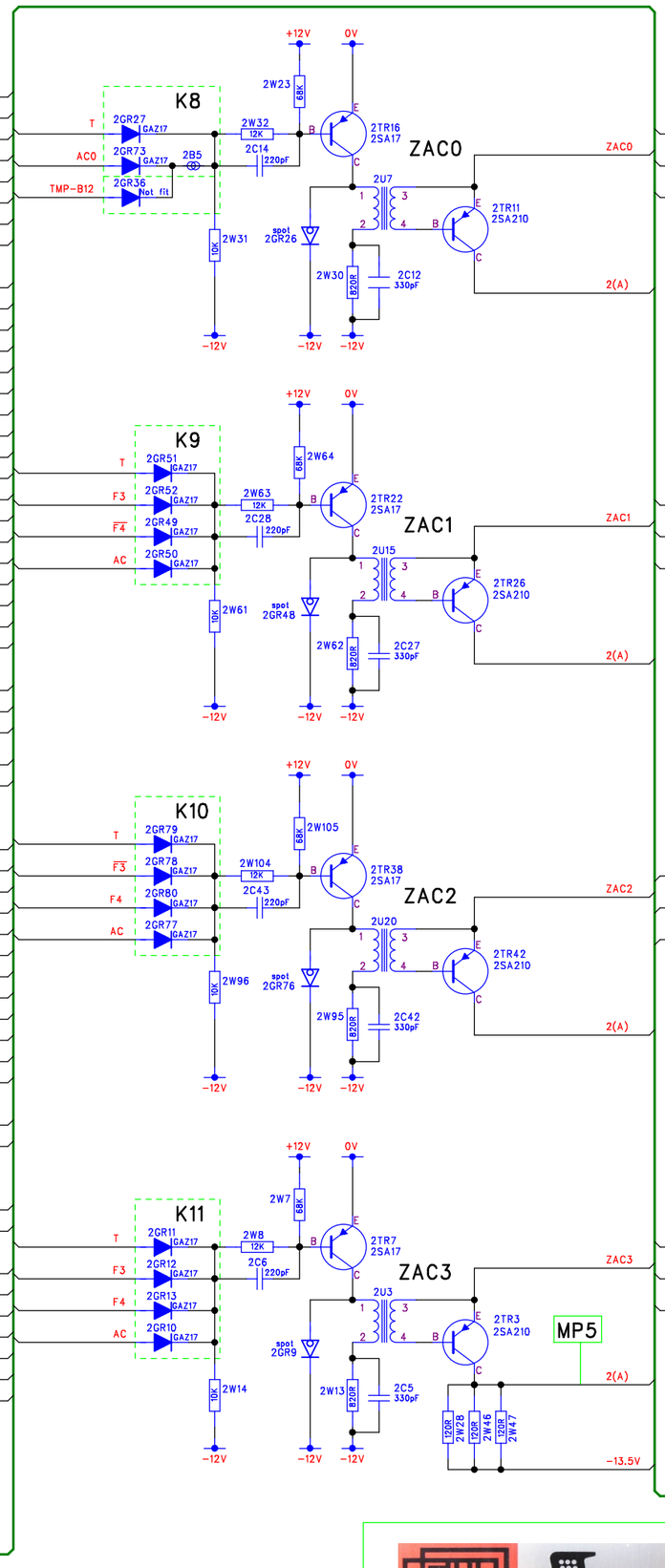
62pin PCB Plug

K(MS)	PL2-A1	K(MS)
MDS	PL2-A2	MDS
$\overline{Z8L}$	PL2-A3	$\overline{Z8L}$
Z8S	PL2-A4	Z8S
Z8L	PL2-A5	Z8L
S4S	PL2-A6	S4S
S4L	PL2-A7	S4L
$\overline{S4L}$	PL2-A8	$\overline{S4L}$
N/c	PL2-A9	N/c
$\overline{S4S}$	PL2-A10	$\overline{S4S}$
F4	PL2-A11	F4
Z4	PL2-A12	Z4
$\overline{F3}$	PL2-A13	$\overline{F3}$
F3	PL2-A14	F3
READ	PL2-A15	READ
(Usp) –13.5V	PL2-A16	–13.5V
(Usp) –13.5V	PL2-A17	–13.5V
Z8	PL2-A18	Z8
ZMD	PL2-A19	ZMD
(Usp) –13.5V	PL2-A20	–13.5V
ZAC3	PL2-A21	ZAC3
ZAC0	PL2-A22	ZAC0
ZAC1	PL2-A23	ZAC1
WRITE	PL2-A24	WRITE
ZMR	PL2-A25	ZMR
ZAC2	PL2-A26	ZAC2
$\overline{F4}$	PL2-A27	$\overline{F4}$
N/c	PL2-A28	N/c
$\overline{Z8}$	PL2-A29	$\overline{Z8}$
$\overline{Z4}$	PL2-A30	$\overline{Z4}$
AC	PL2-A31	AC
AC0	PL2-B1	AC0
MRS	PL2-B2	MRS
N/c	PL2-B3	N/c
N/c	PL2-B4	N/c
S1	PL2-B5	S1
COM2	PL2-B6	COM2
COM2	PL2-B7	COM2
COM2	PL2-B8	COM2
$\overline{Z8S}$	PL2-B9	$\overline{Z8S}$
SS3	PL2-B10	SS3
$\overline{T}$	PL2-B11	$\overline{T}$
T	PL2-B12	T
TMP–B12	PL2-B13	TMP–B12
BL8	PL2-B14	BL8
BL1	PL2-B15	BL1
SS2	PL2-B16	SS2
N/c	PL2-B17	N/c
SS4	PL2-B18	SS4
SS1	PL2-B19	SS1
N/c	PL2-B20	N/c
N/c	PL2-B21	N/c
C8	PL2-B22	C8
Z1	PL2-B23	Z1
N/c	PL2-B24	N/c
C1	PL2-B25	C1
Z2	PL2-B26	Z2
$\overline{Z1}$	PL2-B27	$\overline{Z1}$
$\overline{Z2}$	PL2-B28	$\overline{Z2}$
0V	PL2-B29	0V
+12V(+Up)	PL2-B30	+12V
–12V(–Un)	PL2-B31	–12V

BOARD-2 [12]



These diagrams are referenced to 0V – Logical 1 = +12v, logical 0 = 0v

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Pcb Dwg # =			Scale	Nts
	Name	Date	Sheet	11
Drawn	MD Hatch	16/5/2014	Next Sheet	12
Checked	–	–	Drawing Number	Soemtron 224 A2 Issue A

Title: Soemtron ETR 224 Calculator
Transcribed Misc Circuits
Core Drivers

Solder side – 05-224-7002-5c

RevNo	Revision note	Date	By	Checked
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BOARD-2 [11]

-12V 0V +12V +12V 0V -12V

S1 K(MS) 2C33 560pF 2W102 10K 2GR61

2W84 56K 2W91 470R 2GR74 GAZ17 2W92 10K 2W94 1K

2TR34 GS109 2W83 1K 2C40 560pF

+12V 2W108 50K 2W103 4K7 2C41 560pF

2GR75 GAZ17 2W101 1K 2TR41 GS109 2W93 1K

4uS

2W59 68K 2TR25 GS109 2W70 8K2 2C25 560pF N1 2W76 1K5

2W48 47K 2W69 8K2 2C26 560pF N2 2TR20 GS109 2W60 1K5

T

K12

T READ Z8

2GR6 GAZ17 2GR5 GAZ17 2GR8 GAZ17 2W5 12K 2C3 220pF 2W4 68K 2TR6 2SA17 Z8L

2W12 10K spot 2GR7 2W6 820R 2C4 330pF 2U2 2TR2 2SA210 COM2 Z8L

K13

T WRITE Z8

2GR23 GAZ17 2GR22 GAZ17 2GR25 GAZ17 2W21 12K 2C11 220pF 2W20 68K 2TR44 2SA17 Z8S

2W29 10K spot 2GR24 2W22 820R 2C13 330pF 2U6 2TR10 2SA210 COM2 Z8S

K14

T READ Z8

2GR30 GAZ17 2GR29 GAZ17 2GR28 GAZ17 2W25 12K 2C15 220pF 2W24 68K 2TR17 2SA17 Z8L

2W38 10K spot 2GR31 2W37 820R 2C16 330pF 2U8 2TR12 2SA210 COM2 Z8L

K15

T WRITE Z8

2GR16 GAZ17 2GR14 GAZ17 2GR15 GAZ17 2W10 12K 2C7 220pF 2W9 68K 2TR8 2SA17 Z8S

2W16 10K spot 2GR17 2W15 820R 2C8 330pF 2U4 2TR4 2SA210 COM2 Z8S

K24

T WRITE C1

2GR19 GAZ17 2GR21 GAZ17 2GR20 GAZ17 2W19 12K 2C10 220pF 2W17 68K 2TR13 2SA17 Inhibit Bit (plane) 1 BL1

2W26 10K spot 2GR18 2W18 820R 2C9 330pF 2U5 2TR9 2SA210 MP7 2W27 180R 2W43 120R 2W44 120R COM2 BL1

K25

T WRITE C8

2GR4 GAZ17 2GR3 GAZ17 2GR2 GAZ17 2W3 12K 2C2 220pF 2W1 68K 2TR5 2SA17 Inhibit Bit (plane) 8 BL8

2W11 10K spot 2GR1 2W2 820R 2C1 330pF 2U1 2TR1 2SA210 MP8 2W45 180R 2W68 120R 2W58 120R COM2 BL8

K6

T MRS

2GR64 GAZ17 2GR63 GAZ17 2W85 12K 2C35 220pF 2W86 68K 2TR31 2SA17 ZMR

2W77 10K spot 2GR62 2W78 820R 2C34 330pF 2U18 2TR35 2SA210 ZMR 2(A)

K7

T MDS

2GR38 GAZ17 2GR39 GAZ17 2W34 12K 2C20 220pF 2W33 68K 2TR21 2SA17 ZMD

2W50 10K spot 2GR37 2W49 820R 2C19 330pF 2U10 2TR15 2SA210 ZMD 2(A)

These diagrams are referenced to 0V – Logical 1 = –12v, logical 0 = 0V

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Pcb Dwg # =			Scale	Nts
	Name	Date	Sheet	12
Drawn	MD Hatch	16/5/2014	Next Sheet	13
Checked	–	–	Drawing Number	Soemtron 224 A2 Issue A

Title: Soemtron ETR 224 Calculator
Transcribed Misc Circuits
Core Drivers