



**\*NOTE\***  
 KONY CRYSTAL C120-150pF; C124-20pF  
 C.S.L CRYSTAL C120-10nF(10%)  
 C124-22pF(5%)

**NOTE**

	BOTTOM (A)	TOP (B)
A14	1	A15
A11	2	A13
+5V	3	D7
+9V	4	N.C.
SLOT	5	SLOT
0V	6	D0
0V	7	D1
CPU CK	8	D2
A0	9	D6
A1	10	D5
A2	11	D3
A3	12	D4
TORQ BLK	13	JST
0V	14	NMI
NOT USED	15	HALT
NOT USED	16	MREQ
NOT USED	17	IO REQ
NOT USED	18	RD
BUSREQ	19	WR
RESET	20	-5V
A7	21	SWT
A6	22	-12V
A5	23	-12V
A4	24	MT
ROM CS	25	RFSH
BUS ACK	26	A8
A9	27	A10
A11	28	N.C.

KEY	KB1	KB2	KEY	KB1	KB2
TRF VVIDEO	1	2	F	1	6
INV VVIDEO	1	4	EXT MODE	1	2
1	1	1	EDIT	3	6
2	1	2	A	1	1
3	1	3	S	2	2
4	4	1	D	3	3
5	5	1	F	4	3
6	5	2	G	5	3
7	4	3	H	5	3
8	3	4	J	4	4
9	2	5	K	3	5
0	1	6	L	2	6
BREAK	1	7	ENTER	1	7
DELETE	1	8	CAP SHFT L	1	8
GRAPH	1	9	CAP SHFT R	1	9
Q	1	10	Z	1	10
W	2	11	X	3	10
E	2	12	C	4	6
R	4	13	V	5	6
T	5	14	B	5	8
V	5	15	N	4	8
U	4	16	M	3	8
I	2	17	2	3	8
O	2	18	CAP SHFT R	1	8

**MEMBRANE CONNECTIONS**

KEY	KB1	KB2
SYM SHFT L	2	1
SYM SHFT R	2	1
SPACE BAR	1	1
<	1	5
>	1	3
SYM SHFT R	2	1

**TRANSISTOR LEAD IDENTS**

LEAD VIEW

TR3	ZTX 313	TR10	BC208
TR4	ZTX 650	TR11	BC239
TR5	ZTX 213	TR12	BC239
TR6	ZTX 313	TR13	BC239
TR14	ZTX 313		



**ZX Spectrum+ 128k**  
 Investronica model 2-1  
 digital circuit  
 schematic diagram  
 drg.rev 2.0 05/09/2001  
 analogue schematic  
 drg.rev 1.0a 05/09/2001  
 rendered by Ian Worsley  
<http://www.8bit.ht.st/>  
 Rearranged by  
 Nikolai Kondrashov  
<http://spbnick.github.io/>