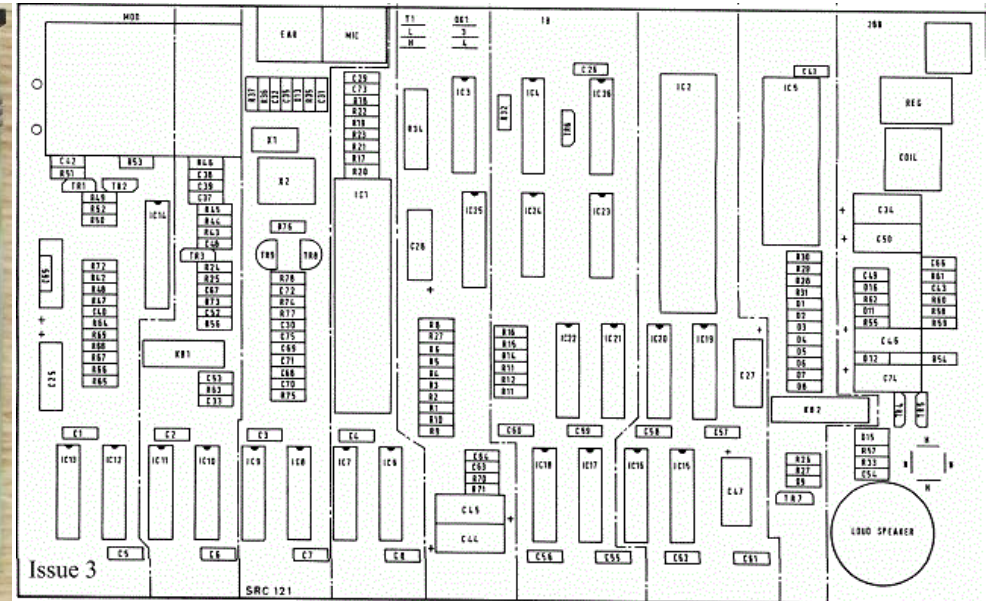
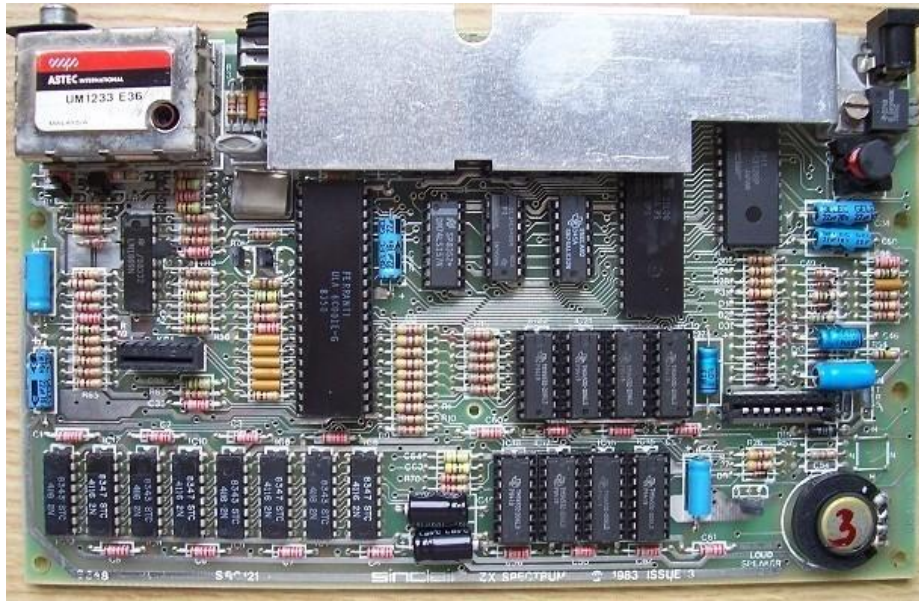
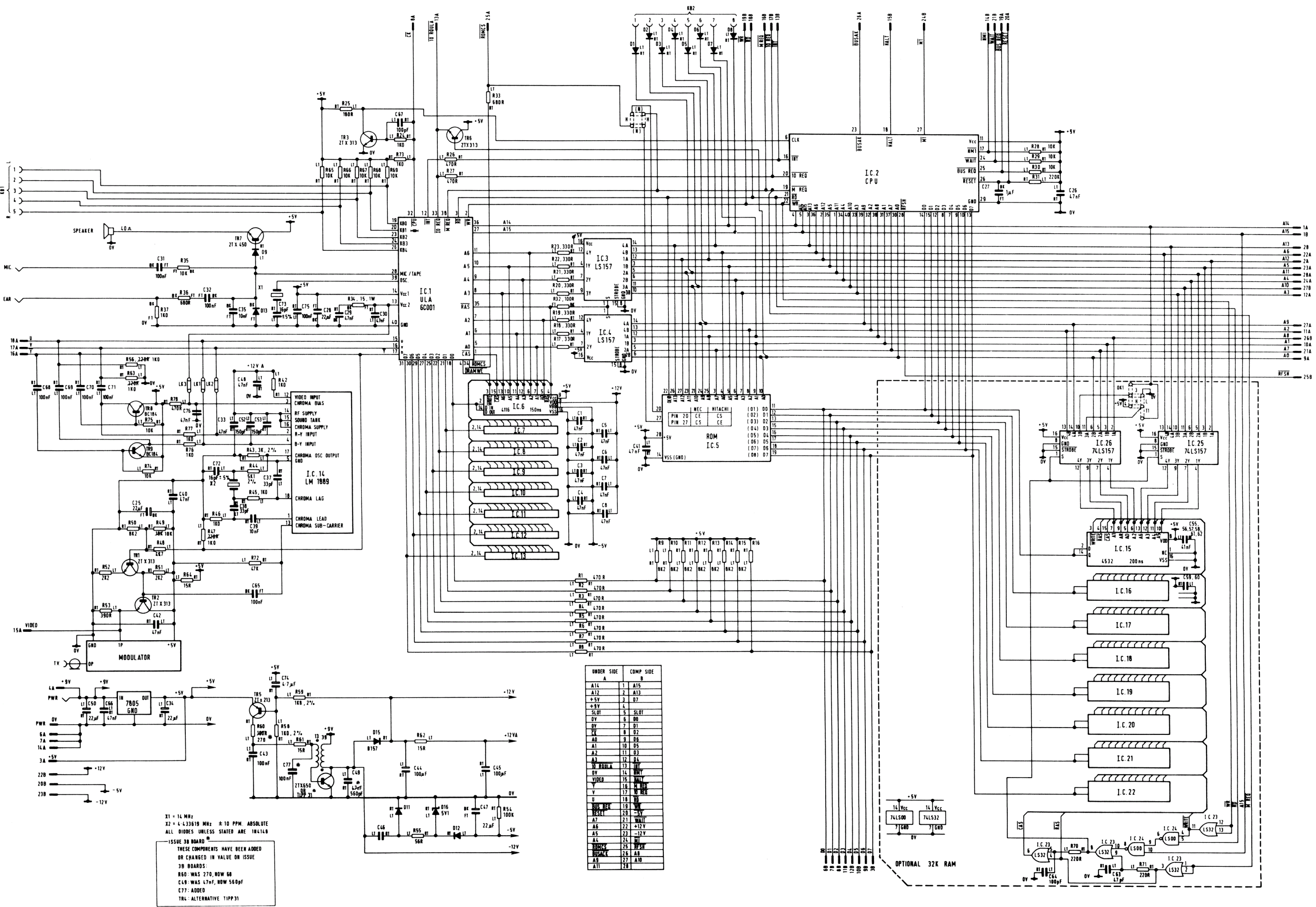


# ESQUEMATICO ZX SPECTRUM 48kB ISSUE 3

*Retrocomputing*







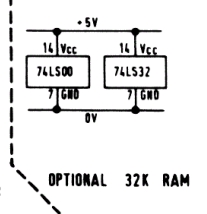
X1 = 14 MHz  
 X2 = 4.433619 MHz ± 10 PPM ABSOLUTE  
 ALL DIODES UNLESS STATED ARE 1N4148

ISSUE 3B BOARD

THESE COMPONENTS HAVE BEEN ADDED OR CHANGED IN VALUE ON ISSUE 3B BOARDS:

R60: WAS 270, NOW 68  
 C49: WAS 47nF, NOW 560pF  
 C77: ADDED  
 TR1: ALTERNATIVE 11PP 31

UNDER SIDE		COMP SIDE	
A	B	A	B
A14	1	A15	
A12	2	A13	
+5V	3	07	
+9V	4		
SLOT	5	SLOT	
0V	6	00	
0V	7	01	
CK	8	02	
A0	9	08	
A1	10	05	
A2	11	03	
A3	12	04	
A4	13	06	
0V	14	09	
VIDEO	15	04	
Y	16	08	
V	17	05	
U	18	06	
BUS RED	19	07	
RESET	20	-5V	
A7	21	WAIT	
A6	22	+12V	
A5	23	-12V	
A4	24	RT	
ROMCS	25	RTSY	
A3	26	AB	
BUSACK	27	A10	
A11	28		



OPTIONAL 32K RAM