ZX SPECTRUM VIDEO RAM MEMORY

ATRIBUTY 22528-22783	PIXELY 16384-18431	ATRIBUTY 22784-23039	PIXELY 18432-20480	ATRIBUTY 23040-23295	PIXELY 20480-22527
#5800-#581F	#4000-#401F #4100-#411F #4200-#421F #4300-#431F #4400-#441F #4500-#451F #4600-#461F #4700-#471F	#5900-#591F	#4800-#481F #4900-#491F #4A00-#4A1F #4B00-#4B1F #4C00-#4C1F #4D00-#4D1F #4E00-#4E1F #4F00-#4F1F	#5A00-#5A1F	#5000-#501F #5100-#511F #5200-#521F #5300-#531F #5400-#541F #5500-#551F #5600-#561F #5700-#571F
00		08		16	
#5820-#583F	#4020-#403F #4120-#413F #4220-#423F #4320-#433F #4420-#443F #4520-#453F #4620-#463F #4720-#473F	#5920-#593F	#4820-#483F #4920-#493F #4A20-#4A3F #4B20-#4B3F #4C20-#4C3F #4D20-#4D3F #4E20-#4E3F #4F20-#4F3F	#5A20-#5A3F	#5020-#503F #5120-#513F #5220-#523F #5320-#533F #5420-#543F #5520-#553F #5620-#563F #5720-#573F
01		09		17	
#5840-#585F	#4040-#405F #4140-#415F #4240-#425F #4340-#435F #4440-#445F #4540-#455F #4640-#465F #4740-#475F	#5940-#595F	#4840-#485F #4940-#495F #4A40-#4A5F #4B40-#4B5F #4C40-#4C5F #4D40-#4D5F #4E40-#4E5F #4F40-#4F5F	#5A40-#5A5F	#5040-#505F #5140-#515F #5240-#525F #5340-#535F #5440-#545F #5540-#555F #5640-#565F #5740-#575F
02		10		18	
#5860-#587F	#4060-#407F #4160-#417F #4260-#427F #4360-#437F #4460-#447F #4560-#457F #4660-#467F #4760-#477F	#5960-#597F	#4860-#487F #4960-#497F #4A60-#4A7F #4B60-#4B7F #4C60-#4C7F #4D60-#4D7F #4E60-#4E7F #4F60-#4F7F	#5A60-#5A7F	#5060-#507F #5160-#517F #5260-#527F #5360-#537F #5460-#547F #5560-#557F #5660-#567F #5760-#577F
03		11		19	
#5880-#589F	#4080-#409F #4180-#419F #4280-#429F #4380-#439F #4480-#449F #4580-#459F #4680-#469F #4780-#479F	#5980-#599F	#4880-#489F #4980-#499F #4A80-#4A9F #4B80-#4B9F #4C80-#4C9F #4D80-#4D9F #4E80-#4E9F #4F80-#4F9F	#5A80-#5A9F	#5080-#509F #5180-#519F #5280-#529F #5380-#539F #5480-#549F #5580-#559F #5680-#569F #5780-#579F
04		12		20	
#58A0-#58BF	#40A0-#40BF #41A0-#41BF #42A0-#42BF #43A0-#43BF #44A0-#44BF #45A0-#45BF #46A0-#46BF #47A0-#47BF	#59A0-#59BF	#48A0-#48BF #49A0-#49BF #4AA0-#4ABF #4BA0-#4BBF #4CA0-#4CBF #4DA0-#4DBF #4EA0-#4EBF #4FA0-#4FBF	#5AA0-#5ABF	#50A0-#50BF #51A0-#51BF #52A0-#52BF #53A0-#53BF #54A0-#54BF #55A0-#55BF #56A0-#56BF #57A0-#57BF
05		13		21	
#58C0-#58DF	#40C0-#40DF #41C0-#41DF #42C0-#42DF #43C0-#43DF #44C0-#44DF #45C0-#45DF #46C0-#46DF #47C0-#47DF	#59C0-#59DF	#48C0-#48DF #49C0-#49DF #4AC0-#4ADF #4BC0-#4BDF #4CC0-#4CDF #4DC0-#4DDF #4EC0-#4EDF #4FC0-#4FDF	#5AC0-#5ADF	#50C0-#50DF #51C0-#51DF #52C0-#52DF #53C0-#53DF #54C0-#54DF #55C0-#55DF #56C0-#56DF #57C0-#57DF
06		14		22	
#58E0-#58FF	#40E0-#40FF #41E0-#41FF #42E0-#42FF #43E0-#43FF #44E0-#44FF #45E0-#45FF #46E0-#46FF #47E0-#47FF	#59E0-#59FF	#48E0-#48FF #49E0-#49FF #4AE0-#4AFF #4BE0-#4BFF #4CE0-#4CFF #4DE0-#4DFF #4EE0-#4EFF #4FE0-#4FFF	#5AE0-#5AFF	#50E0-#50FF #51E0-#51FF #52E0-#52FF #53E0-#53FF #54E0-#54FF #55E0-#55FF #56E0-#56FF #57E0-#57FF
07		15		23	

RESOLUTION PIXELS

16384 - 22527
#4000 - #57FF

256 × 192

LEN: 2048B #0800
LEN: 2048B #0800
LEN: 2048B #0800

RAM 5/7:
49152 - 55295
#C000 - #D7FF

ALL PIXELS LEN: 6144B #1800
PIXELS + ATTR LEN: 6912B #1B00

RESOLUTION ATRIBUTS

22528 - 23295
#5800 - #5AFF

32 × 24

RAM 5/7:
55296 - 56063
#D800 - #DAFF

LEN: 768B #0300

MEMORY
16384 - 65535
#4000 - #FFFF

PERM.MIRROR
RAM 5
49152 - 65535
#C000 - #FFFF

TWO VRAM
ZX Spectrum
128K

```
VRAM0 -> OUT 32765,21
         page.5 49152(#C000)

VRAM1 -> OUT 32765,31
         page.7 49152(#C000)
```

VRAM 1
PAGE 7
49152 - 56063
#C000 - #DAFF → overlap to video

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18.2.2004

PIX

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
0	5800	5801	5802	5803	5804	5805	5806	5807	5808	5809	580A	580B	580C	580D	580E	580F	5810	5811	5812	5813	5814	5815	5816	5817	5818	5819	581A	581B	581C	581D	581E	581F
1	5820	5821	5822	5823	5824	5825	5826	5827	5828	5829	582A	582B	582C	582D	582E	582F	5830	5831	5832	5833	5834	5835	5836	5837	5838	5839	583A	583B	583C	583D	583E	583F
2	5840	5841	5842	5843	5844	5845	5846	5847	5848	5849	584A	584B	584C	584D	584E	584F	5850	5851	5852	5853	5854	5855	5856	5857	5858	5859	585A	585B	585C	585D	585E	585F
3	5860	5861	5862	5863	5864	5865	5866	5867	5868	5869	586A	586B	586C	586D	586E	586F	5870	5871	5872	5873	5874	5875	5875	5877	5878	5879	587A	587B	587C	587D	587E	587F
4	5880	5881	5882	5883	5884	5885	5856	5857	5888	5889	588A	588B	588C	588D	588E	588F	5890	5891	5892	5893	5894	5895	5896	5897	5898	5899	589A	589B	589C	589D	589E	589F
5	58A0	58A1	58A2	58A3	58A4	58A5	58A6	58A7	58A8	58A9	58AA	58AB	58AC	58AD	58AE	58AF	58B0	58B1	58B2	58B3	58B4	58B5	58B6	58B7	58B8	58B9	58BA	58BB	58BC	58BD	58BE	48BF
6	58C0	58C1	58C2	58C3	58C4	58C5	58C6	58C7	58C8	58C9	58CA	58CB	58CC	58CD	58CE	58CF	58D0	58D1	58D2	58D3	58D4	58D5	58D6	58D7	58D8	58D9	58DA	58DB	58DC	58DD	58DE	58DF
7	58E0	58E1	58E2	58E3	58E4	58E5	58E6	58E7	58E8	58E9	58EA	58EB	58EC	58ED	58EE	58EF	58F0	58F1	58F2	58F3	58F4	58F5	58F6	58F7	58F8	58F9	58FA	58FB	58FC	58FD	58FE	58FF
8	5900	5901	5902	5903	5904	5905	5906	5907	5908	5909	590A	590B	590C	590D	590E	590F	5910	5911	5912	5913	5914	5915	5916	5917	5918	5919	591A	591B	591C	591D	591E	591F
9	5920	5921	5922	5923	5924	5925	5926	5927	5928	5929	592A	592B	592C	592D	592E	592F	5930	5931	5932	5933	5934	5935	5936	5937	5938	5939	593A	593B	593C	593D	593E	593F
10	5940	5941	5942	5943	5944	5945	5946	5947	5948	5949	594A	594B	594C	594D	594E	594F	5950	5951	5952	5953	5954	5955	5956	5957	5958	5959	595A	595B	595C	595D	595E	595F
11	5960	5961	5962	5963	5964	5965	5966	5967	5968	9569	596A	596B	596C	596D	596E	596F	5970	5971	5972	5973	5974	5975	5976	5977	5978	5979	597A	597B	597C	597D	597E	597F
12	5980	5981	5982	5983	5984	5985	5986	5987	5988	5989	598A	598B	598C	598D	598E	598F	5990	5991	5992	5993	5994	5995	5996	5997	5998	5999	599A	599B	599C	599D	599E	599F
13	59A0	59A1	59A2	59A3	59A4	59A5	59A6	59A7	59A8	59A9	59AA	59AB	59AC	59AD	59AE	59AF	59B0	59B1	59B2	59B3	59B4	59B5	59B6	59B7	59B8	59B9	59BA	59BB	59BC	59BD	59BE	59BF
14	59C0	59C1	59C2	59C3	59C4	59C5	59C6	59C7	59C8	59C9	59CA	59CB	59CC	59CD	59CE	59CF	59D0	59D1	59D2	59D3	59D4	59D5	59D6	59D7	59D8	59D9	59DA	59DB	59DC	59DD	59DE	59DF
15	59E0	59E1	59E2	59E3	59E4	59E5	59E6	59E7	59E8	59E9	59EA	59EB	59EC	59ED	59EE	59EF	59F0	59F1	59F2	59F3	59F4	59F5	59F6	59F7	59F8	59F9	59FA	59FB	59FC	59FD	59FE	59FF
16	5A00	5A01	5A02	5A03	5A04	5A05	5A06	5A07	5A08	5A09	5A0A	5A0B	5A0C	5A0D	5A0E	5A0F	5A10	5911	5912	5913	5914	5915	5916	5917	5918	5919	591A	591B	591C	591D	591E	591F
17	5A20	5A21	5A22	5A23	5A24	5A25	5A26	5A27	5A28	5A29	5A2A	5A2B	5A2C	5A2D	5A2E	5A2F	5A30	5A31	5A32	5A33	5A34	5A35	5A36	5A37	5A38	5A39	5A3A	5A3B	5A3C	5A3D	5A3E	5A3F
18	5A40	5A41	5A42	5A43	5A44	5A45	5A46	5A47	5A48	5A49	5A4A	5A4B	5A4C	5A4D	5A4E	5A4F	5A50	5A51	5A52	5A53	5A54	5A55	5A56	5A57	5A58	5A59	5A5A	5A5B	5A5C	5A5D	5A5E	5A5F
19	5A60	5A61	5A62	5A63	5A64	5A65	5A66	5A67	5A68	5A69	5A6A	5A6B	5A6C	5A6D	5A6E	5A6F	5A70	5A71	5A72	5A73	5A74	5A75	5A76	5A77	5A78	5A79	5A7A	5A7B	5A7C	5A7D	5A7E	5A7F
20	5A80	5A81	5A82	5A83	5A84	5A85	5A86	5A87	5A88	5A89	5A8A	5A8B	5A8C	5A8D	5A8E	5A8F	5A90	5A91	5A92	5A93	5A94	5A95	5A96	5A97	5A98	5A99	5A9A	5A9B	5A9C	5A9D	5A9E	5A9F
21	5AA0	5AA1	5AA2	5AA3	5AA4	5AA5	5AA6	5AA7	5AA8	5AA9	5AAA	5AAB	5AAC	5AAD	5AAE	5AAF	5AB0	5AB1	5AB2	5AB3	5AB4	5AB5	5AB6	5AB7	5AB8	5AB9	5ABA	5ABB	5ABC	5ABD	5ABE	5BAF
22	5AC0	5AC1	5AC2	5AC3	5AC4	5AC5	5AC6	5AC7	5AC8	5AC9	5ACA	5ACB	5ACC	5ACD	5ACE	5ACF	5AD0	5AD1	5AD2	5AD3	5AD4	5AD5	5AD6	5AD7	5AD8	5AD9	5ADA	5ADB	5ADC	5ADD	5ADE	5ADF
23	5AE0	5AE1	5AE2	5AE3	5AE4	5AE5	5AE6	5AE7	5AE8	5AE9	5AEA	5AEB	5AEC	5AED	5AEE	5AEF	5AF0	5AF1	5AF2	5AF3	5AF4	5AF5	5AF6	5AF7	5AF8	5AF9	5AFA	5AFB	5AFC	5AFD	5AFE	5AFF

PLOT