

Cathode Ray Tubes

European - One letter followed by two groups of numbers and one or two letters: Ann-nnAA

1st letter	A	TV display for domestic use				
	D	Single trace oscilloscope tube				
	E	Multiple trace oscilloscope tube				
	F	Radar display, direct view				
	L	Display storage tube				
	M	TV display for professional use, direct view				
	P	Display tube for professional use, projection				
	Q	Flying spot scanner				
1st figure group: for rectangular screens the diagonal in cm; for round screens the diameter in cm.						
2nd group of figures is the serial number						
Final letters indicate the screen properties:	A	Reddish purple, purple, bluish purple				
	B	Purplish blue, blue, greenish blue				
	D	Blue-green				
	G	Blueish green, green, yellowish green				
	K	Yellow-green				
	L	Orange, orange-pink				
	R	Reddish orange, red, pink, purplish pink, purplish red, red-purple				
	V	Greenish yellow, yellow, yellowish orange				
	W	'standard white' TV tube phosphor				
	X	Tri-colour screen				
	Y	Greenish-yellow, yellow, yellowish-orange				
2nd letter is a serial letter to denote other specific difference in screen properties.	Designation		EIA	Colour		Persistence
	New	Old	number	Fluorescence	Phosphorescence	
	BA	C		Purplish blue		Very short
	BC	V		Purplish blue		Killed
	BE	B	P11	Blue	Blue	Medium short
	BF	U		Purplish blue		Medium short
	GE	K	P24	Green	Green	Short
	GH	H	P31	Green	Green	Medium short

	GJ	G	P1	Yellowish green	Yellowish green	Medium
	GK	G		Yellowish green	Yellowish green	Medium
	GL	N	P2	Yellowish green	Yellowish green	Medium short
	GM	P	P7	Purplish blue	Yellowish green	Long
	GP		P2	Bluish green	Green	Medium short
	GR		P39	Green	Green	Long
	GU			White	White	Very short
	LA	D		Orange	Orange	Medium
	LB	E		Orange	Orange	Long
	LC	F		Orange	Orange	Very long
	LD	L	P33	Orange	Orange	Very long
	W	W	P4	White		
	X	X	P22	Tri-colour screen		
	YA	Y		Yellowish orange	Yellowish orange	Medium
	Type GK is used in projection screens.					

CRTs - European - old system

Two letters followed by two sets of figures

1st letter indicates type of focussing and deflection	A	Electrostatic focussing and electromagnetic deflection
	D	Electrostatic focussing and deflection
	M	Electromagnetic focussing and deflection
2nd letter indicates the phosphor.	B	Blue fluorescence and phosphorescence, short persistence
	C	Blue/Violet fluorescence and phosphorescence, very short persistence
	F	Orange fluorescence and phosphorescence, very long persistence
	G	Green fluorescence and phosphorescence, medium persistence
	L	Orange fluorescence and phosphorescence, long persistence

	N	Blue-green fluorescence and green phosphorescence, long persistence
	P	Blue fluorescence and green phosphorescence, very long persistence
	R	Greenish-yellow fluorescence and yellow phosphorescence, long persistence
	W	Picture tube, white screen colour, short persistence
1st figure group is the screen diameter in cm for round tubes, or the screen diagonal in cm for rectangular tubes.		
2nd figure group is the serial number.		

CRTs - American RETMA system

Figure(s), letter(s), P, figure(s)

1st figure(s)	For round screen, diameter in inches; for rectangular screen, diagonal in inches
1st letter(s)	Serial coding applying to tubes of the same diameter or diagonal
P followed by a number: Screen characteristics	See Screen Characteristics
Suffix letter, if present	Indicates a later and modified version (A, B, C etc). The letter W indicates a military type, and precedes any further suffix letter.

Mazda TV tube code

Starting with a C, followed by the screen size in mm, the 2 letters and a number. 1st letter=deflection M=magnetic, S=electrostatic; 2nd letter is screen colour B=blue, G=green, R=radar long-persistence, W=white. Final number is sequential.

Screen characteristics

Designation	Colour/persistence	Application
P1	Green / Medium	General purpose oscilloscope
P2	Blue-Green / Green / Long	Special oscilloscopes and radar displays

P3	Yellow / Medium	
P4	White / Medium	Television receivers
P5	Blue / Very short	Photographic recording equipment
P6	White / Short	Originally in TV receivers
P7	Blue-White / Short Light-Yellow / Long	Radar indicators (blue-white short trace leaves yellow long trace)
P8	Obsolete	
P9	Obsolete	
P10	Magenta - Dark trace / Very long	Outside light source. Persistence from seconds to months
P11	Blue / Short	Oscilloscopes
P12	Orange / Medium	Radar indicators
P13	Light red / medium	
P14	Purple-White / Short Light-Orange / Long	Radar indicators
P15	Blue-Green and near ultraviolet / Very short	TV pick-up of flying spot scanners
P16	Violet and near ultraviolet / Extremely short	TV pick-up of flying spot scanners
P17	Greenish-Yellow / short and long	Cascade phosphor, combines P7 and P15 characteristics
P18	White / Medium	Low frame rate TV applications
P19	Yellow / Medium long	Radar indicators
P20	Yellow / Short	
P21	Yellow-Orange / Medium long	
P22	Red-Blue-Green / Medium	Colour TV tubes
P23	White / Medium	Similar to P4 TV tubes
P24	White / Short	Colour flying spot scanner
P25	Orange / Long	
P26	Yellow-Orange / Very long	
P27	Orange-Red / Medium	
P28	Yellow-Green / Long	
P29	Two colour stripe pattern	
P30	Not registered	
P31	Green	Fast, used for oscilloscopes
P32	Blue-Green -Yellow-Green / Long	

P33	Orange / Long	
P34	Blue-Green - Green	
P35	Blue-White	

The following screen characteristic codes were used to describe CRTs, in particular those in the CV datasheets:

1st letter (flash)		2nd letter (afterglow)		3rd letter (afterglow duration)	
B	Blue	B	Blue	L	> 5s
G	Green	G	Green	M	1s to 5s
Y	Yellow	Y	Yellow	S	0.1s to 1s
R	Red	R	Red	N	1ms to 0.1s
O	Orange	O	Orange	K	<1ms
W	White	W	White		
U	Ultraviolet				

An alternate last digit was introduced later replacing the LMSNK code with a number as follows:

	Min	Max	Description
1	-	10 μ s	Killed (K)
2	10 μ s	100 μ s	Ultra short (US)
3	100 μ s	1000 μ s	Very short (VS)
4	1ms	10ms	Short (S)
5	10ms	100ms	Medium short (MS)
6	100ms	1000ms	Medium (M)
7	1s	10s	Medium long (ML)
8	10s	100s	Long (L)
9	100s	-	Very long (VL)