



WELLS-GARDNER
ELECTRONICS CORPORATION



VGA Resolution
U3100

U3100

PRODUCT SPECIFICATIONS

SPECIFICATIONS

- CRT size (diagonal measure): **14", 19"**
- Phosphor type: P22
- CRT etch: Polished faceplate; Other faceplates available
- Dot trio spacing: 0.28 mm (14"), 0.71 mm (19")

INPUT SIGNALS

- Input connector: 15 pin D-sub high density male; VGA compatible
- Video type: RGB analog
- Video input impedance: 75 ohm
- Video level: 0.7 volts peak-to-peak
- Sync type: Standard VGA/ TTL sync
- Sync input impedance: 470 ohm (H sync), 1 k ohm (V sync)
- Horizontal sync frequency: 31.5 kHz
- Vertical sync frequency: 56 to 87 Hz

LIGHT OUTPUT

30 fL typical

GEOMETRY

- Horizontal linearity: ±5%
- Vertical linearity: ±5%
- Picture size regulation: 2%
- Geometric distortion: ±2% max.

POWER INPUT

- Input voltage: 90-264 VAC, 50-60 Hz; no isolation transformer required.
- Maximum power: 90 watts typical (19")

USER CONTROLS

- Remote controls: Brightness, contrast, horizontal size, horizontal centering, vertical size, vertical centering.
- Internal controls: Horizontal hold, vertical linearity, focus, G2 (screen).

MECHANICAL

See reverse side

MISCELLANEOUS

- Operating temperature: 0 to 55 degrees C.
- Agency compliance: UL, CSA, DHHS radiation performance std., TUV.

RESOLUTION

- Graphics modes: VGA: 640 x 200, 640 x 350, 640 x 480
- Video bandwidth: 22 MHz typical.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Wells Gardner Electronics Corporation

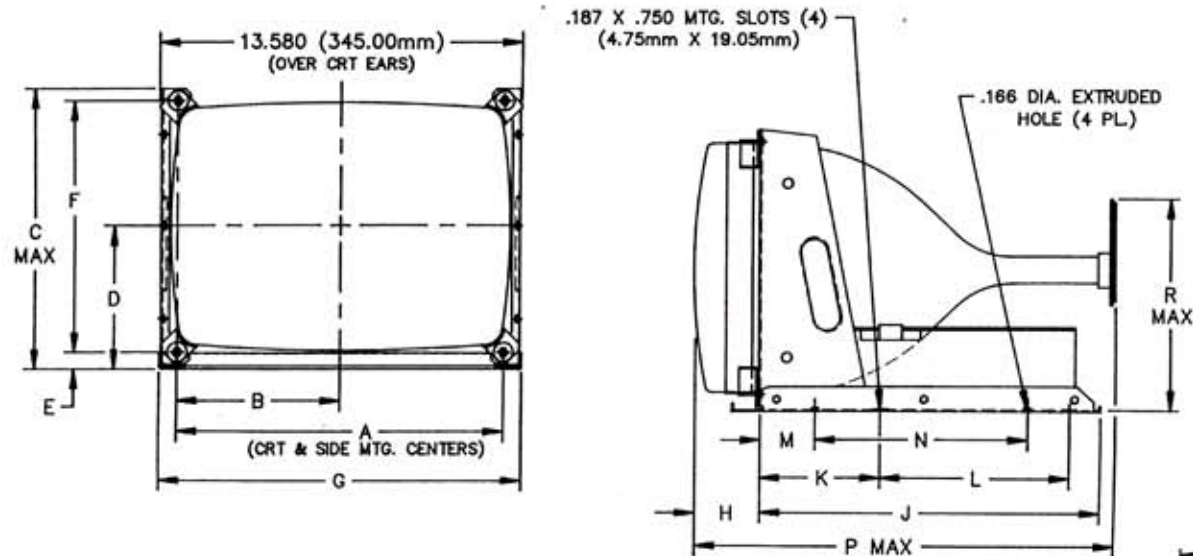
14V Monitor 14-M1 (F13HM1)

DIM.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
IN.	12.260	6.130	10.673	5.334	.547	9.575	12.980	2.450	10.860	4.300	5.500	1.550	7.500	13.625	7.375
mm.	311.40	155.70	271.10	135.50	13.89	243.20	329.70	62.23	275.84	109.22	139.70	39.37	190.50	346.08	187.33

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. FOR SPECIFICS CONTACT W.G.E.C. ENGINEERING.
2701 North Kildare Avenue Chicago, Illinois 60639 Phone (773) 252-8220 Fax (773) 252-8072



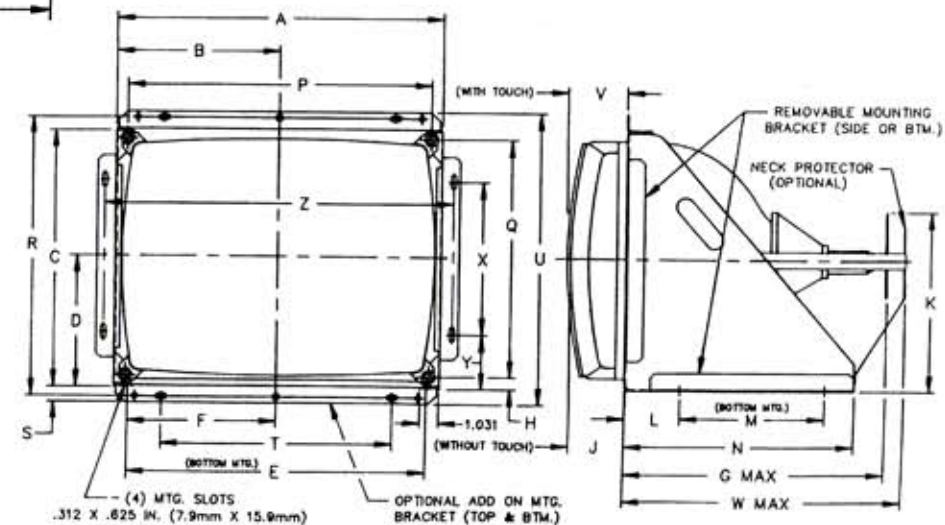
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19V Color Monitor 19-M2 (F19HM2)

DIM.	A	B	C	D	E	F	G	H	J	K	L	M
IN.	18.340	9.170	14.343	7.255	16.971	8.485	14.531	.622	3.091	9.81	3.063	8.000
mm.	465.84	232.92	364.31	184.28	431.06	215.53	369.09	15.80	78.51	249.17	77.80	203.20

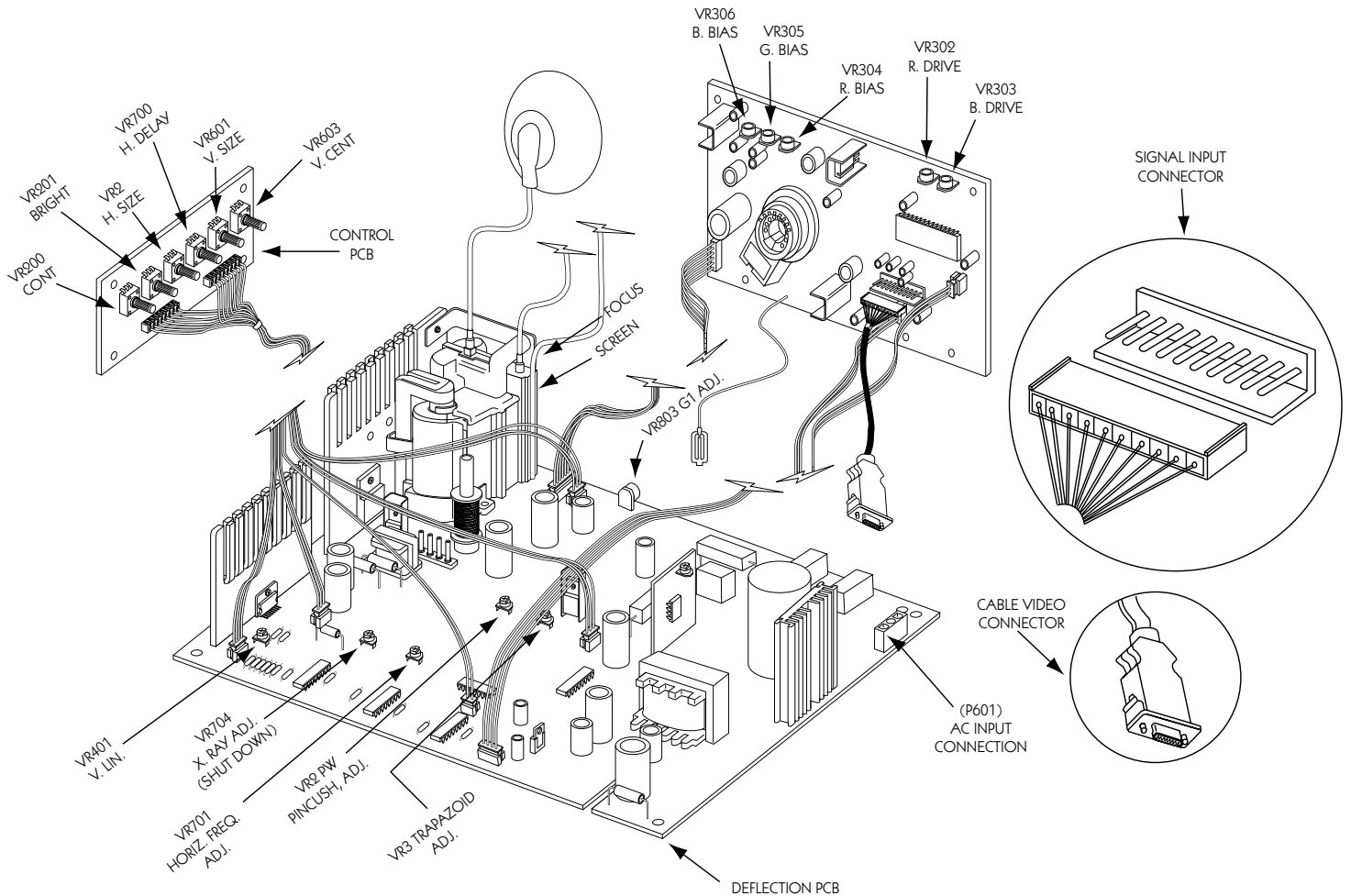
DIM.	N	P	Q	R	S	T	U	V	W	X	Y	Z
IN.	12.687	17.090	13.260	15.740	.968	12.843	16.440	3.281	15.280	8.500	2.890	19.593
mm.	322.25	434.09	336.80	399.80	24.59	326.21	417.58	83.34	388.11	215.9	73.41	497.66





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M O D E L
1 4 K 3 1 0 1
1 9 K 3 1 0 2



AC INPUT CONNECTOR: P601

AMP 350760-4
Mating AMP type 1-480700-0

Pin	Description
1	AC hot
2	Earth ground
3	AC neutral

CABLE VIDEO CONNECTOR

15 Pin Subminiature D-type

Pin	Description	Pin	Description
1	Red video input	8	Blue video ground
2	Green video input	9	N/C
3	Blue video input	10	Digital/sync ground
4	N/C	11	Reserved (mode)
5	Reserved (test)	12	N/C
6	Red video ground	13	Horizontal sync
7	Green video ground	14	Vertical sync
		15	N/C



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14K3181



REPLACEMENT PARTS LIST

Main, Neck, Control PCB Assembly Parts List

DIODES

DESIGNATION	DESCRIPTION	PART NO.
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D1, D403, D404, D701A,		
D801, D802, D804, D805	DIODE 1N4148	066X0099-001
D301, D302, D303, D507,		
D508	DIODE 1N4148	066X0099-001
D402	DIODE 1N4003	8-100D-010-81
D604, D606, D701, D803	DIODE 1N4942, 1A, 200V, BYT52	8-100D-011-81
D807	DIODE 10DF4, 1A, 400V	8-100D-015-41
D601, D602, D603	DIODE HER103, 1A, 200V	8-100D-012-81
D2	DIODE DD54RC SANYO	066X0150-001
D610, D611, D806	DIODE HER204	8-100D-003-41
D3	DIODE MUR460	8-100D-025-11
D607, D608, D609	DIODE HER308, 3A, 1KV, BYT56M	8-100D-004-41
ZD401A	DIODE ZENER 2.4V	8-100D-002-81
D602	DIODE RS405, 4A, 600V, KBL06-G	8-100D-006-41
ZD402, ZD403	DIODE ZENER 5.1V, 5%, 0.5W	066X0040-028
ZD701	DIODE ZENER HZ6C2, 6.2V, 0.5W	8-100D-008-81
ZD801, ZD301	DIODE ZENER HZQA2, (8V2)	8-100D-009-81

INTEGRATED CIRCUITS

DESIGNATION	DESCRIPTION	PART NO.
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IC401, IC702	IC 74LS123 DUAL MONO	086X0338-001
IC402	TTL TDA1675A	086X0360-001
IC403	IC L4051 BCP	8-100S-002-11
IC602	TTL IC7805, 5V, 1A	8-100S-011-11
IC701	IC 74LS86, EXCL-OR	086X0313-001
IC703	IC LA7850 H/V SYNC PROC SANYO	086X0274-001
IC501	IC PWM, UC3842AN	086X0257-001
IC201	IC LM1203N, RGB, VID, AMP, NSC	086X0270-001

TRANSFORMERS

DESIGNATION	DESCRIPTION	PART NO.
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L1	COIL PINCUSHION	1-459L-004-11
L2	COIL LINEARITY	1-459L-001-11
T601	SWITCHING TRANSFORMER	1-441T-004-11
T703	FLYBACK TRANSFORMER	1-439T-002-11

TRANSISTORS

DESIGNATION	DESCRIPTION	PART NO.
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Q301	TRANSISTOR 2SC458C	8-100X-005-91
Q307, Q310, Q313	TRANSISTOR 2SB716A	8-100X-008-91
Q302, Q303, Q304	TRSTR 2N2369, MOT	086X0157-001
Q306, Q309, Q312	TRANSISTOR 2S756A	8-100X-014-91
Q305, Q308, Q311	TRANSISTOR 2SC3788	8-110X-013-11
Q1	TRSTR 2N3904 MOT	086X0113-501
Q2	TRSTR 2N3906 MOT	086X0114-501
Q3	TRSTR 2SD525R	086X0074-001
Q601	TRSTR N-MOSFET 6N60	086X0334-001
Q602	TRSTR 2SB857C/TIP 127	8-100X-011-11
Q603, Q803	TRSTR 2SC1921C	8-100X-101-91
Q701	TRSTR 2SA1015GR	8-100X-002-11
Q702	TRSTR 2SC458C	8-100X-005-11
Q703, Q805	TRSTR 2SC1213C	8-100X-004-11
Q704	TRSTR 2SD667AC	8-100X-007-91
Q705	TRSTR 2SC4123	8-100X-003-11
Q804	TRSTR 2SB649AC	8-100X-006-11

VARIABLE POTENTIOMETERS

DESIGNATION	DESCRIPTION	PART NO.
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VR603	VR, 1K OHM	1-121R-024-11
VR2	VR, 5K OHM	1-212R-023-11
VR200, VR700	VR, 10K OHM	1-221R-008-11
VR201	VR, 20K OHM	1-221R-025-11
VR601	VR, 100K OHM	1-221R-007-11

MISCELLANEOUS

DESIGNATION	DESCRIPTION	PART NO.
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R604	RES .33 OHM 5%, 1W, WW	043X0477-008
R601	CEMENT RES 4.7 OHM 7W	1-218R-017-11
F601	FUSE 3.15A 5X20 IEC/UL SLO-BLO	016X0211-009
CRT	CRT 14 INCH, M34KXG30X55	088X0379-001
CRT	CRT 19 INCH, A48ACB24X	088X0290-506