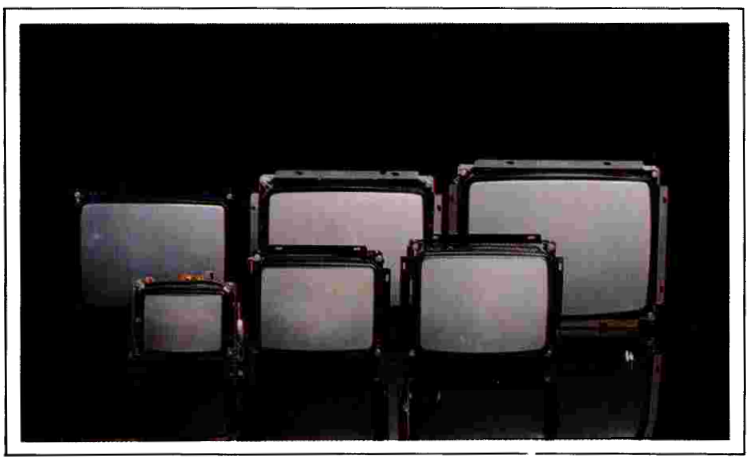
HANTAREX

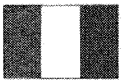
ELECTRONIC SYSTEMS

MONITORS MTC 9000 14"-16"-20"

- MANUALE DI SERVIZIO
- SERVICE MANUAL
- HANDBUCH
- MANUAL DE SERVICIO
- MODE D'EMPLOI



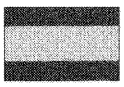
INDICE / INDEX / INHALTSVERZEICHNIS / INDICE / SOMMAIRE



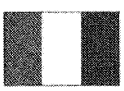
ITALIANO: da pag. 3 a pag. 11

ENGLISH: from page 12 to page 20

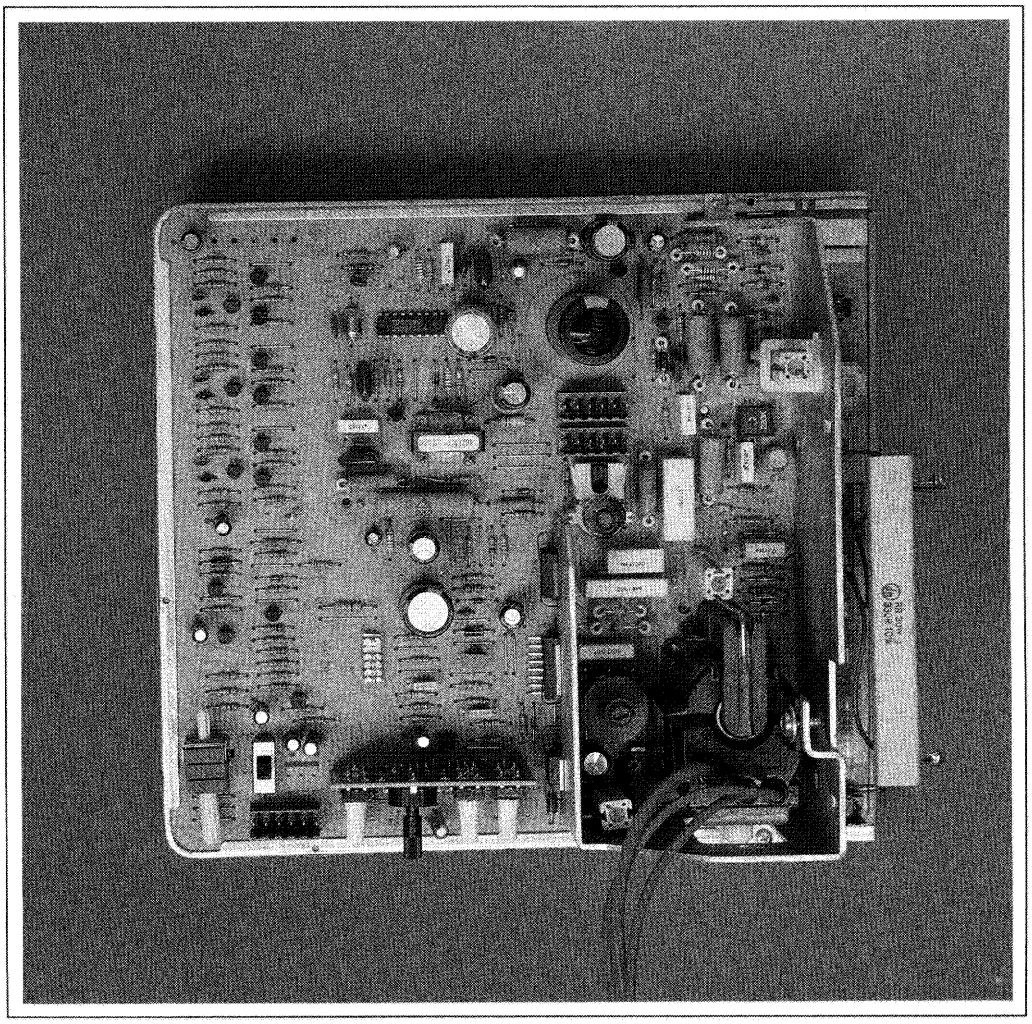
DEUTSCH: von Seite 21 bis Seite 29



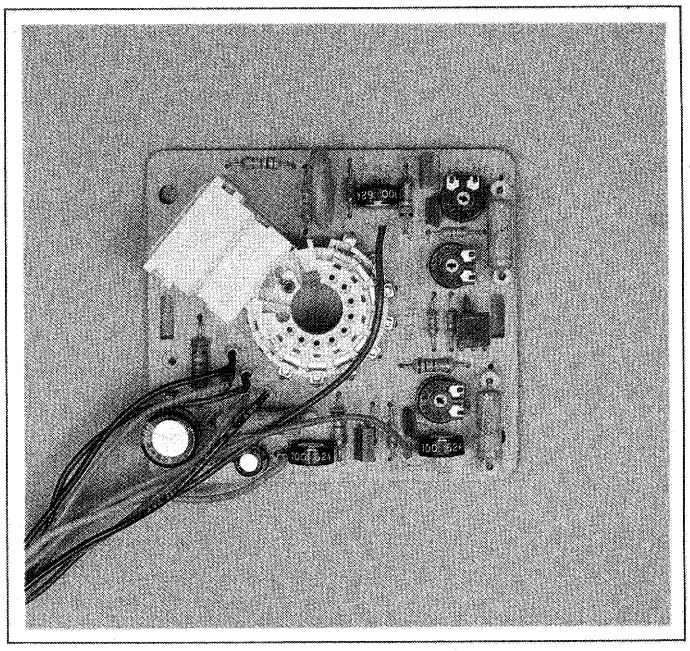
ESPAÑOL: de pag. 30 a pag. 38



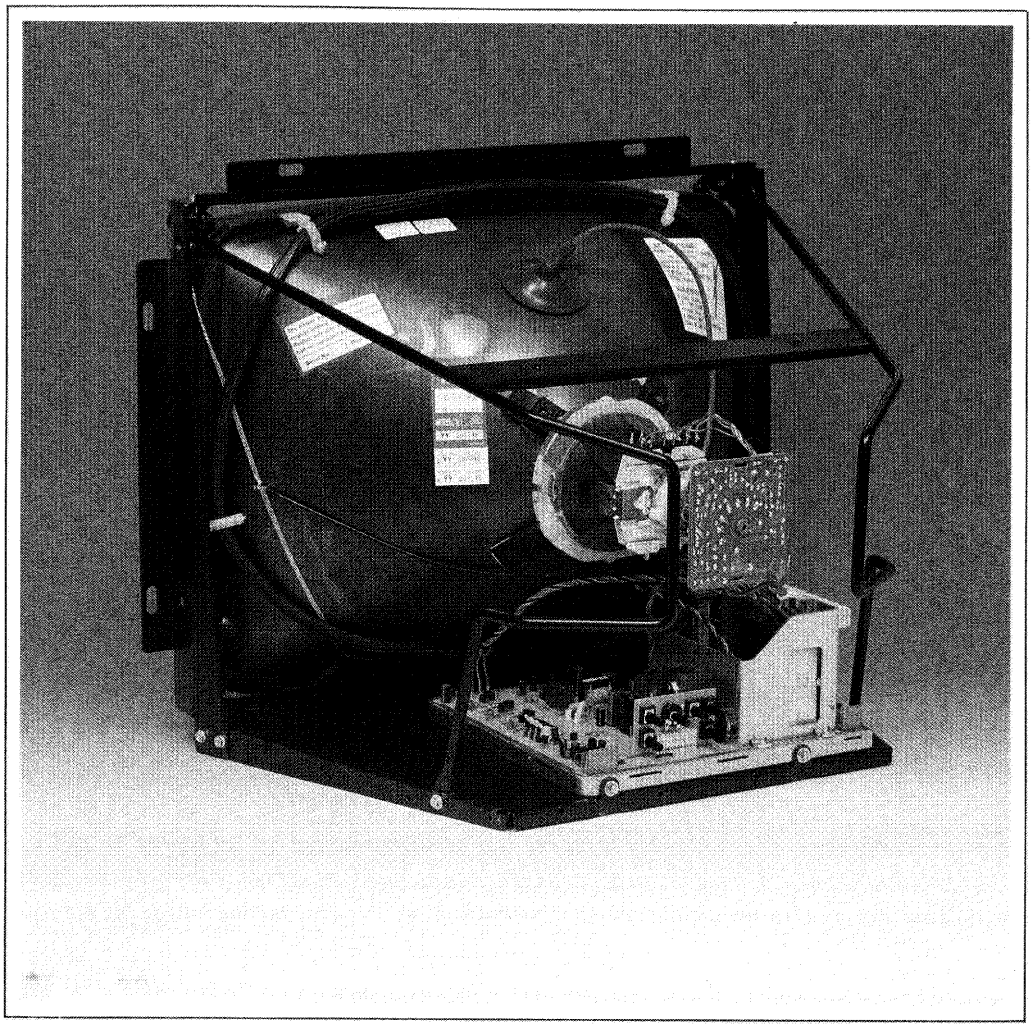
FRANÇAIS: de la page 39 à la page 47



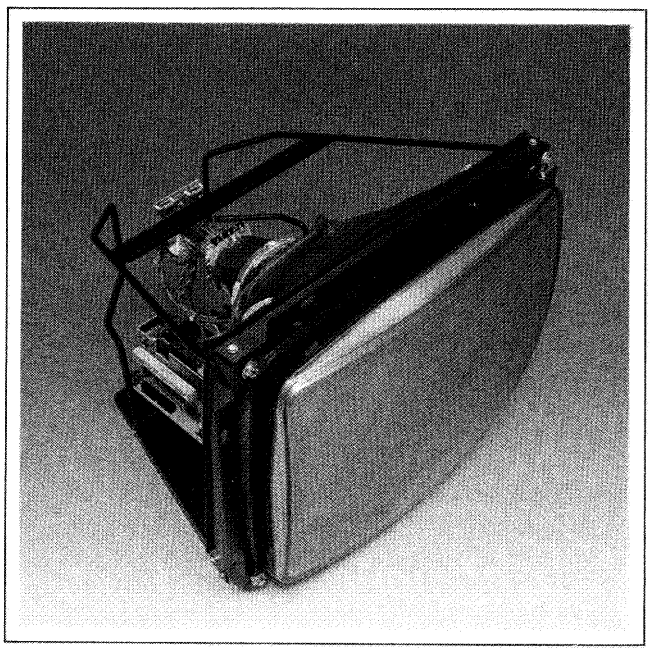
Piastra madre / Mother board



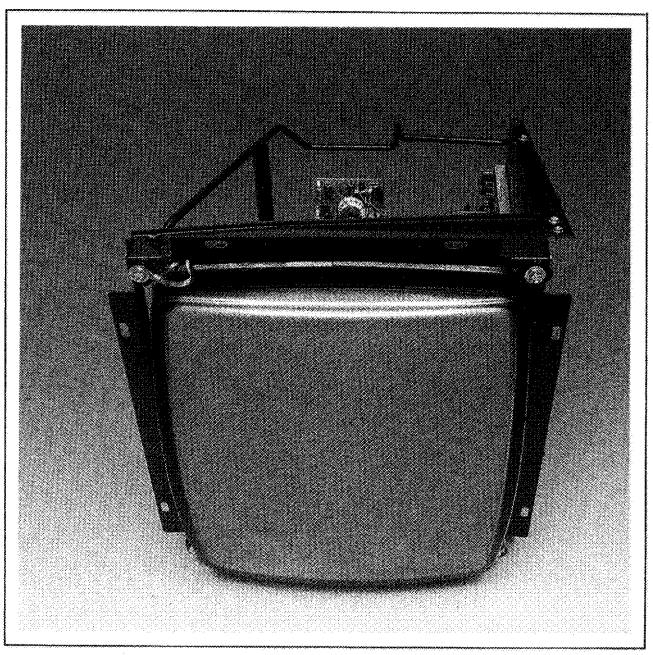
Assieme zoccolo cinescopio / *C.R.T. socket assembly*



MTC9000 vista posteriore / Rear view



MTC9000 posizione orizzontale / Horizontal position



MTC9000 posizione verticale / Vertical position

DETAILS AND INNOVATIONS OF THE MTC 9000

1) The MTC 9000 monitor has been designed for maximum versatility, so allowing it to be used with almost any logic board.

2) The 'monolithic' construction, using a single printed circuit board, makes maximum use of the automatic insertion of components, which, being free of human error, guarantees a high level of production uniformity coupled with a high level of reliability.

3) Completely new mechanical design with the specific object of making the unit extremely resistant to impact and vibration during transportation.

4) Use of two connectors (CL and CM on the printed circuit board) for the deflexion unit with cross-over wiring which permits easy inversion and reversal of the image — often an indispensable feature.

5) Use of a special circuit in the power supply section, which, in the event of the mains supply falling below the point where the regulator operates, the supply is transformed from the 'regulated' condition to that of an anti-ripple circuit. This permits the use of the monitor under very adverse mains supply conditions.

6) All the controls which affect the display (horizontal and vertical frequency, horizontal and vertical amplitude, horizontal phase and vertical shift) are mounted on a small separate p.c.b. which is normally plugged into a connector on the main board, but may be used in conjunction with a 1.5 metre long extension cable that is available on request. This allows the control card to be mounted in a specially moulded mounting bracket in a position where the operator can easily adjust the monitor while directly viewing the image.

7) The video input is fed via a precision three-gang potentiometer permitting acceptance of input signals in the range 1 to 5 V p.p. without creating changes in colour balance.

8) The MTC 9000 is mechanically and electrically interchangeable with the earlier Hantarex monitors MTC 900 and MTC 900E with respect to input signal, input power, deflexion connexions and fixing points. For further details see page 18.

9) Utilization of a new integrated circuit for vertical deflexion (TDA 1670A) resulting in the short vertical fly-back time of 0.7 ms, so extending the range of logic board usage.

10) Incorporation of a new integrated circuit in the horizontal sync. circuitry. This I.C. guarantees a positive protection against x-ray radiation and conforms with the principal international public health regulations, such as F.D.A. Federal Drug Administration.

WARNING

1) SUPPLY
The input supply of the monitor (128 V a.c.) must be fed via a mains isolating transformer.

2) EARTHING
The chassis and the heat sinks are connected to earth. To measure voltages and to inspect waveforms, connect the negative terminals of instruments to the chassis.

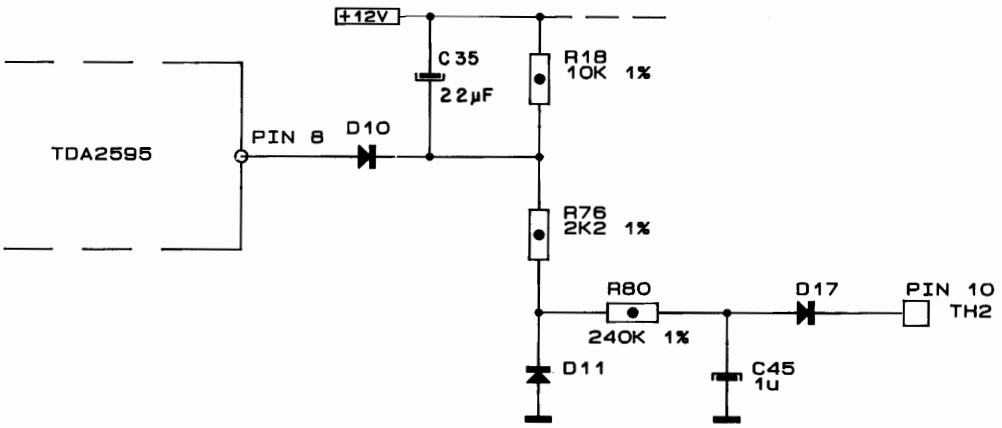
3) X-RAYS
The monitor has been designed to minimize x-ray radiation. Furthermore, a special safety circuit comes into operation in the event of failure to limit radiation to below 0.5 mR/h.

4) E.H.T.
Dangerously high voltages are present inside the monitor, and for safe operation it is imperative to follow all safety instructions and warnings.

5) C.R.T.
The cathode-ray tube is a high vacuum device and its surfaces are subject to high external pressure. It is therefore necessary to handle the tube with care and to avoid impact which could cause implosion. It follows that personnel handling cathode-ray tubes during installation or during replacement, should wear thick gloves and protective clothing to protect against possible flying glass splinters.

6) WEATHER PROTECTION
To avoid the possibility of electric discharge, do not expose the monitor to rain or excessive humidity.

PROTECTION AGAINST X-RAY RADIATION



(D.H.H.S. accession n. 8720899)

The MTC 9000 monitor contains an x-ray protection circuit. A reference voltage is generated from the E.H.T. transformer and is fed via a resistive divider to pin 8 of I.C. TDA 2595.
The voltage appearing at pin 8 is compared with an accurate reference voltage within the I.C., and if the E.H.T. exceeds 28 kV the voltage at pin 8 operates a trigger circuit which inhibits the oscillator and hence the generation of the E.H.T.
The circuit continues to block the oscillator until the cause of the failure has been repaired, and can only be reset by completely switching-off the monitor and switching-on again.

TECHNICAL CHARACTERISTICS

1) SUPPLY
128 V a.c. +10 —20%, 50/60 Hz
The supply to the monitor must be via an isolating transformer with the following characteristics: primary 220/240 V a.c., secondary 128 V a.c. 100 VA.

2) POWER CONSUMPTION
100 W max.

3) DEGAUSSING
220/240 V a.c. automatic at switching-on.
To change to manually controlled degaussing, remove bridge P34 and insert a twin cable of the desired length into connector CD terminated in a push-button switch, enabling degaussing to be effected at any time.

4) VIDEO INPUT SIGNALS
RGB positive-going with an input impedance of 2.2 kOhm. Input sensitivity from 1 to 5 V p.p. Input connexions as shown on page 49.
For negative-going input signals refer to the description of the «Video Inverter» on page 17.

5) VIDEO PASS BAND
-3 dB at 12 MHz

6) HORIZONTAL BLANKING
12 us

7) VERTICAL BLANKING
1 ms

8) SYNC. SIGNALS
Horizontal and vertical, positive or negative, composite or separate. Input impedance 2.2 kOhm. Input level between 1.5 and 5 V p.p. Input connexions as shown on page 49.
Selection of positive or negative input is made by switch SW4 (see page 49).

9) SCANNING FREQUENCIES
Horizontal 15.625 ± 0.5 kHz: adjustable.
Vertical 45-65 Hz: adjustable.

10) CONTROLS
Contrast, brightness, focus, horizontal frequency, horizontal phase, horizontal amplitude, horizontal linearity, vertical frequency, vertical shift and vertical amplitude. For further details see page 49.

INSTALLATION AND SETTING-UP INSTRUCTIONS

1) SUPPLY
Check that the h.t. line voltage of the monitor at test point TP10 is 130 V d.c. ± 3%.

2) HORIZONTAL OSCILLATOR
Remove the incoming sync. signal (for which one may use SW4) and turn RV5 to obtain a stationary image. Reconnect the sync. input signal.

3) VERTICAL OSCILLATOR
Adjust RV1 to obtain a slow roll-over of the image in a downward direction. Turn back until the image locks.

4) FEED VOLTAGE TO VERTICAL DEFLEXION CIRCUIT
Check that the voltage at TP13 is 26 V d.c. ± 5%. See page 51.

5) FEED VOLTAGE TO VIDEO AMPLIFIER
Check that the voltage at TP1 is 24 V d.c. ± 5%. See page 51.

6) FEED VOLTAGE TO VIDEO OUTPUT AMPLIFIER
Check that the voltage at TP14 is 200 V d.c. ± 5%. See page 51.

7) ADJUSTMENT OF BRIDGE COIL
Bridge Coil B3 is adjusted on the production line, but should it become necessary to re-adjust, the following procedure should be adopted:
a) Adjust RV4 on board CG for minimum horizontal amplitude.
b) Adjust the ferrite core of B3 for minimum horizontal amplitude.
c) Re-adjust RV4 to obtain the desired amplitude.

8) ADJUSTMENT OF GAIN OF RGB VIDEO OUTPUT STAGES
Having inserted RGB signals of equal amplitude to the inputs, turn the blue gain control RV206, located on the c.r.t. neck board ZG, to its mid-position and adjust the Contrast Control P1 so that the video signal measured with an oscilloscope at the blue cathode is 100 V p.p. Adjust the signals at the cathodes of the red and green guns to the same value by adjustment of RV202 and RV201. See page 49.

9) ADJUSTMENT OF «WHITE»
a) Remove the video input signal.
b) Turn RV7 on the c.r.t. grid 1, to maximum brightness.
c) Turn the black level controls situated on the c.r.t. neck board, RV203 red, RV204 green and RV205 blue, to minimum (clockwise).
d) Reduce the brightness by adjusting the voltage on grid 2 by means of the control situated on the line output transformer TH2 so that the dominant colour is only just visible, and then adjust the black level controls to obtain the best white possible.
e) The G2 «Screen» potentiometer functions as the brightness control.

10) FOCUS
Adjust the focus control (FOCUS situated on the line output transformer TH2) using a dot pattern signal, with medium brightness, to give the best focus obtainable.

11) HORIZONTAL LINEARITY
Using a grid pattern signal, adjust for the last square on the right to be equal in size to the first square on the left.

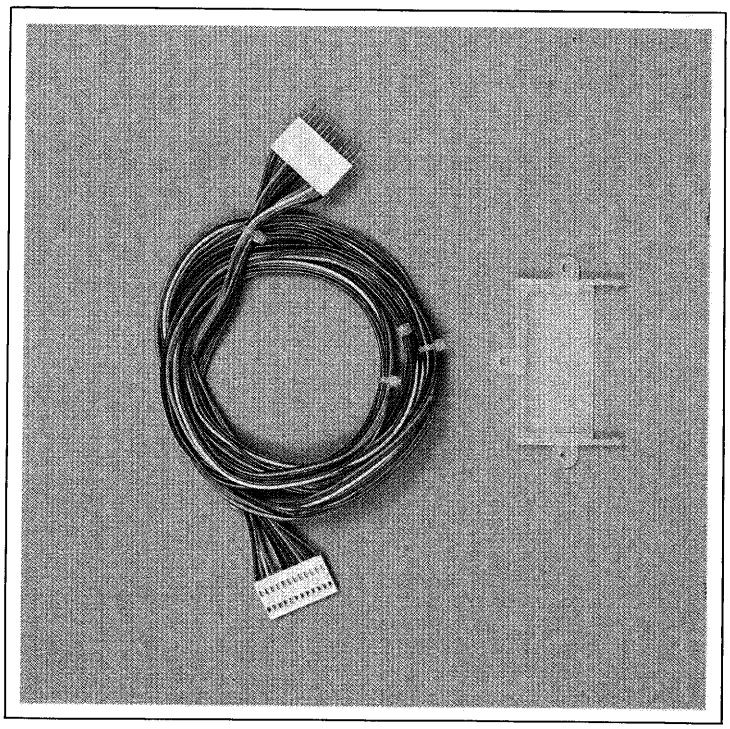
OPERATING INSTRUCTIONS

1) Insert the supply cable to the power input connector CC. See page 49.
2) Insert the signal and sync. cable to the input connector CA. See page 49.
3) Set sync. selector switch SW4 to positive or negative according to the type of input signal, so as to obtain a locked image horizontally and vertically. See page 49.
4) Next adjust vertical amplitude, vertical frequency, horizontal amplitude, horizontal phase, vertical shift, horizontal frequency, brightness and contrast to match the applied signal. See page 49.

Finally it may be necessary to trim to the colour and white adjustments. See para. 8 and 9 page 15.

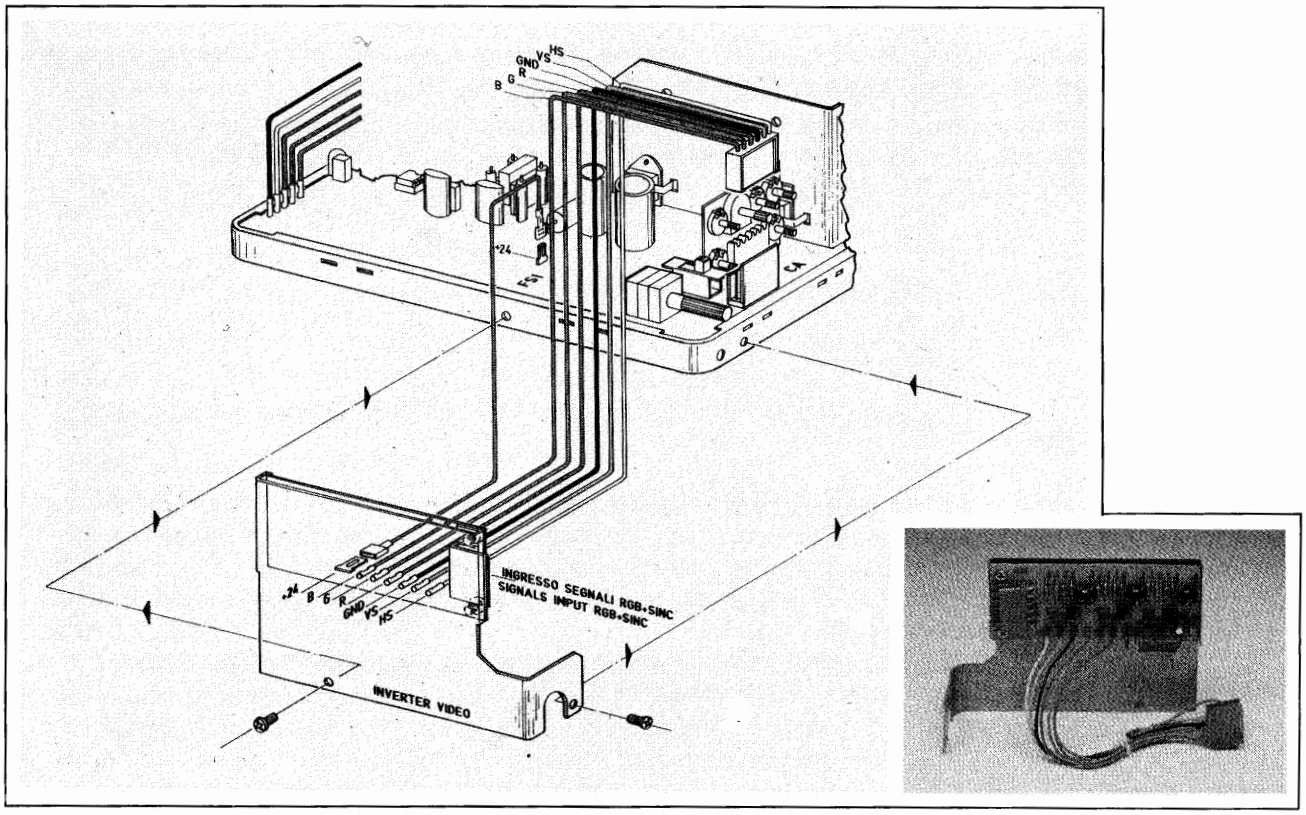
REMOTE CONTROL

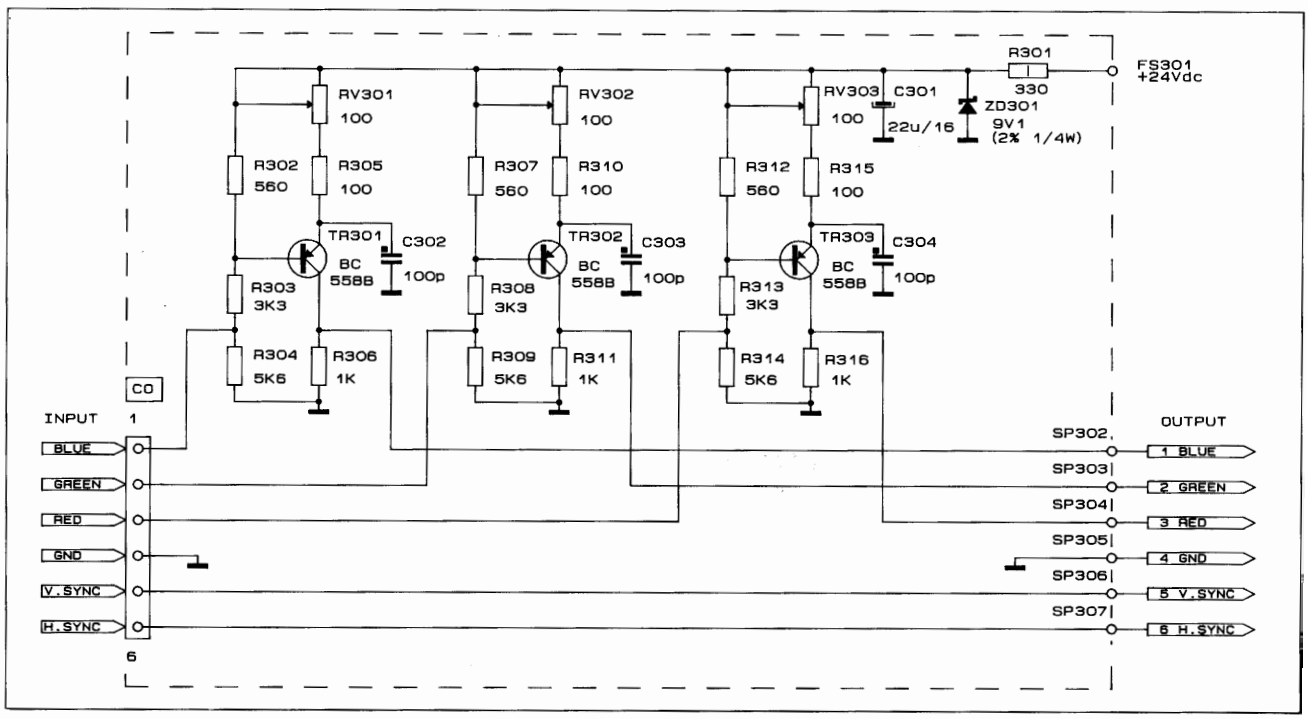
The following controls are all mounted on a small printed circuit board CG: vertical frequency, vertical amplitude, vertical shift, horizontal frequency, horizontal phase, horizontal amplitude. The board is fitted with a socket connector which is plugged into a mating plug connector CF on the main board, and may be removed and re-connected via a 1.5 metre cable (available on request) enabling the operator to adjust all those controls from the front of the monitor.
The cable and the special plastic support frame for remotely mounting the control board can be ordered by quoting part no. 62008440 Remote Control Assembly.



INVERTER VIDEO

To enable the MTC 9000 to be used with negative going input signals, HANTAREX has designed an interface board which mounts directly into the framework of the monitor. The board is supplied complete with circuit diagram, mounting instructions and connexions to the monitor. To order, quote part no. 63000160 Inverter Video.



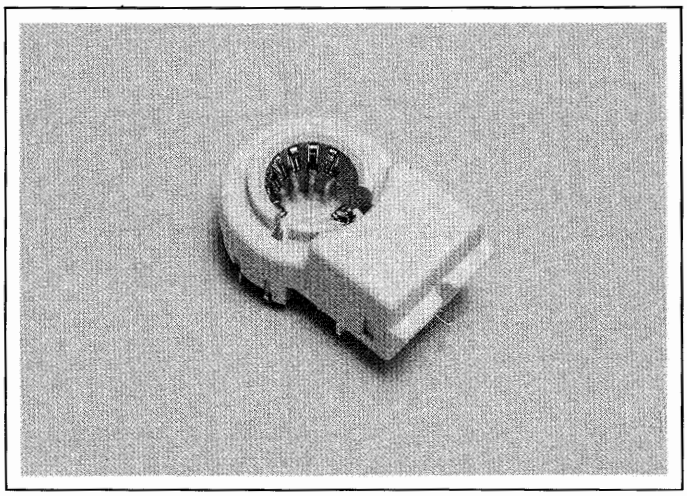


INFORMATION ON THE INTERCHANGEABILITY OF THE MTC 9000 WITH THE EARLIER MTC 900 AND MTC 900E.

HOSIDEN C.R.T. SOCKET

1) ADAPTATION OF THE C.R.T. SOCKET TO THE VARIOUS TYPES USED IN HANTAREX PRODUCTION.

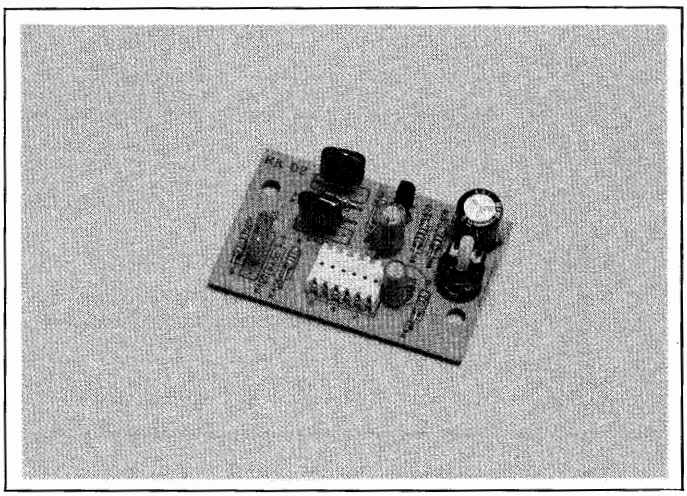
Current production of the MTC 9000, whether 14'', 16'' or 20'', uses the c.r.t. socket type JEDEC B 10-277 (PH) for use with tubes manufactured by PHILIPS, ORION, SAMSUNG, TOSHIBA and VIDEOCOLOR type A51-427X.
For interchangeability with previous types of c.r.t. used in MTC 900 and MTC 900E monitors fitted with c.r.t. socket JEDEC B8-274 (S4), the corresponding plastic socket should be ordered and substituted for that already mounted by unsoldering and re-soldering with the replacement, so avoiding substitution of the whole neckboard assembly. To order, quote part. no. 34020170 Hosiden Socket type S4.



EAST/WEST CORRECTION

2) ADAPTATION OF THE MTC 9000 TO THE EARLIER MTC 900 AND MTC 900E FITTED WITH EAST/WEST CORRECTION.

The MTC 9000, whether 14'', 16'' or 20'', has been designed with circuitry to allow for the remote control of many parameters, and the same circuitry also permits the insertion of a small board for east/west correction without alteration to the main board in those cases where this is necessary.
The board is provided with a 5-pin socket connector which is plugged into a mating plug connector CH on the main board. To order, quote part no. 62008060 East-West.



PARTS LIST

MAIN P.C.B. ASSEMBLY MTC9000 14''16''20''

CODE	DESCRIPTION	REF.NO.	Q.TY
20110300	ZENER DIODE 1.3 W ZY 100	ZD2	1
20150150	DIODE BY 584 (BY 184)	D27	1
20150170	DIODE BYV 95/C - 600	D13	1
20150210	DIODE BY 228	D12	1
20410100	TRANSISTOR BDX 53 A	TR17	1
20430320	TRANSISTOR BU 508 A	TR15	1
20430470	TRANSISTOR TIPL 762	TR20	1
20430570	TRANSISTOR BU 801	TR19	1
20670270	INTEGRATED CIRCUIT TDA 2595	IC2	1
20670950	INTEGRATED CIRCUIT TDA 1670A	IC1	1
21000037	PHILIPS PTC 2322.662.96009 220V	PTC1	1
21351601	METAL FILM RES. 16K 1% 1/2W	R113-114	2
21416800	METAL OXIDE RESISTOR 6.8E 5% 1W	R120	1
21452200	METAL OXIDE RESISTOR 22K 5% 1W	R107	1
21453300	METAL OXIDE RESISTOR 33K 5% 1W	R110	1
21454700	METAL OXIDE RESISTOR 47K 5% 1W	R119-72	2
21541001	METAL OXIDE RESISTOR 1K 5% 2W	R73-82	2
21621000	METAL OXIDE RESISTOR 10E 5% 3W	R111-112	2
21651200	METAL OXIDE RESISTOR 12K 5% 3W	R101	1
21744700	METAL OXIDE RESISTOR 4.7K 10% 4W	R95	1
22142200	METAL OXIDE RESISTOR 2.2K 5% 5W	R74	1
22414700	WIREWOUND RESISTOR VERT. 4.7E 5% 9W	R81	1
22451000	WIREWOUND RESISTOR 10K 10% 9W	R97	1
22712200	WIREWOUND RESISTOR 2.2E 10% 17W	R99	1
22933300	AXIAL WIREWOUND RES. 330E 10% 30W	R105	1
23062203	CARBON TRIMMER 220K HORIZ. PT10V	RV7	1
23241009	POTENTIOMETER 1K 232250590002	P1	1
24341000	RADIAL ELECT. CAPACITOR 1000MF 16V	C15-16	2
24514702	RADIAL ELECT. CAPACITOR 4,7MF 50V	C42	1
24541000	RADIAL ELECT. CAPACITOR 1000MF 35V	C57	1
24822201	RADIAL ELECT. CAPACITOR 22MF 160V	C34	1
24922200	RADIAL ELECT. CAPACITOR 22MF 200V	C54	1
24934710	RADIAL ELECT. CAPACITOR 470MF 200V	C53	1
25144703	FILM CAPACITOR 4,7NF 63V 5%	C28	1
25362200	FILM CAPACITOR 1.60 220NF 160V 10%	C47	1
25461010	FILM CAPACITOR 1.60 100NF 250V 10%	C43	1
25464710	FILM CAPACITOR 1.76 470NF 250V 10%	C37	1
25551000	FILM CAPACITOR 1.60 10NF 400V 10%	C46	1
25651200	FILM CAPACITOR 1.73 12NF 630V 10%	C41	1
25746802	FILM CAPACITOR 1.73 6.8NF 1500V 5%	C40	1
25751002	FILM CAPACITOR 1.58X10NF 250VCA 20%	C52	1
25761002	FILM CAPACITOR 1.58X100NF 250VCA 20%	C48	1
25943302	FILM CAPACITOR 1.73 3.9NF 1500V 5%	C36	1
26422608	CERAMIC CAPACITOR —20 + 50 2,2NF 500V	C50-51-55-49	4
28010590	DRIVER TRANSFORMER AT4043/01	TH1	1
28021210	BRIDGE COIL UTF49	B3	1
28025170	LINEARITY COIL UTF67	B1	1
28026030	TRANSFORMER E.H.T., 1105-E048	TH2	1
29100000	TIME-DELAY FUSE 2 A	F1	1
29100009	TIME-DELAY FUSE 3,15 A	F2	1
29100150	FUSE HOLDER C10 6A 250V		2
30000450	SWITCH. CHANG. SWITCHCRAFT KSA2251	SW4	1
34010061	FASTON LUG.M. TE115 2,8 x 0,8	SF1	1
34023352	AMP CONNECTOR MOD. 1-2 D280609/1	CD-CE	2
34023354	AMP CONNECTOR MOD. 1-4 D280610/1	CC	1
34023356	AMP CONNECTOR MOD. 1-6 D280611/1	CL-CM-CA	3
34075080	5WAY MALE CONN. PRESSAC UTH1859	CH	1
34075090	11WAY MALE CONN. PRESSAC UTH1861	CF	1
43000011	SPRING x TO220 UTH38		4
43000100	SPRING x RESISTOR 30W UTH635		2
50110140	RESISTOR BRACKET UTH601		4
50116101	HEATSINK X MTC9000 UTH1569		1
50116111	MTC9000 MAINFRAME UTH1129		1
50420225	SPINDLE, CONTRAST CONTROL KL1-7503		1
50424220	TO3 INSULATOR UTH1986		2
50424230	TO220 ISULATOR UTH1987		1
50424310	INTEGRATED CIRCUIT INSUL. UTH2047		1
50424640	MTC9000 MAIN PROTECTION UTH2044		1
20400469	TRANSISTOR BC639	TR14-18-22	3
20401029	TRANSISTOR BC548 B	TR2-3-5-6-8-9-10-13	8
20401039	TRANSISTOR BC 558 B	TR1-4-7-11-12-16	6
20420219	TRANSISTOR BF 422	TR21	1
24324709	RADIAL ELECT. CAP. 47MF 16V SM	C6-14	2
24421009	RADIAL ELECT. CAP. 10MF 25V SM	C20-18-17-19-58	5
24422209	RADIAL ELECT. CAP. 22MF 25V SM	C35	1
24531009	RADIAL ELECT. CAP. 100MF 35V SM	C9-59	2
24611009	RADIAL ELECT. CAP. 1MF 63V SM	C23-38-22	3
24811009	RADIAL ELECT. CAP. 1MF 160V SM	C56	1
24911009	RADIAL ELECT. CAP. 1MF 200V	C45	1
25161019	FILM CAPACITOR 1.85 100NF 63V 5%	C12-13	2
25163319	FILM CAPACITOR 1.85 330NF 63V 5%	C10	1
25244719	MYLARD CAP. 4.7NF 100V 10%	C32	1
25251029	MYLARD CAP. 10NF 100V 10%	C24-25	2
25252209	FILM CAPACITOR 1.85 22NF 100V 10%	C30	1
25261009	MYLARD CAP. 100NF 100V 10%	C31-26	2
25262219	FILM CAP. 22.365 220NF 100V 10%	C27-33-11	3
26215109	CER.CAP.NP0 50V 15PF RTHE40SKCH150J	C1-3-5	3
26310109	CER.CAP.NP0 50V 100PF RTHE80SKCH101J	C2-4-7	3
26347109	CER.CAP.10% 50V470PF RTHE40SKYB471K	C8	1
26610609	CER.CAP.-20 + 80 50V 100NF RTDSK11SKYF104Z	C29	1
20100000	DIODE 1N 4148	D4-2-1-8-10-6-25-26-11	9
20110101	ZENER DIODE 1.3 W ZPY 12 2%	ZD1	1
20110600	ZENER DIODE 2% BZX 79 B5V6	ZD3	1
20130060	DIODE BAV 20	D16-28	2
20150004	DIODE 1N 4004	D3-5-24	3
20150460	DIODE BYD 33G	D23-17-15-18-14	5
20150480	DIODE GP 15 G	D21-22-19-20	4
21211801	METAL LAYER RES. 1.8E 1% 1/4W	R46	1
21212200	CARBON RESISTOR 2.2E 5% 1/4W	R36	1
21224700	CARBON RESISTOR 47E 5% 1/4W	R8-18-28-79	4
21225600	CARBON RESISTOR 56E 5% 1/4W	R11-21-33	3
21228200	CARBON RESISTOR 82E 5% 1/4W	R3-13-20	3
21231200	CARBON RESISTOR 120E 5% 1/4W	R44-22-34-12	4
21232700	CARBON RESISTOR 270E 5% 1/4W	R71	1
21233300	CARBON RESISTOR 330E 5% 1/4W	R32	1
21234700	CARBON RESISTOR 470E 5% 1/4W	R54-56-60	3
21241000	CARBON RESISTOR 1K 5% 1/4W	R31-64-24-4-52-27-17-7	8
21241000	CARBON RESISTOR 1K 5% 1/4W	R37-65-43	3
21241200	CARBON RESISTOR 1.2K 5% 1/4W	R109	1
21241500	CARBON RESISTOR 1.5K 5% 1/4W	R118	1
21241601	METAL LAYER RES. 1.6K 1% 1/4W	R115	1
21241800	CARBON RESISTOR 1.8K 5% 1/4W	R47	1
21242200	CARBON RESISTOR 2.2K 5% 1/4W	R108-51-61-23-53-15-10	7
21242200	CARBON RESISTOR 2.2K 5% 1/4W	R83-100-2-106	4
21242202	METAL LAYER RES. 2.2K 1% 1/4W	R76	1
21242700	CARBON RESISTOR 2.7K 5% 1/4W	R45	1
21243300	CARBON RESISTOR 3.3K 5% 1/4W	R127	1
21244700	CARBON RESISTOR 4.7K 5% 1/4W	R9-19-30-63-39-96	6
21245600	CARBON RESISTOR 5.6K 5% 1/4W	R66	1
21246800	CARBON RESISTOR 6.8K 5% 1/4W	R88-86	2
21248200	CARBON RESISTOR 8.2K 5% 1/4W	R98	1
21251000	CARBON RESISTOR 10K 5% 1/4W	R35-85-87-25-48-121	6
21251002	METAL LAYER RES. 10K 1% 1/4W	R78	1
21251200	CARBON RESISTOR 12K 5% 1/4W	R69	1
21251202	METAL FILM RES. 12K 1% 1/4W	R38	1
21252200	CARBON RESISTOR 22K 5% 1/4W	R123	1
21253300	CARBON RESISTOR 33K 5% 1/4W	R84	1
21253900	CARBON RESISTOR 39K 5% 1/4W	R70	1
21254700	CARBON RESISTOR 47K 5% 1/4W	R75-91-1	3
21258201	METAL LAYER R. 82K 1% 1/4W	R42	1
21261000	CARBON RESISTOR 100K 5% 1/4W	R67	1
21261200	CARBON RESISTOR 120K 5% 1/4W	R68-40	2
21261500	CARBON RESISTOR 150K 5% 1/4W	R5-16-26	3
21261800	CARBON RESISTOR 180K 5% 1/4W	R103	1
21264700	CARBON RESISTOR 470K 5% 1/4W	R41-93-92	3
21266800	CARBON RESISTOR 680K 5% 1/4W	R102	1
21313901	RESISTOR, NON-FLAMMABLE, 3.9E 5% 1/2W	R94	1
21323300	CARBON RESISTOR 33E 5% 1/2W	R6	1
21324700	CARBON RESISTOR 47E 5% 1/2W	R126	1
21334700	CARBON RESISTOR 470E 5% 1/2W	R29	1
21341000	CARBON RESISTOR 1K 5% 1/2W	R104	1
21342200	CARBON RESISTOR 2.2K 5% 1/2W	R89	1
21362700	CARBON RESISTOR 270K 5% 1/2W	R90	1
21371004	METAL FILM RESISTOR 1M 5% 1/2W VR 37	R77	1
50146210	C.R.T. NECK BOARD ASSEMBLY, MTC9000/3 BZ01		1

CRT SOCKET ASSEMBLY MTC9000 14''16''20'' code 62008433

CODE	DESCRIPTION	REF.NO.	Q.TY
20420110	TRANSISTOR BF 459	TR201-202-203	3
21411000	METAL OXIDE RES. 1E 5% 1W WK4	R216	1
21551000	METAL OXIDE RES. 10K 5% 2W	R205-206-210	3
23034706	TRIMMER VERT. REG. 470E PT10NH	RV201-202-206	3
23044700	CARBON TRIMMER HOR. REG. 4.7K PT10V	RV203-204-205	3
24921000	RADIAL ELECT. CAPACITOR 10 MF 250V	C205	1
26468720	CERAMIC CAP. 507.6 6.8NF 2KV 20%	C206	1
29300010	SOAPSTONE INSULATORS 8 M.M.		6
34010061	FASTON LUG M.FACO TE115 2.8 x 0.8	FS201	1
34020590	SOCKET, HOSIDEN HPS0199-020		1
50423440	HEXAGONAL SHAFT PHILIPS 822241771060		3
53840180	SOC. SHIELDING 9000 EUROPA UTH1852		1
61002270	SOC.WIRING ASS. MTC900/E UTC241		1
61005060	SOC. SIGNALS WIRING MTC9000 UTC527		1
24522209	RADIAL ELECT. CAPACITOR 22uF 35V SM	C201	1
26318109	CERAMIC CAP. 10% 50V 180PF RTHE40SKYB181K	C202-203-204	3
21212200	CARBON RESISTOR 2,2E 5% 1/4W	R201	1
21238200	CARBON RESISTOR 820E 5% 1/4W	R203-207-209	3
21244700	CARBON RESISTOR 4,7K 5% 1/4W	R204-208-211	3
21341000	CARBON RESISTOR 1K 5% 1/2W	R213-214-215	3
21342200	CARBON RESISTOR 2,2K 5% 1/2W	R217	1
21351000	CARBON RESISTOR 10K 5% 1/2W	R218	1
50144841	CRT SOCKET P.C.B. MTC9000 ZG 06		1

CONTROLS P.C.B. ASSEMBLY MTC9000 14''16''20'' code 62007750

CODE	DESCRIPTION	REF.NO.	Q.TY
21332700	CARBON RESISTOR 270E 5% 1/2W	R116	1
21333300	CARBON RESISTOR 330E 5% 1/2W	R117	1
23041009	SEALED TRIMMER 1K HORIZ. REG. PT15NV	RV3	1
23044710	SEALED TRIMMER 4,7K HORIZ.REG.PT10NV	RV1	1
23051013	SEALED TRIMMER 10K HORIZ.REG.PT10NV	RV4-5-6	3
23062207	SEALED TRIMMER 220K HORIZ.REG.PT10NV	RV2	1
34075095	11 WAYFEMALE CONN. PRESSAC UTH1862	CG	1
34075290	POLARIZATION KEY 12/3768		1
50144830	CONTROLS P.C.B. MTC9000 CG		1
50423430	SHAFT PT15		1
50423440	HEXAGONAL SHAFT PHILIPS 822241771060		5

POWER IN WIRING ASSEMBLY MTC9000 14''16''20'' code 61000120

CODE	DESCRIPTION	Q.TY
34020002	AMP FEMALE LUGS 280702/1	4
34023404	AMP CONNECTOR 4 F 280591	1

SIGNALS INPUT WIRING ASSY MTC9000 14''16''20'' code 61000140

CODE	DESCRIPTION	Q.TY
34020002	AMP FEMALE LUGS 280702/1	6
34023406	AMP CONNECTOR 6 F 280592	1

C.R.T. ASSEMBLY MTC9000 14''

CODE	DESCRIPTION	Q.TY
20810085	C.R.T., 14'' SR, SAMSUNG, 3708B22 TC24	1
43000030	SPRING, C.R.T., EARTHING, UTH 634	1
43000070	HOOK, WIRE, DEGAUS. COIL, UTH 156	1
50113260	HOOK, DEGAUSSING COIL, UTH 783	2
50113270	SPRING, TENS., DEGAUS. COIL, UTH 784	1
61002290	GROUNDING BRAIRED WIRE ASSY MTC9000 UTC 244	1

C.R.T. ASSEMBLY MTC9000 16''

CODE	DESCRIPTION	Q.TY
20810065	C.R.T., 16'' SR, PHILIPS, A42-590X 3620	1
43000030	SPRING, C.R.T., EARTHING, UTH 634	1
43000080	SPRING TENSION, UTH 157	1
50113260	HOOK, DEGAUSSING COIL, UTH 783	2
50420640	CLEAT, CABLE, 32-0011-1150,OL.3812112	1
61002300	GROUNDING BRAIRED WIRE ASSY MTC9000 UTC 243	1

C.R.T. ASSEMBLY MTC9000 20''

CODE	DESCRIPTION	Q.TY
20810027	C.R.T., 20'' SR, PHILIPS, A51-590X-3620	1
43000030	SPRING, C.R.T., EARTHING, UTH 634	1
43000070	HOOK, WIRE, DEGAUS, COIL, UTH 156	3
43000080	SRPING TENSION, UTH 157	1
50420640	CLEAT, CABLE, 32-0011-1150 OL.3812112	1
61002350	GROUNDING BRAIRED WIRE ASSY MTC9000 UTC 239	1

YOKE WIRING ASSEMBLY MTC9000 14''16''20'' code 61001070

CODE	DESCRIPTION	Q.TY
34020002	AMP FEMALE LUGS 280702/1	6
34023406	AMP. CONNECTOR 6 F 280592	1

DEGAUSSING COIL ASSY MTC9000 14'' code 62005130

DEGAUSSING COIL ASSY MTC9000 16'' code 62005130

DEGAUSSING COIL ASSY MTC9000 20'' cod. 62005550

C.R.T. MAINFRAME ASSY 14''

CODE	DESCRIPTION	Q.TY
50111160	LEG x 14'' MAINFRAME	1
50111200	BASE PLATE 14''	1

C.R.T. MAINFRAME ASSY 16''

CODE	DESCRIPTION	Q.TY
50111380	CENTRAL LEG x 16''	1
50111360	RIGHT LEG x 16''	1
50111370	LEFT LEG x 16''	1
50111390	BASE PLATE x 16''	1

C.R.T. MAINFRAME ASSY 20''

CODE	DESCRIPTION	Q.TY
40213507	CAP SCREW 4 x 7 CH6 FR.I.Zn	4
40942095	SELF TAPPING SCREW 4.2 x 9.5	8
40963016	SELF TAPPING SCREW 6.3 x 16	4
42000010	WASHER UNI 6593-69 D18 d6.6 SP2	4
50111210	RIGHT LEG x 20'' MAINFRAME UTH 441	1
50111220	LEFT LEG x 20'' MAINFRAME UTH 442	1
50111230	CENTRAL LEG x 20'' MAINFRAME UTH 443	1
50111240	BASE PLATE x 20'' MAINFRAME UTH 440	1
50111450	CRT NECK REINFORCING FRAME UTH 444	1

PACKING ASSEMBLY MTC9000 14''

CODE	DESCRIPTION	Q.TY
52823370	BOARD UPPER	1
52823360	BOARD LOWER	1
52824960	PACKING BOX MTC9000 14''	1

PACKING ASSEMBLY MTC9000 16''

CODE	DESCRIPTION	Q.TY
52822370	BOARD UPPER	1
52822380	BOARD LOWER	1
52824950	PACKING BOX MTC9000 16''	1

PACKING ASSEMBLY MTC9000 20''

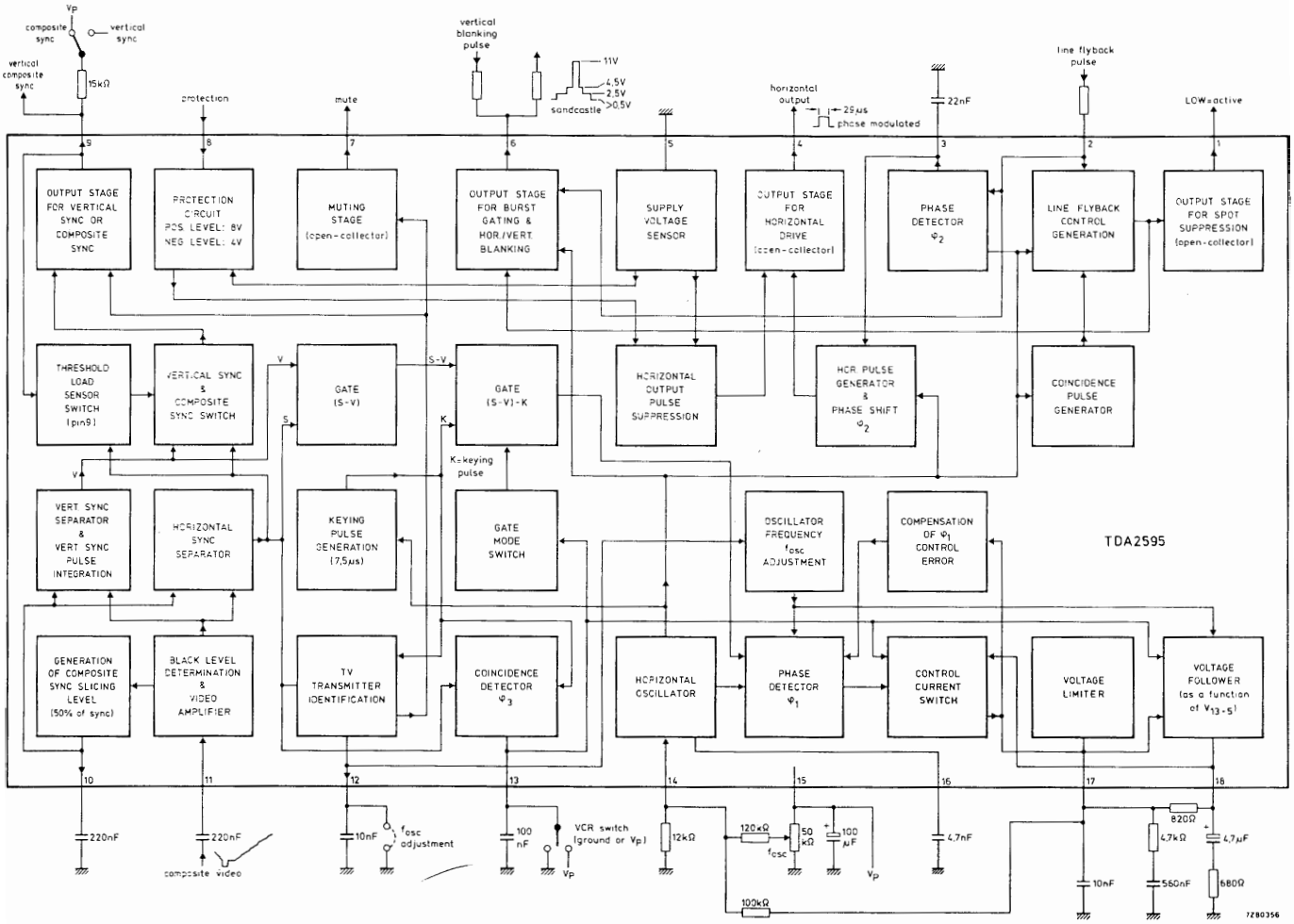
CODE	DESCRIPTION	Q.TY
52422000	RIGHT SIDE POLYUR. BOX 20'' UTH1913	2
52422010	LEFT SIDE POLY R. BOX 20'' UTH1914	2
52824800	PACKING BOX MTC9000 20'' EUR. UTH1926	1

LEGEND

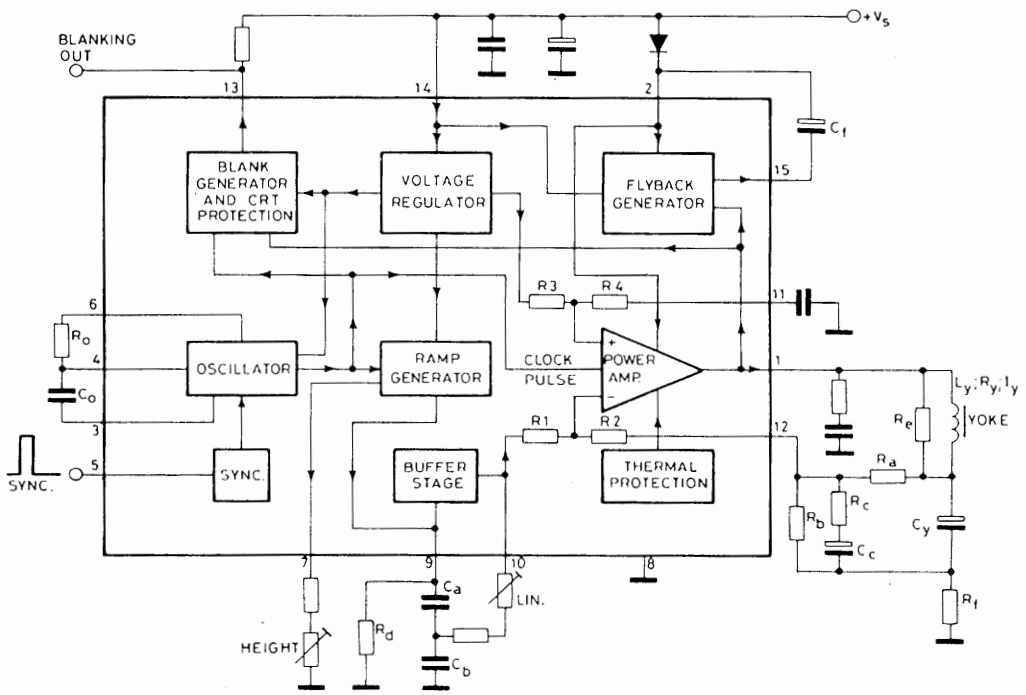
FILM CAPACITOR	= CAPACITOR, POLYSTYRENE
FILM CAPACITOR 1.60	= CAPACITOR, METALLIZED POLYESTER
FILM CAPACITOR 1.76	= CAPACITOR, DOUBLE-METALLIZED POLYPROPOLENE
FILM CAPACITOR 1.73	= CAPACITOR, METALLIZED POLYPROPOLENE
FILM CAPACITOR 1.58X	= CAPACITOR, POLYESTER
FILM CAPACITOR 1.85	= CAPACITOR, METALLIZED POLYESTER
FILM CAPACITOR 22.365	= CAPACITOR, POLYESTER
RADIAL ELECT. CAPACITOR	= CAPACITOR, RADIAL ELECTROLYTIC
CER.CAP.	= CAPACITOR, CERAMIC

- **DIAGRAMMA A BLOCCHI PER CIRCUITO INTEGRATO TDA 2595 E TDA 1670A**
- **BLOCK DIAGRAM FOR INTEGRATED CIRCUITS TDA 2595 AND TDA 1670A**
- **BLOCKSCHALTBILD FÜR TDA 2595 UND TDA 1670A**
- **DIAGRAMA DE BLOQUES DEL CIRCUITO INTEGRADO TDA 2595 E TDA 1670A**
- **DIAGRAMME FONCTIONNEL POUR CIRCUITS IMPRIMES TDA 2595 ET TDA 1670A**

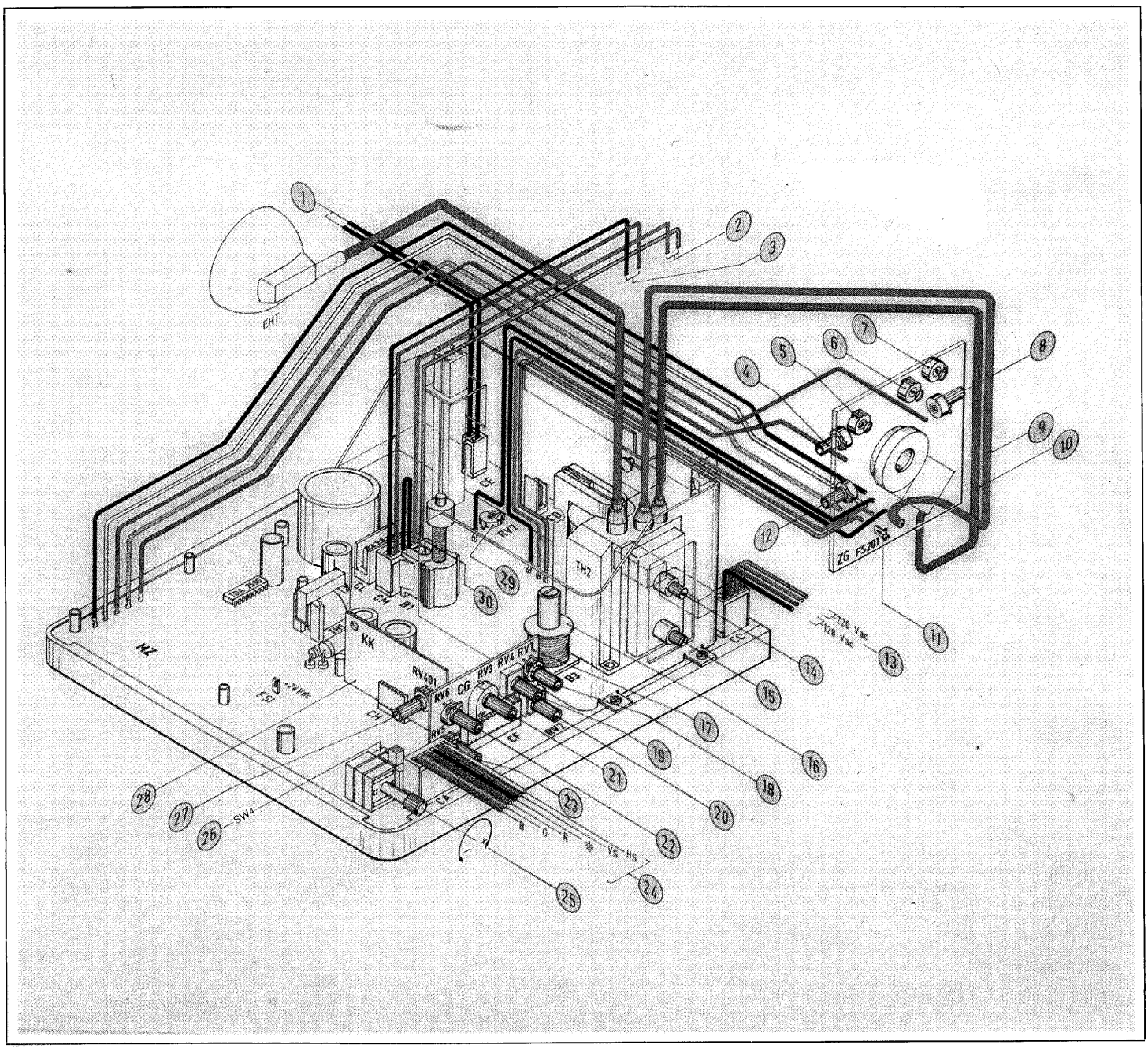
TDA 2595



TDA 1670A



- **DIAGRAMMA DELLE CONNESSIONI E REGOLAZIONI DEI TRIMMER**
- **CONNEXIONS DIAGRAM AND PRE-SET ADJUSTMENTS**
- **ANSCHLUßPLAN UND JUSTAGE - ELEMENTE**
- **ESQUEMA DEL CONEXIONADO Y REGULACION DE LOS POTENCIOMETROS**
- **SCHEMA DE CONNEXION ET REGULATION DES TRIMMERS**



1) FASCIA DI SMAGNETIZZAZIONE
— DEGAUSSING COIL
— BOBINA DESMAGNETIZADORA
— ENTMAGNETISIERUNGSSPULE
— BOBINE DE DEMAGNETISATION

2) GIOGO ORIZZONTALE
— HORIZONTAL YOKE
— BOBINA DEFLECTORA HORIZONTAL
— HORIZONTALE ABLENKSPULE
— BOBINE DE DEFLEXIÓN HORIZONTALE

3) GIOGO VERTICALE
— VERTICAL YOKE
— BOBINA DEFLECTORA VERTICAL
— VERTIKALE ABLENKSPULE
— BOBINE DE DEFLEXION VERTICALE

4) GUADAGNO ROSSO
— RED GAIN
— GANANCIA ROJO
— ROT-VERSTÄRKUNGS-REGLER
— GAIN ROUGE

5) INTERDIZIONE VERDE
— GREEN CUT-OFF
— VERDE CUT-OFF
— SCHWARZWERT FÜR GRÜN
— SUPPRESSION VERT

6) INTERDIZIONE ROSSO
— RED CUT-OFF
— ROJO CUT-OFF
— SCHWARZWERT FÜR ROT
— SUPPRESSION ROUGE

7) INTERDIZIONE BLU
— BLUE CUT-OFF
— AZUL CUT-OFF
— SCHWARZWERT FÜR BLAU
— SUPPRESSION BLEU

8) GUADAGNO BLU
— BLUE GAIN
— GANANCIA AZUL
— BLAU-VERSTÄRKUNGS- REGLER
— GAIN BLEU

9) G2
— SCREEN
— PANTALLA
— SCHIRMGITTER-REGLER
— ECRAN

10) FUOCO
— FOCUS
— FOCO
— FOCUS
— FOCALISATION

11) MASSA CINESCOPIO
— GND PICTURE TUBE
— MASA DEL TUBO
— BILDRÖHRENMASSE
— MASSE DU TUBE

12) GUADAGNO VERDE
— GREEN GAIN
— GANANCIA VERDE
— GRÜN-VERSTÄRKUNGS-REGLER
— GAIN VERT

13) INGRESSO ALIMENTAZIONE
— POWER SUPPLY
— FUENTE ALIMENTACION
— NETZTEIL
— ENTREE ALIMENTATION

14) REGOLAZIONE FUOCO
— FOCUS ADJUSTMENT
— AJUSTE FOCO
— FOCUS-REGLER
— REGLAGE FOCALISATION

15) REGOLAZIONE LUMINOSITÀ
— BRIGHTNESS ADJUSTMENT
— REGULACION BRILLO
— HELLIGKEITS-REGLER
— REGLAGE LUMINOSITE

16) BOBINA PONTE
— BRIDGE COIL
— BOBINA PUENTE
— BRÜCKE
— BOBINE PONT

17) MODULO CG COMANDI E REGOLAZ.
— ADJUSTING MODULE
— MODULO CG REGULACION
— EINSTELL-EINHEIT
— MODULE DE REGLAGE

18) FREQUENZA VERTICALE
— VERTICAL HOLD
— FRECUENCIA VERTICAL
— VERTIKALE FREQUENZ
— FREQUENCE VERTICALE

19) AMPIEZZA ORIZZONTALE
— HORIZONTAL WIDTH
— AMPLITUD HORIZONTAL
— HORIZONTALE AMPLITUDE
— AMPLITUDE HORIZONTALE

20) AMPIEZZA VERTICALE
— VERTICAL HEIGHT
— AMPLITUD VERTICAL
— VERTIKALE HÖHE
— AMPLITUDE VERTICALE

21) FASE VERTICALE
— VERTICAL SHIFT
— FASE VERTICAL
— VERTIKALE VERSCHIEBUNG
— PHASE VERTICALE

22) FASE ORIZZONTALE
— HORIZONTAL SHIFT
— FASE HORIZONTAL
— HORIZONTALE VERSCHIEBUNG
— PHASE HORIZONTALE

23) FREQUENZA ORIZZONTALE
— HORIZONTAL HOLD
— FRECUENCIA HORIZONTAL
— HORIZONTALE FREQUENZ
— FREQUENCE HORIZONTALE

24) INGRESSO VIDEO/SINCRONISMI
— VIDEO/SYNC. INPUT
— ENTRADA VIDEO/SINC.
— VIDEO - UND SYNCHRONISATIONS EINGANG
— ENTREE SYNCHRO. VIDEO

25) CONTRASTO
— CONTRAST
— CONTRASTE
— KONTRAST
— CONTRASTE

26) COMMUTATORE PER SINC. POS/NEG.
— SYNC. POLARITY SWITCH
— CONMUTADOR SINCRONISMOS/NEG.
— SYNCHRONISATIONS - UMSCHALTER POS./NEG
— COMMUTATEUR POUR SYNCHRO. POS/NEG

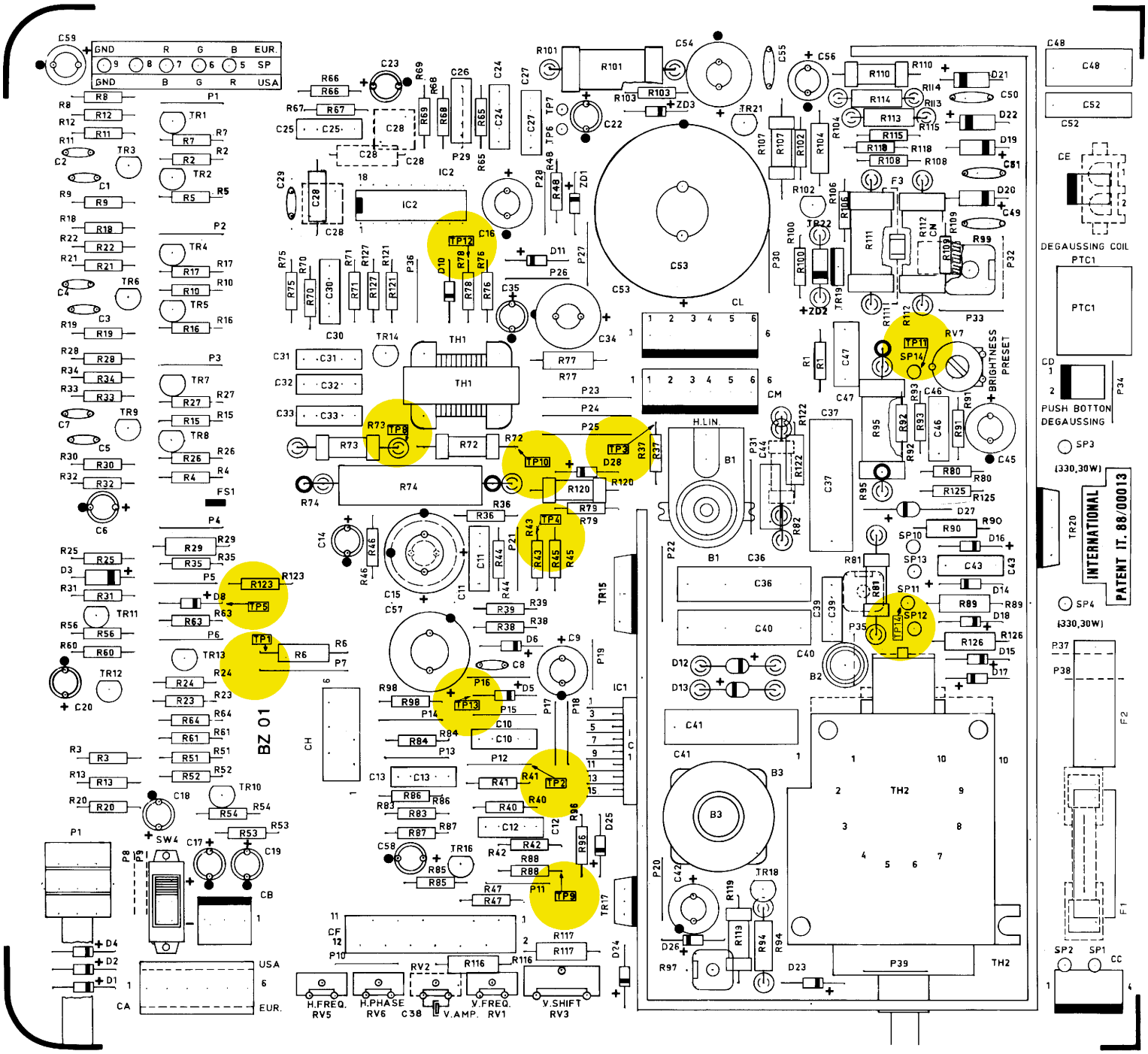
27) REGOLAZIONE EST/OVEST
— PINCUSCHION ADJUSTMENT
— REGULACION ESTE/OESTE
— OST/WEST-REGLER
— REGLAGE DROITE/GAUCHE

28) MODULO KK CORREZIONE EST/OVEST
— KK PINCUSCHION MODULE
— MODULO KK CORRECCION ESTE/OESTE
— OST/WEST - MODUL
— MODULE KK DE CORRECTION DROITE/GAUCHE

29) PRESELETTORE LUMINOSITÀ
— BRIGHTNESS PRESET
— PREREGULACION BRILLO
— HELLIGKEITSREGLER
— PRE-SELECTION LUMINOSITE

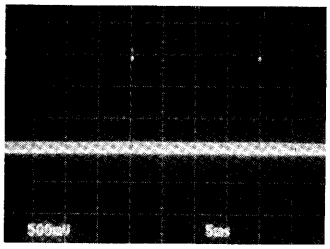
30) LINEARITÀ ORIZZONTALE
— HORIZONTAL LINEAR.
— LINEALIDAD HORIZONTAL
— HORIZONTALE LINEARITÄTSEINSTELLUNG
— LINEARITE HORIZONTALE

- CIRCUITO STAMPATO CON I PUNTI DI TARATURA, TENSIONI E FORME D'ONDA
- PRINTED CIRCUIT BOARD SHOWING TEST POINTS, VOLTAGES AND WAVEFORMS
- HAUPTLEITERPLATINE MIT TEST-PUNKTEN, SOLLSPANNUNGEN UND OSZILLATORDIAGRAMMEN
- CIRCUITO IMPRESO CON EL PUNTO DE MEDIDA, TENSION Y FORMA DE ONDA
- CIRCUIT IMPRIME ET POINT DE REGLAGE, TENSION ET FORME D'ONDES

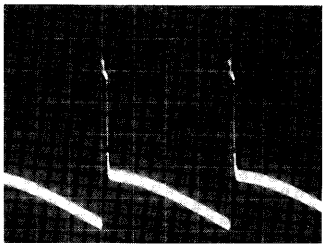


- **T.P. DI CONTROLLO E FORME D'ONDA**
- **CONTROL TEST POINTS AND WAVEFORMS**
- **TEST-PUNKTE UND OSZILLATORDIAGRAMME**
- **PUNTO DE PRUEBA PARA CONTROL Y FORMA DE ONDA**
- **POINTS DE TEST DE CONTROLE ET FORME D'ONDE**

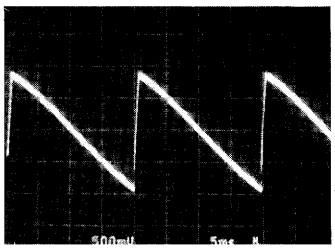
TP2



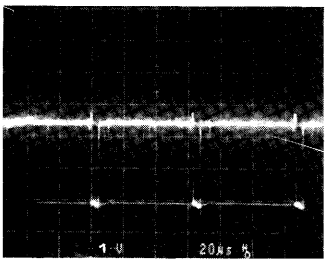
TP3



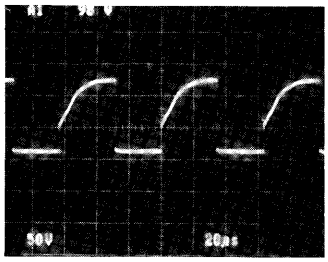
TP4



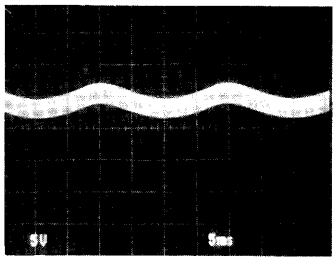
TP5



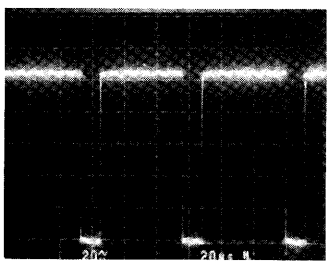
TP8



TP9



TP11



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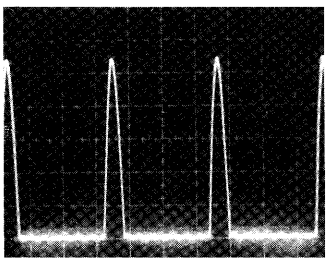

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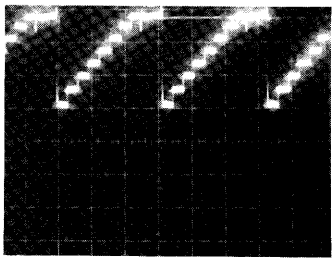


FORME D'ONDA
WAVEFORMS

T.P.2 *Sincronismo verticale*
Vertical sync.

T.P.3 Pilotaggio deflessione verticale
Vertical drive

T.P.4 Segnale di reazione deflessione verticale
Vertical feedback

T.P.5 Sincronismo composito
Composite sync.

T.P.8 Pilotaggio per transistors finale di riga
Horizontal drive

T.P.9 Correzione est/ovest con modulo KK inserito
East/west correction with module KK inserted

T.P.11 Spegnimento orizzontale e verticale
Horizontal and vertical blanking

1. Impulso del collettore BU 508
Pulse at collector of BU 508

2. Segnale sui catodi finale video RVB
Signal at cathodes of RGB video output

TENSIONI
SUPPLIES

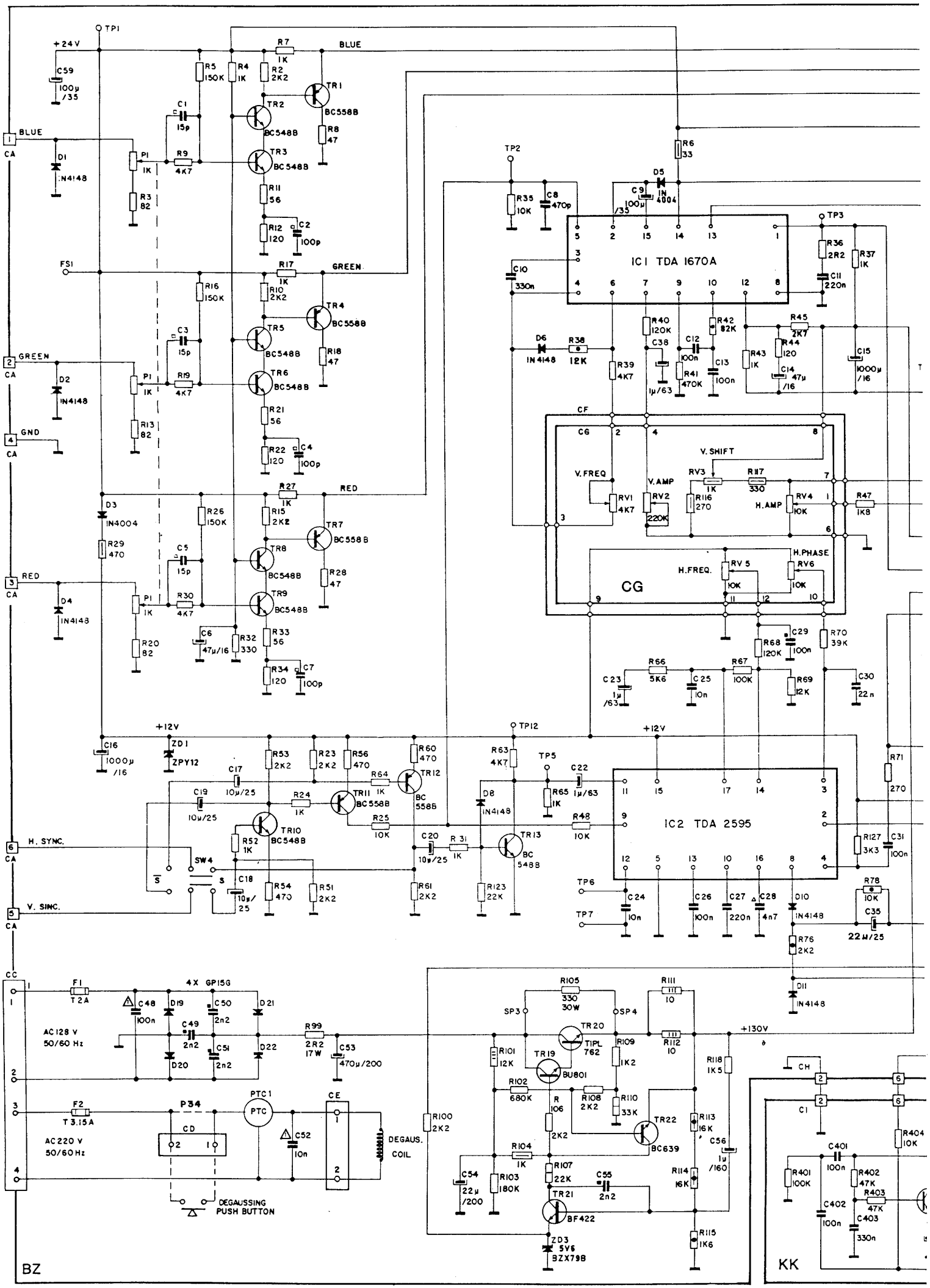
T.P.1 24/25 V.d.c. Alimentazione amplificatore video
24/25 V.d.c. Video amplifier supply

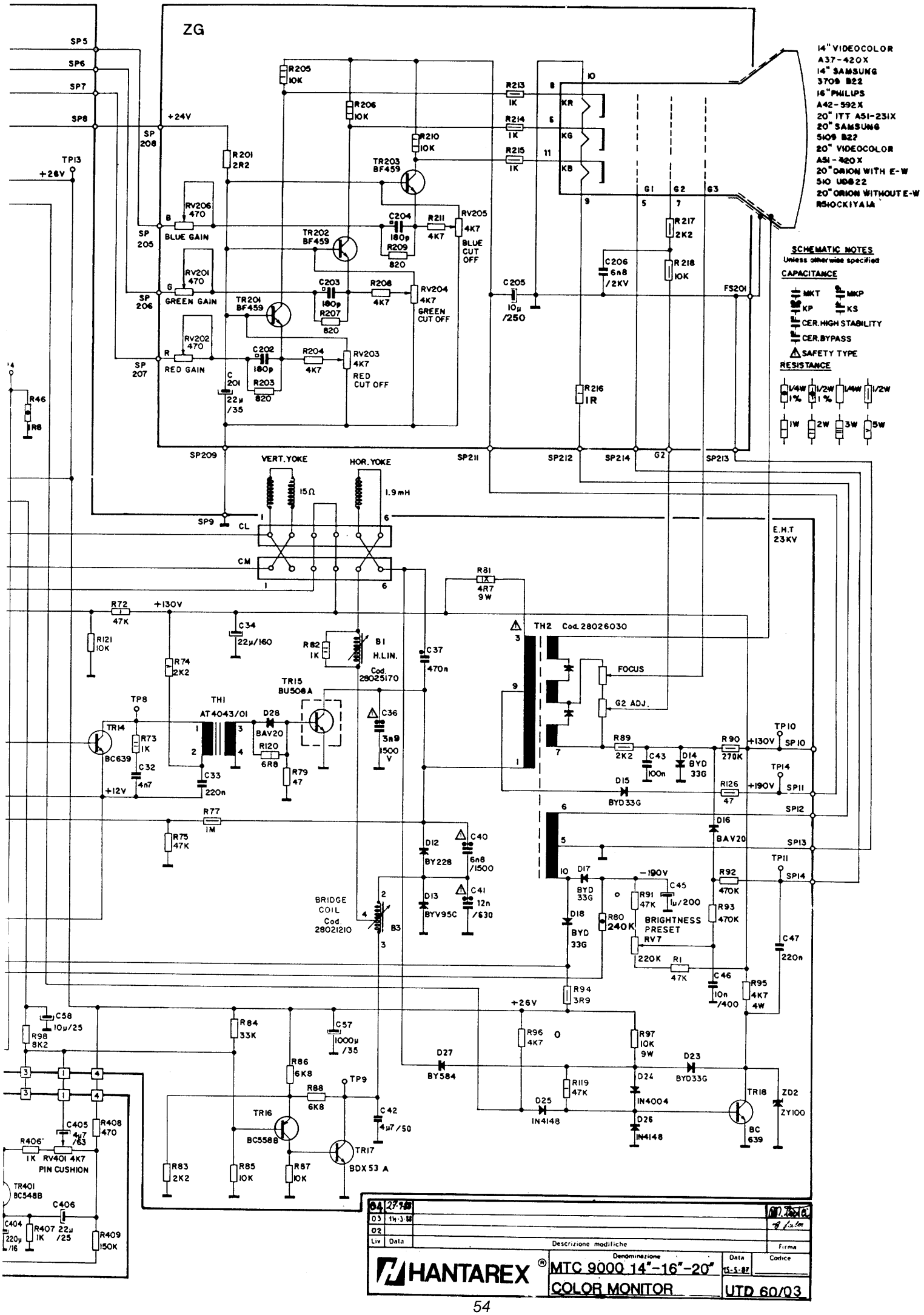
T.P.10 130 V.d.c. ± 2% Alimentazione stabilizzata
130 V.d.c. ± 2% Stabilized supply

T.P.12 12 V.d.c. Alimentazione sincronismo e oscillatore orizzontale (TDA 2595)
12 V.d.c. Horizontal sync. and oscillator supply (TDA 2595)

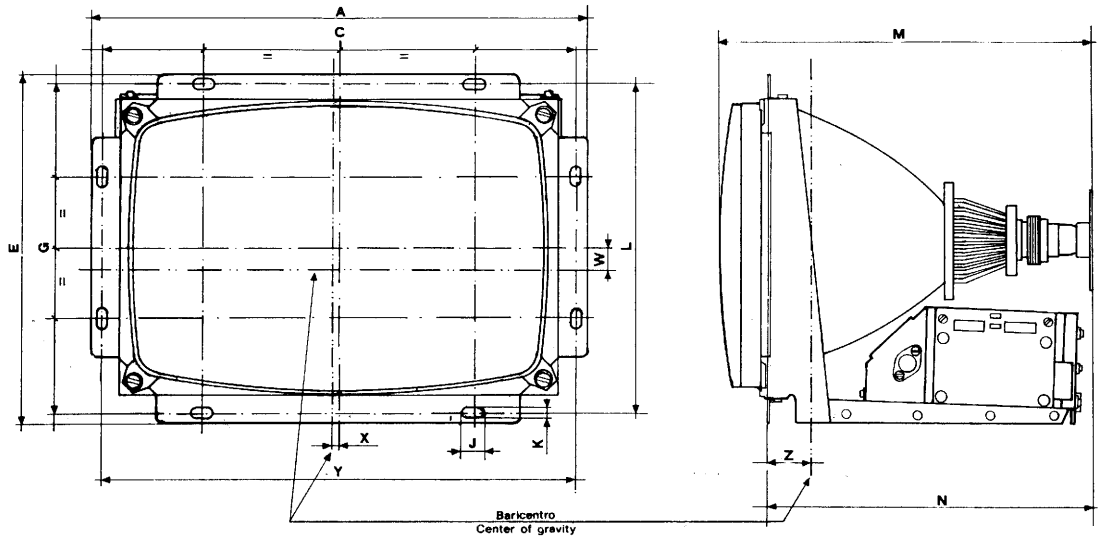
T.P.13 25/26 V.d.c. Alimentazione verticale
25/26 V.d.c. Vertical supply

T.P.14 200/210 Alimentazione finale video
200/210 V.d.c. Video output supply

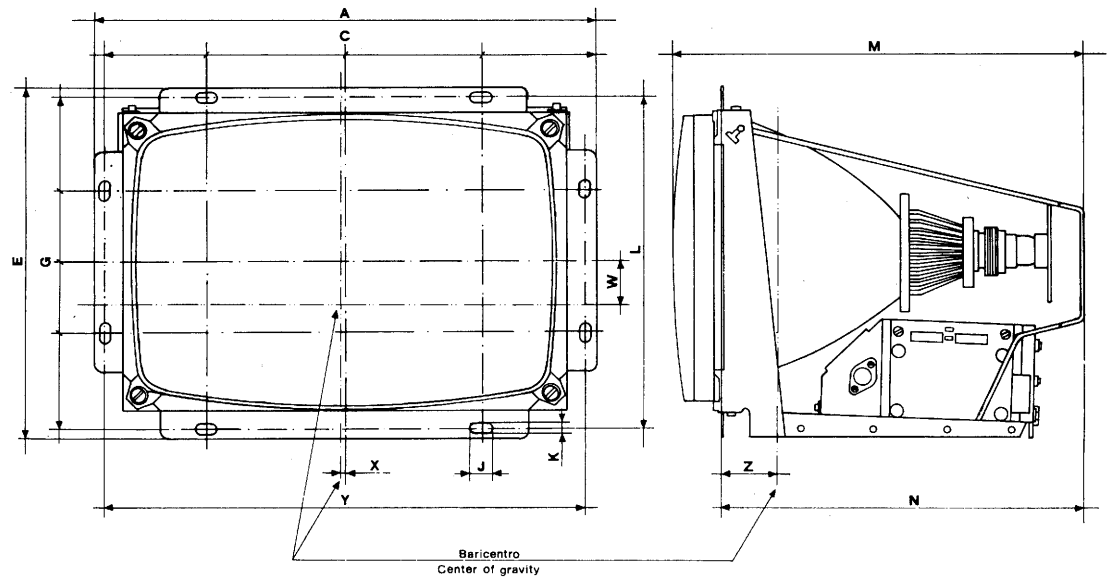

+24V
TP1
BLUE
GREEN
RED
FSI
GND
H. SYNC.
V. SINC.
CA
CC
IC1 TDA 1670A
IC2 TDA 2595
CG
CF
TP2
TP3
TP5
TP6
TP7
TP12
+12V
V. SHIFT
V. FREQ
V. AMP
H. AMP
H.FREQ.
H.PHASE
SW4
4X GP15G
AC 128 V
50/60 Hz
AC 220 V
50/60 Hz
P34
PTC1
PTC
CD
CE
DEGAUS.
COIL
DEGAUSSING
PUSH BUTTON
+130V
SP3
SP4
CH
BZ
KK


ZG
14" VIDEOCOLOR A37-420X
14" SAMSUNG 3709 B22
16" PHILIPS A42-592X
20" ITT A51-231X
20" SAMSUNG 5109 B22
20" VIDEOCOLOR A51-420X
20" ORION WITH E-W 510 UD822
20" ORION WITHOUT E-W R540CKIYAIA
SCHEMATIC NOTES
Unless otherwise specified
CAPACITANCE
MKT
MKP
KP
KS
CER. HIGH STABILITY
CER. BYPASS
SAFETY TYPE
RESISTANCE
1/4W 1%
1/2W 1%
1/4W
1/2W
1W
2W
3W
5W
SP5
SP6
SP7
SP8
+24V
TP13
+26V
SP 208
SP 205
SP 206
SP 207
R205 10K
R206 10K
R210 10K
R213 1K
R214 1K
R215 1K
KR
KG
KB
R201 2R2
TR203 BF459
TR202 BF459
TR201 BF459
RV206 470
BLUE GAIN
RV201 470
GREEN GAIN
RV202 470
RED GAIN
C204 180p
R211 4K7
RV205 4K7
BLUE CUT OFF
R209 820
C203 180p
R208 4K7
RV204 4K7
GREEN CUT OFF
R207 820
C202 180p
R204 4K7
RV203 4K7
RED CUT OFF
R203 820
C 201 22µ /35
C205 10µ /250
C206 6n8 /2KV
R217 2K2
R218 10K
R216 1R
FS201
G1
G2
G3
SP209
SP211
SP212
SP214
SP213
VERT. YOKE
HOR. YOKE
15Ω
1.9mH
SP9
CL
CM
E.H.T 23KV
R81 4R7 9W
R72 47K
+130V
C34 22µ/160
R121 10K
R82 1K
B1 H.LIN. Cod. 28025170
C37 470n
R74 2K2
TR15 BU508A
C36 3n9 1500 V
TH2 Cod. 28026030
FOCUS
G2 ADJ.
TP8
TH1 AT4043/01
D28 BAV20
R120 6R8
R79 47
TR14 BC639
R73 1K
C32 4n7
C33 220n
+12V
R89 2K2
C43 100n
D14 BYD 33G
R90 270K
TP10
SP10
TP14
R126 47
+190V
SP11
D15 BYD33G
SP12
D16 BAV20
SP13
TP11
SP14
R77 1M
R75 47K
D12 BY228
C40 6n8 /1500
D13 BYV95C
C41 12n /630
BRIDGE COIL Cod. 28021210
B3
D17 BYD 33G
D18 BYD 33G
-190V
R91 47K
C45 1µ/200
R80 240K
BRIGHTNESS PRESET
RV7 220K
R1 47K
R92 470K
R93 470K
C47 220n
C46 10n /400
R95 4K7 4W
R94 3R9
C58 10µ/25
R98 8K2
R84 33K
C57 1000µ /35
R96 4K7
R97 10K 9W
D27 BY584
D23 BYD33G
D24 IN4004
D25 IN4148
D26 IN4148
R119 47K
TR18 BC 639
ZD2 ZY100
R86 6K8
R88 6K8
TP9
TR16 BC558B
TR17 BDX53 A
C42 4µ7/50
R83 2K2
R85 10K
R87 10K
C405 4µ7 /63
R408 470
R406 1K
RV401 4K7
PIN CUSHION
TR401 BC548B
C406
C404 220µ /16
R407 22µ 1K /25
R409 150K
04 27-7-88
03 14-3-88
02
Liv Data
Descrizione modifiche
Firma
HANTAREX
Denominazione
MTC 9000 14"-16"-20"
COLOR MONITOR
Data 15-5-87
Codice
UTD 60/03

- **DATI MECCANICI**
- **MECHANICAL DATA**
- **MECHANISCHE ANGABEN**
- **DATOS MECANICOS**
- **DONNEES MECANIQUES**

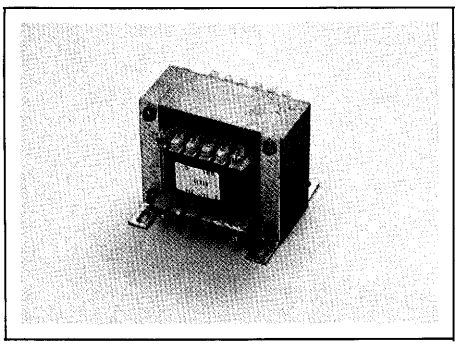


DIM.	A	C	E	G	J	K	L	M	N	W	X	Y	Z
14''mm	372	198	312	144	20	8	294	352	271	23	6	352	60
16''mm	424	250	340	175	20	8	320	380	310	32	6	408	47
14''IN.	14.646	7.795	12.283	5.669	0.787	0.315	11.575	13.858	10.669	0.905	0.236	13.858	2.362
16''IN.	16.693	9.842	13.386	6.89	0.787	0.315	12.598	14.960	12.205	1.26	0.236	16.063	1.85

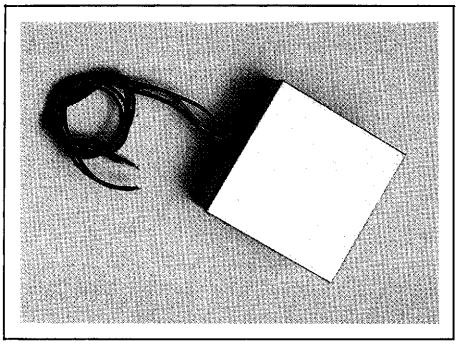


DIM.	A	C	E	G	J	K	L	M	N	W	X	Y	Z
20''mm	512	280	406	200	20	8	390	442	387	34	3	496	43
20''IN.	20.157	11.024	15.984	7.874	0.787	0.315	15.354	17.402	15.236	1.339	1.181	19.527	1.693

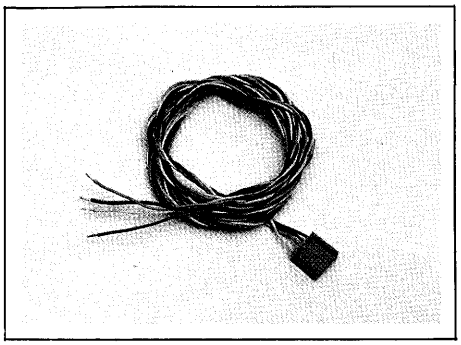
ACCESSORI ACCESSOIRES ZUBEHÖR ACCESORIOS ACCESSORIES



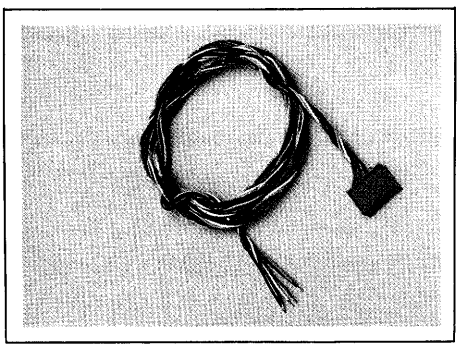
- Trasformatore di alimentazione monitor MTC9000 220/240 Vac / 128 Vac 100 W. (Per richiesta cod. 28070030).
- Isolating transformer for supplying monitor MTC 9000 220/240 V a.c. / 128 V a.c. 100 W. To order, quote: cod. 28070030.
- Trenntransformator für die Stromversorgung des Monitors MTC9000 mit 220/240 V Eingang, 128 V / 100 W Ausgang. Bestell-Nr. 28070030.
- Transformador de alimentación monitor MTC9000 220/240 Vac / 128 Vac 100 W. (Para solicitud cod. 28070030).
- Transformateur d'alimentation pour moniteur MTC9000 220/240 V c.a. / 128 V c.a. 100 W. (Code 28070030).



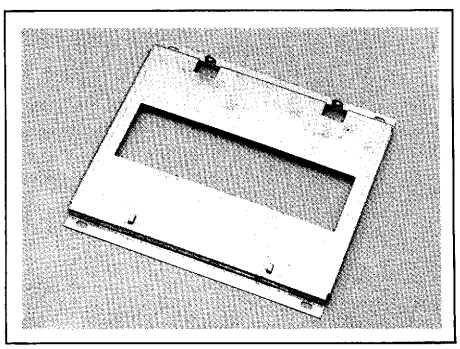
- Trasformatore toroidale di alimentazione 220/240 Vac / 128 Vac 100 W indicto nei casi in cui debba essere montato vicino al monitor. (Per richiesta cod. 28070260).
- Toroidal supply transformer 220/240 V a.c. / 128 V a.c. 100 W for use where the transformer must be mounted close to the monitor. To order, quote: cod. 28070260.
- Ringkerntransformator für Spannungsversorgung MTC9000 220/240 V - 128 V 100W im Stahlblechgehäuse eingebaut. Gegen Streufelder abgeschirmt. Bestell-Nr. 28070260
- Transformador toroidal de alimentación 220/240 Vac / 128 Vac 100 W indicado en aquellos casos en que deba instalarse cerca del monitor. (Para solicitud cod. 28070260).
- Transformateur toroidal d'alimentation 220/240 V c.a. / 128 V c.a. 100 W, indiqué dans les cas où il dévrait être monté près du moniteur. (Code 28070260).



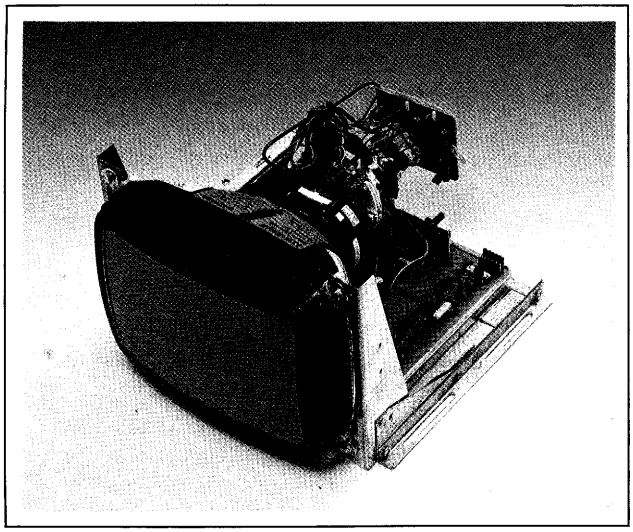
- Cablaggio ingresso alimentazione. Viene fornito unitariamente al monitor. (Per ricambistica cod. 61000120).
- Input Power Lead. Supplied with each monitor. Spare part no. cod. 61000120.
- Verbindungskabel für Stromversorgung mit Anschlußstecker für Monitor MTC9000. Bestell-Nr. 61000120.
- Cable de entrada de alimentación. Viene incluido con el monitor. (Para recambio cod. 61000120).
- Câblage d'éntrée d'alimentation. Il est fourni avec le moniteur. (Pour pièces de rechange code 61000120).



- Cablaggio ingresso segnali. Viene fornito unitamente al monitor. (Per ricambistica cod. 61000140).
- Input Signal Lead. Supplied with each monitor. Spare part no. cod. 61000140.
- Verbindungskabel RGB - Signal mit Anschlußstecker für Monitor MTC9000. Bestell-Nr. 61000140.
- Cable de entrada de senales. Viene incluido con el monitor. (Para recambio cod. 61000140).
- Câblage d'entrée des signaux. Il est fourni avec le moniteur. (Pour pièces de rechange code 61000140).

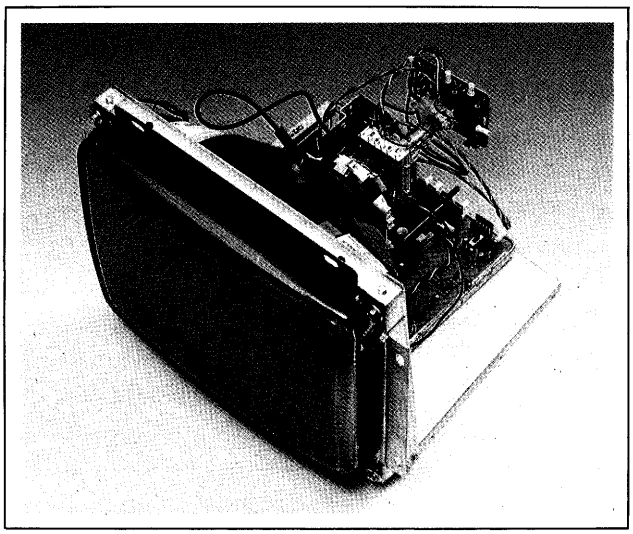


- Supporto metallico per MTC9000 per fissare l'elettronica al mobile nel caso debba essere disassemblata dal cinescopio. (Per richiesta cod. 50113370).
- Metal support for fixing electronic chassis to a case when the chassis is to be separated from the c.r.t. To order, quote cod. 50113370.
- Metallrahmen für MTC9000 zur Aufnahme von Chassis und der Bildröhre. Bestell-Nr. 50113370.
- Soporte metalico para el MTC9000 para fijar el circuito impreso al mueble, en el caso en que deba ser descollado del TRC. (Para solicitud cod. 50113370).
- Support metallique pour MTC9000 pour fixer l'electronique sur le meuble dans cas où elle devrait être desassemblée du tube image. (Code 50113370).



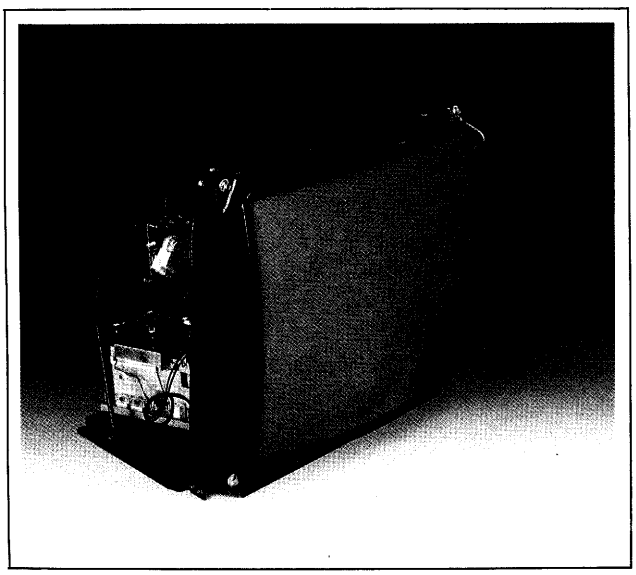
Monitor MTC9000 10'' COD. 02191552
Video R.V.B. positivo analogico, sincronismi compositi, separati negati o positivi. Alimentazione: 128 Vac - 70 W.
Dimensioni: L x H x P mm 297 x 250 x 307.

Monitor MTC 9000 10'' COD. 02191552
Video RGB, positive analogue, composite or separate sync., negative or positive.
Power: 128 V a.c., 70 W.
Dimensions: L x W x D: 297 x 250 x 307 mm.



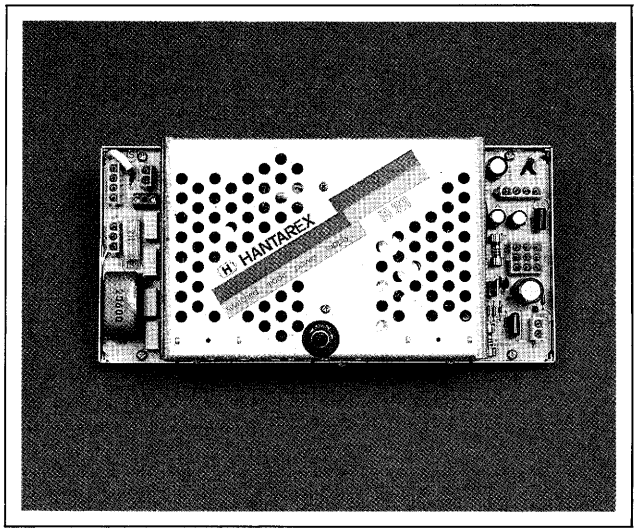
Monitor MTC9000 15'' F.S. COD. 02191870
Video R.V.B. positivo analogico, sincronismi compositi, separati negati o positivi.
Alimentazione 128 Vac - 150 W
Cinescopio: Flat Full Square MR.
Spazio fra le triadi 0,51 mm.
Dimensioni: L x H x P mm 400 x 330 x 360.

Monitor MTC 9000 15'' FS COD. 02191870
Video RGB, positive analogue, composite or separate sync., negative or positive.
Power: 128 V a.c., 100 W.
C.r.t. flat full square MR. Pixel spacing 0.51 mm.
Dimensions: L x W x D: 400 x 330 x 360 mm.



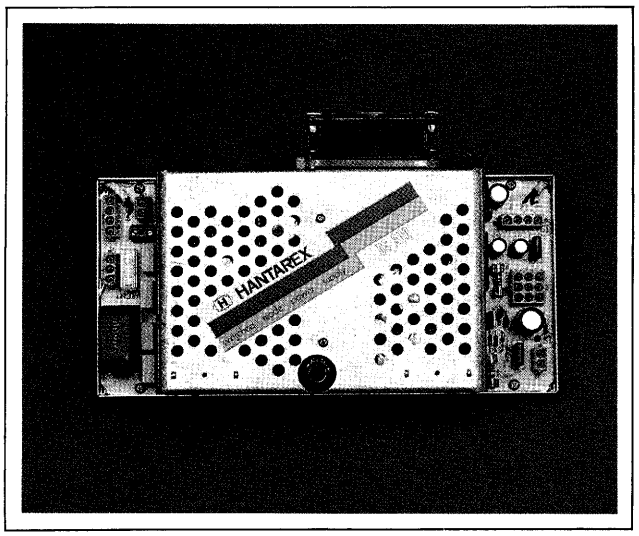
Monitor MTC9000 25'' 110° FLAT COD. 02190861
Video R.V.B. analogico, positivo, sincronismi separati, compositi, positivi o negati.
Alimentazione 128 Vac - 150 W.
Dimensioni: L x H x P mm 592 x 480 x 499

Monitor MTC 9000 25'' 110° FLAT COD. 02190861
Video RGB, positive analogue, composite or separate sync., negative or positive.
Power: 128 V a.c. 150 W.
Dimensions: L x W x D: 592 x 480 x 499 mm.



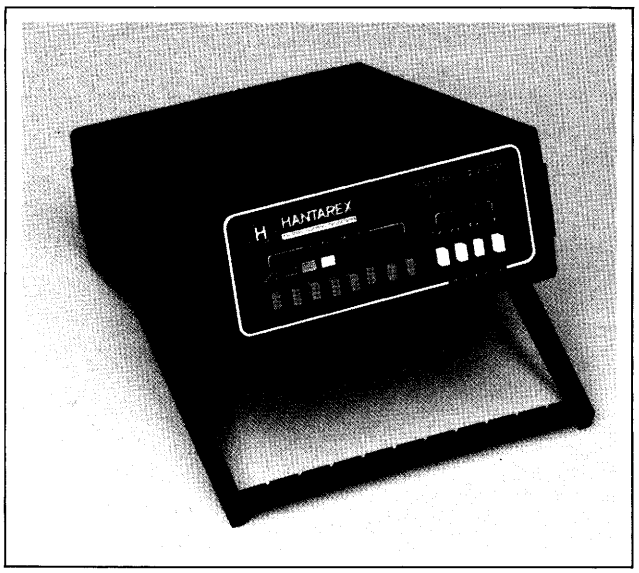
Alimentatore a commutazione US 250 COD. 63000131
Ingresso rete: 187 ÷ 264 Vac. Alimentazione monitor in d.c. senza trasformatore di alimentazione.
Basse tensioni: 5 Vdc 10A / 12 Vdc 2A /
—5 Vdc 1A / —12 Vdc 1A.
Dimensioni: L x H x P mm 288 x 156 x 124.

Switched Mode Power Supply US 250 COD. 63000131
Mains input: 187-264 V a.c. Monitor d.c. supply without mains transformer.
Low tensions: 5 V d.c. 10 A. 12 V d.c. 2A.
—5 V d.c. 1 A. —12 V d.c. 1A.
Dimensions: L x W x D: 288 x 156 x 124 mm.



Alimentatore a commutazione US 300 Ventilato COD. 63000081
Ingresso rete: 187 ÷ 264 Vac. Alimentazione monitor in d.c. senza trasformatore di alimentazione.
Basse tensioni: 5 Vdc 15A / 12 Vdc 2A /
—5 Vdc 1A / —12 Vdc 1A.
Dimensioni: L x H x P mm 288 x 188 x 124 mm.

Switched Mode Power Supply US 300 ventilated COD. 63000081
Mains input: 187-264 V a.c. supply without mains transformer.
Low tensions: 5 V d.c. 15A. 12 V d.c. 2A.
—5 V d.c. 1A. —12 V d.c. 1A.
Dimensions: L x W x D: 288 x 188 x 124 mm.



Generatore di segnali R.V.B. e sincronismi MOD. K 190 G COD. 02190280
Utile per la messa a punto di monitors aventi un ingresso segnali R.V.B.
Commutatori frontali per la selezione delle varie immagini.

RGB Signal Generator with sync. MOD. K 190 G COD. 02190280
Invaluable for setting-up colour monitors with RGB input.
Front panel switching for selecting a variety of images.

HANTAREX

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nuova SAMBERS
20092 Cinisello-Balsamo (MI) - Italy
50, Via Casignolo
tel. 02/6186085/6171285
telefax 02/6182558

HANTAREX SUD
01100 Viterbo - Italy
strada Cassia nord km. 88
tel. 0761/250741 - telex 611537 Hansud-I
telefax 0761-250742

HANTAREX HELLAS-SELCON
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London SE26 5BA - England
Unit 2, Kangley Bridge Road
tel. 01-778 1414 - telex 8952421 Hanr ir-G
telefax 01-6599348

HANTAREX DEUTSCHLAND
D-5230 Altenkirchen
Siegenerstrasse 23
tel. 02681/3041-2 - telex 869991 Hantx-D

HANTAREX IBERICA
Barcellona II - España
210 Aragon str.
tel. 93/3232941 - telex 98017
telefax 0034/3-2538163

HANTAREX CORP. OF AMERICA
Schaumburg - IL. 60195
A-1261 Wiley Road
tel. (312) 8437226/8437344
telefax 001-312-8437244

HANTAREX JAPAN
Tokyo 104 - Japan
Dai Nihon P.R. Centre BLDG
3-8 Irifune - 2 Chome
tel. 03/5550831 - telex 28185 Eujatrc-J