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TEST AND MEASURING INSTRUMENTS

OSC 84

OSCILLOSCOPE PM 3262

Already published: OSC 25-30-40-42-44-50-51-62-63-66-70-71-72

Subject: Alteration

This service information sheet must be used in combination with the PM 3262/05 service manual 9499 443 00502.

During the production of the /06/ version, the following modifications are introduced:

- Capacitor C624 and diode V613 are removed from unit 13
A resistor R610 of 84E5 MR30 - 0,5% (5322 116 54776) is added to unit 13 on the position of V613.
Reason: Preventing distortion of signals of about 35 MHz.
- Unit 8 is modified to prevent that in triggered DTB-mode the intensified portion on the CRT screen starts too early.
A capacitor C925 of 10pF (4822 122 31054) is added between points 12 and 13 of D902.
R1304 is changed into 4,87 k Ω 5322 116 50509
R1360 " " " 953 Ω 5322 116 54547
R1362 " " " 953 Ω 5322 116 54547
R1365 " " " 787 Ω 5322 116 54538
R1369 " " " 2,61 k Ω 5322 116 50671
- For improvement of the correct functioning of SINGLE mode two diodes are added to unit 8.
A diode V965 BAW 62 (4822 130 30613) is added on unit 8 with its anode connected to the anode of V943 and its cathode connected to point 5 of D902.
A diode V955 BAW 62 is added on unit 8 with its anode connected to the anode of V943 and its cathode connected to the cathode of V1329.
- Improvement of a part of the adjusting procedure.
3.4.4.3. Cathode voltage (unit 11)
 - Check that the voltage on testpoint T4 (unit 11) on the Z-amplifier board is 150V \pm 3V
 - If necessary, readjust potentiometer R2048 on the Z-amplifier board. (CRT cathode voltage must be -2200V).

9499 448 15911

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- Faults in the service manual 9499 443 00502 figure 3.54.

V 1706 must be BF 423	4822 130 41106
V 1707 " " BF 422	4822 130 41084
V 1708 " " BF 422	4822 130 41084
V 1709 " " BF 423	4822 130 41106
V 1714 " " BF 423	4822 130 41106
V 1716 " " BF 422	4822 130 41084
V 1717 " " BF 422	4822 130 41084
V 1718 " " BF 422	4822 130 41106

- To prevent oscillations unit 9 is modified in the following way:

- C 806 - C 816 - C 1203 - C 1209 - R 830 - R 1209 - R 1238 - R 810 and V 805 are removed from the unit.
- V 802 is connected again with the 50 Ω socket.
- C 804 is changed into 22pF 4822 122 31063
- C 1208 " " 22pF 4822 122 31063
- R 808 " " 51,1 Ω 5322 116 54442
- R 1208 " " 51,1 Ω 5322 116 54442
- C 805 of 1nF (4822 122 30027) is added in serial with R 835 of 4,99 Ω (5322 116 50568) between the base and the emitter of 806.
- C 1205 of 1nF (4822 122 30027) is added in serial with R 1205 of 4,99 Ω (5322 116 50568) between the base and the emitter of V 1206.

- Fault in the service manual 9499 443 00502 figure 3.54.

R 961 on unit 8 has a value of 10k Ω .

- To prevent the instruments for defective power supplies after connecting the instruments to the 220V mains with the voltage adaptor set to 110V mains, two resistors are added to the power supply unit.

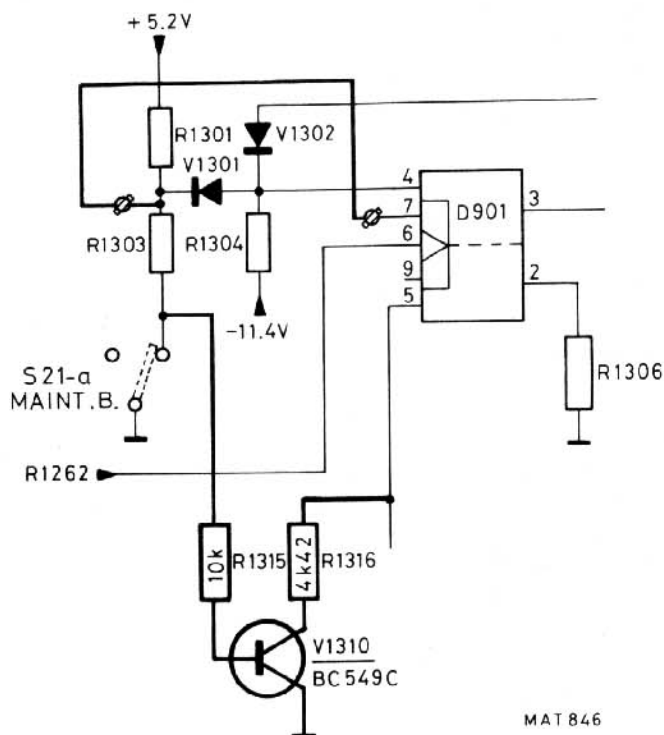
A resistor of 1M Ω - VR37 (4822 110 42187) is inserted on unit 5 between the junction of R 1804/R 1806 and the positive side of C 1816.

A resistor of 4,42k Ω - MR 25 (5322 116 50556) is inserted on unit 5 between the positive side of C 1816 and the positive side of C 1818.

- For protection of D 1551 on unit 8 a resistor R 1550 of 215 Ω (5322 116 50457) is added between point 11 of D 1551 and the base of V 1562.

- A modification is introduced on unit 8 to avoid that DTB sweeps are too short and to avoid that in triggered DTB more than one DTB sweep is generated during one MTB sweep.

- A male contact pin is soldered in the hole of the print track between R 1303 and the cathode of V 1301.
- A connection wire is added between the new male contact pin and the male contact pin which is connected to point 7 of D 901.
- The undermentioned components are added to the circuit as shown in the figure.



V 1310	—	BC 549C	4822 130 44246
R 1315	—	10K	5322 116 54619
R 1316	—	4K42	5322 116 50556

- A capacitor C 1324 of 10pF is added between the points 6 and 7 of D 902.
- An electrolytic capacitor C 1326 of 10V - 47 μ F is added on unit 8 between point 4 of D 1303 and earth (— to earth)
REASON: To avoid oscillations and overshoots and to correct trigger jitter and double triggering.
- On unit 12 are resistors R414 - R 417 - R 464 and R 467 replaced by 4 interconnection wires to avoid oscillations.
- ● Resistors R 1631 - R 1632 and R 1633 are removed from unit 12.
- Resistors R 1627 - R 1628 and R 1629 are changed into 5,23 k Ω (5322 116 54596)
- Additional diodes V220, V320 and V500 BAW 62 (4822 130 30613) are added in serial with V221, V321 and V507 respectively.
REASON: To prevent spoilage of D 1602.

— Unit 12 is modified to avoid oscillations.

- R 212 is changed into 5,11 k Ω (5322 116 54595)
- R 312 " " " 5,11 k Ω (5322 116 54595)
- R 234 " " " 59 Ω (5322 116 54364)
- R 238 " " " 59 Ω (5322 116 54364)
- R 334 " " " 59 Ω (5322 116 54364)
- R 338 " " " 59 Ω (5322 116 54364)
- R 236 " " " 237 Ω
- R 239 " " " 237 Ω
- R 336 " " " 237 Ω
- R 339 " " " 237 Ω
- C 210 - C 213 - C 310 - C 313 - C 402 - C 406 - C 412 - C 452 - C 456 - C 462 - R 423 and R 473 are removed from unit 12.
- R 235 of 9,09 Ω (5322 116 50863) is added in parallel with C 235 of 560pF between the junction of R 234/R 236 and the anode of V207.
- R 240 of 9,09 Ω (5322 116 50863) is added in parallel with C 240 of 560pF between the junction of R 238/R 239 and the other anode of V 207.
- R 335 of 9,09 Ω (5322 116 50863) is added in parallel with C 335 of 560pF between the junction of R 334/R 336 and the anode of V 307.
- R 340 of 9,09 Ω (5322 116 50863) is added in parallel with C 340 of 560pF between the junction of R 338/R 339 and the other anode of V 307.
- A resistor R 225 of 1k Ω (5322 116 54549) is added between pt 16 of D 201 and the -11,4V.
- A resistor R 325 of 1k Ω (5322 116 54549) is added between pt 16 of D301 and the -11,4V.
- C 202 and C 302 are removed from the unit.
- R 212 is connected with R 241 instead of R 242.
- R 312 is connected with R 341 instead of R 342.
- A resistor R 215 of 100 Ω (5322 116 54469) is added in serial with a trimmer C 215 of 18pF (5322 125 50051) between the junction of V 201/V 202 and testpoint T1.
- A resistor R 315 of 100 Ω (5322 116 54469) is added in serial with a trimmer C 315 of 18pF (5322 125 50051) between the junction of V 301/302 and testpoint T2.

— Unit 9 is modified to avoid oscillations

- C 817 is changed into 100pF.
- C 834 of 100nF is added in parallel with C 829.
- C 1220 of 47 μ F is added between the junction V 1214/R 1254 and earth ("+" to earth).

— For improvement of the MTB sweep in SINGLE-mode R 951 on unit 8 is changed into 332 Ω (5322 116 54513)

— Potentiometer R 2039 on unit 21 is disconnected from earth and connected to the -60V (R 1747).
REASON: To bring the geometry potentiometer better in its range.

— Unit 8 is modified because of trigger interference due to high peak currents in the time-base auto circuit.

- R 955 - R 979 and R 980 are removed from the unit.
- The emitter of V 945 is disconnected from earth.
- Diode V 935 is replaced by a connection wire.
- R 960 is changed into 6,81 k Ω (5322 116 54012)
- A resistor R 955 of 5,11 k Ω (5322 116 54595) is mounted between the base of V 945 and the emitter of V 936.
- A resistor R 980 of 10k Ω (5322 116 54619) is mounted in parallel with a zener-diode V 935 BZX 79 - C4 V7 (5322 130 34174) (cathode to +5,2V) between the base of V 945 and the -5,2V (R 953).
- A connection wire is mounted between the collector of V 945 and the base of V 934.
- A connection wire is mounted between the emitter of V 945 and point 11 of D 902.

— A stabistor V 1847 BZX 75 - C1 V4 (4822 130 34047) is added on unit 5 with its anode connected to the emitter of V 1844 and with its cathode to the base of V 1846.

The print track between the emitter of V 1844 and the base of V 1846 is interrupted.

REASON: To assure that the resulting LINE signal is an undistorted sine-wave signal.