



# PHILIPS

## SERVICE

Scientific & Analytical Equipment  
Test and Measurement  
Industrial Automation  
Advanced Automation Systems  
Audio-communications  
Electronic Security & Recording Systems  
Broadcast Equipment

**Industrial &  
Electro-acoustic  
Systems  
Division**

850910

TEST AND MEASURING EQUIPMENT

OSC 216

OSCILLOSCOPE PM3219/04

Already published: OSC123; OSC168, OSC177

Subject : 1. Supplementary information to Service manual 9499 445 01911  
2. Modifications during production of the /04-version  
3. Possible storage problem

Note: This information sheet must be used in combination with  
Service manual 9499 445 01911.

### 1. SUPPLEMENTARY INFORMATION

#### 1.1. ERRATA

Fig. 8.4.: R342 must be 348E (codenr. in partslist is correct).

Page 116 - REAR VIEW:

item 6	: BNC connector for Z-MOD output	5322 267 10004
	Spacer for BNC connector	5322 532 20749

Page 117:

item 2	: Magnetic shield for CRT	5322 447 90014
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Flexible coupling for R8, R9 and R17 complete:

* Spring washer, metal	4822 530 70043
* Coupling disc	5322 528 20333
* Coupling bush	5322 532 51241
* Fixing spring	5322 492 62451

Page 143:

Some codenumber on this page are wrong typed.

L1602, L1602 and L1603 - COIL - must be	5322 281 64154
T603 - CHOKE TFE 25 - must be	5322 146 20821
Thermal fuse must be	4822 252 20017

4822 872 08318

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## 1.2. CHANGED SPECIFICATIONS

### Section 1.2.2:

Bandwidth d.c...50MHz 0,3MHz derating per °C at 2,5 and 10mV/DIV settings related to ambient temp. of 25°C.

Input impedance 1 MegOhm  
20pF +4pF or -0pF Differences between ranges and attenuators max.+1pF.

## 1.3. PARTSLIST INFORMATION

Completion of partslist, page 142

D602 OQ0127 5322 209 80992

D905 SN74S132N-00 5322 209 85267

Because the following components are obsolete, they have been changed into a new type. Please adapt your Service manual for the new codenumbers.

<u>Itemnumber</u>	<u>New type</u>	<u>Codenumber</u>
V301	ON4057	5322 130 42366
V401	ON4057	5322 130 42366
C901	100N-10%-63V	5322 122 32049

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## 2. MODIFICATIONS DURING PRODUCTION OF THE /04 VERSION

### 2.1. MODIFICATIONS TO ATTENUATOR UNIT P.C.B.

To obtain a better input capacitance in the settings 2V/DIV, 0.2V/DIV and 20mV/DIV the following components have been added to the Attenuator unit p.c.b.

- \* C105, 1p5-500V (4822 122 31184) mounted between R102/R103 and ground
- \* C110, 1p8-500V (4822 122 31185) mounted between R104/R106 and ground
- \* C205, 1p5-500V (4822 122 31184) mounted between R202/R203 and ground
- \* C210, 1p8-500V (4822 122 31185) mounted between R204/R206 and ground

### 2.2. MODIFICATIONS TO AMPLIFIER UNIT P.C.B.

To obtain a better adjusting of the highest MTB sweep speed, the following modification has been introduced:

- Changed: \* R1242 into 3k48-MR25 (5322 116 55367)  
\* R1247 into 3k16-MR25 (5322 116 50579)
- Added: \* R1250, value 3k16-MR25 (5322 116 50579) mounted between V1217-base and -12J.  
\* C1209, value 10N-100V (4822 122 31414) mounted across R1247.  
\* R1235, value 31,6E-MR25 (5322 116 54034) mounted between V1213-base and the junction of V1214/R1236/R1222
- Cancelled: \* C1209 (old) and C1211

To adapt the Z-amplifier to the cut-off voltage of the CRT, resistor R1527 has been changed into 7k87-MR25 (5322 116 50458).

### 2.3. MODIFICATIONS TO SUPPLY UNIT P.C.B.

To improve the overload regulator, resistor R1628 has been changed into 1E-MR25 (4822 116 51179).

### 2.4. MODIFICATIONS ON STORAGE UNIT P.C.B.

To avoid erasing of the trace when the READ pushbutton is depressed, capacitor C1317 has been mounted between D1306-2 and ground.

## 3. POSSIBLE STORAGE PROBLEM

A problem has occurred in several storage boards that may be particularly difficult to track down. A method of checking to see if you have this problem, as well as a procedure to resolve this problem, is given below.

Symptom: The symptom for this problem is that the storage function can not be turned off. In addition, if you measure the voltage on storage mesh "G9" on the CRT, it remains at approximately +110 volts, regardless of whether the memory is switched on, or off.

Solution: The solution to this problem is as follows:

1. Remove transistor V1369.
2. Cut the trace on the conductor side of the P.C. board that connects the emitter of V1369 with R1436.
3. Replace transistor V1369, however instead of inserting the emitter lead in the P.C. board, connect it directly to R1436. Insulate the lead to prevent shorting.
4. Check the unit for proper operation, allowing at least a 48 hour burn-in period to insure proper operation.

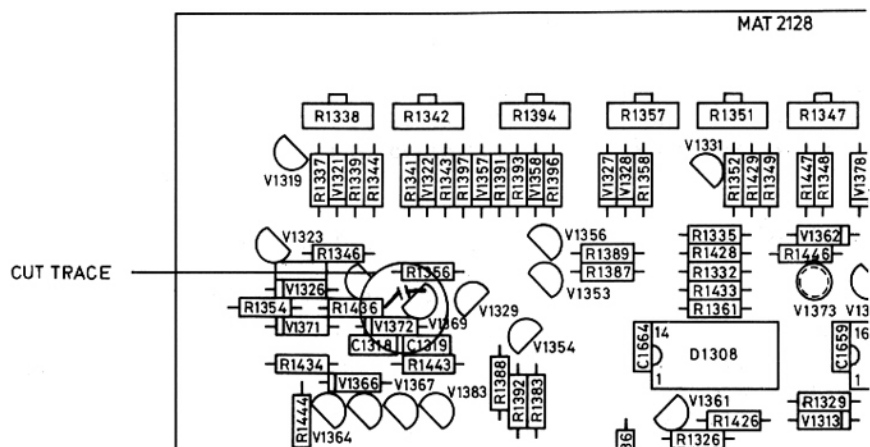


Fig.1 Part of Storage unit p.c.b.