

# Colour TV pattern generator

Operating card

## PM 5518

9452 055 18...

9499 520 091 11  
87 09 01

This operating card belongs to the operating manual (OM) PM 5518, 9499 520 09001



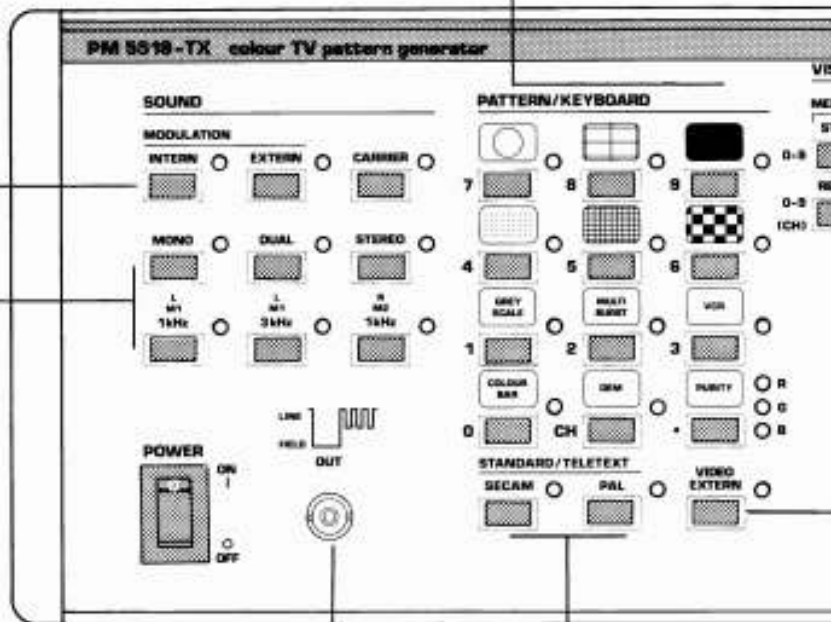
PM 5518-TX  
PM 5518



# PHILIPS

Sound carrier, internal sound  
1 kHz on/off or external sound  
via socket AUDIO IN

PATTERN or data (KEYBOARD)  
dependent on button INPUT:  
- single or combined patterns  
- frequency of vision carrier (3 digits)  
- TV channel (2 digits)  
- memory locations 0...9



Combined line/field sync output  
2.6 V<sub>pp</sub> / 5 V<sub>pp</sub> for trigger purpose

PM 5518 -TX:  
1 or 2 sound carriers  
mono, dual channel, stereo  
int. sound 1 kHz / 3 kHz on/off or  
ext. mono/stereo signal via  
socket AUDIO IN.

PM 5518:  
Selection TV systems combined  
with thumbwheel switches at the rear:  
SECAM or PAL/NTSC

PM 5518 -TX:  
Additional text transmission for  
standard SECAM L: ANTIOPE, 7 pages  
standard PAL B/G/H, I: TELETEXT, 5 pag

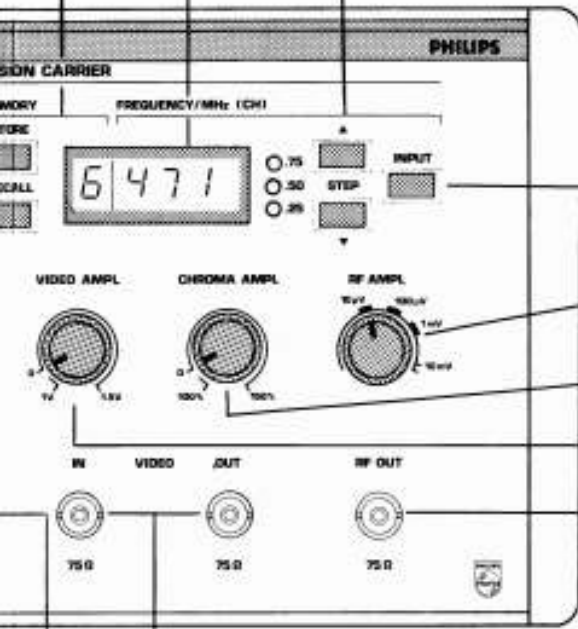
Memory functions:

- store or recall of 10 setups
- indication of actual memory position

Indication of vision carr. frequency or TV channel number

Step function:

- fine adjustment of vision carrier frequency
- switch-over memory positions



Preparing KEYBOARD operation (data input):  
(green inscription)  
- vision carrier frequency  
- TV channel number

RF carrier can be attenuated >60 dB from 10mV

Chroma/burst amplitude 100% in stop position, variable 0...150%

Video amplitude, 1 V<sub>pp</sub> in stop position, variable 0...1.5 V<sub>pp</sub>

RF carrier output of >10 mV into 75 Ω

Separate video input / output to modulate by ext. video signal (CVBS/VBS)

Switch-over internal/external video modulation

## Short form instruction

### TV standard

Type Number	PAL					NTSC	SECAM					Antiope-Teletext	RGB unit
	D	G	I	M*	N*	M	L	B	D	G	H		
PM 5518	X	X	X			X	X	X	X	X	X		
PM 5518-TX	X	0 △ X	△ X			X	◆ X	X	X	X	X	△ ◆	

X - Mono sound 0 - Stereo sound △ - Teletext ◆ - Antiope □ - RGB unit

\* Conversion from one to another version is not foreseen

example: TV standard SECAM D, K, K1

OM chapter 3.5.1.

action: STANDARD SECAM\*\*

\*\* thumbwheel switch rear side

example: TV standard PAL B, G, H

action: STANDARD PAL/NTSC\*\*

### Vision carrier frequency (MHz)

OM chapter 3.5.3.

frequency range: 32... 900 MHz.  
 format: 0XX or XX.X < 100 MHz  
 (3 digit input) XXX ≥ 100 MHz

correction:

example: VHF frequency (E5) 175.25 MHz

action:

display: 175.25 Hz

### Frequency tuning

OM chapter 3.5.3.

frequency steps: 100 kHz < 45 MHz  
 (resolution) 250 kHz > 45 MHz

indication: .X (display) < 45 MHz  
 3 LEDs > 45 MHz

display: .25/50/75

tuning direction: up down

example: VHF frequency (E5) 175.25 MHz  
tuning range  $\pm 750$  kHz

action:     <sup>Δ</sup>  
<sup>Δ</sup> (3 steps up) 175.25 MHz  
<sub>∇</sub> (6 steps down) 176 MHz  
174.50 MHz

### STORE function

For frequency, pattern, sound, TV channel

OM chapter  
3.5.9.

correction:

example: vision carrier 543.25 MHz  
memory place 1  
TV channel 30 (UHF/IV system G)

action:     <sup>Δ</sup> display: 543.25 MHz  
  1/543.25 MHz  
    1/C30

### RECALL function

memory locations 0...9

OM chapter  
3.5.10.

action:

TV channel number 0...99

action:

steps from/to memory locations 0...9

action:  <sup>Δ</sup> or  <sub>∇</sub>

correction for  
RECALL modes:

## Pattern survey double combinations

Pattern	Circle	Centre cross	White pattern	Dots	Crosshatch	Checkerboard	Greyscale	Multiburst	VCR pattern	Colour bar	DEM pattern	Purity patterns	Black pattern
Circle		x	x	x	x	x	x	x	x	x	x	x	x
Centre cross	x		x	x	x							x	x
White pattern	x	x		x	x		x	x		x			
Dots	x	x	x										x
Crosshatch	x	x	x										x
Checkerboard	x												
Greyscale	x		x					x		x			
Multiburst	x		x				x			x			
VCR pattern	x												
Colour bar	x		x				x	x					
DEM pattern	x												
Purity patterns	x	x											
Black pattern	x	x		x	x								

## Special test pattern

Pattern	PURITY red	PURITY green	PURITY blue	COLOUR BAR
3 horizontal bars	x*			x
6 horizontal colour bars		x*		x
black/white pattern			x*	x

\* must be switched on first

VHF/UHF-channel frequencies for different TV systems  
VHF band I and band III channels

B and C			D		K and K1		M and N	
Channel	Vision	Sound	Vision	Sound	Vision	Sound	Vision	Sound
1			49.75	56.25				
2	48.25	53.75	59.25	65.75			55.25	59.75
3	55.25	60.75	77.25	83.75			61.25	65.75
4	62.25	67.75	85.25	91.75	175.25	181.75	67.25	71.75
5	175.25	180.75	93.25	99.75	183.25	189.75	77.25	81.75
6	182.25	187.75	175.25	181.75	191.25	197.75	83.25	87.75
7	189.25	194.75	183.25	189.75	199.25	205.75	175.25	179.75
8a								
8	196.25	201.75	191.25	197.75	207.25	213.75	181.25	185.75
9	203.25	208.75	199.25	205.75	215.25	221.75	187.25	191.75
10	210.25	215.75	207.25	213.75			193.25	197.75
11	217.25	222.75	215.25	221.75			199.25	203.75
12	224.25	229.75	223.25	229.75			205.25	209.75
13							211.25	215.75
14								

AUSTRALIA (B)			IRELAND (I)			ITALY (B)		
Ch	Vision	Sound	Ch	Vision	Sound	Ch	Vision	Sound
0	46.25	51.75	IA	45.75	51.75	A	53.75	59.25
1	57.25	62.75	IB	53.75	59.75	B	62.25	67.75
2	64.25	69.75	IC	61.75	67.75	C	82.25	87.75
3	86.25	91.75	ID	175.25	181.25	D	175.25	180.75
4	95.25	100.75	IE	183.15	189.25	E	183.75	189.25
5	102.25	107.75	IF	191.25	197.25	F	192.25	197.75
5a	138.25	143.75	IG	199.25	205.25	G	201.25	206.75
6	175.25	180.75	IH	207.25	213.25	H	210.25	215.75
7	182.25	187.75	IJ	215.25	221.25	L	217.25	222.75
8	189.25	194.75						
9	196.25	201.75						
10	209.25	214.75						
11	216.25	221.75						

Special cable TV channels (CATV)

Band	Channel*	Vision	Sound	Band	Channel	Vision	Sound
I	S1	69.25	74.75	III	U1/S11	231.25	236.75
I	S2	76.25	81.75	III	U2/S12	238.25	243.75
I	S3	83.25	88.75	III	U3/S13	245.25	250.75
III	M1 /S1	105.25	110.75	III	U4/S14	252.25	257.75
III	M2 /S2	112.25	117.75	III	U5/S15	259.25	264.75
III	M3 /S3	119.25	124.75	III	U6/S16	266.25	271.75
III	M4 /S4	126.25	131.75	III	U7/S17	273.25	278.75
III	M5 /S5	133.25	138.75	III	U8/S18	280.25	285.75
III	M6 /S6	140.25	145.75	III	U9/S19	287.25	292.75
III	M7 /S7	147.25	152.75		S20	294.25	299.75
III	M8 /S8	154.25	159.75				
III	M9 /S9	161.25	166.75				
III	M10/S10	168.25	173.75				

\* S channels in band I are only used in Belgium

## UHF band IV and band V channels

SYSTEMS: I, G, H, K and L					
Band	Channel	Vision C.	Band	Channel	Vision C.
IV	21	471.25	V	51	711.25
	22	479.25		52	719.25
	23	487.25		53	727.25
	24	495.25		54	735.25
	25	503.25		55	743.25
	26	511.25		56	751.25
	27	519.25		57	759.25
	28	527.25		58	767.25
	29	535.25		59	775.25
	30	543.25		60	783.25
31	551.25	61	791.25		
32	559.25	62	799.25		
33	567.25	63	807.25		
34	575.25	64	815.25		
35	583.25	65	823.25		
36	591.25	66	831.25		
37	599.25	67	839.25		
V	38	607.25	68	847.25	
	39	615.25	69	855.25	
	40	623.25	70	863.25	
	41	631.25	71	871.25	
	42	639.25	72	879.25	
	43	647.25	73	887.25	
	44	655.25	74	895.25	
	45	663.25			
	46	671.25			
	47	679.25			
	48	687.25			
	49	695.25			
	50	703.25			

(sound carrier dependent on TV system)

SYSTEMS: M, N and Japan					
Channel	Vision C.	Sound C.	Channel	Vision C.	Sound C.
14	471.25	475.75	49	681.25	685.75
15	477.25	481.75	50	687.25	691.75
16	483.25	487.75	51	693.25	697.75
17	489.25	493.75	52	699.25	703.75
18	495.25	499.75	53	705.25	709.75
19	501.25	505.75	54	711.25	715.75
20	507.25	511.75	55	717.25	721.75
21	513.25	517.75	56	723.25	727.75
22	519.25	523.75	57	729.25	733.75
23	525.25	529.75	58	735.25	739.75
24	531.25	535.75	59	741.25	745.75
25	537.25	541.75	60	747.25	751.75
26	543.25	547.75	61	753.25	757.75
27	549.25	553.75	62	759.25	763.75
28	555.25	559.75	63	765.25	769.75
29	561.25	565.75	64	771.25	775.75
30	567.25	571.75	65	777.25	781.75
31	573.25	577.75	66	783.25	787.75
32	579.25	583.75	67	789.25	793.75
33	585.25	589.75	68	795.25	799.75
34	591.25	595.75	69	801.25	805.75
35	597.25	601.75	70	807.25	811.75
36	603.25	607.75	71	813.25	817.75
37	609.25	613.75	72	819.25	823.75
38	615.25	619.75	73	825.25	829.75
39	621.25	625.75	74	831.25	835.75
40	627.25	631.75	75	837.25	841.75
41	633.25	637.75	76	843.25	847.75
42	639.25	643.75	77	849.25	853.75
43	645.25	649.75	78	855.25	859.75
44	651.25	655.75	79	861.25	865.75
45	657.25	661.75	80	867.25	871.75
46	663.25	667.75	81	873.25	877.75
47	669.25	673.75	82	879.25	883.75
48	675.25	679.75	83	885.25	889.75