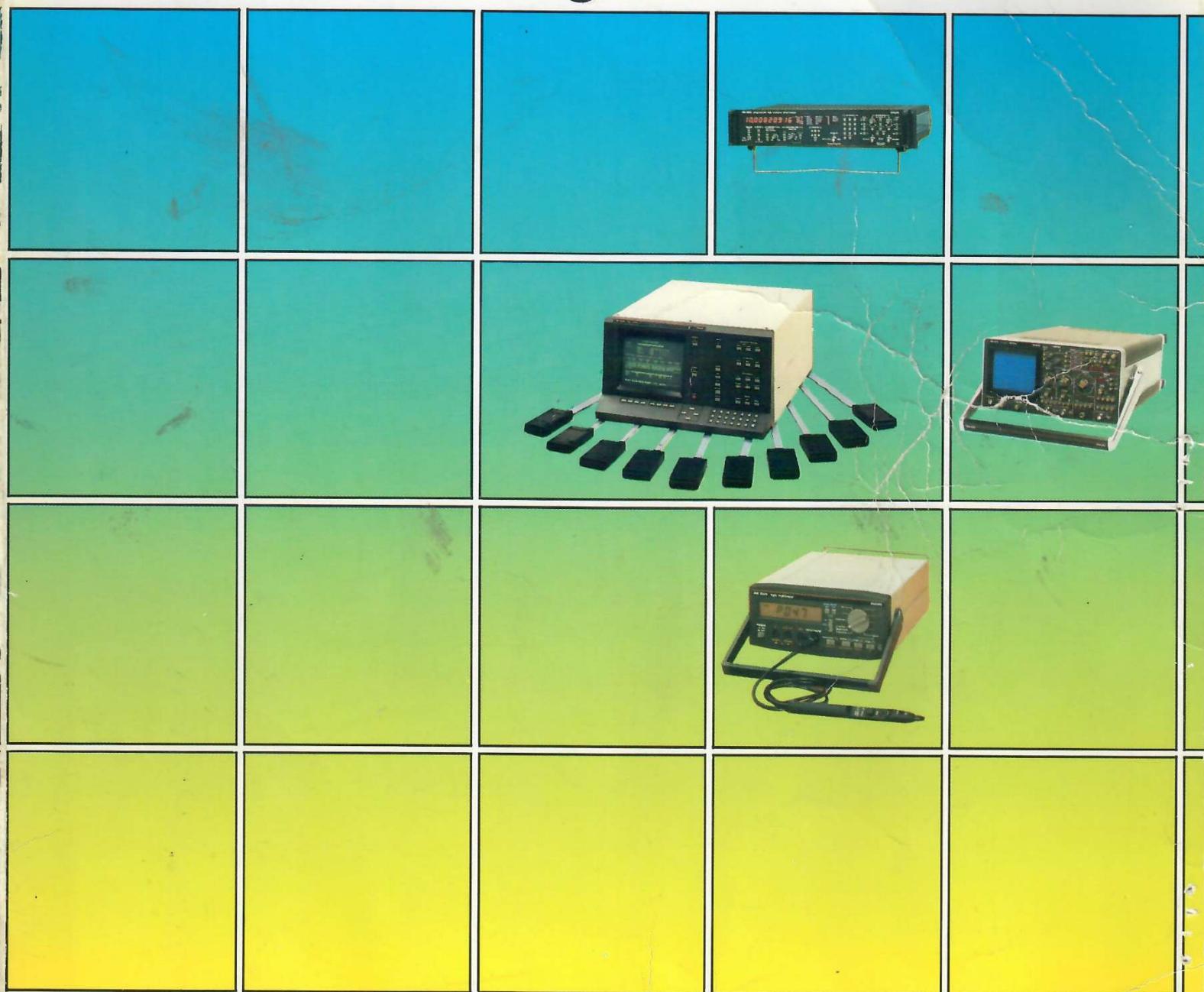


test and measurement catalog 1985/86



Test & Measurement

PHILIPS

Professional TV measuring equipment

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Introduction

This section of the catalog describes only part of the extensive range of Philips professional television measuring equipment (PTV). More details are available in the comprehensive PTV catalog and separate data sheets.

The Philips PTV activity is among the largest in the world. PTV test equipment is in use in almost all areas of television, i.e. TV broadcasting, cable TV, closed-circuit TV, engineering, manufacturing and repair of consumer and professional TV products. Philips PTV test equipment is found in broadcasting studios, telecine and video tape recorder centres, main terminals, microwave and satellite link stations, and transmitting stations. Large cable TV and closed-circuit TV systems use PTV equipment for testing and monitoring the system performance, and for distribution of the signals. Most of the world's TV receivers are produced with the involvement of some Philips test gear. Also in the manufacturing process of video tape recorders, video cassette recorders, television transmitters, television cameras, mixers, colour monitors and other television test gear, Philips PTV equipment is widely used.

The total range of PTV equipment has a reputation for very high quality and excellent reliability. These are important factors in equipment selection where the failure of a single piece of equipment can shut down the whole operation.

Systems

The PTV factory also offers system work and special customer modification of standard products. The increasing complexity of television systems and the demand for special knowhow and test equipment is encouraging many users of TV test equipment to seek professional assistance for planning and installation of their systems. The ordering of a complete system rather than the individual unit offers the user the following advantages:

- guaranteed system performance
- design and planning by experienced PTV specialists
- only a single supplier to negotiate with.

The Philips PTV systems group has the expertise and the experience after many years of successful system designs, in particular for TV set and video cassette recorder factories.



COLOUR GENERATOR, PO PM 5630
(parallel outputs)

Generates six different video signals on parallel outputs

All video signals are generated digitally

Provides all synchronization signals necessary for TV studios and OB vans

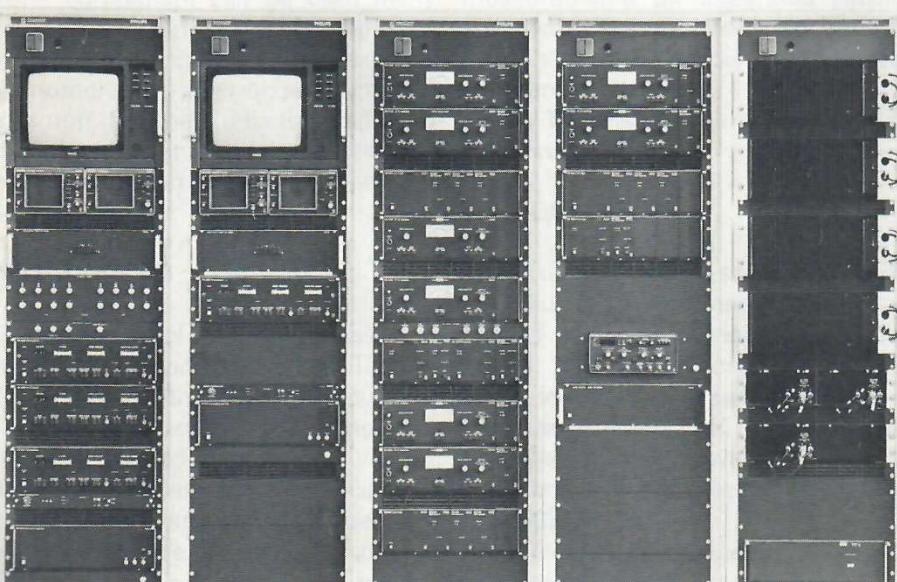
High stability through the use of TCXO as reference oscillator

The new Colour Generator, PO (Parallel Outputs), type PM 5630, is a combined colour sync pulse generator and colour test signal generator. "PO" indicates that all test signals are available simultaneously at separate outputs.

The sync pulse generator is in conformity with the latest EBU and RS-170A standards for broadcasting, and it supplies all necessary synchronization signals for driving television studios and other television systems. Special custom-made integrated circuits and carefully selected crystal oscillators ensure unsurpassed accuracy and stability.

The signal generator works digitally, i.e. all test signals are stored in programmable read-only memories as digital information. This information feeds digital to analog converters in such a way that the required analog waveforms are obtained. This principle guarantees very accurate and stable output signals. The signals comprise the following important studio alignment signals:

- Colour bars (several versions)
- PLUGE with grey scale
- Convergence pattern (grid-dots-checker board, several versions available)
- Red pattern
- Grey scale (5 or 10 riser)
- Window (10%-100% white) in steps of 10%
- Black burst



COLOUR GENERATOR, MP PM 5631 (multi pattern)



Generates up to 99 different video signals selectable from the front panel.

Provides all necessary synchronization signals for TV studios and OB vans.

All main functions remotely controllable via optional IEEE bus interface.

Colour field reference pulse available.

Can be genlocked to other video sources.

The new Colour Generator, MP (Multiple Pattern), type PM 5631 is a combined colour sync pulse generator and colour pattern generator. "MP" indicates that a large number of signals can be selected on a single output.

The sync pulse generator is in conformity with the latest EBU and RS-170A standards for broadcasting, and supplies all necessary synchronization signals for driving television studios and other television systems. Special custom-made integrated circuits and carefully selected crystal oscillators ensure unsurpassed accuracy and stability.

The signal generator works digitally, i.e. all test signals are stored in programmable read-only memories as digital information. This information feeds digital to analog converters in such a way that the required analog waveforms are obtained. This principle guarantees very accurate and stable output signals. The generator has a standard library of some 90 pre-programmed patterns that include:

- Colour bars
- Composite colour patterns
- Colour test signals
- Monochrome signals

In the manual mode, pattern selection is done with push-buttons (up/down counter with display) and modifications are available for testing purposes. The instrument can also be controlled remotely via an IEC/IEEE interface (optional).

The PM 5631 is available for all PAL systems (PAL-G, PAL-M and PAL-N).

The PM 5631 are recommended where a number of test signals are needed on a single output, by manual or computer control, such as in broadcast studios, CCTV and CATV studios, outside broadcast vans, factories for manufacturing of high quality consumer TV products and professional colour equipment.

COLOUR GENERATOR, SECAM PM 5632

This generator is the SECAM version of the PM 5631. All test signals and features are essentially identical with those of the PM 5631. The output signal is in accordance with the colour system SECAM.

COLOUR GENERATOR, RGB PM 5633

This generator is an RGB | Y;R-Y, B-Y version of the PM 5631. All test signals and features are essentially identical with those of the PM 5631. The generator has three output sockets for either RGB output or Y, R-Y, BY output as selected internally on the instrument.

COLOUR PATTERN GENERATORS PM 5534 AND PM 5535



Most recognized receiver test pattern in the world

Used intensively by broadcasting authorities and TV setmakers

Extended performance by optional text generator and time clock

Built-in coder and sync pulse generator for all colour systems (PM 5534)

YRGB output (PM 5535)

The colour pattern generator PM 5534 is a self-contained instrument generating the well-known PHILIPS circle pattern. This pattern, recognized all over the world, offers the unique feature that most important characteristics of a TV receiver can be visually checked on the screen. The pattern of the PM 5534 is identical with the pattern produced by its predecessor PM 5544.

This test pattern has been adopted by the television authorities in more than 25 countries in all parts of the world as the test pattern to be transmitted outside the programme hours. The pattern is composed in such a way that almost all relevant parameters for a TV receiver or colour monitor can be checked by observation of the various signal elements of the pattern, right from the screen of the receiver or TV monitor.

The PM 5535, with its YRGB output will drive different coders for multi-standard applications (eg, PAL & SECAM)

In addition there is room for optional print cards to extend the performance of the instrument.

These include a text generator, clock generator, an oven-controlled crystal oscillator and a 10MHz input card.

TEST PATTERN GENERATOR PM 5537



Composite pattern based upon international insertion test signals

Used in eurovision network as a standby and link test pattern

Pattern composition allows both off-screen and waveform monitor evaluation of the transmission quality

Built-in encoder for most colour systems

The PM 5537 is the successor to extended performance through the PM 5547 test pattern generator, and it generates the same composite pattern, which is ideal for checking all sorts of internal and external transmission paths in broadcast TV system and networks.

The pattern is designed in such a way that it gives a fairly good impression of the transmission quality, when displayed on a colour monitor. Besides authority identification can be shown in alphanumeric display.

All the signal elements of the pattern except the colour bar, are the same as those composing the insertion test signals viz. white reference bar, multi-burst, 2T sine-squared pulse, 20T pulse carrierborn and grey scale signal. This means that the pattern represents a full-field VIT signal, and by proper selection of the time base controls, the TV engineer can check the most important transmission characteristics on his waveform monitor. On top of that the colour bar signal gives valuable information that is not available from the VITS.

The comprehensive PTV catalog is available on request.

VIDEO TEST SIGNAL GENERATOR PM 5570



Most versatile signal generator for testing transmission characteristics of video systems

Generates all necessary signals for aligning and checking TV studios, transmission links and transmitters

All levels are continuously variable with preset positions

Sweep signal from 100kHz up to 10MHz in one sweep with marker indication for each MHz

The PM 5570 is the most versatile video test signal generator available nowadays. It generates a wide variety of test signals necessary for measuring the system parameters of all kinds of video transmission equipment. It also enables the user to vary all signal levels so that level dependent parameters can be detected as well.

The generator has its own standard SPG built-in, which can be genlocked to an external composite video – or black burst signal. A choice of the following test signals can be made: squarewave signals of different frequencies and with different rise times, pulse-and-bar signals, sawtooth- and staircase signals with and without superimposed sine wave/subcarrier and various sine wave signals, viz. video sweep, multiburst and fixed frequencies. All signals can be superimposed with hum, and white noise can be added to check among others sync separators, clamp circuits, processing amplifiers, etc. A flat field signal (APL) can be added to the sawtooth and staircase signals forming the so-called duty signals (alternating 3 lines APL, 1 line sawtooth/staircase).

TELETEXT TEST GENERATOR PM 5645



Complete 4-page teletext generator in conformity with British teletext standard

Transmission of 1, 10 or 100 pages per magazine selectable from front panel

Adjustable eye-height of data signal with two pre-set positions.

Adjustable white noise as well as co-channel sinewave interference available.

The PM 5645 teletext test generator is a precision instrument designed for testing of teletext decoders, TV receivers with

teletext decoder, as well as any equipment or part of a TV + teletext transmission system.

The instrument is selfcontained in the terms that it consists of a sync pulse generator (SPG), a full field video generator (cross-hatch) and a teletext generator with distortion possibilities. The teletext part has the following key facilities:

- 8 selectable magazines
- magazine length of 1, 10 and 100 pages
- 4 different pages
- eye-height reduction by echos, co-channel interference and noise.

The PM 5645 is recommended for use in production and professional repair plants for test, calibration and evaluation of TV receivers/monitors with teletext facilities. In the transmission path, in particular at transmitter stations, the PM 5645 is very useful for test of the degradation of the decoding margin as a result of incorrect amplitude and group delay response.

SYNC TEST GENERATOR PM 5634



Jumping line signal with offset up to $\pm 8\%$ from nominal line frequency

Jumping subcarrier signal with offset up to $\pm 800\text{Hz}$ from nominal subcarrier frequency

Anti-PAL signal for adjustment and control of PAL decoders

External reference inputs for other line and subcarrier frequencies

The PM 5634 sync test generator is an extremely versatile tool for the test and evaluation of the synchronization circuitry incorporated in most types of television equipment, such as monitors, receivers, video tape recorders, sync pulse generators, etc.

The instrument supplies two main signals and two auxiliary signals. The monochrome test signal has variable horizontal (and vertical) frequency, which can be off-set from nominal in steps or jumped automatically from plus to minus the selected off-set. The colour test signal has a variable subcarrier frequency, which can be off-set in the same way as the horizontal frequency of the monochrome signal. The auxiliary signals (red and anti-PAL) are used for monitor and receiver alignment.

The PM 5634 is recommended for all sorts of television production, repair and

quality control. In engineering and design laboratories the instrument offers speedy evaluation of the synchronization characteristics of new equipment.

COLOUR ENCODER PM 5545



Precision colour encoder of high class

Two inputs: (Y) RGB and Y, R-Y, B-Y giving the choice of optimal quality of the encoded signal

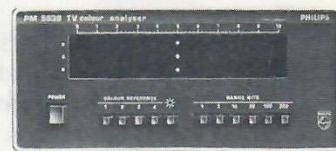
Separate colour and bl/wh outputs are available

Switchable luminance and chrominance information facilitates testing of encoding/decoding characteristics

The PM 5545 colour encoder is a precision instrument designed for the encoding of critical signal sources, like for instance the RGB signals of the PM 5546 video calibration generator and the PM 5535 colour pattern generator. The colour encoder is also very well suited for encoding the signals of RGB and YRGB colour cameras.

The PM 5545 has (Y) RGB as well as Y, B-Y, R-Y inputs, so that all types of signals can be encoded. The following signal elements are switchable in order to provide testing possibilities: luminance, B-Y part, R-Y part, colour burst, and phase alternation (PAL versions). A notch filter can be inserted in the luminance path. The amplitude of the colour burst is variable from 0% to 200% of nominal amplitude.

TV COLOUR ANALYZER PM 5539



First practical solution to the problem of 'objective setting' of colour monitors

Optional battery makes operation possible where mains connection is impossible or inconvenient

The three LED bars mounted over each other ensure quick and accurate reading of the colour levels and balance

High sensitivity allows accurate setting of the colour white at low luminance levels

The Philips TV colour analyser PM 5539 has been developed to meet the increasing demand for measurement and adjustment of the 'colour' white of

colour TV-sets and colour monitors. The light emitted by a colour picture tube consists of the three primary colours red, green and blue. White is obtained by additive mixing of these colours in the appropriate proportions. The PM 5539 has three independent LED displays so that the intensities of the three primary colours can be measured simultaneously.

To cope with different white standards or different brands of picture tubes, the PM 5539 has four matrix circuits which can be adjusted to give correct readings. The white level is normally adjusted at both high and low brightness levels, but the ratio of the three primary colours should also stay the same at 'grey' levels. To permit this 'grey scale tracking', the PM 5539 has a wide sensitivity range (1 to 300 NIT full scale).

VIDEO LEVEL METER PM 5548



Precise video level measurement

Controls for line selection and position on the selected line(s) allow measurement of the video level at any place of a TV signal or pattern including insertion signals

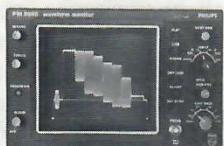
Optional BCD output

Complementary to PM 5633 colour generator, RGB

The digital video level meter is specially designed for aligning and checking of all kinds of video equipments such as pattern and test signal generators, encoders, decoders, mixers, etc.

The instrument is using a sampling method enabling it to measure levels at any point of the television signal. The position of the sampling pulse is determined by four frontplate controls: - thumbwheel switches, directly indicating the line number for the sampling to start, - control "height" determining how many lines will be sampled, - multturn potentiometer "delay" giving the sampling point on the selected line(s), - control "width" determining the width of the sampling pulse.

WAVEFORM MONITOR PM 5565



Designed for use in broadcast studios and OB vans

Input at the front for a standard oscilloscope probe

Internal graticule for accurate level readings

Low power consumption

Compatible with other brands of waveform monitors

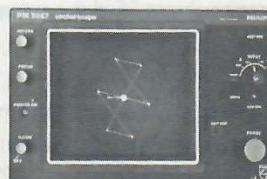
The PM 5565 waveform monitor was designed for use in television studios, VTR and telecine centres and OB vans. The main application of the instrument is to set-up and check the signals of b/w and colour cameras, videotape recorders, film and slide scanners etc.

As a unique feature for an instrument of its price class, the PM 5565 has a probe input at the front. This enables the PM 5565 to be used for fault finding in the equipment to which it is allocated, thus eliminating the need for an extra oscilloscope for servicing purposes.

The PM 5565 has two video inputs and a monitor output at the rear plus the facility for synchronization from a third video or composite sync input. The vertical sensitivity is $1V_{p-p}$ or $0.2V_{p-p}$ full screen size. Filters for display of luminance only or chrominance only are provided. Differential gain measurement is also possible with one separate button.

Horizontal deflections are one or two lines as well as one or two fields, full screen size. Also 20 times magnification is possible. For the convenience of adjusting colour cameras, the PM 5565 accepts the signals from a 'parade display' switcher.

VECTORSCOPE PM 5567



Designed for use in broadcast studios and OB vans

Internal graticule for accurate vector readings

Low power consumption and high reliability

Very easy access to servicing

Compatible with other brands of vectorscopes

Easy to operate because of logic ergonomy

The PM 5567 vectorscope was designed for use in television studios, VTR and telecine centres and OB vans. The main application is for setting-up and checking the colour content of signals from colour

cameras, video taperecorders, film- and telecine scanners etc.

The colours of the selected signal are displayed as vectors.

Vector length represents the saturation of the colours; vector angle represents the hue of the colours (the latter with reference to the colour burst).

PM 5567 has two video inputs plus a further facility for synchronization from a third video colour subcarrier signal. In the PAL version the R-Y alternation can be switched off when checking the 180 degrees PAL switching of the displayed signal. An NTSC display also turns all the -(R-Y) vectors positive.

The internal graticule makes vector readings easier and more accurate, because parallax errors cannot occur. The graticule has special tolerance lines for reading both the amount of differential gain and phase distortion.

STUDIO VITS GENERATOR PM 5651



Self-contained unit with insertion and generation of the CCIR or NTC 7 specified VIT signals

Programme path is protected via by-pass relay

Insertion of VIT signals selectable by internal matrix from line 8 to line 22 (321-335)

Optional source code generator available

The PM 5651 is designed for application in broadcasting studios, video tape recording and telecine centres.

The PM 5651 offers the professional EBU and NTC 7 signals at an attractive price such that it is now economically feasible to introduce a VITS generator/inserter/deleter at each video source. In addition the PM 5651 has an optional source code generator which makes the identification of signal-source or program material easy or even automatic. The EBU source code is standard in the European version, other codes on request.

The generator has extreme accuracy and stability due to its digital generation principle, where the signals are stored in a digital format in PROMs and turned into analog waveforms by means of a high-speed precision D/A converter. By-pass relay protection, easy programming and serviceability are self-evident features of this type of equipment.

INSERTION SIGNAL GENERATOR PM 5576A



In full conformity with the EBU performance specification for insertion signal equipment except that the PM 5576 has no full-field facility
Ideal for use in TV studios and OB vans, where simple and reliable operation is important

Easy programmability via internal matrix board

The PM 5576 insertion signal generator has been developed for those applications, where insertion signals are inserted into programme signals as routine operations that require no attention nor operation of the inserting equipment. The PM 5576 can be considered a simplified version of the fully EBU specified ITS generator PM 5575, since the ITS generating part and the inserter are identical in the two apparatus. Only the full-field signal part is omitted in the PM 5576, whilst the front plate controls of the PM 5575 have been placed inside the PM 5576.

The PM 5576 is particularly useful in OB vans, TV studios and switching centres because of its reliable and sturdy construction and simple operation. Once the routine of using insertion signals within a broadcast authority has been established, the setting of the ITS generator is very rarely changed. The equipment thus requires minimal adjustment by the operational staff.

EBU INSERTION SIGNAL GENERATOR PM 5575A



Authorized by the EBU for use in the Eurovision network

Easy programmability through front plate controls and matrix board

Keyed-in inputs for external insertion signals to be used for data signals, command codes or special insertion signals.

This universal insertion signal generator and inserter has been specially developed to meet the growing need for 'in transmission' testing and automatic analysis. The PM 5575 is a precision instrument that generates, inserts and

erases insertion signals in accordance with the EBU specifications for international transmissions, and it can also be used for data signals. It is easily and conveniently programmed from the front panel pinboard matrix.

The PM 5575A is particularly attractive for use in main terminals of broadcast and PTT switching centres as well as in advanced laboratories and maintenance workshops. This because it is easily programmed from the front panel, which has the advantage that the various settings can be seen directly at the frontplate. The instrument can be switched to full-field operation and this signal is available at all times. Moreover the full-field signal can be generated in various combinations, including a special 50Hz squarewave signal that is very useful for testing the low frequency response.

INSERTION SIGNAL ANALYZER PM 5578



Up to 21 parameters can be measured

Outstanding accuracy of measuring results

Presentation by means of digital display

Adjustable limit selection with out-of-tolerance alarm facility

Data print-out possible (serial code ASCII)

Output for data transmission to monitoring centre

Additional inputs facilitate transmission of alarm functions

One 19-in rack cabinet, 3E high contains all circuitry

This system is a precision instrument for carrying out continuous measurements of the distortion on television chains or other television equipment. It may be used wherever video equipment (from amplifiers and equalizers to transmission links and transmitters or the whole broadcast network from programme studio to transmitters) has to be checked, adjusted or constantly supervised in broadcast studios, switching centres and transmitter stations. Up to 21 different distortions can be measured with it, the results being extremely accurate. Presentation is by means of a digital display. The system includes adjustable limit selection with out-of-tolerance facility. Data print-out is possible (serial

code ASCII). A special data transmitter output is incorporated for transmitting the measuring results and alarm signals to a distant centre for remote monitoring. In combination with a minicomputer, several systems may be used for supervising a whole broadcast network.

IF MODULATOR PM 5580



Narrow limits for bandpass and group delay profiles

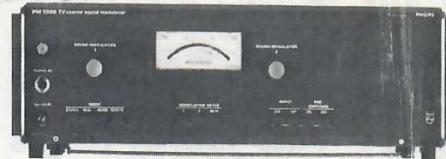
Switchable DSB and VSB modes

Switchable linear and pre-corrected group delay characteristics

Synthesized carrier frequency generator

The PM 5580 is a compact combined vision and sound modulator that uses a highly stable 10MHz X-tal oscillator in order to derive the IF carrier. Synthesizing the signal in this way also allows other intermediate frequency to be provided. The modulator is used to supply either combined or separate IF vision and sound carrier to the VHF and UHF converters described on this page. In turn this combination can be used for signal distribution systems. The DSB mode facility of the modulator also allows it to be employed for testing, for example Nyquist receivers for pulse and frequency response.

TV STEREO MODULATOR PM 5588



Self contained sound modulator for 2 channels or stereo transmission

In conformity with the for German broadcast service

Options for inter-carrier output and internal vision carrier

Easy to use with existing vision modulators, in particular PM 5580

The PM 5588 TV stereo modulator contains all the circuits needed to generate the FM modulated sound signals for normal television transmissions (mono), two-channel sound transmissions (dual) and stereo phonic sound transmissions (stereo). Together with a

vision modulator, for instance the PM 5580, a composite vision/sound signal is generated (IF frequency), which can then be converted to any VHF or UHF channel with one or more RF converters (PM 5581 for VHF, PM 5582 for UHF).

The two sound carriers are produced by synthesizers using the incoming video as reference, are FM modulated by the incoming audio signals in accordance to the selected mode of operation: mono, dual or stereo.

VHF/UHF CONVERTERS PM 5581-PM 5583



- Easy change of channel**
- Directional coupler in the IF output**
- Covers all VHF/UHF as well as S channels**
- High stability, very low distortion**

The PM 5581 converts IF signals to signals in the VHF band whilst the PM 5582 converts to the UHF band. They are designed for use together with the IF modulator PM 5580. One converter can be plugged into the same 19-in cabinet as the PM 5580, from which it also is driven. If more converters are used one has to use the PM 5583 base unit, which can contain up to four converters. The directional coupler unit enables the user to connect many converters in series, which is necessary in a IF distribution network.

TV MODULATORS PM 5597/98



- Self-contained TV modulators for distribution and universal purposes**
- Double side-band modulation with special filter that reduces partly the lower side-band, and suppresses spurious and harmonic signals**
- Built-in indicators for overmodulation of the video as well as the sound carriers**
- The output of several modulators can be combined by means of simple combiners**

The PM 5597 and PM 5598 TV modulators are small one-channel, combined

vision/sound 'transmitters' of professional quality, well suited for colour and monochrome TV. The carrier frequency is crystal controlled, and all channels from 35MHz to 300MHz (PM 5597) and 470MHz to 960MHz (PM 5598) are available.

The output signal is in principle a double side-band modulated RF signal, but a band-pass filter in front of the output stage partly suppresses the lower side-band and the frequency content of the higher side-band above the sound carrier. Besides, this filter suppresses any spurious and harmonics outside the band-pass range. Thanks to wide-band output stage (75Ω output impedance over the complete frequency range) the outputs of several modulators can be connected to a single cable for distribution by means of simple combiners without any mutual disturbance of the signals. Only every other channel has to be kept free of signal.

Mechanically the modulators are plug-in units fitting into the PHILIPS 19-in rack/table cabinet. The PM 5597 is a 1/6 unit, while the PM 5598 is a 2/6 unit.

TV TEST MODULATOR PM 5669



- Very accurate display of rest carrier with digital meter**

- Extremely high stability of modulator balance**
- Double side-band video modulator with output signals on IF as well as in band I**
- Three different modes of DC restoration**

The main application of the PM 5669 is test and evaluation of professional TV demodulators and receivers. These products are in themselves measuring instruments so to test them, a modulator with extreme accuracy and stability is mandatory. The PM 5669 delivers a double side-band modulated signal both on IF basis and on a TV channel in band I. The flatness of the response, the accuracy of the group delay precorrection response, and the very low level of distortions and spurious signals, satisfy fully the needs for demanding demodulator test and calibration. The instrument has a precision, digital modulation meter so that evaluations can be performed with well defined modulation depths.

TV MODULATOR PM 5671



Combined vision and sound modulator with output signal in VHF or UHF bands

Very high stability due to use of SAW filters.

Pre-corrected group delay and vestigial side-band characteristics.

Very low content of harmonics and spurious at the output

Ideal for low power transmitters and distribution systems in TV factories

The TV modulator PM 5671 is a complete television modulator (transmitter) which has inputs for video and audio and output for VHF or UHF radio frequencies.

Extreme accuracy and stability are obtained by the use of new technology, such as synthesized carrier generation and surface-acoustic wave-filter (SAW) for the amplitude response shaping. Although the PM 5671 is very economically priced, it features the following broadcasting characteristics only found in more expensive modulators:

- Vestigial side-band characteristics
- Group delay pre-correction
- Low distortion
- Channel output with very low spurious and harmonic content
- Precision meters, front mounted, for modulation control.

The PM 5671 is ideal for television distribution systems such as those used in TV and video cassette recorder factories, closed-circuit and cable TV networks, etc. The SAW filter ensures that adjacent channel operation is possible without interference. The PM 5671 is also ideal as a cost effective exciter in low power TV transmitters. The instrument is available for TV systems B/G, D/K, I and M.

TV MODULATOR, IF PM 5670

This modulator is an IF version of the PM 5671 TV modulator. The modulator gives the option of either a composite vision/sound IF signal or vision and sound signals on separate output connectors (selected internally).

The PM 5670 is recommended when IF signals are required or sound and vision have to be converted separately into VHF or UHF channels. Recommended converters: PM 5581 and 82 (PM 5583 power supply for PM 5581/82)

TV MODULATOR PM 5672 DS (dual sound)



Combined vision and dual/stereo sound modulator with RF output in the VHF range and UHF range

Dual/stereo sound in conformity with the German system

Pre-corrected group delay and vestigial side-band characteristics

Ideal for low power dual sound/stereo transmitter in CATV networks as well as central transmitter in TV factories

The PM 5672 TV modulator, DS is a complete television modulator (transmitter) which has inputs for video and two audio channels and output for VHF or UHF radio frequencies.

Extreme accuracy and stability are obtained by the use of new technology, such as synthesized carrier generation and a surface-acoustic wave-filter (SAW) for the amplitude response shaping. Although the PM 5672 is very economically priced, it features the following broadcasting characteristics only found in more expensive modulators:

- Vestigial side-band characteristics
- Group delay pre-correction
- Low distortion
- Channel output with very low spurious and harmonic content
- Precision meters, front mounted, for modulation control
- Automatic substitution for video and audio.

The PM 5672 is ideal for television distribution systems such as those used in TV and video cassette recorder factories, closed-circuit and cable TV networks, etc., The SAW filter ensures that adjacent channel operation is possible without interference. The PM 5672 is also ideal as a cost effective exciter in low power TV transmitters.

TV MODULATOR PM 5673, CATV



Designed for adjacent channel operation in cable systems and other distribution systems

Automatic or manual substitution of video and audio

Pre-corrected group delay and vestigial side-band characteristics

Very high stability due to the use of SAW filters and synthesized carriers

The PM 5673 TV modulator, is a complete television modulator (transmitter) which has inputs for video and audio and output for VHF or UHF radio frequencies.

Extreme accuracy and stability are obtained by the use of new technology, such as synthesized carrier generation and a surface-acoustic wave-filter (SAW) for the amplitude response shaping. Although the PM 5673 is very economically priced, it features the following important characteristics only found in more expensive modulators:

- Vestigial side-band characteristics
- Group delay pre-correction
- Low distortion
- Channel output with very low spurious and harmonic content
- Precision meters, front mounted, for modulation control
- Automatic substitution for video and audio.

The PM 5673 is specially designed for television distribution systems such as cable TV systems, etc. The SAW filter ensures that adjacent channel operation is possible without interference. The automatic substitution circuitry changes to stand-by video and audio signals, when the incoming programme signals disappear. Manual control is also possible.

TV DEMODULATOR PM 5560



Both synchronous and envelope detection modes give possibility of measuring more parameters than previously and with improved accuracy

Unique ROM and synthesizer circuits facilitate straightforward dialling of the wanted channel

Separate inputs for UHF and VHF channels at low and high levels plus IF input

Channel and input selection can be remotely controlled

The Philips PM 5560 TV demodulator is a compact precision Nyquist demodulator containing both the tuner and the IF demodulator.

The tuner is a combined VHF-UHF tuner using double conversion to obtain a good selectivity. The tuning is done by means of thumbwheels, indicating the selected channel number. Provisions have been made to cover also the S-channels, special VHF channels and to tune to transmitters using an off-set frequency. The IF demodulator can be used in two modes:

- a. synchronous detection
- b. envelope detection

The modes can either be selected manually or automatically with a preference for the synchronous mode. Sound detection is also possible in two modes:

- a. intercarrier sound
- b. splitcarrier sound

Three meters are mounted at the front-plate enabling simultaneous checks of IF level, sound deviation and vision rest carrier.

POWER AMPLIFIERS PM 5691/93/94



1 Watt RF power into 75Ω

Usable with natural cooling or forced air cooling

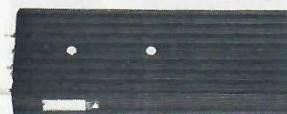
Very low distortion and intermodulation

Small mechanical dimensions

The PM 5691/93/94 power amplifiers are designed for high quality, high power distribution systems in, for instance, TV set and video recorder factories. The amplifiers are supplied for a specific channel in band I VHF (PM 5691), band III VHF (PM 5693) and the UHF band (PM 5694).

The amplifiers have very flat amplitude response/group delay response and very low intermodulation/distortion. They are therefore ideal for use in high quality low power transmitters.

The standard output level is 1 Watt, however, if slightly more intermodulation is acceptable or a linearity corrector is applied the amplifier can deliver substantially more power.



The comprehensive PTV catalog is available on request.