



# VM 700T Application/ TV Generator Matrix

## Auto Mode (NTSC)

| VM 700T<br>Application                                          | Generator Required   |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
|-----------------------------------------------------------------|----------------------|-------------------|--------|-------------------|---------|---------|--------------------|---------|--------------------|--------|---------|---------|------|
|                                                                 | TSG100               | TSG100<br>Opt. 01 | TSG120 | TSG120<br>Opt. 02 | TSG130A | TSG170A | TSG170A<br>Opt. 1V | TSG170D | TSG170D<br>Opt. 1V | TSG200 | VITS100 | VITS200 | 1910 |
| Horizontal/Vertical<br>Blanking Interval<br>Timing Measurements | Any Composite Signal |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| Amplitude and Phase Measurements                                |                      |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| APL                                                             | Any Composite Signal |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| Bar Top                                                         |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Bar Amplitude                                                   |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| C/Y Delay                                                       |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| C/Y Gain                                                        |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Differential Gain                                               |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Differential Phase                                              |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Luminance Nonlinear Distortion                                  |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Relative Burst Gain                                             |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Relative Burst Phase                                            |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Burst Amplitude                                                 | Any Composite Signal |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| Sync Amplitude                                                  | Any Composite Signal |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| Blanking Level                                                  | Any Composite Signal |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| Sync Variation                                                  | Any Composite Signal |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| Blanking Variation                                              | Any Composite Signal |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| Frequency Response Measurements                                 |                      |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| Multiburst Flag Amplitude                                       |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  |        | X       | X       | X    |
| Multiburst Packet Amplitudes                                    |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  |        | X       | X       | X    |
| ICPM <sup>1</sup>                                               |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Color Bars                                                      |                      | X                 | X      | X                 | X       |         | X                  |         | X                  |        | X       | X       | X    |
| Field-Time Distortion                                           |                      | X                 |        | X                 |         |         | X                  |         | X                  |        |         |         | X    |
| Waveform Distortion Measurements                                |                      |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| Line-Time Distortion                                            |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Pulse-to-Bar Ratio                                              |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Short-Time Distortion                                           |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| Chrominance Nonlinear Gain                                      |                      | X                 |        | X                 |         |         | X                  |         | X                  |        | X       | X       | X    |
| Chrominance Nonlinear Phase                                     |                      | X                 |        | X                 |         |         | X                  |         | X                  |        | X       | X       | X    |
| Chrominance-to-Luminance Intermodulation                        |                      | X                 |        | X                 |         |         | X                  |         | X                  |        | X       | X       | X    |
| 2T K-Factor                                                     |                      | X                 | X      | X                 | X       | X       | X                  | X       | X                  | X      | X       | X       | X    |
| VIRS Measurements                                               |                      |                   |        |                   |         |         |                    |         |                    |        |         |         |      |
| VIRS Setup                                                      |                      |                   |        |                   |         |         |                    |         |                    |        | X       | X       | X    |
| VIRS Chrominance Reference Amplitude                            |                      |                   |        |                   |         |         |                    |         |                    |        | X       | X       | X    |
| VIRS Chrominance Phase Relative to Burst                        |                      |                   |        |                   |         |         |                    |         |                    |        | X       | X       | X    |
| VIRS Luminance Reference                                        |                      |                   |        |                   |         |         |                    |         |                    |        | X       | X       | X    |
| Signal-to-Noise Ratio Measurements                              | Any Composite Signal |                   |        |                   |         |         |                    |         |                    |        |         |         |      |

<sup>1</sup> Requires staircase or ramp signal and quadrature output from a demodulator.

## Measure Mode

### VM 700T

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| Application                    | TSG100 | TSG100 Opt. 01 | TSG111 | TSG120 | TSG120 Opt. 02 | TSG121 | TSG130A | TSG1 |
|--------------------------------|--------|----------------|--------|--------|----------------|--------|---------|------|
| Bar Line Time                  | X      | X              | X      | X      | X              | X      | X       | X    |
| Bounce                         |        |                | X      | X      | X              | X      | X       | X    |
| Burst Frequency                |        |                |        |        |                |        |         |      |
| Chroma/Luma Gain & Delay       | X      | X              | X      | X      | X              | X      | X       | X    |
| Chroma Frequency Response      |        |                |        |        |                |        |         |      |
| Chroma Noise                   |        |                | X      | X      |                | X      | X       | X    |
| Chroma Nonlinearity            |        | X              | X      |        | X              |        |         |      |
| Color Bar                      | X      | X              | X      | X      | X              | X      | X       | X    |
| DP/DG                          | X      | X              | X      | X      | X              | X      | X       | X    |
| Frequency Response/Group Delay |        | X              | X      |        | X              |        |         |      |
| Horizontal Blanking            |        |                |        |        |                |        |         |      |
| Horizontal Timing              |        |                |        |        |                |        |         |      |
| ICPM <sup>2</sup>              | X      | X              | X      | X      | X              | X      | X       | X    |
| Jitter                         |        |                |        |        |                |        |         |      |
| Jitter Long-Time               |        |                |        |        |                |        |         |      |
| K-Factor                       | X      | X              | X      | X      | X              | X      | X       | X    |
| Level Meter                    |        |                |        |        |                |        |         |      |
| Line Frequency                 |        |                |        |        |                |        |         |      |
| Luminance Nonlinearity         | X      | X              | X      | X      | X              | X      | X       | X    |
| Multiburst                     | X      | X              | X      | X      | X              | X      | X       | X    |
| Noise Spectrum                 |        |                |        |        |                |        |         |      |
| SCH Phase                      |        |                |        |        |                |        |         |      |
| Short-Time Distortion          |        | X              | X      | X      | X              |        | X       |      |
| Two Field                      |        | X              |        |        | X              |        |         |      |
| Vertical Blanking              |        |                |        |        |                |        |         |      |

<sup>1</sup> Available in custom signal set.

<sup>2</sup> Requires staircase or ramp signal and quadrature output from a demodulator.

**quired**

| 170A                 | TSG170A Opt. 1V | TSG170D | TSG170D Opt. 1V | TSG200 | TSG271 | VITS100 | VITS200 | VITS201 | 1910           |
|----------------------|-----------------|---------|-----------------|--------|--------|---------|---------|---------|----------------|
| X                    | X               | X       | X               | X      | X      | X       | X       | X       | X              |
| X                    | X               | X       | X               |        |        |         |         |         | X              |
| Any Composite Signal |                 |         |                 |        |        |         |         |         |                |
| X                    | X               | X       | X               | X      | X      | X       | X       | X       | X              |
|                      | X               |         | X               |        |        |         |         |         | X <sup>1</sup> |
| X                    | X               | X       | X               |        | X      |         |         |         | X              |
|                      | X               |         | X               |        | X      | X       | X       | X       | X              |
| X                    | X               | X       | X               | X      | X      | X       | X       | X       | X              |
| X                    | X               | X       | X               | X      | X      | X       | X       | X       | X              |
|                      | X               |         | X               |        | X      | X       | X       | X       | X              |
| Any Composite Signal |                 |         |                 |        |        |         |         |         |                |
| Any Composite Signal |                 |         |                 |        |        |         |         |         |                |
| X                    | X               | X       | X               | X      | X      | X       | X       | X       | X              |
| Any Composite Signal |                 |         |                 |        |        |         |         |         |                |
| Any Composite Signal |                 |         |                 |        |        |         |         |         |                |
| X                    | X               | X       | X               | X      | X      | X       | X       | X       | X              |
| X                    | X               | X       | X               | X      | X      | X       | X       | X       | X              |
| Quiet Line           |                 |         |                 |        |        |         |         |         |                |
| Any Composite Signal |                 |         |                 |        |        |         |         |         |                |
| X                    | X               | X       | X               | X      | X      | X       | X       | X       | X              |
|                      | X               |         | X               |        | X      |         |         |         | X              |
| Any Composite Signal |                 |         |                 |        |        |         |         |         |                |

## Auto Mode (PAL)

| VM 700T<br>Application                    | Generator Required   |         |        |         |
|-------------------------------------------|----------------------|---------|--------|---------|
|                                           | TSG111               | TSG131A | TSG271 | VITS201 |
| Line/Field Blanking Timing Measurements   | Any Composite Signal |         |        |         |
| Bar Rise Time                             | X                    | X       | X      | X       |
| Amplitude and Phase Measurements          |                      |         |        |         |
| APL                                       | Any Composite Signal |         |        |         |
| Sync Amplitude Error                      | Any Composite Signal |         |        |         |
| Sync Amplitude Error (with sound-in-sync) | Any Composite Signal |         |        |         |
| Burst Amplitude Error                     | Any Composite Signal |         |        |         |
| Chrominance Reference Amplitude Error     | X                    |         | X      | X       |
| Luminance Bar Amplitude Error             | X                    |         | X      | X       |
| Luminance Bar Amplitude                   | X                    |         | X      | X       |
| Luminance Bar Amplitude (% of carrier)    | X                    |         | X      | X       |
| Residual Carrier (Bar Top)                | X                    |         | X      | X       |
| Blanking Level                            | Any Composite Signal |         |        |         |
| Chrominance-Luminance Gain Inequality     | X                    |         | X      | X       |
| Chrominance-Luminance Delay Inequality    | X                    | X       | X      | X       |
| Sync/Bar Ratio                            | X                    |         | X      | X       |
| Sync-to-Bar Top                           | X                    |         | X      | X       |
| C/L Gain Error (using mod Pulse)          | X                    | X       | X      | X       |
| Sync Amplitude                            | Any Composite Signal |         |        |         |
| Burst Amplitude                           | Any Composite Signal |         |        |         |
| Burst Amplitude Difference                | Any Composite Signal |         |        |         |
| Burst Quadrature Error                    | Any Composite Signal |         |        |         |
| Differential Gain (Peak & P-P)            | X                    |         | X      | X       |
| Differential Phase (Peak & P-P)           | X                    |         | X      | X       |
| Frequency Response Measurements           |                      |         |        |         |
| Multiburst Flag Amplitude                 | X                    | X       | X      | X       |
| Multiburst Amplitude                      | X                    | X       | X      | X       |
| Waveform Distortion Measurements          |                      |         |        |         |
| Baseline Distortion                       | X                    | X       | X      | X       |
| 2T Pulse/Bar Ratio Error                  | X                    | X       | X      | X       |
| 2T Pulse K-Factor                         | X                    | X       | X      | X       |
| Bar Tilt (End Points)                     | X                    | X       | X      | X       |
| Bar Tilt (Peak-to-Peak)                   | X                    | X       | X      | X       |
| Line-Time Distortion                      | X                    | X       | X      | X       |
| Bar Tilt (Rec. 569)                       | X                    | X       | X      | X       |
| Field-Time Distortion                     |                      |         | X      |         |
| Chrominance-to-Luminance Intermodulation  | X                    |         | X      | X       |
| Luminance Nonlinear Distortion            | X                    |         | X      | X       |
| Low Frequency Error                       | Any Composite Signal |         |        |         |
| Noise Measurements                        | Any Composite Signal |         |        |         |
| ICPM <sup>1</sup>                         | X                    | X       | X      | X       |

<sup>1</sup> Requires staircase or ramp signal and quadrature output from a demodulator.

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