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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde and Schwarz SAF02 TV Demodulator/Test Receiver

Rohde & Schwarz SAF02 CCVS plus Component TV Generator (SAF) SAF02 is the R&S SAF CCVS plus component television generator (multistandard B/G PAL, M/NTSC, M/PAL, N/PAL). Listings sometimes call it a TV demodulator/test receiver; OEM documentation identifies SAF as a generator, not a receiver. A transputer calculates Y, CB, CR; three D/A converters plus an analog matrix provide simultaneous CCVS, YCbCr, RGB, and SVHS. Sibling SFF is CCVS only. Optional SAF Z1 adds parallel and two serial digital video outputs. SAF02 is the R&S SAF CCVS plus component television generator (multistandard B/G PAL, M/NTSC, M/PAL, N/PAL). Listings sometimes call it a TV demodulator/test receiver; OEM documentation identifies SAF as a generator, not a receiver. A transputer calculates Y, CB, CR; three D/A converters plus an analog matrix provide simultaneous CCVS, YCbCr, RGB, and SVHS. Sibling SFF is CCVS only. Optional SAF Z1 adds parallel and two serial digital video outputs. Video analyzer and encoder calibration; gain control and white clip testing; studio and transmitter alignment; simultaneous composite and component monitoring; ITUR Rec. 801 and pathological pattern work; digital studio interface with SAF Z1.



MODEL

Rohde & Schwarz SAF02

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SAF02

LISTING

<https://aumictechlabs.com/products/saf02-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SAF02 is a multi-standard television test signal generator engineered for broadcast and video measurement applications across B/G/PAL, M/NTSC, M/PAL, and N/PAL standards. The instrument generates composite video, component video, RGB, and S-VHS test signals with selectable 4:3 or 16:9 aspect ratios. Its digital architecture employs a high-speed RISC transputer processor to calculate Y, CB, and CR signal components in real time, with three dedicated D/A converters and an analog matrix enabling simultaneous RGB and YCBCR output delivery.

Technical Specifications

Signal Generation: Test signals per CCIR Rec. 801, pathological patterns, and shallow ramps with 10-bit resolution

Supported Formats: CCVS, YCBCR, RGB, S-VHS

Broadcast Standards: B/G/PAL, M/NTSC, M/PAL, N/PAL

Aspect Ratios: 4:3 and 16:9 selectable

Digital Architecture: Real-time digital CCVS generation via LSI gate arrays; transputer-based Y/CB/CR calculation; three D/A converters

Output Configuration: Analog matrix converts components to RGB format; RGB and YCBCR signals available simultaneously

PALplus Option: Includes all PALplus reference signals and Wide Screen Signaling (WSS) bits when equipped

Key Features

- Softkey-controlled menu system enables extensive signal variation through amplitude and phase adjustment of individual components
- User-defined signal definition and storage via front-panel entry or memory card
- Front-panel signal customization without external equipment requirements
- Real-time digital CCVS output capability

Typical Applications

- Gain control and white-level limiting circuit validation across operational ranges
- Video analyzer performance verification and calibration
- Broadcast television equipment testing and alignment
- Video measurement system characterization

Compatibility & Integration

Optional SAF-Z1 Digital Video Interface module upgrades the instrument for digital TV studio deployment, providing parallel and dual serial digital video outputs simultaneously with analog video signals.

SAF02 Characteristics / Specifications

PARAMETER	VALUE
Selectable	3 or 16:9 patterns ITURRec. 801 (CCIR 801) signals, pathological patterns, 10 bit shallow ramps PALplus / WSS option for widescreen signalling Softkey amplitude and phase of components; user signals stored in generator or memory card
Model	SAF (SAF02)
Manufacturer	Rohde & Schwarz
Instrument Type	Multistandard CCVS plus Component TV Test Generator
Alias	R&S SAF; SAF02; CCVS plus Component Generator SAF
Related CCVS Only Model	SFF
Standards	B/G PAL; M/NTSC; M/PAL; N/PAL
Output Formats	CCVS; YCbCr; RGB; S VHS
Aspect Ratios	4:3 and 16:9
Shallow Ramp Resolution	10 bits
Component Architecture	digital Y, CB, CR via three D/A converters
RGB Path	analog matrix from YCbCr, simultaneous with components
Sampling Rate Architecture	13.5 MHz (ITURBT.601 class)
Video Passband	6 MHz with steep stopband (min 65 dB at 7.5 MHz per R&S generator AN)
Luminance Bar Amplitude	700 mV (CCIR ITS class)
Multiburst Burst Amplitude	420 mVpp on 50 percent grey (ITS 2/3)
ITS 2 Burst Frequencies	0.5, 1.5, 3, and 4.433 MHz class (CCIR 473 4)
ITS 3 Burst Frequencies	0.5, 1, 2, 4, 4.8, and 5.8 MHz
TwoTPulse HAD	200 ns nominal (base about 420 ns on these generators)
TwoTkFactor	approximately 0.5 percent (R&S 2T note)
Signal Edit Pulse Grid	37.037 ns (13.5 MHz sample)
Zone Plate	programmable horizontal, vertical, and temporal components (SAF/SFF group)

PARAMETER	VALUE
Amplitude Phase Adjust	component amplitude and phase via menus
User Storage	internal and memory card
Digital Option	SAF Z1 parallel plus two serial digital outputs
Control	front panel softkeys; remote as family IEEE class
PALplus Option	PALplus reference plus WSS bits
Pathological Signals	yes (SAF/SFF)
ITURRec	801 test signals
Generator Type	digital transputer/RISC
CCVS Coding	realtime LSI from YCbCr
NotAReceiver	generator only (not EFA/SAF demodulator) Notes Specs from R&S SAF/SFF product descriptions and application notes (7BM15, 7BM21, 7BM25). SAF02 is the SAF generator variant, notaTV demodulator. Use SFF if only CCVS is required. Confirm SAF Z1, PALplus, and memory card options. For analog M/N demodulation see EFA93.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Related CCVS Only Model	SFF
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Output Formats	CCVS; YCbCr; RGB; S VHS
Aspect Ratios	4:3 and 16:9
Shallow Ramp Resolution	10 bits
Component Architecture	digital Y, CB, CR via three D/A converters
RGB Path	analog matrix from YCbCr, simultaneous with components
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Zone Plate	programmable horizontal, vertical, and temporal components (SAF/SFF group)
Amplitude Phase Adjust	component amplitude and phase via menus
User Storage	internal and memory card
Digital Option	SAF Z1 parallel plus two serial digital outputs
Control	front panel softkeys; remote as family IEEE class

PARAMETER	VALUE
PALplus Option	PALplus reference plus WSS bits
Pathological Signals	yes (SAF/SFF)
ITURRec	801 test signals
Generator Type	digital transputer/RISC
CCVS Coding	realtime LSI from YCbCr
NotAReceiver	generator only (not EFA/SAF demodulator)

Notes

Specs from R&S SAF/SFF product descriptions and application notes (7BM15, 7BM21, 7BM25). SAF02 is the SAF generator variant, notaTV demodulator. Use SFF if only CCVS is required. Confirm SAF Z1, PALplus, and memory card options. For analog M/N demodulation see EFA93.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.