COMPANY PROFILE

Doewe Technologies, headquartered in Beijing, has been operating for a decade and currently has branches including the Beijing R&D Center, Chengdu R&D Center, Doewe Shanghai, Doewe Shenzhen, and Doewe Hong Kong. The company is fully committed to building its independent brand "Doewe," with its business covering two main categories: Advanced Sensing Measurement and Control (ASMC) and Professional Test and Measurement Solutions (PTMS).

The ASMC product line provides innovative high-precision sensing acquisition and data analytics solutions. PTMS focuses on industry-specific test and measurement solutions for audio, video, and RF applications. It has established the 5XC product system, serving sectors such as transportation, broadcasting, automotive electronics, consumer electronics, and university research institutes.

Through relentless effort, several of the company's products have become benchmark test instruments in their respective industries. Doewe Technologies also holds multiple core patents and software copyrights, participates in relevant industry standards working groups, and contributes to the formulation of national and industry standards. Building on past achievements, Doewe continues to increase its R&D investment. We have never forgotten our original aspiration, firmly believing that only profound technological accumulation creates value. We persistently pursue innovation in test and measurement technology, dedicated to technology development, application software services, and research in test and measurement solutions.

Leveraging its Beijing headquarters, related technical centers, and subsidiaries, Doewe Technologies has gradually established a nationwide pre-sales and after-sales service network, providing customers with professional technical consultation. Guided by the principles of "Rigorous, Efficient, Professional, Innovative," Doewe Technologies will continue steadfastly on this path, living up to the trust of every customer.
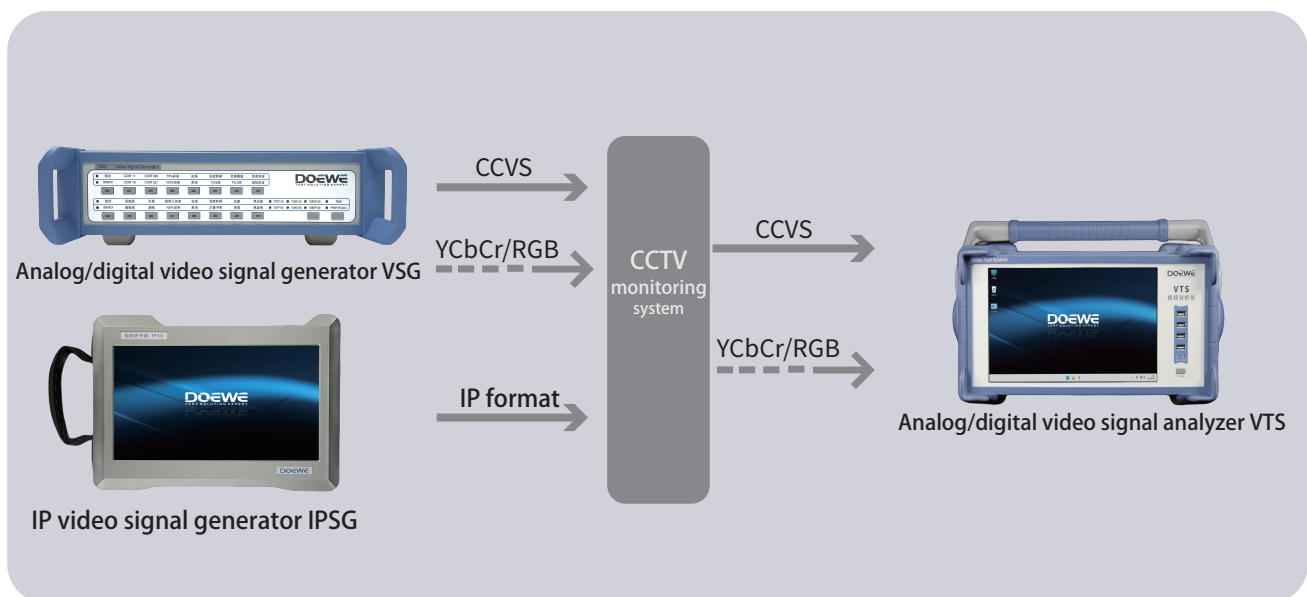
The journey ahead is long and challenging. We will accompany you on this path of growth to create a new future of technology together.

Overview

The road electromechanical monitoring and testing system VisionEye is an automated testing system that fully complies with the content related to road electromechanical monitoring testing in the JTG 2182 - 2020 standard. The system consists of an analog/digital video signal generator VSG, an IP video signal generator IPSG, and an analog/digital video signal analyzer VTS. It supports all the test video signal generation functions required by the standard and various video transmission quality testing functions.

For the highway transportation industry, the system supports the "comprehensive test map" signal generation function, integrating all the test image signals required by the JTG 2182 - 2020 standard. During the system test process, there is no need to switch test signals, and with one - key testing, all test indicators can be tested simultaneously and the results can be displayed. Once the system test is completed, the overall test time does not exceed 10s.

The system functions include but are not limited to the following test items:

- Output quantization error
- Inter-channel time delay
- Amplitude-frequency response
- Linearity distortion
- Signal-to-Noise Ratio (SNR)
- Differential gain

- Differential phase
- Chrominance-luminance gain inequality
- Chrominance-luminance delay inequality
- Echo measurement
- Linear response (K factor)

Analog/digital video signal generator VSG

CCVS

YCbCr/RGB

CCTV monitoring system

CCVS

YCbCr/RGB

Analog/digital video signal analyzer VTS

IP video signal generator IPSG

IP format

Core Equipment Characteristics and Advantages

Analog Digital Video Signal Generator VSG

- Modular design, can be configured or transmitted as needed;

- SD signal supports 720×576/50i, aspect ratio 4:3;

- HD resolution supports 1080i/1080p, frame rate supports 50Hz/60Hz;

- Directly set buttons to switch images and standards, convenient operation;

- Multiple standard test patterns, providing SD/HD comprehensive test charts for road intersection testing;

- SD comprehensive test charts include CCIR 601/525/625, 75% Color Bars, SINX/X, 50% Flat Field, Red Field, 15kHz Square Wave, and Vertical Interval Test Signal (VITS), etc.;

- Supports Analog Composite Video (CVBS)/Audio HD Component (Pfb-Pt) for HD output;

- HD provides comprehensive test chart, multiburst, 100% color bars, 8-step grayscale scale, white window, black window, monoscope window, checkerboard, white field, black field, dropped frame, and smearing test pattern effective in 1080i and 1080p formats.

IP Video Signal Generator IPSG

- The IP video signal generator supports Gigabit Ethernet port, and can directly output standard video signals through the Gigabit Ethernet port, and supports future expansion of optical port output function;

- IP video output supports GB/T 28181-2018 protocol (Media Sender), RTSP protocol (Server end), RTSP protocol (Client Announce push stream);

- Supports configuring GB/T 28181-2018 standard parameters, including SIP server ID, domain, address, port, password, heartbeat interval and concurrent quantity, etc.;

- Supports configuring RTSP server parameters, including starting port, stream initial name and concurrent quantity, etc.;

- Supports configuring RTSP push client parameters, including RTSP push address and concurrent quantity, etc.;

- The device supports adding, saving, loading and deleting test scheme functions. Can save video output configurations;

- After loading the test scheme, the saved configurations can be directly imported for testing;

- Video source can select static pictures, encoded and output as streams in H.264; resolution and bitrate parameters can be controlled;

- Supports simulating multiple (not less than 12 channels) concurrent signal sources, bound to different ports, for simulating multiple imaging terminals;

- Video source can select video files with mp4 suffix and H.264 video encoding;

- The IP video signal generator module equipment adopts touchscreen design.

# Core Equipment Features and Advantages

Analog & Digital Video Signal Analyzer VTS

- Integrated design: Specifically for the output of traffic and road signal transmission channels;

- Supports output and metric testing of complex video signals (CCVS) and HDMI;

- Supports component control strategy for HDMI interface input, allowing viewing of HDMI interface identification information;

- Component control analysis for HDMI input supports RPG/BRTVCb/Cr;

- Supports direct switching of different input modes; supports signal waveform display function, with comparison signal and comparison position setting/display functions;

- Supports importing comparison position templates, one-click execution of comparison, directly reads all test results for corresponding items under JTG 21s2 standard, supports output of comparison result data;

- Composite video testing supports: video output amplitude, luminance waveform distortion, luminance-chrominance delay difference, DC/DP, luminance nonlinear distortion, video frequency response, and synchronization characteristic metrics;

- Component video testing supports: Y signal input amplitude, Cr signal input amplitude, Cb signal input amplitude, nonlinear distortion, luminance channel linear response, signal delay difference, and SRP functions.
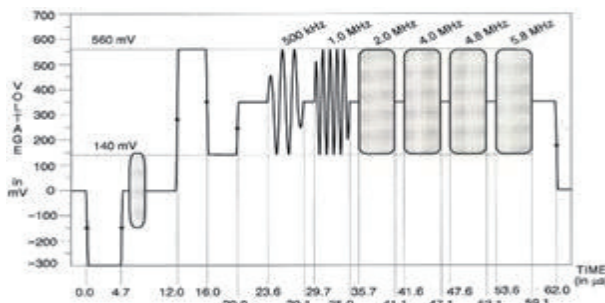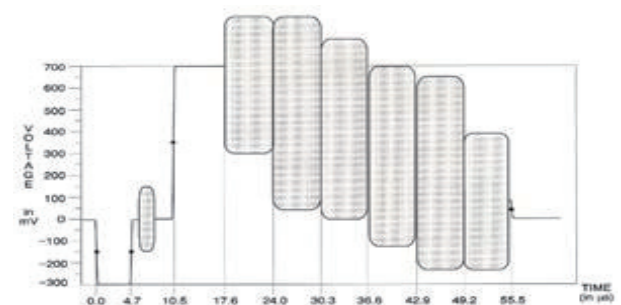
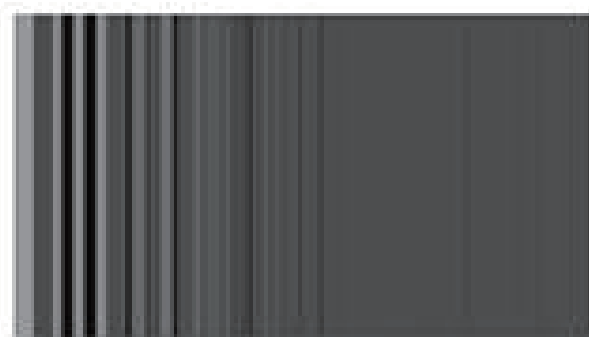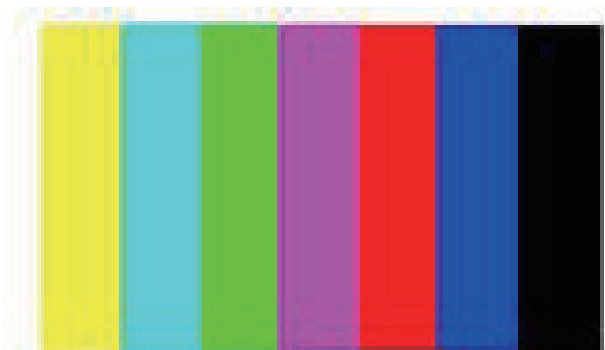# Typical Test Signals
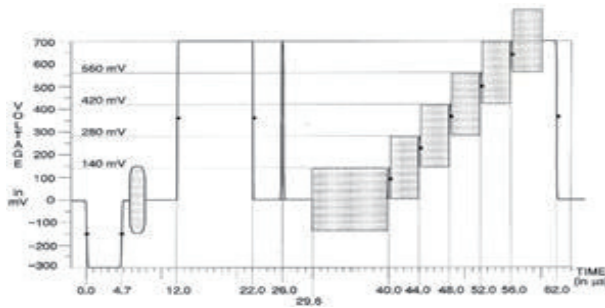
CCIR 300
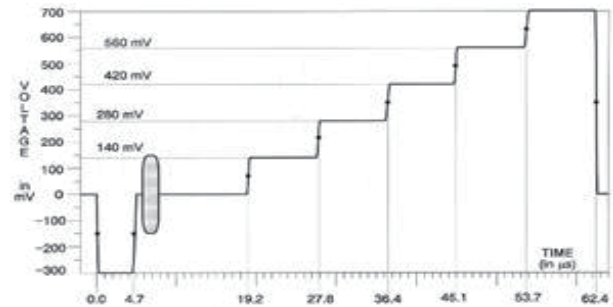
Luminance Staircase

Multiburst

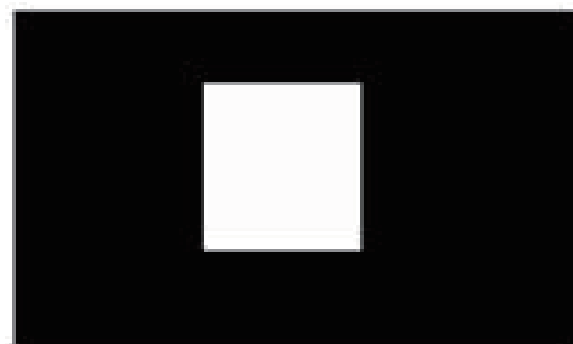100% Color Bars

Multiburst

100% Color Bars

White Frame

Black Frame
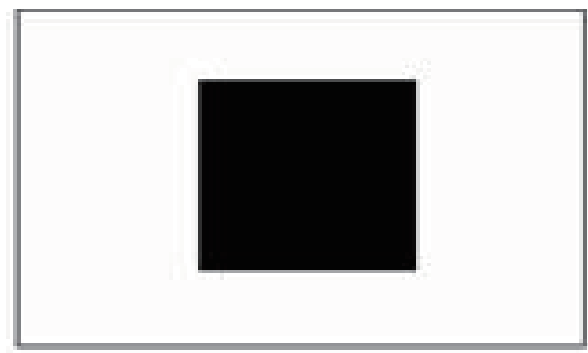
DOEWE
TEST SOLUTION EXPERT

Beijing Doewe Technologies Co., Ltd

Beijing Headquarters

Address: Room 1821, Building 2, Soubao Business Center, No. 16 South Third Ring Road West, Fengtai District, Beijing.

Technology Center

Address: Room 1812, Building 2, Soubao Business Center, No. 16 South Third Ring Road West, Fengtai District, Beijing.

Doewe Technologies (Shanghai) Co., Ltd.

Address: Room 212, Kaidi Commercial Building, No. 688 Huajiang Road, Jiangqiao Town, Jiading District, Shanghai.

☎ Phone：010-64327909

🌐 Website：https://www.doewe.com

✉ Email：info@doewe.com

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