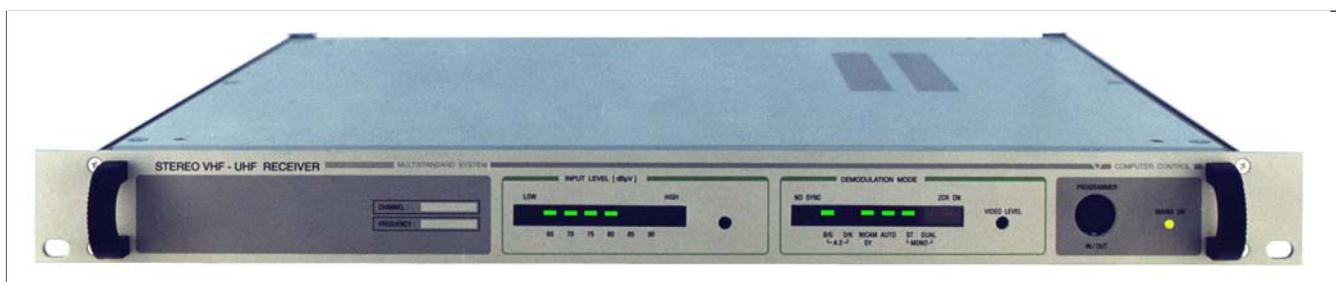


CW-3026, CW-3027 STEREO VHF-UHF RECEIVER

Amplitude modulated vestigial side-band (AM-VSB) signals often have to be demodulated e.g. at analogue cable TV headends for obtaining the program signals or at television transmitters for checking up the output,. The CW-302x STEREO VHF-UHF RECEIVER, which was designed for this purpose, is equipped with high quality vision- and sound demodulators. The sound demodulator uses the most advanced digital method to identify and demodulate the sound signals of the FM mono, A2 stereo and NICAM standards.

The desired channel and operation mode are set by programming. The input signal level and the actual operation mode are displayed by front panel LEDs. A measuring pulse permits the accurate measuring of the modulation depth thus the receiver can advantageously be used with measuring and test arrangements, too.

The CW-3027 type is the version of the CW-3026 STEREO VHF-UHF RECEIVER additionally equipped with A2 stereo (two-carrier sound) encoder and modulator.



Main features:

- NICAM-728, A2 stereo and mono FM sound
- Digital sound demodulator
- Clamped output video signal
- Two-section group delay corrector
- Low differential amplitude and phase distortion
- Adjustable sound output level (0 ... +6 dBm)
- ZCR pulse for measuring the modulation depth
- Input RF level measuring
- PLL tuned front-end
- Operation mode indication by front panel LEDs

Technical data:

INPUT SIGNAL VHF-UHF vision and sound carriers, modulated according to B/G and D/K standard

TRANSMISSION CHARACTERISTICS

Amplitude response within the channel

Up to 4.5 MHz less than 2 dB
Up to 4.8 MHz less than 4 dB

Noise factor

In the VHF band less than 10 dB
In the UHF band less than 12 dB

Nominal IF frequency

38.9 MHz

INPUT DATA

Input frequency bands

48.25 - 154.25 MHz
161.25 - 439.25 MHz
447.25 - 855.25 MHz

Nominal input level

60 - 90 dB μ V

Recommended input level

66 dB μ V

Nominal input impedance

75 Ω

OUTPUT DATA

Video outputs:

- Number of video outputs 2
- Nominal output impedance 75 Ω
- Output voltage 0.8-1.2 Vp-p, adjustable from the front panel
- Nominal output level 1 Vp-p (at 87.5% modulation depth)
- Differential amplitude less than 4 % (at 4.43 MHz)
- Differential phase distortion less than 3° (at 4.43 MHz)
- Signal to noise ratio related to a black to white step better than 54 dB rms (weighted according to CCIR Rec. 567), in the 0 to 5 MHz band

Sound frequency output:

L (A), R (B)

- Output impedance approx. 33 Ω
- Nominal load impedance 600 Ω
- Nominal output level 0 dBm
- adjustable range 0 ... +6 dB
- Amplitude response less than 1 dB in the 30 Hz - 14 kHz band
- Harmonic distortion less than 0.3 %
- Signal to noise ratio better than 70 dB, according to CCIR 468-3

A2 stereo multiplex output:

CW-3027 only

- Sound carrier frequencies 33.4 / 33.158 MHz
- 6.5 / 6.26 MHz version 32.4 / 32.640 MHz
- Sound carrier level -13 / 20 dB
- Pilot- and identification signals locked to the video signal
- Distortion less than 0.5 %
- Cross-talk
- Stereo mode less than -40 dB
- Dual tone mode less than -70 dB
- Signal to noise ratio better than 68 dB

SOUND DEMODULATOR OPERATION MODES

Mono FM:

- De-emphasis 50 μ s

Two-carrier FM stereo (A2 stereo):

- Sound carrier frequencies 5.5/5.74 MHz
- De-emphasis 50 μ s
- Cross-talk at 1 kHz
- Stereo mode less than -50 dB
- Dual sound mode less than -70 dB

NICAM-728:

- Sound carrier frequencies
- B/G mode 5.5/5.85 MHz
- D/K mode 6.5/5.85 MHz
- De-emphasis J17
- Cross-talk
- Stereo mode less than -70 dB
- Dual sound mode less than -70 dB

PROGRAMMABLE PARAMETERS

Programming is made with the CW-3081 PROGRAMMER, which is only needed for the time of programming

1. Reception frequency
 - Raster 62.5 kHz
 - Accuracy better than 1×10^{-4}
2. ZCR pulse timing 10 ... 56 μ s, adjustable in 1 μ s steps
 - Pulse width approx. 5 μ s, fixed
3. Sound demodulator operational modes
 - B/G dual FM (A2 stereo)
 - B/G NICAM
 - D/K NICAM
4. Sound frequency output signal
 - Automatic (mono, stereo, dual)
 - Mono FM sound
 - Stereo sound (left, right)
 - Two (dual) sound signals A, B
 - Two (dual) sound signals A, A, or NICAM mono
 - Two (dual) sound signals B, B
5. Output sound signal level 0 ... +6 dBm, adjustable in 1 dB steps

GENERAL DATA

- Service period continuous
- Mains voltage 230V +10 ... -15 %, 50/60 Hz
- Power consumption 50 VA
- Type of connectors
 - RF input IEC 169-2 (DIN 45325)
 - VIDEO output BNC
 - AUDIO output RCA
- Physical dimensions 19" \times 1 height unit
 - Width 483 mm
 - Height 43.6 mm
 - Depth 473 mm
- Mass approx. 4 kg
- Operational temperature range
 - To fulfil the specs +10 ... +35 °C
 - To maintain operation 0 ... +40 °C
- Relative humidity max. 85 %
- Storage temperature range -25 ... +45 °C

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