

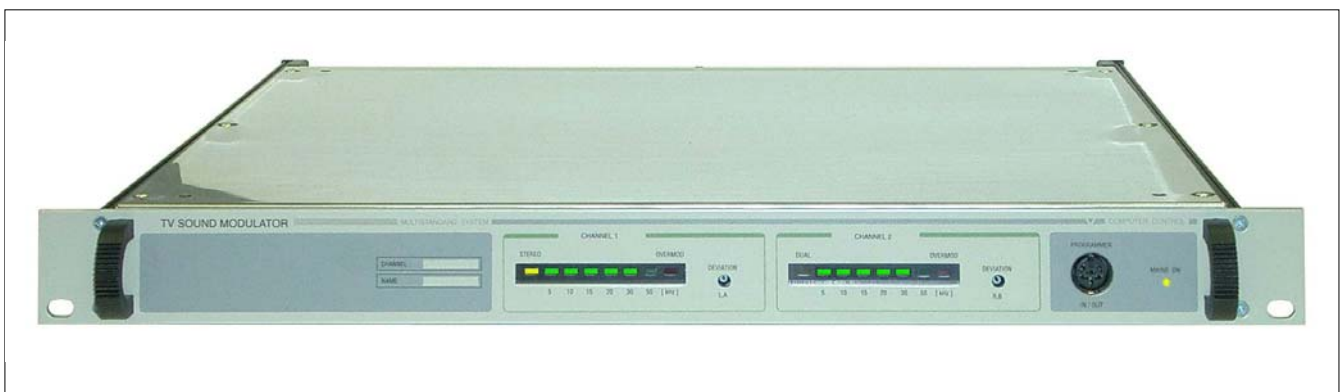
## CW-3130 TV SOUND MODULATOR

*Developing activity in the field of analogue television technology was closed down a decade ago. The last developments were made for improving the quality of sound transmission. For transmitting stereo and dual sound, two systems were introduced in Europe.*

*First the two-carrier German system was elaborated, which is simpler to implement but offers poorer quality than the digital NICAM system elaborated later.*

*The CW-3130 TV SOUND MODULATOR generates IF sound carriers (33.4 / 33.157 MHz) in the two-carrier system, often referred to as A2 system. These sound carriers added to the modulated vision carrier of analogue TV modulators result in a complete IF signal. For deriving the control signals, the video signal has to be led also in the TV SOUND MODULATOR.*

*Control of the mono, stereo and dual sound modes is a major problem with stereo modulators. The operation mode of the CW-3130 TV SOUND MODULATOR can be set manually from the front panel (using the CW-3081 PROGRAMMER), with optional remote control, or when equipped with the optional CW-3016 DATA LINE DECODER BOARD, automatically by the data signal of the 16<sup>th</sup> line.*



### Main features:

- Stereo sound transmission by the German two-carrier system
- Mono – stereo – dual sound mode by manual, remote or automatic switching
- Optional data line decoder for the signal in the 16<sup>th</sup> line
- Remote control with the standard B1, B2 signals
- Output signal: modulated IF sound carriers (33.4 / 33.157 MHz)
- Built-in directional coupler for combining the vision carrier and the sound carriers

## Technical data

## Input data

## IF input

Input impedance	75 Ω
Nominal frequency	38.9 MHz
Input connector type	F socket
Nominal input level	102 dBμV

## Video input

	looped-through (high impedance)
Nominal input voltage	1 Vp-p
Connector type	BNC socket

## Output data

## IF output

Output impedance	75 Ω
Nominal frequencies	(38.9) / 33.4 / 33.158 MHz
Output connector type	F socket
Nominal output levels	(102) / 89 / 82 dBμV

## Video output

	looped-through (high impedance)
Nominal terminating impedance	75 Ω (to be terminated externally)
Connector type	BNC socket

## Operating modes

<b>STEREO</b>	CH1 = (L + R) / 2 CH2 = R + pilot
Pilot modulation	117.5 Hz / 50% AM

<b>DUAL SOUND</b>	CH1 = program A CH2 = program B
Pilot modulation	274.1 Hz / 50% AM

<b>MONO</b>	CH1 = program A CH2 = program A
Pilot modulation	unmodulated pilot

## Pilot signal

Frequency (54.6875 kHz)	3.5 fH, locked to the video signal
Pilot transmission	on the 2 <sup>nd</sup> sound carrier (CH2)
Modulation	FM with 2.5 kHz deviation

## Nominal deviations of the sound carriers

Factory setting	30 kHz / 0 dBm
Operating deviation	30 kHz or 50 kHz (according to the user's setting)

## Displays

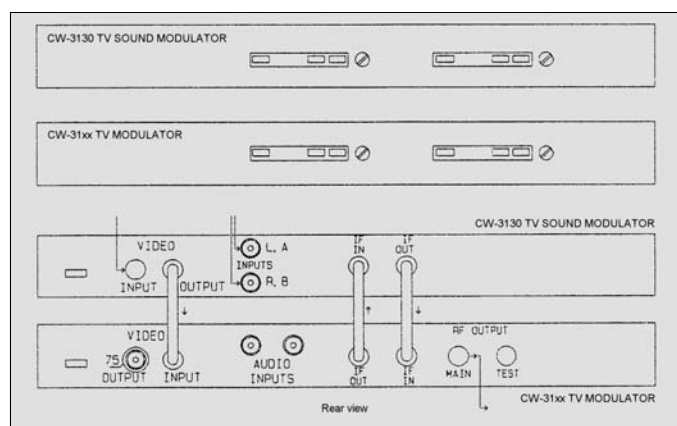
Channel deviation CH1, CH2 accuracy at 30 kHz deviation	two LED rows +3 kHz
Mode	MONO, STEREO, DUAL

## Mode setting

by programming, remote control or automatically

## General data

Service period	continuous
Mains voltage	230 V -10 ...+15 %, 50 / 60 Hz
Power consumption	max. 50 VA
Physical dimensions	19" rack × 1 height unit
Width	483 mm
Height	43.6 mm
Depth	473 mm
Mass	approx. 3 kg
Operational temperature range to fulfil the specs	+10 ... +35 °C
to maintain operation	0 ... +40 °C
Storage temperature range	- 25 ... +45 °C



Interconnection of the TV modulator and the CW-3130 TV SOUND MODULATOR

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