



The **PROMAX-6** **PROMAX-5** and **PROMAX-4** are analysers designed for the **installation** and **maintenance** of systems for the reception and distribution of television signals. They are especially suited to **cable television** systems, since they integrate all the basic functions required for signal analysis in an easy-to-use, accurate, robust and low-cost device.

While the PROMAX-4 offers coverage of all television channels between 45 MHz and 862 MHz, the PROMAX-5 and PROMAX-6 also covers the return channels (5 MHz to 862 MHz).

Both of them enable the signal level to be measured with a high degree of accuracy. They incorporate a series of functions for evaluating the image quality. They include a calculation of the **Video/Audio (V/A) ratio** and the **Carrier/Noise (C/N) ratio in the Channel (Patented Method)**.

The implementation of all these functions in instruments which weigh just half a kilo makes them incomparable working tools.

Every detail has been carefully studied in order to achieve optimum balance between the characteristics and their functionality.

The result is a device with advanced functions which is easy to use and can be operated by non-specialist personnel.

## Video / Audio measurement

The V/A ratio indicates the relation between the level of the Video carrier and the Audio carrier. There are certain optimum values for each standard.

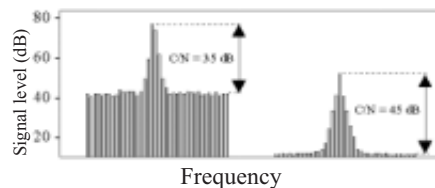
It frequently occurs that the audio carrier levels are not checked when the installation takes place. Sometimes it is taken for granted that it is enough to check the demodulated audio signal, but it should be noted that an unsuitable V/A ratio may cause interference in the video.



## Carrier / Noise measurement

Carrier / Noise Measurement is another factor which enables us to evaluate the signal quality. The C/N function measures the ratio between the carrier level and the noise level.

PROMAX has developed and **patented** a method for calculating this ratio **in the channel** in which the measurement is made.



As can be seen in the illustration, it is not rare that a signal with a higher carrier level than another may have a lower C/N ratio, so this measurement is essential.



## Direct reading

Both instruments have a dynamic range from 20 dB $\mu$ V (-40 dBmV) to 120 dB $\mu$ V (60 dBmV). In order to achieve a **direct reading** of the signal level, the measurement is automatic and the device



itself selects the input attenuator most suitable for each signal. In applications for which a value must be set for the attenuators, the Manual mode may be used. The units may be displayed in dB $\mu$ V or in dBmV.

## Selection modes

A rotary selector allows any one of the three tuning modes to be selected: by Frequency, Channels or Programs. The **Frequency** mode allows user to tune into any frequency between 5 and 862 MHz (between 45 and 862 MHz for the PROMAX-4) with a resolution of 62.5 kHz.



Access by **Channel** depends on the channel plan selected. Tuning by **Programs** enables direct access for up to 64 channels. The number of programs may be limited to adapt the measuring cycles to the capacity of the network.



## Safety

They have been designed according to the requirements of the European standard on electrical safety, EN61010-1. The recommendations regarding the level of protection against water and dust in the outside materials have also been taken into account and incorporated to level IP21. As with all PROMAX devices, they also comply with the regulations on electromagnetic compatibility, EN55014, regarding radio interference.

## Multi-Standard Audio

A highly efficient speaker allows the demodulation of **FM or AM audio**. They also include a tone that is proportional to the signal level. In addition it is possible to select the audio **carrier frequency** anywhere from 4 to 9 MHz, so that the device can be used for making measurements with any television broadcast standard.

SPECIFICATIONS	PROMAX-4	PROMAX-5	PROMAX-6
<b>Tuning</b>			
Tuning range	From 45 to 862 MHz	From 5 to 862 MHz	
Tuning method	Through channels, frequency or programs		Through channels or frequency
Channel plans	One channel plan, configurable from PC Through RM-006		
Frequency	62.5 kHz		
Indication	LCD alphanumeric display with back lighting		
<b>Operating modes</b>			
<b>Level measurement</b>			
Measurement range	20 dB $\mu$ V to 120 dB $\mu$ V	25 dB $\mu$ V to 120 dB $\mu$ V	
Readout	Digital in dB $\mu$ V or dBmV. Resolution 1 dB		
IF bandwidth	230 kHz $\pm$ 50 kHz		
Input impedance	75 $\Omega$		
Audible indicator	Audible tone varies with the signal level		
Accuracy typical			
Analogue channels	$\pm$ 2 dB (from 0 to $^{\circ}$ C)		
Digital channels		$\pm$ 3 dB (from 0 to 40 $^{\circ}$ C)	
<b>Video / Audio</b>			
Measurement range	From 0 to 40 dB		
<b>Carrier-to-noise (C/N)</b>			
Measurement range			
Analogue channels	From 40 to 50 dB		
Digital channels			From 15 to 40 dB
<b>Sound</b>			
Demodulation	AM/FM/Level		
Output	Internal speaker / external headphones		
<b>Power requirements</b>			
NiCd battery	7.2 V - 0.8 Ah		
Low battery	Display indicator		
Auto power off	Automatic power off after few minutes whitout operation		
Battery charger	By external fast charger		
Battery autonomy	1 h 45 minutes (approx.)		
<b>Mechanical features</b>			
Dimensions	W. 70 (90 at display) x H. 218 x Pr. 50 mm		
Weight	580 g (Battery included)		

Shoulder Strap DC-286



Carrying Case DC-234



Control Software RM-008+

