Televes[®]

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Televes Italy (TEI)

The 80's brought Televes to Italy, first indirectly and since 2004 through a fully owned subsidiary, Televes Italia.

Nearly thirty years ago the presence was mainly linked to the sale of IF-IF processor, a technical solution to a problem that was blocking satellite TV penetration in the market.

In today's global world, the arrival of Digital Terrestrial Television (DTT) brought the opportunity to introduce quality products and top-end solutions to a very competitive market.

Televes Italy has followed the Corporation strategy path and its three pillars to continuous success: Quality, Manufacturing and state of the art R&D. Pillars strongly recognized by all the users of our products.

The switch-off of analogue channels, arrival of DTT and HDTV means that new technology is surpassing old one, just as color TV took over black and white TV. Televes' R&D quickly understood the challenge ahead and got in motion to overcome the obvious difficulties it laid for this industry; thus new products had to be developed. The brand has fullfilled the gap left by our competitors, whom have gone the track to sell low quality products and out of date technology.

The Italian market demanded new products, so Televes introduced innovative solutions such as the BOSS tech range of antennas, AVANT HD, Headend T05/T0X range, H45



Hugo Botas. Gerente de Televés Italia (TEI)

field strength meters, fiber optics, etc... which clearly make a difference.

Our partners choose Televes because they value the personalized service, continuous innovation and the profitability its bring to their businesses. In the past five years, Televes' growth has been dramatic and now its recognized as the main MATV quality brand all over Italy.



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For more information



Tel. (+34) 902 686 400 fax. (+34) 981 522 262 televes@televes.com



Product News

New range of distribution network devices



Its solid and shielded connection allows the performance of the easy F connection in distribution networks of 5 to 2400 MHz. To achieve a proper balance of the signal between floors, there is a full range of splitters and taps from 2 to 8 outputs available.

Improving the features and benefits, the new range of easy F passives includes significant improvements in the design and manufacturing. The changes to highlight are the absence of welding in the connector inner contacts and the size reduction of the devices; these changes mean an improvement on the following points:

Absence of welding:

Substantial improvement of through losses.

Automated system for insertion of the inner contact of the easyF connection, which:

▶ Optimizes the electromagnetic behaviour in high frequencies.

▶ Reinforces Televes' commitment to the environment by eliminating the pollution caused by welding and reducing energy consumption in the manufacturing process.

Size reduction:

Makes it even easier to use in junction boxes as well as confined sites.

> The use of microcomponents improves the electric behaviour and reduces the effects of impulsive noise.



▶ First use of SMD transformers in these products (2mm x 1,20mm) that allows a totally automized SMD mounting, which futher increases also the reliability of the new range.



All these improvements result in a range with the highest possible level of quality and reliability.

FAQ

Interpretation of the maximum output voltage level characteristic of a broadband amplifier when there are several COFDM channels at its input (Switch-off area).

The maximum output voltage of an amplifier indicates the maximum level that can be obtained at the output of the device ensuring a linear operation, without introducing significant distortion to the input signal.

The linearity of an active element such as an amplifier depends on the type and number of signals at the input, and it varies depending on the modulation type.



In general, the maximum output voltage indicated in the characteristics of an amplifier is measured according to DIN 45004B (EN 50083) which expresses the maximum output level for 2 analogue channels of equal amplitude at its input.

If the input signals are all COFDM, the maximum output level must be reduced by 2 dB compared to the level obtained by applying DIN 45004B.

On the other hand, if the number of channels at the input of a broadband amplifier increases, the maximum output level has to be reduced in an amount that is given by this formula:

V maximum output = 7,5log(N-1)

where "N" represents the number of channels.



Therefore, the maximum output level of a broadband amplifier for N COFDM channels is the result of applying the following formula:

Vo max (dBµV) = V DIN45004B – 7,5 log (N-1) – 2 dBµV



Your pictures



The pipeline for the entry of cables has become a smoke and heat output.

If we check the installation, we see that there are individual receivers that should operate only in winter; they're real heaters... and electricity consumers.

That's why collective ventilation systems are produced.

Ideas

The domestic solution to incorporate modulated channels in hybrid SMATV/CATV networks

Combining modulated channels with already available services of an installation, regardless of whether CATV or SMATV, can cause many problems on it, both in the CATV return signal (5-65 MHz) and the IF satellite signal (950-2150 MHz).

A simple and efficient solution may be to install a domestic modulator, ref. 5858, which allows the passage of current between the output and input to power supply the LNB.

The modulator features a frequency bandpass of between 5 and 2400 MHz, which allows:

a) the passage of the TV signal either MATV (47-862 MHz) or CATV (87-862 MHz),

b) the passage of the return channel CATV signal (5-65 MHz), and

c) the passage of the IF satellite signal (950-2150 MHz).

A quick and easy combination of CATV and/or SMATV signals, which even allows the modulated channel signal level adjustment between 75 and 90 dBuV.



Real Installations

Casta Diva Resort 5* in the Lake of Como (Milano - Italy)

This villa, now transformed into a hotel, belonged to the famous opera singer Giudita Pasta, the first soprano who sang Bellini's Norma, becoming so the first "Casta Diva" of the Ode to the moon by the Italian composer.



The resort has a XVIII century historical building and eight villas, scattered throughoutthe gardens of the property , which are named after other famous Italian sopranos. The resort has 75 rooms, a SPA (1,300 m2 with saunas and an indoor pool), amphitheater, 2 luxury restaurants, 4 meeting rooms, a floating swimming pool upon the same lake, private dock, plus stunning views of Como and surroundings.

Installed by the company TC Elettronica srl of Desio (MI) and adjusted by Televes' Italian Technical Department.

The installation:

By means of 2 optical LNB (ref. 2353), TV signals from 2 satellites (Astra Hotbird 13E & 19W) are received, and using a DAT HD Boss (ref.1495) DTT signals are received that are then converted into optical with ref. 8674. The three optical signals travel in single-mode fibre from the reception point at Villa Isotta to the technical room of the Grand Hotel Casta Diva, where we can find the rack.

Here, each of the optical signals corresponding to satellite signals, is divided into 8 optical lines; 7 are sent to the substations of the villas and one is converted into RF to be processed in the rack. In that rack, the following operations are performed:

16 DTT MUX with foreign channels are created from satellite signals (ref. 5181).

- ▶ The terrestrial DTT MUX are processed (ref. 5179).
- All MUX are combined and amplified.

The totally digital output is converted into an optical signal and is properly distributed; it is sent to the 7 mentioned substations of the villas.

Finally, in each substation, the outputs of a terrestrial optical receiver (ref. 8675) and of 2 optical satellite receivers (ref. 2350) are injected into 9-inputs multiswitches that give service to all outlets of each villa.



Optical Fibre Measurements

The signal quality at an optical link output, not only depends on the quality of the input signals, but also on the optical link balance.

The optical balance can be defined as the right balance between the losses of the optical network, the optical power that the transmitter is able to provide, and the optical power necessary for the proper functioning of the receiver. These factors should be checked out to ensure the quality of the installation over time.

Measurement of optical losses

• The Televes multimetter H45 can calibrate and make attenuation measurements, automatically, at three waveleng-ths (1310, 11490 and 1550 nm) in combination with the triple light signal generator of Televes OPS 3L.



Simultaneous analysis in three windows: 1310, 1490 and 1550 nm.

• You can also check the optical link losses by measuring the optical power at the transmitter output, and then repeat the process at the other end of the link. The difference between both powers measured will be the losses of the optical link.



To represent the spectrum of the RF signal transmitted via Fibre Optics. A great help for accurate adjustment of optical links.

Measurements of signal quality

After validating the optical network, we have to verify, in terms of quality, the impact that the optical transmitter/receiver may have on the original signal.



Indeed, optical transmitters and receivers are active devices that will do a double transformation of the signal: the transmitter converts the electrical signal into an optical signal and the receiver does the reverse.

As with any electrical phenomenon, these transformations involve a slight qualitative degradation of the original signal. This slight degradation can be more or less aggravated depending on the transmitter or receiver input signals may be too strong or too weak, adding like this symptoms of saturation, intermodulation and even noise.

Through its optical interface, the Televes H45 meter allows to make the signal quality measurements over coaxial cable as much as over optical fibre. All measures of the electrical signal quality at the transmitter input (BER, MER, C/N,..., etc.) can be carried out on the optical fibre at the output of the transmitter, whether they are digital (DVB-S, DVB-S2, DVB-T, DVB-T2 and DVB-C) or analog.



To watch digital signals transmitted via Fibre Optics (Full HD depending on the options)

This way we can verify:

• The optimization of transmitted signals (qualitative comparison at the optical transmitter input and output).

• The proper functioning of the optical receiver (qualitative comparison to the input and output of the optical receiver).

The H45 meter with optical interface is a true multi-function tool that allows you to check easily, all the key points of a optical fibre installation.