

# INFO Televes®

BIMONTHLY NEWSLETTER • N.º12 - JULY 2012

## The London 2012 Olympics, the first true HDTV summer games with Televes equipment



The 2012 London Summer Olympic Games are upon us and more than a billion people around the world will gather around their TV set to watch some of its content, all within the comfort of their homes.

Technologically speaking, four years is an eternity, and while Beijing 2008 marked the first full HD games, few audiences were equipped then to experience the games in full 1080p.

This year BBC will provide live HDTV through 24 live streams to terrestrial and satellite providers around the world, so no matter what broadcast technology is utilized, this year HDTV will be a reality.

Televes is there to ensure that HD content is distributed to the end user with total guarantee. The T.OX head-ends provide universal transmodulation in any building, and whether the broadcasts are received in terrestrial or satellite, the

complete family of BOSS Tech aerials, QSD satellite dishes and the ZAS HD set-top boxes are all we need to make the most of the 2012 London HDTV Olympic games.

2012 marks a year where the revolution of social media, mobile coverage and on-demand live HD video are starting to become part of our day-to-day lives. We are surely evolving to expect instant HD content, while being connected 24/7.

If the first televised Olympic games were held in Berlin in 1936, London 2012 will become the first to provide full televised HD content, as well as the first true testing platform for the future 3D, mobile and social summer games.

One thing is sure, whatever the television demands for the next 2016 games in Rio de Janeiro, Televes will ensure TV content is delivered intact to the user.

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El Corte Inglés - Plaza del Duque de la Vitoria (Seville)

### NEW PRODUCT

Meter H60

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### MEETING POINT

Visit us in:



#### June

6-7 Aotec- Madrid

12-14 Anga Cable- Cologne

19-22 Broadcast Asia- Singapur

## TELEVES IN LIGHT+BUILDING (FRANKFURT)



Televes took part in the international fair Light + Building, which took place in Frankfurt (Germany) from 15 to 20 April. This event gathered more than 2,000 companies around the world who shared their technology services and solutions in lighting buildings ■

## EVOLVING CONNECTIVITY (UK)



We attended the exhibition of the IAC, where there have been held conferences from BBC and OFCOM about the changes ahead (2013) with the sale of spectrum and the start of LTE transmissions. Thus, Televes UK presented several LTE solutions such as filters, mast and domestic amplifiers, along with the new meter H60. Some 275 delegates attended very interested to know what these changes will mean in terms of product in the near future ■



## FAQ

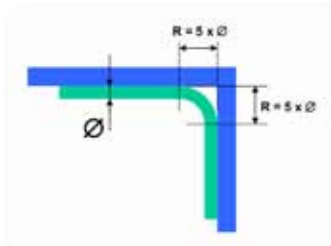
### What is the bending radius of a coaxial cable?

*Occasionally, the small space available in some distribution boxes, forces to make coaxial cable kinks that can cause signal mismatches.*

#### EXPERT OPINION

All coaxial cable have a limit in their bending radius at a given value; beyond this value the cable no longer will maintain its electrical properties.

Furthermore, apart from the variation of impedance, an excessive bending beyond the minimum bend radius can lead to break of shielding foil. This breakage leaves the coaxial cable exposed to the ingress of interfering signals.



For cable runs where it might be forced to bending radius less than its minimum value, the use of right angled connectors is

the best solution. The image below shows how a connector easyF preserves the integrity of the cable compared with a straight F connector.



There is no specific rules to establish the minimum bending radius. Manufacturers and operators establish their own criteria. In practice and as a general rule, it is not recommended bending radius less than five times the cable diameter, as shown in the figure ■

Javier Esteban  
Technical Assistance Manager



More information in  
[televes.com](http://televes.com)

## YOUR PICTURES


### I&P: imagination and professionalism



No doubt there are many situations in which a professional installer has to deal with unexpected problems during the installation process. In their resolution, there are two key concepts: imagination and professionalism (I&P). Undoubtedly, an installer with low coefficient I&P would run the cables under the tile causing them to break likely, and simultaneously, a filtering of moisture into house. **Congratulations for this professional with a high I&P coefficient!**

## General information

### Televes concludes ambitious NP100 catalogue renovation plan ahead of time

 Televes has successfully completed the NP100 plan two months ahead of the established deadline. The company has thereby concluded an ambitious and complex plan that put its capacity for innovation and market response to the test.

The plan started up towards the end of January 2011 with the purpose of renovating the company's catalogue by launching a hundred new products over a period of 18 months. In the end this period was reduced by two months, surpassing all expectations.

NP 100 was seen as a very ambitious and extraordinarily complex challenge, only possible for a company with the capacity for development and financial muscle power to manage it. Achieving this goal, and what is more, achieving it two months ahead of time shows the extraordinary capacity and commitment of the whole Televes organisation.

The successfully completed catalogue renovation plan provides value for clients and helps revitalise activity in the telecommunications infrastructures sector, reinforcing the position of Televes in the market.



#### INNOVATION IN ALL TELEVISION SIGNAL DISTRIBUTION AREAS

The innovations launched under NP100 cover all the areas of specialisation Televes works in, from obtaining the signal to integrated telecommunications services, via header management, distribution, reception and measurement. The innovations have in many cases focused on electronic re-engineering and the redesign of the chassis to produce smaller and more efficient equipment.

As outstanding references of this NP100 plan, it would be the new CoaxData. Finally, NP100 was also the framework for the launching of the new Coax Data. As is already known,

this hybrid adapter enables a band width of 200 Mbps and it is compatible with high definition.

Category	Nº
Signal reception	21
Header management	32
Distribution	44
Measurement	2
Reception	1

#### THE LTE READY HALL-MARK

Anticipating professionals' needs, Televes has developed new reception and distribution

equipment bearing in mind the implications of the upcoming deployment of the 4G mobile telephone network, the so-called digital dividend. The company has developed the LTE Ready hallmark, which guarantees an optimum response from these products to the future coexistence of LTE signals in the radio electric spectrum with digital terrestrial television (DTT) channels ■

Sergio Martín  
Communications Manager



#### DID YOU KNOW...?

#### ... Televes invented the multi-satellite?

In 1988 Televés presented at the fair Matelec the first multi-satellite reception system in the market, the result of work made by the R&D Department along with the Radiation Group of the ETSIT (Escuela Técnica Superior de Ingenieros de Telecomunicación) Madrid. Years later, following the success of Televes system, companies around the world start to launch to the market multi-satellite systems based on the development of Televés. The name was quickly assimilated multisatellite companies in the industry, remaining still at present ■







## Mix of terrestrial signal with an optical LNB

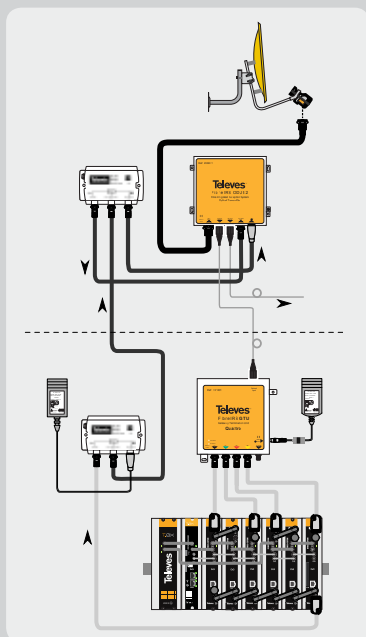
Sometimes, it may be necessary to mix terrestrial signals from a headend with the signal from an optical LNB and generate a single output optical signal.

If the headend generates services coming from the antenna which signal is to be distributed, the cabling system can be simplified by using two combiners ref. 7452.

Thanks to these devices, the satellite signal to be processed will be lead to the headend; and the UHF signal, processed, will come back by the same cable to be converted into optical signal.

But not only are simplified the RF connections; in many cases, the optical LNB power is a problem, since you need an electrical socket in its vicinity.

As indicated below in the figure, the use of two combiners ref. 7452, apart from simplifying the coaxial cabling, allows remote powering of the whole antenna system ■



Javier Esteban



## TELEVES' FACILITIES

### EL CORTE INGLÉS - DUQUE DE LA VICTORIA SQUARE (SEVILLE)

The objective in this center of El Corte Ingles is to **distribute HDTV channels**, both **DTT as TVSAT**, to more than 115 TV sets exposure. Besides these channels, it was necessary to add two own produced multiplexes. It is, therefore, an application in which the signal quality must be guaranteed at all times to reflect the qualities of the TV sets. On the other hand it was paramount an additional feature of flexibility for updating services in a quick and easy manner, depending on the needs of the department.



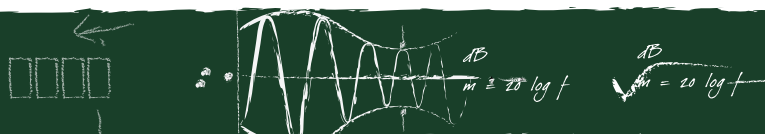
Image and Sound Department

To meet all these needs, was set in place a 19 inch rack cabinet including as major elements: 5 modules DVBS2/COFDM ref 563101, 2 MPEG Encoders ref 5551, and a complete amplification system made up by T03 channel amplifiers . The installation was carried out by the company Silva Vilches, S. A. from the village of Mairena de Aljarafe in Seville ■



CARRIED OUT BY:

**SILVA VILCHES S.A.**



## Treatment and handling of fiber optic pigtails

The fact that optical fibers are a means of transmission of information by means of a light beam, makes it extremely delicate their handling and, therefore, that this is the most important aspect to keep in mind, besides the danger that suppose for people the material which fibers are made of.

In harsh work environments, with dirt and dust everywhere, the installer must take all necessary precautions to ensure the quality of the transmission line and thus that of the final distribution network.

Cleaning connectors is paramount in the installation of fiber optics. This work involves a risk that depends on both the method used and the skill of the installer. The only way to check if the job is done properly, is by the use of a microscope to visualize the core of the fiber and also by a test signal on the network.

Cleaning connectors must be taken into account in the whole installation activity, from the connections of the network itself to the use of measurement devices. All these elements are provided with optical connectors which are susceptible to be damaged by debris.

The usual methods for cleaning fiber connectors are isopropyl alcohol swabs, pen cleaning, cleaning tape reels and the adhesive tape.

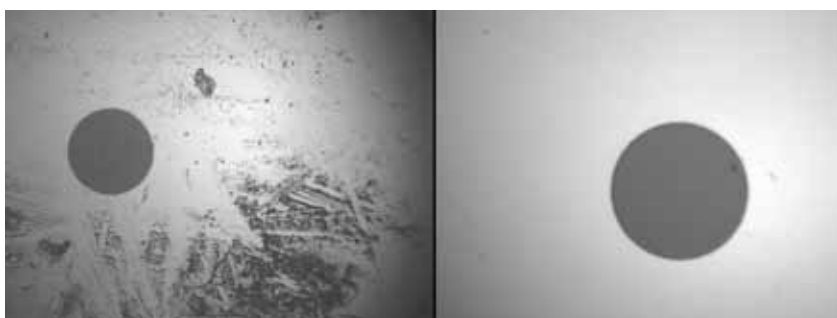
With all these methods it must follow a stringent procedure because they do not always ensure proper cleaning and also can damage the fiber.

✓ **Isopropyl alcohol wipes:** They may leave stains in the fiber if the alcohol is not dried properly (Fig. 1).

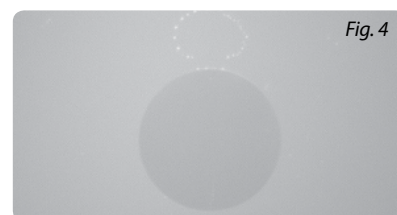
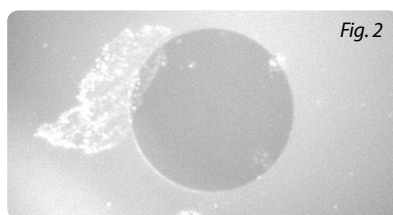
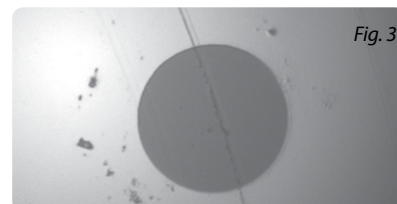
✓ **Cleaning pen:** most often they leave residual dirt when the yarn used for cleaning is nearing completion (Fig. 2).

✓ **Cleaning tape reel:** if not in perfect working order, can incorporate dust spots that scratch the fiber (Fig. 3).

✓ Despite all cautions, there are cases in which the environment where it is performed the installation can also be a source of problems in the transmission of light, as in the case of moist environments with condensation (Fig. 4). The images shown are made with a microscope where it can be evaluated the dirt on the nucleous.



*Estado de una fibra antes y tras su limpieza*



When so, the optical losses are such that clearly cause failures in the transmission.

Although no method discussed so far can ensure proper cleaning of the connectors you always have to choose one of them to mitigate the effects of dirt and therefore improve the conditions of transmission. With this article, we hope to have provided the installer more selection criteria to perform a good job ■



*Cleaning tape*

Jose Negreira  
Training Manager



NEW PRODUCT



Televes set a clear benchmark in the sector when it launched the first portable field spectrum analyser worldwide that incorporated Digital Processing technology.

This milestone set a before and after in certifying television services in buildings and homes because the professional insta-

ller could now utilise all the mathematical precision of an sophisticated laboratory equipment in a portable format of just 2Kg.

Four years later, Digital Processing keeps offering unprecedented functionality, and Televes has decided to launch its newest technological piece of art with great enhan-

cements and features, presented in a larger and clearer screen ■

H60, GETTING THE FULL POTENTIAL OF THE **DIGITAL PROCESSING TECHNOLOGY**... CLEARLY.

Made in Televes

clearer than ever before



Televes