

INFO Televés®

BIMONTHLY NEWSLETTER • N°28 - FEBRUARY 2015

FREE EDITION

TELEVÉS LAUNCHES NEVOSWITCH, A new range of Multiswitches



With the **New Evolution** range, NEVO for short, Televes launches a new series of high quality multiswitches of 5, 9, 13 and 17 wires, enabling in this way TV distribution for different scenarios: from single dwelling units to large collective installations.

26 products complete the range to get 4, 8, 12 and 16 different satellite polarities up to 32 users per switch and allowing the expansion of the system just by cascading new units.

Return-path compatible, QUAD compatible, and receiver-powered compatible units are some of the highlights of this range, but all stand out due to its technical features and its zamak-made chassis that offer an

optimum shielding and its compact design to save space or install them in narrow locations.

All the range feature a switch to operate in cascade or as a terminal unit.

The 5 wire range also presents a QUAD compatible variant with a 22kHz generator and PSU, and a variant that feature variable attenuators for each output user.

9, 13 and 17 wires can operate in the return path (5-65MHz), and feature a High Level switch to gain up to 10 dB more for the satellite feeds. Televes also provides 5, 9, 13 and 17 wires amplifiers, with 27-30 dB gain ■

European technology **Made in  Europe**

AND ALSO...



How can I connect a laptop to a H/E (CDC) controller?

Page 2



TS_ID edition and its influence in TV tuning

Page 4

SUMMARY

TELEVÉS IN THE WORLD

Mobile units' 2014 routes.

FAQs

Can I use different CoaxData versions in the same installation?

YOUR PICTURES

Unhindered training.

TRAINING

The importance of marking a coaxial cable.

FACILITIES

Keystone Resort (Colorado, USA)

IDEAS

"Transport Stream ID" edition and its influence in TV tuning.

DID YOU KNOW...

that the first Televes' patent was achieved the very same year of its foundation?

MADE IN TELEVÉS

Televes manufactures... Automatic verification processes.

NEW PRODUCT

5x wires NevoSwitch.



Televes United Kingdom Ltd.

51° 38' 34.8144" N, 3° 1' 23.88" W



T. +44 01 633 875821 - F. +44 01 633 866311



televes.uk@televes.com

televes.com

MEETING POINT

Visit us at:



MARCH

3-5 **ANDINA LINK**
Cartagena de Indias Colombia

10-12 **CABSAT DUBAI**
United Arab Emirates

Mobile unit's routes in 2014



Unit 1 (Spain and Portugal):
ICT2, Fibre Optics and ITED3

It's been a tricky second half of the year due to the uncertainty about the final approval of the Technical Plan to adapt Collective Installations to the digital dividend, therefore these units have been used to promote the update of the T12 module systems.

March and June were the chosen months to visit Cataluna, Comunidad de Madrid, Andalucia and the North region. In October and November we'll focus on North-west regions and Portugal, where Televés plays a very important role of the disclosure of the new ITED3 regulation.

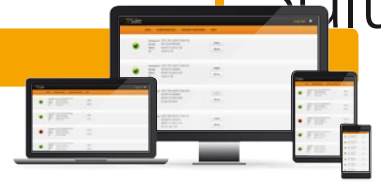


Unit 2 (Germany):
General product display
and Fiber Optics solutions

Televés keeps playing for high stakes in the German market; we've sent a Mobile Unit for exclusively support for commercial promotional events. It's been 40 of them since April to November, achieving great feedback from visitors; very focused on our range of fibre optics for operators ■



FAQs



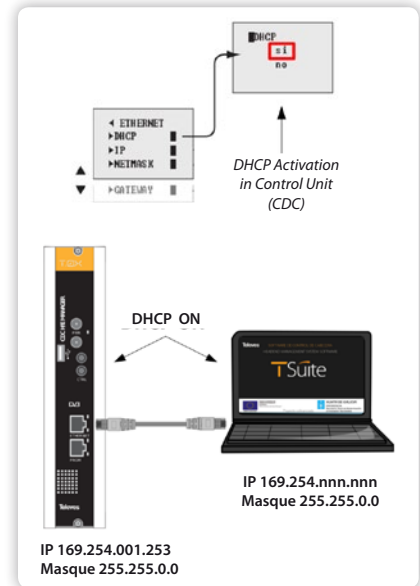
How can I connect a laptop to a H/E controller (CDC)?

Thanks to the autoconfiguration protocols setting a H/E using a CDC controller is an easy task.

THE EXPERT'S OPINION

Present-day T0X transmodulators incorporate functions that make them more powerful and flexible. Features as re-multiplexing, twin outputs, Service ID edition, etc. make more necessary the use of software as TSuite to configure all the settings of the modules included in the system in an user-friendly manner. The link between the T0X CDC unit and the PC can be done by using a RJ45 lead, but both PC and CDC must be in the same IP range to establish the communication. It's not a complex process, but it's necessary to know how to change the PC's IP address and/or CDC. However, CDC units make use of a Windows OS's tool in those PCs running with this operating system called APIPA (Automatic Private Internet Protocol Addressing) so the link between two devices connected by their Ethernet interface with enabled DHCP can be automatically established.

In this way, when a PC detects a device (not a router) connected to its Ethernet interface, Windows will assign the Ethernet interface a valid Class-B private IP address 169.254.nnn.nnn with subnet mask 255.255.0.0.



CDC units implement a similar protocol when DHCP is enabled and detects a PC linked to the Ethernet interface; it automatically assigns to its own Ethernet interface the IP address 169.254.001.253 with subnet mask 255.255.0.0 ■



More information on
televés.com

Javier Esteban
Technical Assistant Manager

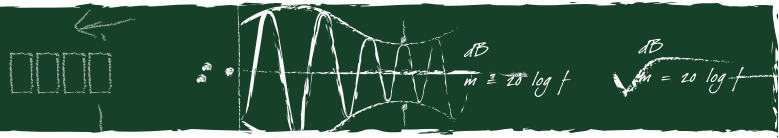


YOUR PICTURES



Unhindered training

Sometimes difficulties can be overcome with a measure of good and most of all, a great willingness to learn. Ask the students of I.E.S Emilio Campuzano, Bilbao (Spain), where the bollards at the entrance of the facility were removed to allow our staff to park the Mobile Unit truck and impart a training course ■



The importance of marking a coaxial cable

Existence of highly interference signals (LTE/4G) makes the criteria of choosing a coaxial cable not to be only focused on its attenuation but in other features.

There are several parameters and specifications with little mean to those that purchase coaxial cable. However, if the criteria is not well-based, the entire installation can be jeopardized.

Interpretation of the coaxial marking may lead to a correct choice, not only of the type of cable or its specifications but for where and how to install it.

Tables shown below help with the interpretation of the description and constitution of a coaxial cable.

The **MATERIAL** of the cable usually makes reference to the inner core and the braid. For example, T100 and T200 type cables are made of 100% copper. This improves the cable's behaviour on DC, as well as the transport of signals in lower and higher frequencies, feature that copper plated cables lack.

Televés' coaxial cables have physical expansion dielectrics, built in expanded polyethylene through gas injection in the core. It's been proved that when tested for durability, the attenuation will not go up to more than 5% worst case scenario.

OUTER COVERING has the function to protect the inner elements. It's composed by white PVC, LSFH, black PE with protection against ultraviolet rays and humidity or black PE with petrogel.

Material		
Inner Conductor	Cu	Copper
	CCA	Copper Clad Steel
Outer Conductor	Cu	Copper
	Al	Aluminium
	CuSn	Tinned copper
	CCA	Copper Clad Aluminium

Coverage	Colour	Protection
PVC Polyvinyl chloride	W	🔥
PE Polyethylene	B	☁️
LSFH Low Smoke Free Hallogen	G	🔥

Standard	Operating range
EN 50117-2-4	5 - 3000 MHz
EN 50117-2-5	5 - 3000 MHz
EN 50117-2-1	5 - 1000 MHz



The cable's **SHIELDING** capability against interferences is generated by both braid and foil (which also guarantee the necessary conductivity). Depending on this capability, the cables can be sorted by classes; Class A+ cables manufactured with TRISHIELD shielding ensure the highest protection against LTE/4G interferences.

Televés' coaxial cables **MARKING** also gives information about the compliance with different standards: ITED in Portugal, ICT in Spain, CAI in the UK, VDE in Germany or SKY in Italy. Moreover, for these two last examples Televés' cables are ratified in independent external agencies. In the case of France, it's used a particular way of classifying cables that nowadays is commonly present in several other countries.

There is a trend to unify standards for those products manufactured in Europe.

Class	Frequency	Shielding Attenuation
B	5 - 30 MHz	TI < 15 mΩ/m
	5 - 1000 MHz	SA > 75 dB
	1000 - 2000 MHz	SA > 65 dB
	2000 - 3000 MHz	SA > 55 dB
A	5 - 30 MHz	TI < 5 mΩ/m
	5 - 1000 MHz	SA > 85 dB
	1000 - 2000 MHz	SA > 75 dB
	2000 - 3000 MHz	SA > 65 dB
A+	5 - 30 MHz	TI < 2,5 mΩ/m
	5 - 1000 MHz	SA > 95 dB
	1000 - 2000 MHz	SA > 85 dB
	2000 - 3000 MHz	SA > 75 dB

TI: Transfer Impedance

Coaxial cables are not an exception, and so marking will indicate the compliance with these standards. However, we can look at Portugal's example where the ITED minimum requirements of the cable's quality are at the same level as the European standard.

Nowadays strong competition laws and the emergence of brands that do not more than importing recycled materials from Orient originate the existence of cables that do not comply with standards although claim to, ending in a case of unfair competition to those companies like Televés, which has always stood out due to the reliability of the cable's specifications and technical features shown in the catalog

Helder Martins
International Technical Assistance



French marking				
21	V	At	C	A
xx	1	2	3	4

Class	
xx	Attenuation in 100m at 800MHz
1	V Outer coverage in PVC
	P Outer coverage in PE
2	Rt Foil and braid in Copper
	At Foil and braid in Aluminium
3	M Solid polyethylene dielectric
	C Polyethylene dielectric
4	A Tinned copper conductor

TELEVES FACILITIES

Keystone Resort (Colorado - USA)



The ski resort Keystone Resort in Colorado, one of the biggest ones in USA, now provide TV services using T.OX equipment.

All the apartments receive TV signals from this headend, formed by two systems of 27 8PSK/QAM modules that transform 54 satellite transponders to distribute them over a HFC (Hybrid Fibre Coaxial) network. Added to these, in-home services like resort events information, restaurant offers, weather forecast, etc. complete the full TV line-up.

Once the signal has been converted to FO, it's distributed using a FTTB (*Fiber to the building*).

Re-conversion to RF is made by outdoors FO receivers. ■



efficient ingenuity

DID YOU KNOW..?

...the first patent was obtained by Televes the same year the company was founded?

The first patent from Televes dates back to 1958. The two founding partners registered an improved antenna model and requested protection for twenty years within the Spain territories.

The document consists of ten pages describing the design of an antenna fully armed with the reflector, directors and dipole elements, and mounted on a central support tube. The request also details two variants for fastening the antenna structure to a mast, an insulator for wire line or coaxial cable, a bridge for connecting the reflector and directors to the support tube of the antenna, and a connection box for the union of the dipole to the same tube. ■



IDEAS

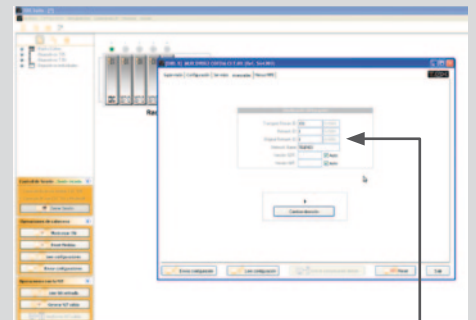


Transport Stream ID and its influence on TV tuning

Due to the different characteristics of manufactures and models, TV tuning can sometimes be tedious and complicated.

It's possible that in those facilities with a TOX H/E system with transmodulators, some TVs do not recognize all the present TV services. This is due to the fact that some TVs take into account a parameter called "**Transport Stream Identifier**" (**TS_ID**) to memorize all the services, as well as the multiplex frequency. When one of this TVs detects the same TS_ID when tuning more than once, they will be automatically ignored and therefore all these services will not be available in TV line-up but the first ones detected.

This problem is easy to identify since all the services will be present when checking the TV signal with a field strength meter but not on a TV.



NIT parameters.

Sometimes TS_ID must be edited (a different TS_ID for each module) to avoid problems in the channel search for some TVs

It can be fixed changing the second TS_ID value to a different one so the TV will recognize all the multiplexes. This can be done using any of the transmodulator's configuration interfaces (PCT handset or TSuite).

In this way, if this is done for all the modules, the TVs will identify every multiplex as a different signal not only in frequency but in content, memorizing in that way all the services processed in the headend. ■

Televes manufactures...

$\theta \times 45^\circ (= 360^\circ)$



Automated verification processes

In the mid-90s Televes began an intense industrial automation initiative, not only in manufacturing, but also in the verification processes. The company deemed it necessary to achieve the same degree of efficiency in quality controls, which were manual up to that point, than that obtained in the manufacturing process itself.

Today, 100% of the product produced in Televes is subjected to various types of automated technical inspection. There are **specific controls for manufacturing subprocesses**, such as the production and assembly of SMD PCBs, chassis structures, plastic or sealed welds of all the elements that make up the finished product. Moreover, stringent quality controls **are performed to the finished product and to its**

intermediate elements (subproducts), for example the complex boards of the field spectrum analysers.

These **checks are performed by using sophisticated artificial vision and robot guidance through parameterised programs**, where all software management, reporting and real-time analysis is developed by our Televes industrial engineering lab.

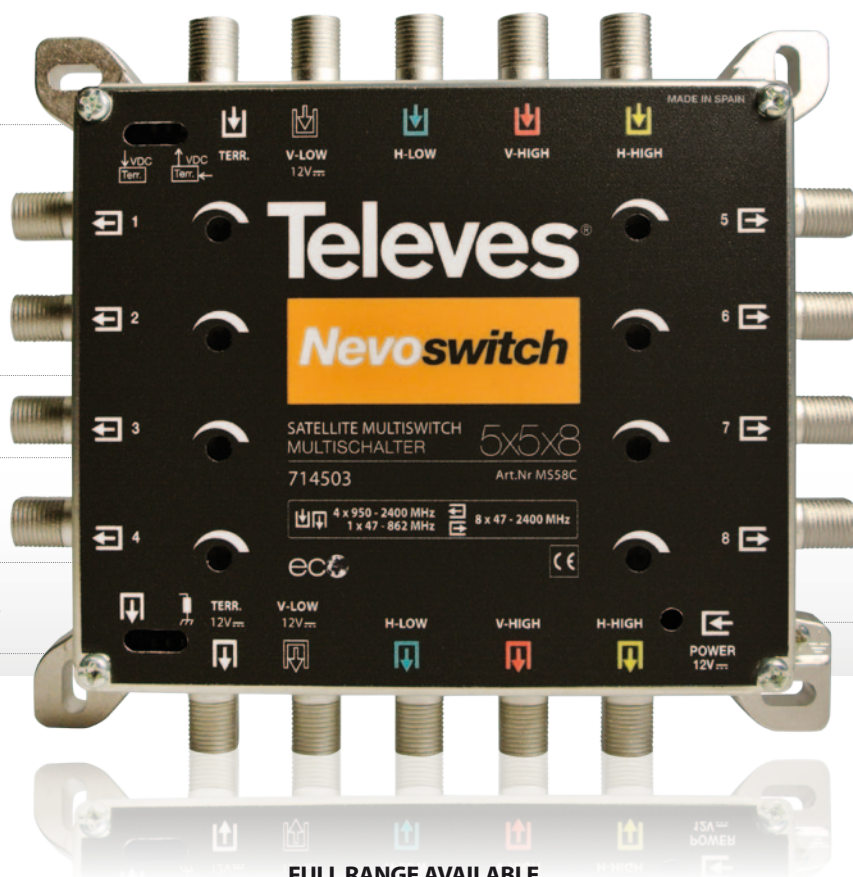
Accordingly, levels of increased quality are achieved. Furthermore, in market situations where unplanned demands may arise, Televes can respond with quicker supply to the industry, ensuring a much higher level of product assurance, unattainable for those products controlled manually ■



NEW RANGE OF MULTISWITCHES

100% MANUFACTURED AND VERIFIED IN OUR ROBOTIZED LINES

NevoSwitch®



MSW can be used to power a setback/mast amplifier or a BOSS Tech antenna

Chassis made of ZAMAK
Improved screening
attenuation

Independent Adjustment
of each user output level

ECO mode:
the consumption decreases as
the number of users is reduced

Versatile.
The same MSW can be configured
as cascade or stand-alone with the
flip of a switch



Multiple powering options
(Vertical/Low polarity):

In-line (cascade) from any point in
the system

From the Set-top-box
(no PSU required in the MSW)

From an external PSU

Small size and compact design

FULL RANGE AVAILABLE

5X, 9X, 13X AND 17X: UP TO 4 SATELLITES

FROM 4 TO 32 USER OUTPUTS

QUAD COMPATIBLE VERSIONS FOR THE 5X RANGE



100% Designed, Developed & Manufactured in Televes Corporation
televescorporation ■ televes.com ■ televes.uk@televes.com

Televes®