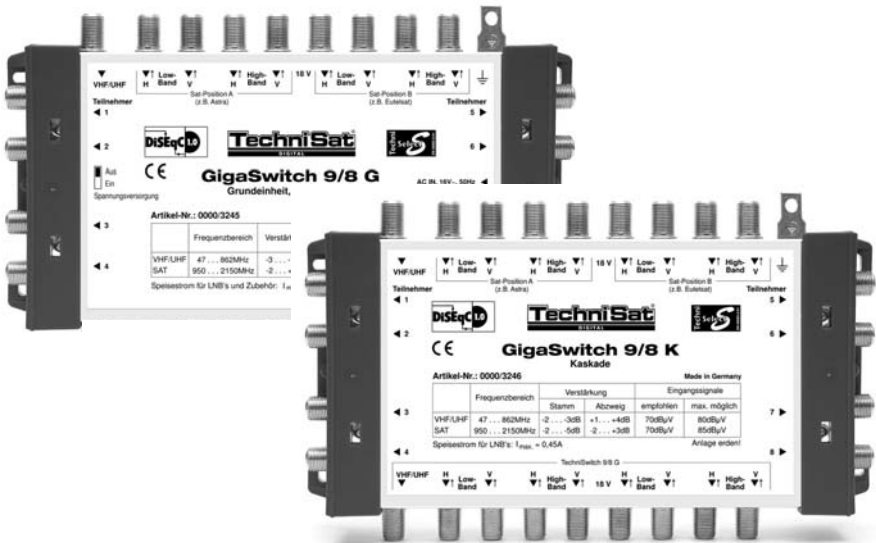


TechniSat®

GigaSwitch 9/8



Installation instructions

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1 Uses

The multi-switches of the GigaSwitch 9/8 series serve to provide satellite IF signals as well as terrestrial signals for up to 16 parties.

Distribution examples include the following:

- > the full bandwidths of two satellites (analogue and digital programmes of the Astra 19,2° and Eutelsat 13° East satellites)

or

- > eight freely selectable polarisation planes.

In the satellite band, the branch switches have a slope-rectified amplification/gain, so that distances of up to 100 metres can be bridged without any need for additional equipment.

The slope-rectified gain system for terrestrial signals is secure for the future, and can distribute DVB-T signals effectively even in areas receiving a weak signal.

Use the mains power adapter supplied to make the connection to mains power. If the GigaSwitch 9/8 G is used without a cascade matrix, it is recommended that the energy-savings switch be set to on.

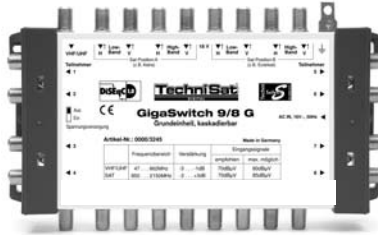
Please note:

When using a Cascade GigaSwitch 9/8 K, the energy-savings option must be switched off!

Basic unit

(for a maximum of 8 parties)

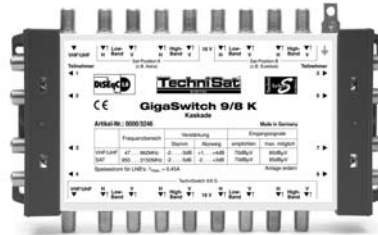
Art. No. 0000/3245



Cascade matrix

(for a maximum of 8 parties)

Art. No. 0000/3246



Mains power adapter

Art. No. 0000/3222



2 Safety notes

For your own protection, you should read the safety notes carefully before installing the equipment. The manufacturer accepts no liability for damage caused by inappropriate handling, or by ignoring the safety instructions.

- > Components should be mounted in a dry room, on a horizontal plane, consisting of flame-resistant materials.
- > When installing the equipment keep the electricity switched off.
- > Ensure the antenna installation is earthed.
- > Ensure the antenna installation is protected from lightning as per local regulations.
- > Ensure that you are in compliance with relevant European standards and VDE regulations, where applicable, with regard to electrical safety.
- > You must comply with national regulations pertaining to broadcast reception installations.
- > Never open the housing of the equipment. Any repairs necessary should only be carried out by a qualified specialist. If the following apply, disconnect the equipment from the mains power supply, and call a qualified repair person:
 - > the unit was subject to humidity, or water has run into the unit,
 - > in case of malfunctions,
 - > in case of severe external damage.

3 Installation

3.1 General

- > We recommend a star-shaped distribution, with the distributor being located either in the attic or near the centre of the building. If you are using a cascade matrix, please note Point 3.5.
- > Please ensure that the levels of the satellite signals fed into the system are approximately equal. This ensures that the very good decoupling characteristics are not limited.
- > As cables are very sensitive to damage, you should install these as late as possible during the building process. If possible, lay the cables inside a protective tube or pipe. Do not bend cables too sharply!
- > Install the equipment while the electricity is switched off, or disconnected.

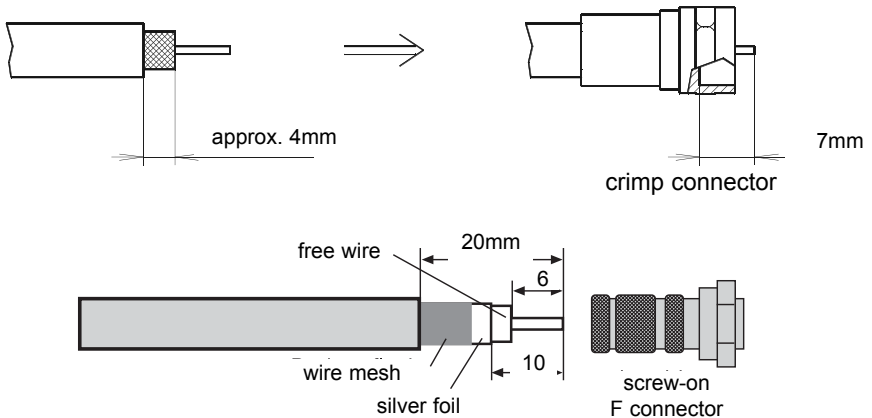
3.2 Selecting the external unit/LNCs

- > You may use Quatro or Dual-Output LNCs. Please note the maximum possible current strength for inputs, as per the technical data.
- > Quatro-Switch LNCs, Twin LNCs and Single Universal V/H LNCs are not suitable.
- > The current feeding the LNCs is approx. 18V (load-dependant).

3.3 Cable

- > Because of the amplification provided by the units, you can use small-calibre, easy-to-use cables in spite of the higher damping this means.
- > When connecting the LNCs with the multi-switch, resp. several multi-switches with each other, we recommend the use of MULTYMEDIA cable (Art. No. 0001/3014).
- > we recommend you use mini coaxial cable to connect the multi-switch with the antenna sockets.
- > To install longer sections of cable to connect to the antenna sockets, please use the low-damping co-axial cable CoaxSat 2150.
- > Damping values are specified in Point 6.
- > Please use crimp-type connectors wherever possible!

Insulation should be stripped from the cable as follows:



3.4 Antenna sockets

The participants should be connected to the system via antenna sockets (SV 500 or SVT 500). This ensures that terrestrial programmes can be received without the need for an additional socket, and equipment connected in this way is protected from extraneous interference.

3.5 Cascade

- > We recommend splitting the cascade distribution (star-shaped for each floor in the building, MULTYMEDIA cable between the multi-switches). This makes the laying of cables more efficient, with less possible confusion.
- > If you wish to distribute to 16 parties from a single central point (star-shaped distribution), connect the switches by means of quick-connecting F-connection adapters.

3.6 Energy-saving switch (use only when operating 9/8 G on its own!)

- > The terrestrial reception is supplied continuously via the mains adapter.
- > If the energy-saving switch is set to "on", the LNCs will only be fed if at least one receiver is switched on.

4 Installation hints

- > Check all cables for short circuits before making the connections, in the case of larger installations this can save a lot of time later.
- > Ensure that the connections from the LNC are not mixed up. To make things easier, we recommend you use the (multi-coloured) MULTYMEDIA cable, or mark the various cables with suitable multi-coloured marks.
- > Use single, uncut lengths of cable throughout. DVB signals are particularly susceptible to interference through the use of F-connectors.
- > Screw the F-connectors moderately tight.
- > Any **outputs** not used can, if you wish to achieve a particularly linear frequency distribution, be capped with a 75 Ohm terminal resistor.
- > Any **inputs** not used may not be capped with a terminal resistor.
- > The multi-switches can also be mounted in small distribution cabinets using hatclip fasteners.

Distribution of terrestrial programmes:

- > Ensure that the terrestrial signals fed into the system are of approximately equal strength.
- > A terrestrial pre-amplifier is **not** required.

5 Troubleshooting guide

Problem	Possible causes	Solution
No reception on any polarisation plane.	Antenna position not correct	Check the position of your antenna. Use the signal strength indicator of your receiver (transponder info)
Still no reception on any polarisation plane	Short circuit in LNC connection	Disconnect the branch connections one after the other to locate the short circuit
No reception, or wrong programmes, on individual polarisation planes	LNC connections switched, or central wire in connection too short	Check on the allocation of cables and connectors. E.g. use a receiver to check on the signal directly in the LNC connection.
Outputs of individual parties not functional	LNC voltage and/or switching criteria of receiver incorrect	Try connecting the receiving unit to a different party output. Check the LNC power and the switching criteria with a measuring device, or try another receiving unit
No reception via receivers at cascade unit.	LNCs not feeding in	Set switch on 9/8 G to "Off" for energy saving
Waves in terrestrial TV image	Input signal too strong	Reduce level (see Technical Data)

6 Technical Data

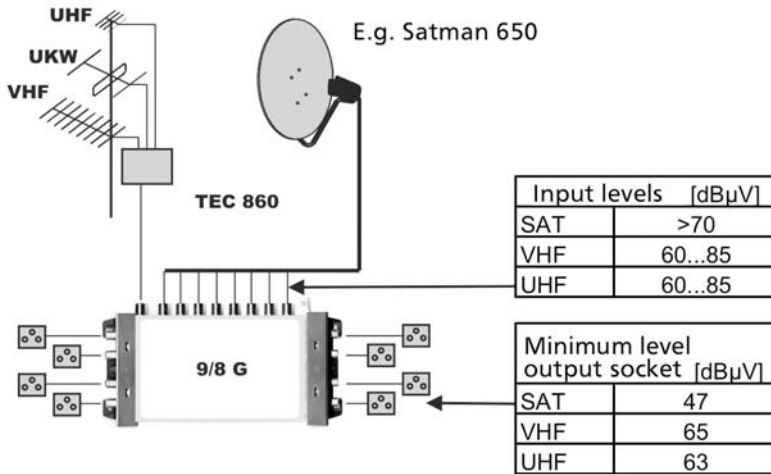
Terrestrial 47 - 862 MHz, Satellite band: 950 - 2150 MHz	9/8 G		Cascade 9/8 G + K	
	Terr.	Sat.	Terr.	Sat.
Throughput damping			2 ... 3dB	2 ... 5dB
Branch gain on 9/8K			1 ... 4dB	-2 ... +3dB
Branch gain on 9/8G	-3 ... -1dB	-2 ... +3dB	-5 ... -4dB ³⁾	-4 ... -2dB ³⁾
Decoupling receiver outputs	> 35dB			
Input levels				
recommended	72dB μ V	70dB μ V	70dB μ V	75dB μ V
maximum	80dB μ V ¹⁾	85dB μ V ²⁾	80dB μ V ¹⁾	90dB μ V ²⁾
Shielding	in acc. with EN50083-2/A1 (TechniSelect S)			
Control	DiSEqC 1.0 or higher with $U_{SS} > 0,25V$ or Mini-DiSEqC or 11,5V...14V/16V...19V und 0/22kHz \pm 4kHz			
Mains adapter	Mains adapter supplied, 16V~, at full load 0,7A, stand-by <25mA			
Power , requirements of mains adapter	65mA		190mA	
max. possible to the LNCs	635mA (protected against short circuit and overload)		510mA (protected against short circuit and overload)	
required by receiver	60mA			
Ambient temperature	-25...+55°C			
Dimensions: WxHxD	210x125x35 (mm)			

1) Relative to broad-band cable signal in BBC grid (36 TV signals, 24 FM programmes), CTB (72dB) / CSO (69dB), in case of terrestrial reception individual stations are often larger, but this is acceptable as long as they remain smaller than 90dB μ V

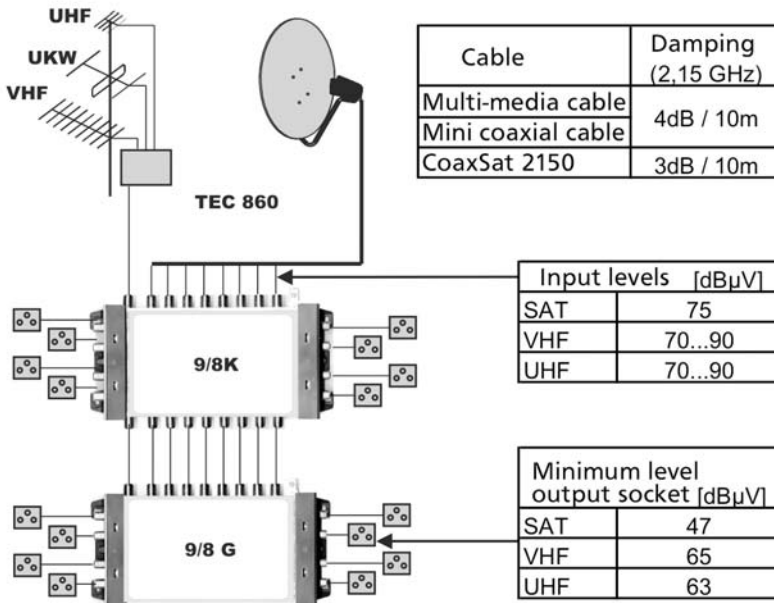
2) in accordance with EN 50083-3: IMA3 35dB

3) In case of split cascading please also consider cable attenuation!

Installation for 8 parties/receivers



Installation for 16 parties/receivers



Your equipment is in accordance with CE, and complies with all relevant EU standards!

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