



User Manual

dCSS/dSCR Add-On 9739



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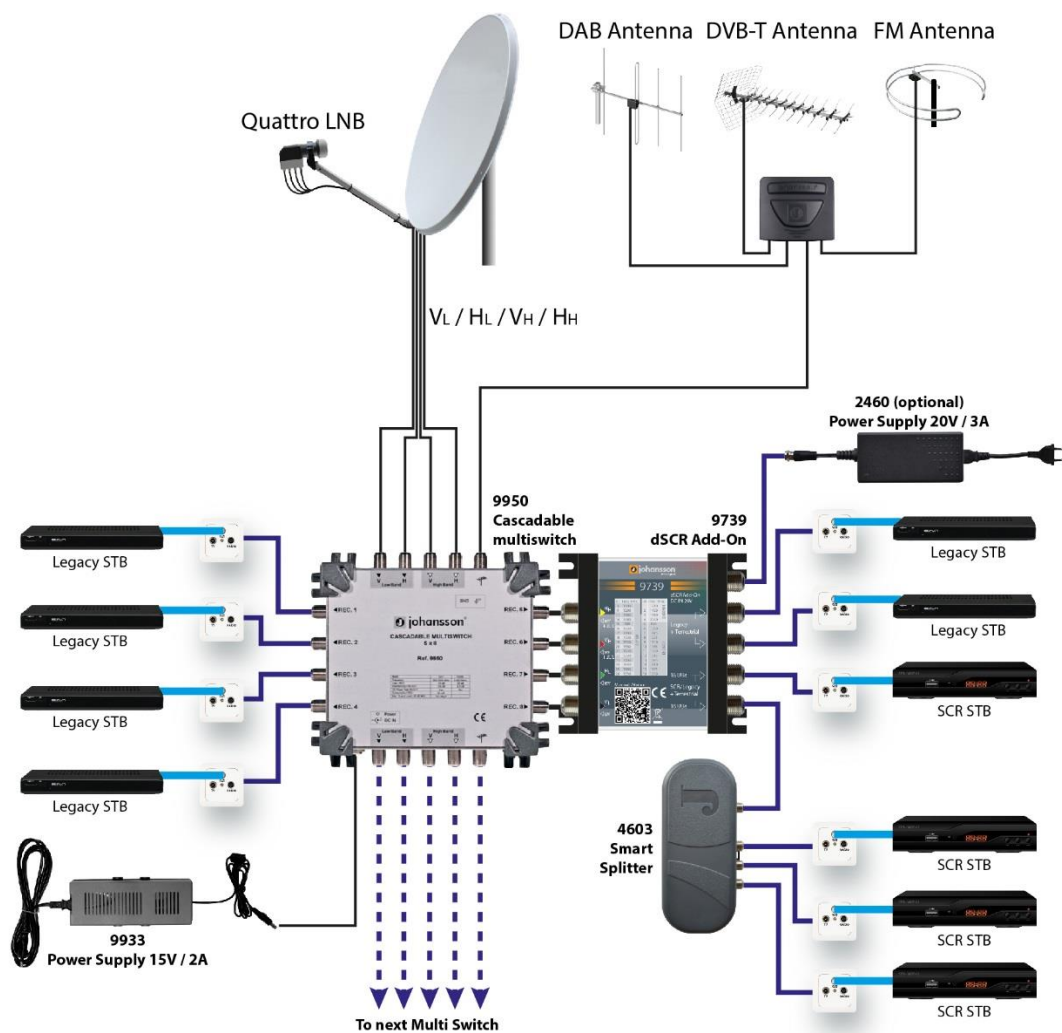
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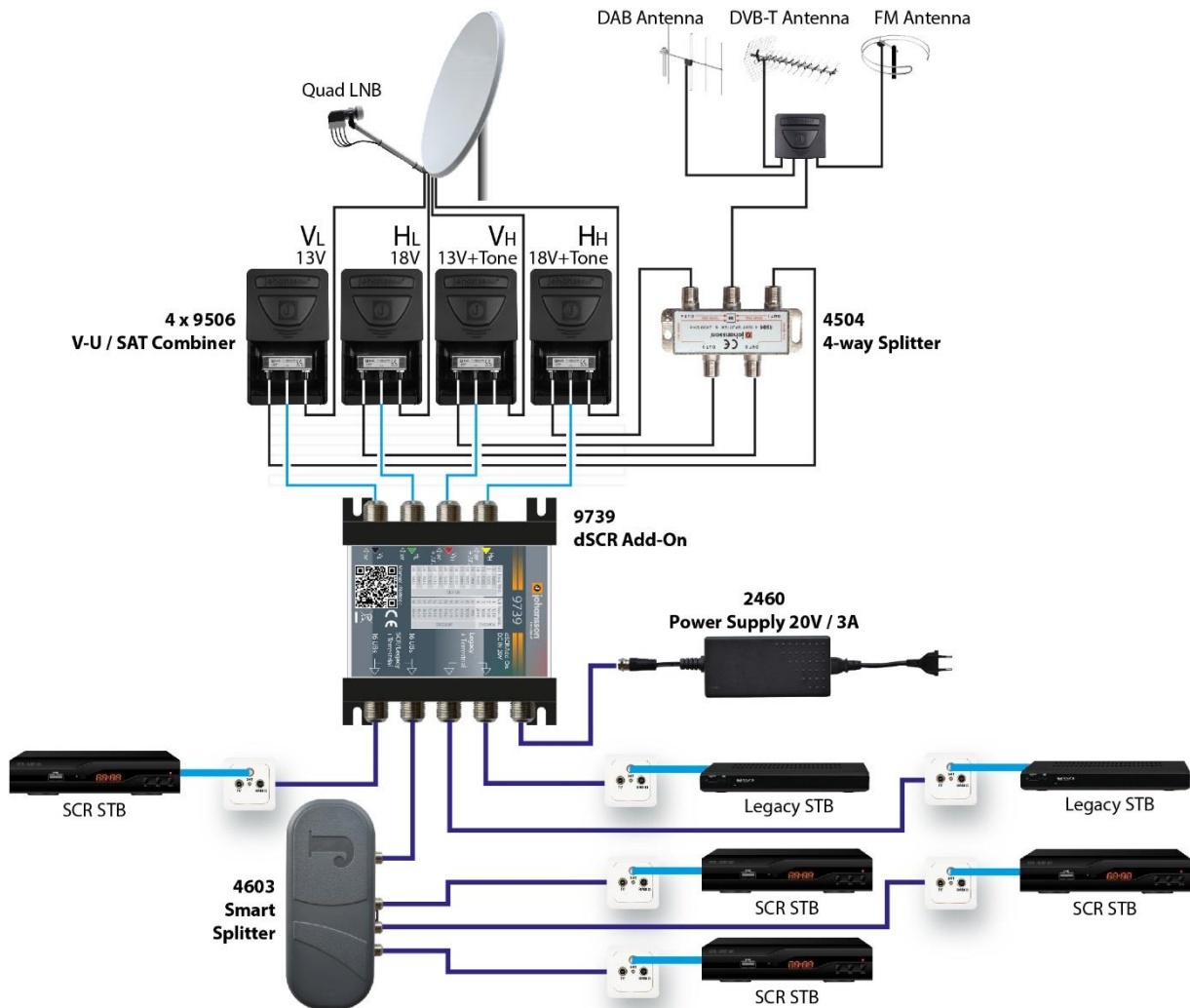
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1. INSTALLATION OF THE HARDWARE

1.1. Quattro LNB with multiswitch



1.2. Quad LNB



2. CONFIGURATION OF THE MODULE

The 9739 can be used with Quattro or Quad LNB types and will output in Legacy or SCR mode. Schematically the units support the following modes and applications:

| | | Quattro/Quad LNB |
|---------|----------|-----------------------|
| Outputs | Legacy | Universal multiswitch |
| | dSCR/SCR | dSCR multiswitch |

2.1. Output : Legacy versus dSCR

Independent of the selected input mode, the 2 lower output ports (SCR) can support Legacy and SCR/dSCR STBs. The upper 2 output ports (Legacy) only support Legacy.

At startup, the SCR outputs work in Legacy mode and can be used as a universal multiswitch.

Upon receiving the first dSCR command, the SCR outputs will automatically switch into dSCR mode in which it supports the following standards:

EN50494/SCR standard (DiSEqC 1.0)

STBs that only support EN50494 will only be able to use the first 4 userbands.

EN50607/dCSS/dSCR standard (DiSEqC 2.0)

STBs that support the newer EN50607 will be able to use the other 12 userbands (UB5 – UB16). This is typically for new multi-tuner STBs with 8 or 12 tuners, like SkyQ or other Home Media Gateways (HMG).

CONCURRENT EN50494/EN50607 standards

For upgrading existing SCR installations where the main STB is upgraded to Next Gen PVR (like SkyQ), the dSCR multiswitch can support both standards simultaneously. In this case a mix of STBs can be supported:

- The existing STBs will use UB1 through UB4
- The new main STB will use UB5 through UB16
- In this case DiSEqC 1.0 and DiSEqC 2.0 will be used over the same cable from LNB to the apartment

SKY UK standard

This is for Installations with the SKY Q-Box:

- SkyQ will have 16 userbands available
- Signalling DiSEqC 1.0 or 2.0 will be used.

For an overview, please see the table in chapter 3: Technical Specifications.

To return back to legacy mode, that output has to be reset. This can be done by removing the DC from the STB output connector. The 2 outputs are independent, so resetting (= unpowering) 1 output does not affect the other output.

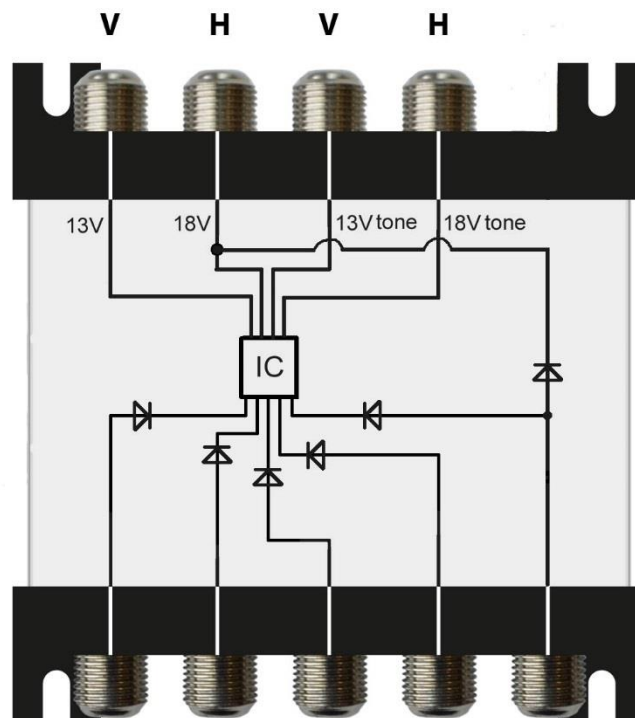
2.2. DC Power

Powering the units can be done in 2 ways:

1. **From STBs:** each STB has to power its connected unit. In this case, the power for the LNB will also be taken from the STB.
2. **From DC IN:** when connecting an external power supply to the 9739, the STBs do not need to power its connected unit.

A power supply (Ref 2460) is designed to power the dSCR multiswitch including the Quattro or Quad LNB.

Block diagram of the DC paths inside the 9739:



3. TECHNICAL SPECIFICATIONS

| 9739 | | |
|---|-----|--|
| Inputs | - | 4 ports Terrestrial + Satellite |
| Input Frequency | MHz | 5 – 862 / 950 – 2150 |
| STB Output Frequency | MHz | 5 – 862 / 950 – 2150 |
| dCSS/dSCR outputs | - | 2 legacy only 2 SCR/legacy (auto detection) |
| dCSS/dSCR output connector | Ohm | 75 F type (Female) |
| dCSS/dSCR UBs | - | 16 per SCR output |
| dCSS/dSCR output level | dBm | -21 |
| Satellite input power level | dBm | -45 to -15 |
| Return loss | dB | >=8 (Typ 12) |
| Tap loss SCR | dB | Not applicable, AGC (automatic Gain control) |
| Tap loss legacy | dB | 0 typical |
| Terrestrial/Cable loss | dB | -7 typical |
| Band and polarity selection | - | Universal LNB voltage & Tone DiSEqC 1.0 (unidirectional) DiSEqC 2.0 (bidirectional) Standard EN 50494 (SCD) Standard EN 50607 (SCD 2) SKY UK standard |
| Max DC current consumption Legacy only ports | W | <2 |
| Max DC current consumption SCR/Legacy ports | W | <4,2 |
| DC power pass from STB to input ports | V | 13/18/22kHz 100mA max per port |
| From DC power port to input ports | V | 13/18/22kHz 100mA max per port 1A max to HL port |
| Power supply | - | From STB or power inserter |
| Power (2460 available separately) | A | 3.0 max, 20V |
| Dimensions | mm | 90x85x40 |

| UB index | UB center frequency (MHz) | UB default BW (MHz) | Protocol | Compatible STBs |
|----------|---------------------------|---------------------|----------|--|
| 1 | 1210 | 46 | EN50494 | SCR compatible STB and PVR |
| 2 | 1420 | 46 | EN50494 | |
| 3 | 1680 | 46 | EN50494 | |
| 4 | 2040 | 46 | EN50494 | |
| 5 | 985 | 46 | EN50607 | New multi-tuner STBs with up to 8 or 12 tuners |
| 6 | 1050 | 46 | EN50607 | |
| 7 | 1115 | 46 | EN50607 | |
| 8 | 1275 | 46 | EN50607 | |
| 9 | 1340 | 46 | EN50607 | |
| 10 | 1485 | 46 | EN50607 | |
| 11 | 1550 | 46 | EN50607 | |
| 12 | 1615 | 46 | EN50607 | |
| 13 | 1745 | 46 | EN50607 | |
| 14 | 1810 | 46 | EN50607 | |
| 15 | 1875 | 46 | EN50607 | |
| 16 | 1940 | 46 | EN50607 | |

| UB index | UB center frequency (MHz) | UB default BW (MHz) | Protocol | Compatible STBs |
|----------|---------------------------|---------------------|----------|-----------------|
| 3 | 1680 | 46 | SKY UK | SkyQ or similar |
| 9 | 1280 | 46 | SKY UK | |
| 11 | 1380 | 46 | SKY UK | |
| 14 | 1480 | 46 | SKY UK | |
| 15 | 980 | 46 | SKY UK | |
| 16 | 1030 | 46 | SKY UK | |
| 17 | 1080 | 46 | SKY UK | |
| 18 | 1130 | 46 | SKY UK | |
| 19 | 1530 | 46 | SKY UK | |
| 20 | 1580 | 46 | SKY UK | |
| 21 | 1630 | 46 | SKY UK | |
| 22 | 1730 | 46 | SKY UK | |
| 23 | 1780 | 46 | SKY UK | |
| 24 | 1830 | 46 | SKY UK | |
| 25 | 1880 | 46 | SKY UK | |
| 26 | 1930 | 46 | SKY UK | |

4. SAFETY INSTRUCTIONS



Read these instructions carefully before connecting the unit



To prevent fire, short circuit or shock hazard:

- Do not expose the unit to rain or moisture.
- Install the unit in a dry location without infiltration or condensation of water.
- Do not expose it to dripping or splashing.
- Do not place objects filled with liquids, such as vases, on the apparatus.
- If any liquid should accidentally fall into the cabinet, disconnect the power plug.



To avoid any risk of overheating:

- Install the unit in a well aery location and keep a minimum distance of 15 cm around the apparatus for sufficient ventilation
- Do not place any items such as newspapers, table-cloths, curtains, on the unit that might cover the ventilation holes.
- Do not place any naked flame sources, such as lighted candles, on the apparatus
- Do not install the product in a dusty place
- Use the apparatus only in moderate climates (not in tropical climates)
- Respect the minimum and maximum temperature specifications



To avoid any risk of electrical shocks:

- Connect apparatus only to socket with protective earth connection.
- The mains plug shall remain readily operable
- Pull out power plug to make the different connections of cables
- To avoid electrical shock, do not open the housing of adapter.



Maintenance



Only use a dry soft cloth to clean the cabinet.



Do not use solvent



For repairing and servicing refer to qualified personnel.



Dispose according your local authority's recycling processes

5. CONDITIONS OF WARRANTY

Unitron N.V. warrants the product as being free from defects in material and workmanship for a period of 24 months starting from the date of production indicated on it. See note below.

If during this period of warranty the product proves defective, under normal use, due to defective materials or workmanship, Unitron N.V., at its sole option, will repair or replace the product. Return the product to your local dealer for reparation

THE WARRANTY IS APPLIED ONLY FOR DEFECTS IN MATERIAL AND WORKMANSHIP AND DOES NOT COVER DAMAGE RESULTING FROM:

- Misuse or use of the product out of its specifications.
- Installation or use in a manner inconsistent with the technical or safety standards in force in the country where the product is used
- Use of non-suitable accessories (power supply, adapters...).
- Installation in a defect system.
- External cause beyond the control of Unitron N.V. such as drop, accidents, lightning, water, fire, improper ventilation...

THE WARRANTY IS NOT APPLIED IF

- Production date or serial number on the product is illegible, altered, deleted or removed.
- The product has been opened or repaired by a non-authorized person.

NOTE

Date of production can be found in the product's serial number code. The format will either be "YEAR W WEEK" (e.g., 2016W01 = year 2016 week 1) or "YYWW" (e.g., 1447 = year 2014 week 47).



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