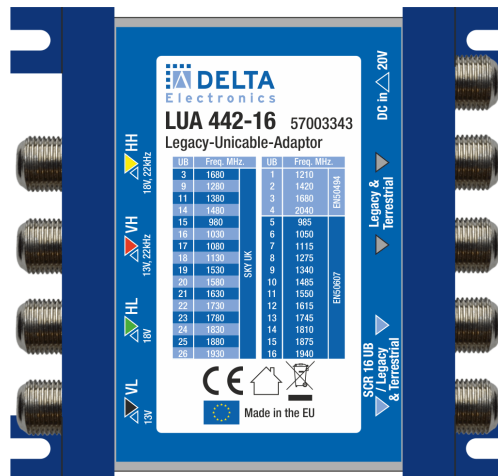


# User Manual

dSCR-Multiswitch-Extension

## LUA 442-16

Item-No: 57003343



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DCT DELTA AG keeps the right to change the specification of hardware and/or software of the device described in this manual.

DCT DELTA AG cannot be made responsible for damages caused by the usage of this device. All information are subject to change.

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# 1. INTRODUCTION

## Product Description

The LUA 402-16 K is a universal extension for existing Legay multiswitches.

It also can be used as standalone device after a Quad or Quattro LNB.

The LUA 442-16 offers:

- 4 Inputs for Universal Quad or Quattro LNB or multiswitch outputs
- Terrestrial signals are transmitted too
- 2 SCR-/ Legacy outputs
- 2 pure Legacy outputs
- 1 DC input.

Every output can be used independently of each other:

- In "Legacy"-Mode the LUA 442-16 outputs are same as every other Legacy multiswitch.
- In SCR-Mode up to 16 user bands are supported per output, user band control is realized through OLT, SCR, CSS, EN50494, EN50607 and other new versions.

The terrestrial Part is passive and support every service up to 1 GHz, including terrestrial reception, CATV and DOCSIS.

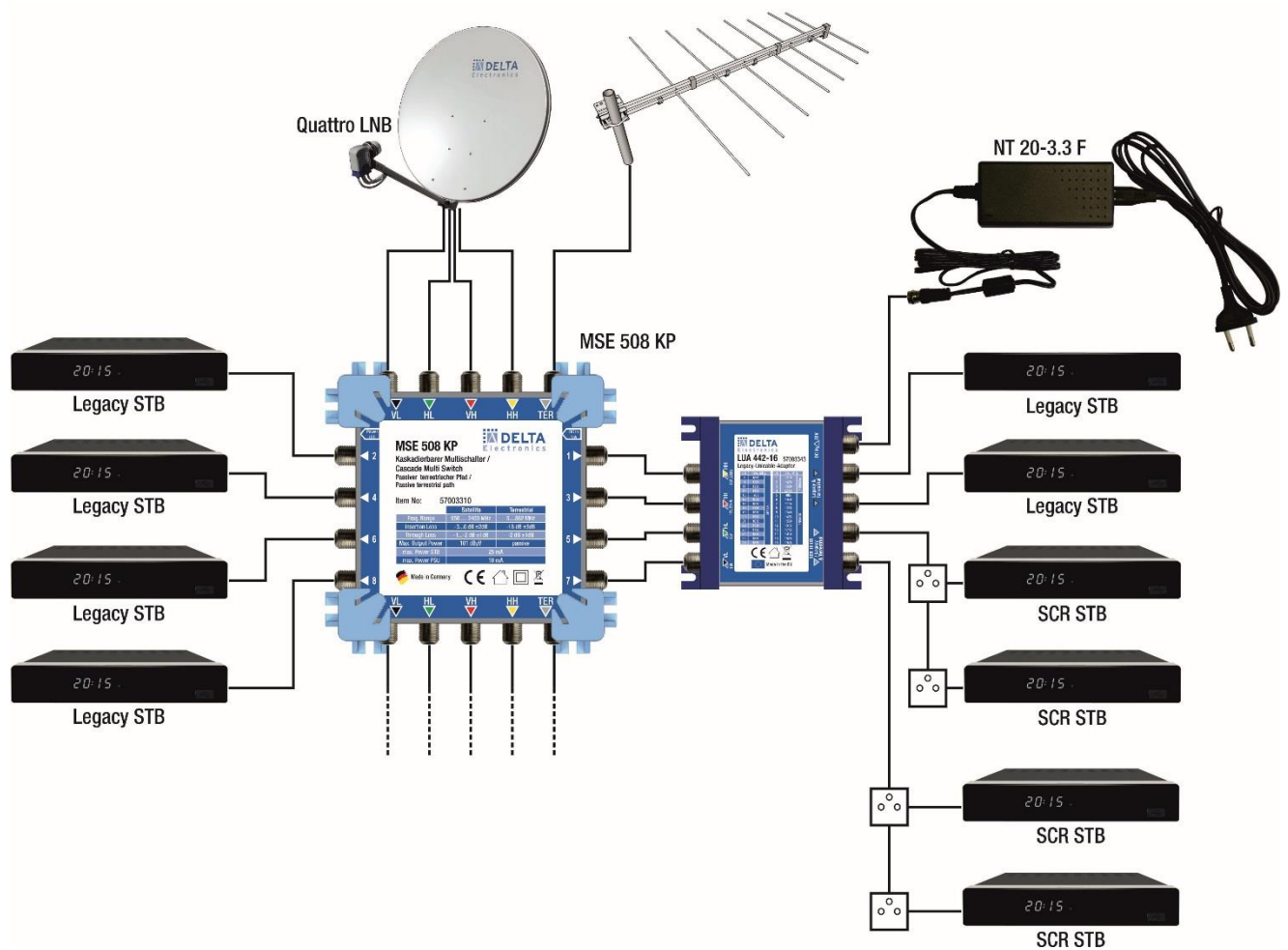
## Content

1x digital SCR Multiswitch LUA 442-16 (without power supply)

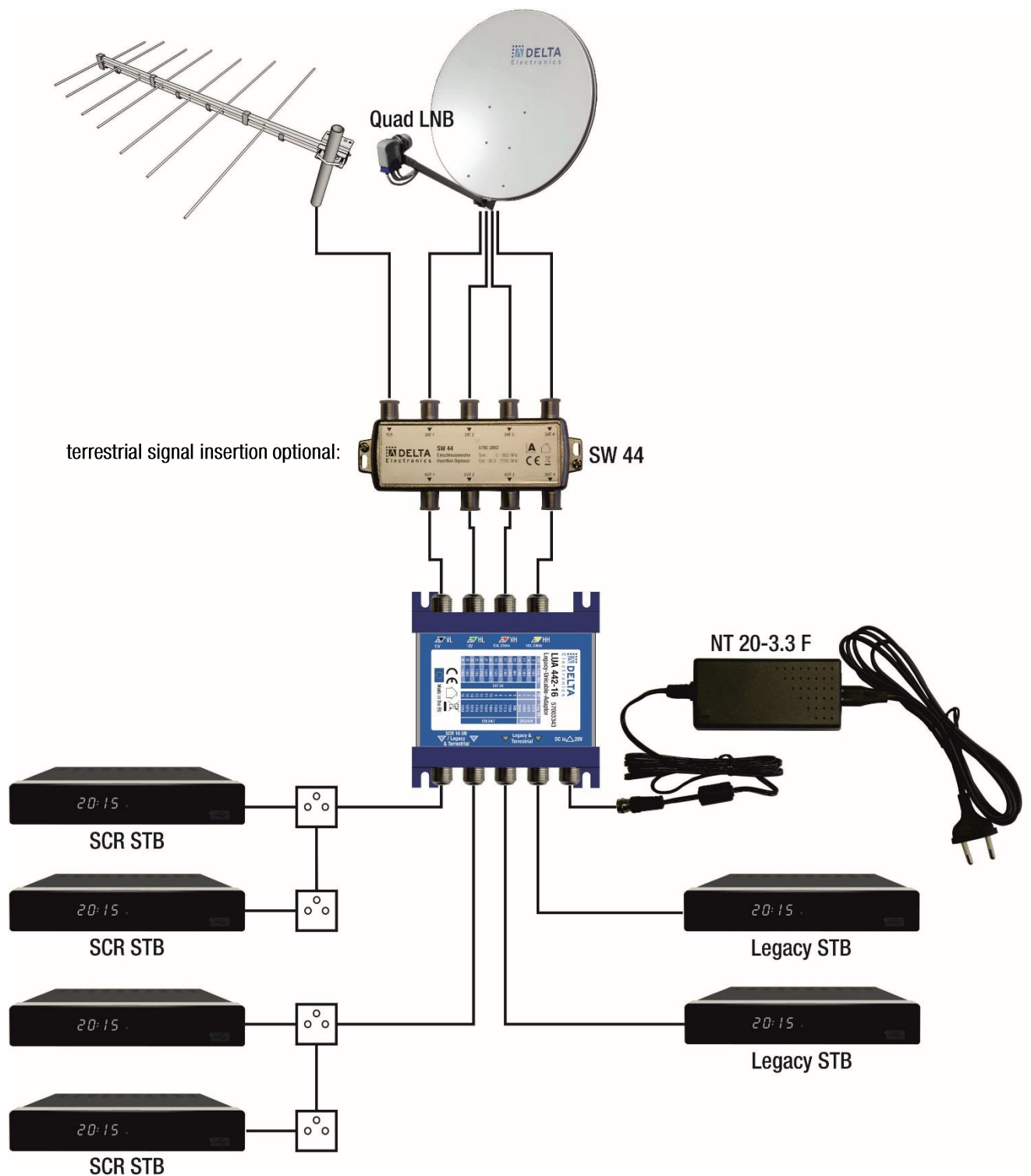
## 2. INSTALLATION OF THE LUA 442-16

### Behind any Multiswitch

No connection gets lost!



## Stand-Alone behind a Quad- or Quattro-LNB



### 3. OUTPUT CONFIGURATION:

The two upper outputs (Legacy) only support Legacy-Mode

The two lower outputs (SCR) are supporting Legacy-Mode as well as SCR/dSCR standards. They are automatically set to Legacy-Mode until the first SCR command will be received to change to SCR-Mode. It can be controlled by:

#### ONLY EN50494/SCR-Standard

For installation with Legacy-STB and PVR / MySKYHD SCR compatible:

- Max. 4 user bands per output (UB1 to UB4) available
- Control signals DiSEqC 1.0

#### ONLY EN50607/dCSS-Standard

For NEW HMG installations:

- 16 user bands per output for HMG (UB1 bis UB16)
- Control signals DiSEqC 1.0 oder 2.0

#### Simultaneous EN50494-/EN50607-Standards

For existing MULTIVISION installations (Legacy STB/PVR SCR compatible), where the main STB is equipped according to Next Gen PVR/HMG.

- Max. 4 user bands per output (UB1 to UB4) available for older (and actual) STB/PVR.
- 12 user bands per output for HMG (UB5 to UB16) for new receivers.
- Control signals DiSEqC 1.0 + DiSEqC 2.0 the same channel from LBN until the apartment.

#### SKY UK Standard

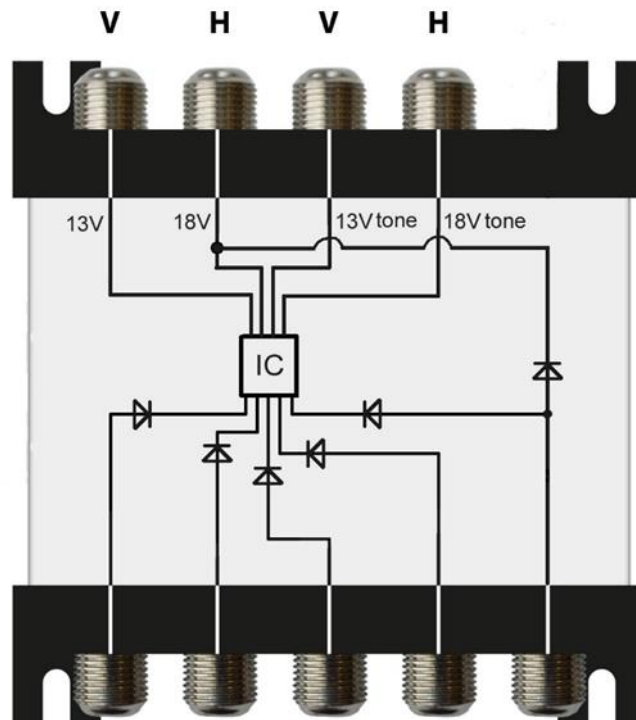
For installations with SKY Q-Box:

- 16 user bands per output in SCR-Mode
- Control signals DiSEqC 1.0 or 2.0

**Power Supply selectable:**

- a) from the subscribers (in this case power demand of LNB and multiswitch have to be added).
- b) from optional external power supply at the DC input, which then supplies the complete power demand.

Block diagram of the DC paths:



Technical support, help for your installations and general information about Unicable you can find at our website:



## 4. TECHNICAL SPECIFICATION

LUA 442-16		
Inputs	-	4 for terrestrial RF + Satellite-IF
Input frequencies	MHz	5 – 862 / 950 – 2150
Subscriber output frequencies	MHz	5 – 862 / 950 – 2150
dCSS/dSCR outputs	-	2 only Legacy 2 SCR/Legacy (automatic recognition)
All ports	Ohm	75 F female
dCSS/dSCR User bands	-	16 per SCR output
dCSS/dSCR Output level	dBμV	87
Satellite input power level	dBμV	63 to 93
Return loss	dB	>=8 (typ. 12)
Attenuation SCR Mode	dB	Because of AGC (Automatic Gain Control) not measurable
Attenuation Legacy Mode	dB	0 typically
Terrestrial/Cable loss	dB	-7 typically
Band and polarization 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. power in pure Legacy mode	W	<2
Max. power in SCR/Legacy mode	W	<4,2
Power from subscriber outputs to the LNB inputs	V	13/18/22kHz 100mA max per subscriber
Power from DC input to the LNB inputs	V	13/18/22kHz 100mA max per subscriber 1A max at HL input
Power supply	-	From STB or power inserter
Power supply (NT 20-3.3 F optional available)	A	3.0 max., 20V
Dimensions	mm	90x85x40

\*: unused outputs need to be terminated with 75 Ohms resistors (DC-blocked).



Sky UK		EN50607		EN50494	
UB	FREQ.	UB	FREQ.	UB	FREQ.
3	1680			1.	1210
9.	1280			2	1420
11.	1380			3	1680
14.	1480			4	2040
15.	980	5.	985		
16.	1030	6.	1050		
17.	1080	7.	1115		
18.	1130	8.	1275		
19.	1530	9.	1340		
20.	1580	10	1485		
21.	1630	11.	1550		
22.	1730	12.	1615		
23.	1780	13.	1745		
24.	1830	14.	1810		
25.	1880	15.	1875		
26.	1930	16.	1940		

## CSS Mode

### ONLY EN50494/SCR Standard

For installations with Legacy-STB and PVR / MySKYHD SCR compatible:

- Max. 4 user bands per output (UB1 to UB4) available (like in SCR-LNB)
- Control signals DiSEqC 1.0

### ONLY EN50607/dCSS Standard

For installations with modern Receivers:

- 12 user bands per output for HMG im Bereich von UB5 bis UB16
- UB1-4 are not available in this mode and protected
- Control signals DiSEqC 1.0 or 2.0

### SIMULTANEOUS EN50494-/EN50607 Standards

For existing MULTIVISION installations (Legacy STB / PVR SCR compatible), where the main STB is equipped according to Next Gen PVR / HMG.

- Max. 4 user bands per output (UB1 to UB4) available for actual STB/PVR
- 12 user bands per output for HMG (UB5 to UB16)
- Control signals DiSEqC 1.0 + DiSEqC 2.0 in the same cable from LNB to the apartment.

### SKY UK Standard

For Installations with SKY Q-Box:

- 16 user bands per output in SCR mode
- Control signals DiSEqC 1.0 or 2.0

## 5. SAFETY INSTRUCTIONS



**Please read the instruction carefully before you connect the device**



To avoid fire, shortage and electric shocks:

- Never expose the device to rain or humidity.
- Install the device in a dry place without the danger of humidity or condensation.
- Protect the device against dripping and splashing water.
- Don't place any with liquids filled containers onto the device.
- If liquids run into the device, please pull the power plug immediately.



To avoid overheating:

- Install the device in a well ventilated location. Too ensure a good ventilation make sure to keep a minimum distance of at least 10 cm to other devices or walls.
- Don't put any things onto the device, that could block the ventilation holes (newspaper, table cloth, curtains, ...).
- Never place open flames like burning candles onto the device.
- Install the device in a dust free environment.
- Use the device only in environments with moderate humidity.
- Die minimum and maximum operating temperatures need to be maintained in every season.



To avoid electric shock:

- Connect the device only properly grounded.
- The power plug needs to be easily accessible at all time.
- Pull out the power plug before you make any changes on the installation.
- Under no circumstance, open the device as long as it is powered.



### Maintenance and care



Only use dry and soft cloth to clean the device



Don't use any solvents



For repair and maintenance, please contact qualified installers.



### Disposal according to local regulations

## 6. TERMS OF GUARANTEE

DCT DELTA AG guarantees for a period of 24 months after the purchase, that the device is free of material and production defects.

Should the product show any material or production defects during normal application within the guarantee period, DCT DELTA AG will replace or repair the product at its own discretion. Please bring or send the defect device back to your dealer.

**The guarantee is only valid for material and production defects and does not cover defects caused by:**

- Abuse or usage of the product outside its specification.
- Installation or usage which is not compliant to the local safety regulations
- Usage of unsuitable accessories (power supplies, adaptors, ...).
- Installation in a not proper environment.
- External sources outside the influence of DCT DELTA AG, like e.g. drop, accident, stroke of lightning, water, fire, insufficient ventilation ...

**The guarantee commitment ends even ahead of time if:**

- The production date or serial number is not readable anymore or has been changed, deleted, removed or in any other way manipulated.
- The device has been opened or repaired by unauthorized people.

Hereby DCT DELTA AG declares that the radio equipment type dSCR extension LUA 442-16 is in compliance with directive 2014/53/EU. The complete text of the EU declaration of conformity is available at the following internet address:

**[www.dct-delta.de/service/](http://www.dct-delta.de/service/)**



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