

# User Manual

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## Smart Amp

Ref. 7473L1 – 7473L2 – 7474L1 – 7474L2



PATENTED TECHNOLOGY

SW Version 1.0

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## 1. INTRODUCTION

### 1.1. Product description

- Scans all channels, amplifies the weak signals while keeping the strong channels
- All output channels have an equal and stable output power
- Treats even the most difficult situations with adjacent channels
- Channels with the same frequency can be amplified in and re-located to the LTE band (switchable)
- Fully automatic channel scan and process function upon double power start-up.
- Fully automatic recognition of the applied country channel plan
- SAW filters for LTE (4G or 5G) protection on all inputs
- Outdoor weatherproof mast-head housing
- DC Power over coax
- All ports ESD protected

### 1.2. Package contents

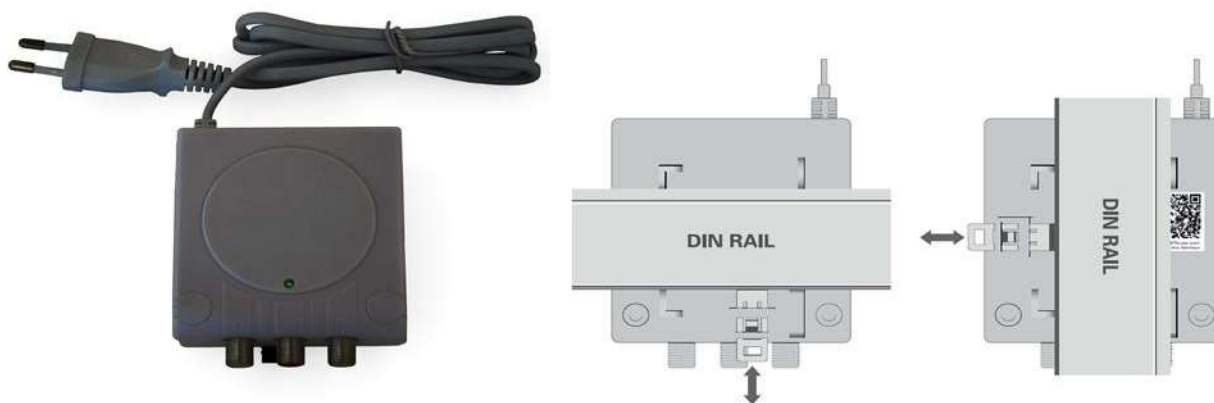
- 1 Smart Amp (ref. 7473L1 – 7473L2 – 7474L1 – 7474L2)
- 1 Power Supply 12V (ref. 2437)
- 1 wall clamp

## 2. TECHNICAL SPECIFICATIONS

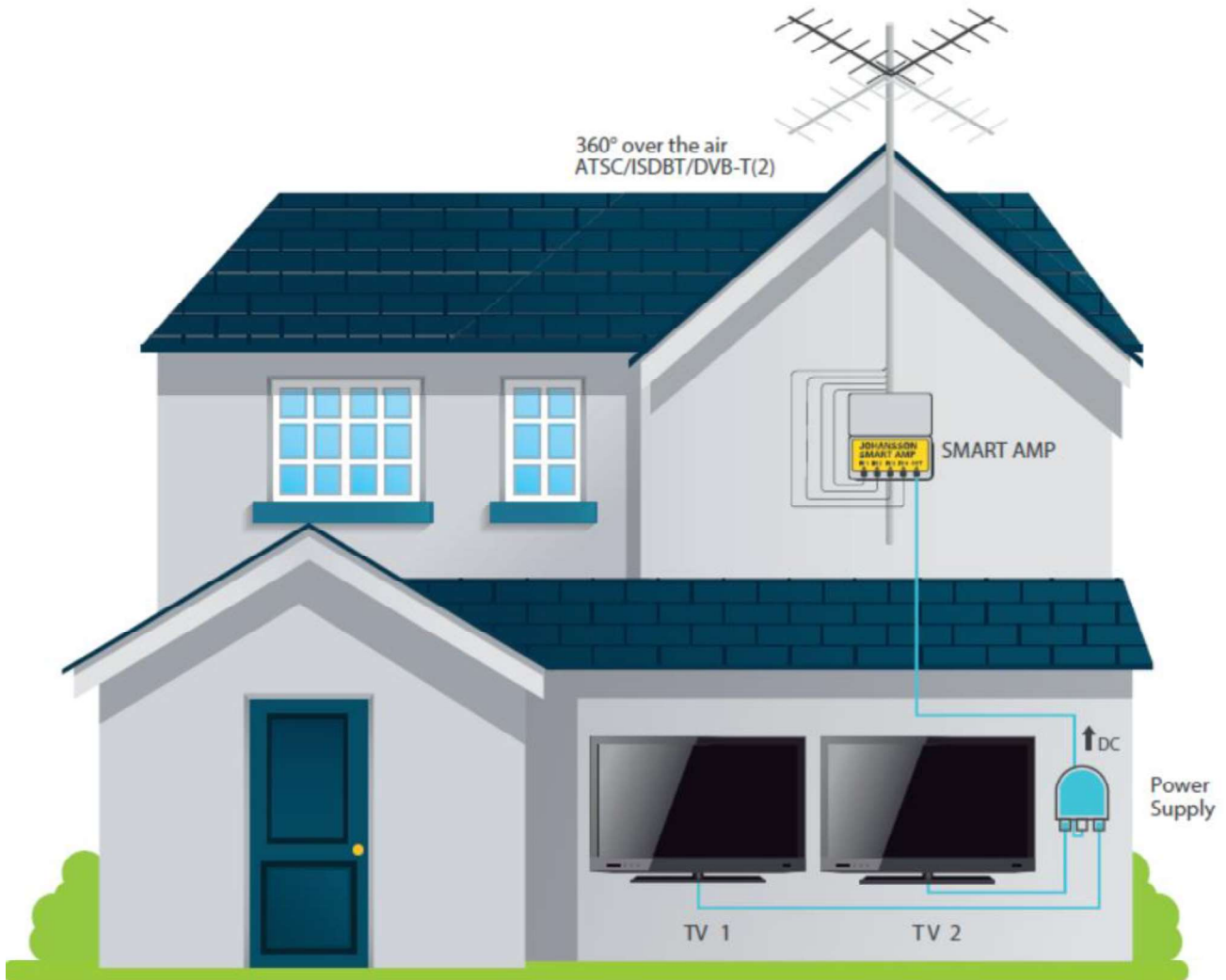
	7473L1	7474L1	7473L2	7474L2	
Inputs	-	3	4	3	4
Outputs	-	4G (> CH60)	4G (> CH60)	5G (> CH48)	5G (> CH48)
Frequency range	-	VHF BIII + UHF Automatic channel plan selection			
LTE band rejection	dB	>40			
Output	-	1			
Output Power	dBμV	90			
Frequency Range	MHz	174 - 862			
LTE band Re-use	-	L1 = CH61-69 (790MHz-862MHz) Switch ON-OFF		L2 = CH49-69 (694MHz-862MHz) Switch ON-OFF	
Adjacent channel isolation	dB	>35			
Input sensitivity	dBμV	40			
Operating temperature	°C	-20 to +50			
Power Supply	-	External power supply (ref. 2437 - 2 out)			
Power	-	12V/300mA (DC over coax) (350mA - 4 in)			
Dimensions	mm	120 x 115 x 50			

Power Supply		ref. 2437
Outputs	-	2
Loss	dB	4 - 5
Frequency range	MHz	174 - 862
Isolation between outputs	dB	10
DC output voltage	VDC	12
Alimentation	V	12 stabilized
AC input voltage/ frequency/ power	-	110-240 VAC / 50-60 Hz / 6,5 W
Standard	-	EN50083-2
Output current	mA	400 max.
Insulation class	-	II
Connectors	-	F-type Female
Operating temperature	°C	0 to +50
Mounting	-	Mast or DIN rail (IP20)
Dimensions	mm	95 x 76 x 35

Power supply supplied only in the KIT version



### 3. HARDWARE INSTALLATION



#### Installing the Smart Amp

- Connect your Terrestrial antennas to the Smart Amp\*
- Connect the Smart Amp output to the Power Supply
- Connect your TVs to the Power Supply

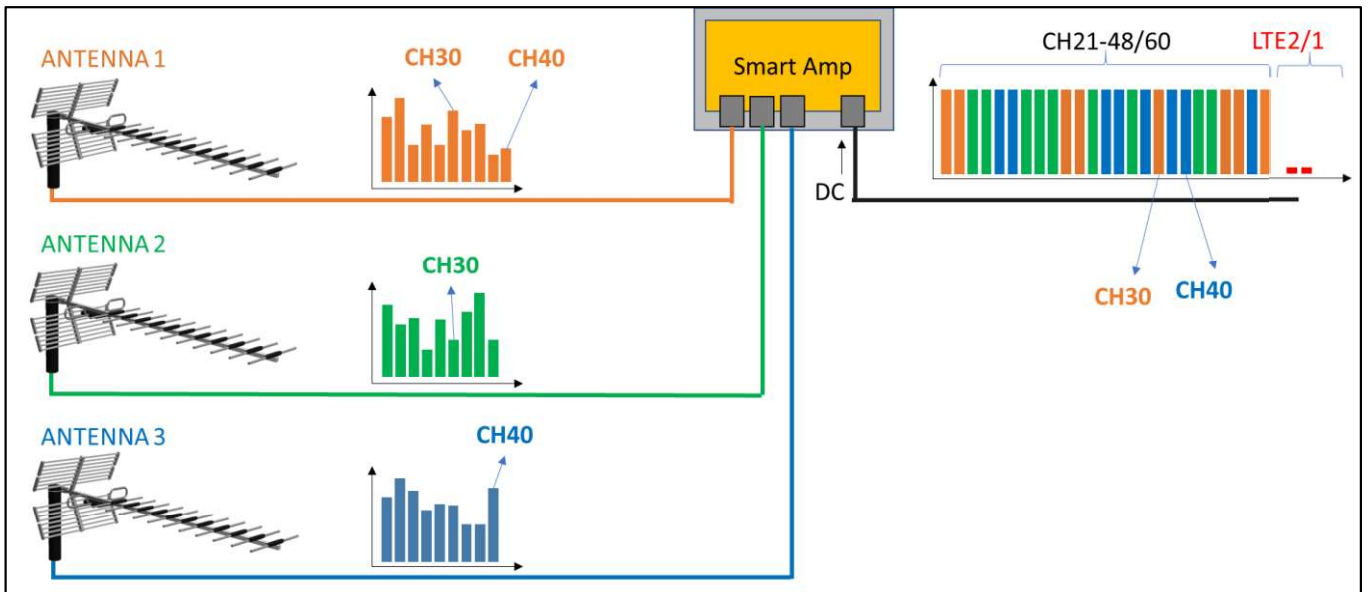
**Important:** Mount the module vertically to a wall in a well-ventilated room and leave a minimum space of 15 cm around the product to guarantee a maximum ventilation of the product

\* The Smart Amp does not allow pass-through DC-power for pre-amplifiers or active antennas

## Duplicate channel switch OFF:

Weakest channel is rejected. See example below:

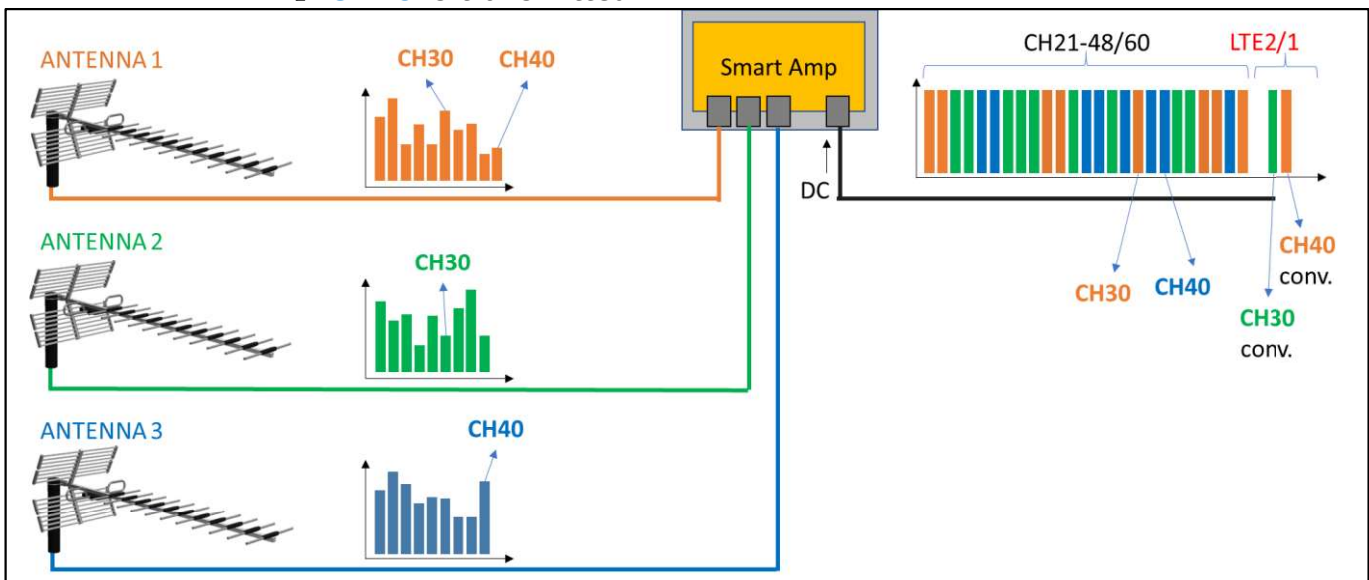
- CH30 > CH30 → CH30 is transmitted
- CH30 is rejected
- CH40 < CH40 → CH40 is rejected
- CH40 is transmitted



## Duplicate channel switch ON:

Weakest channel is converted to LTE band. See example below:

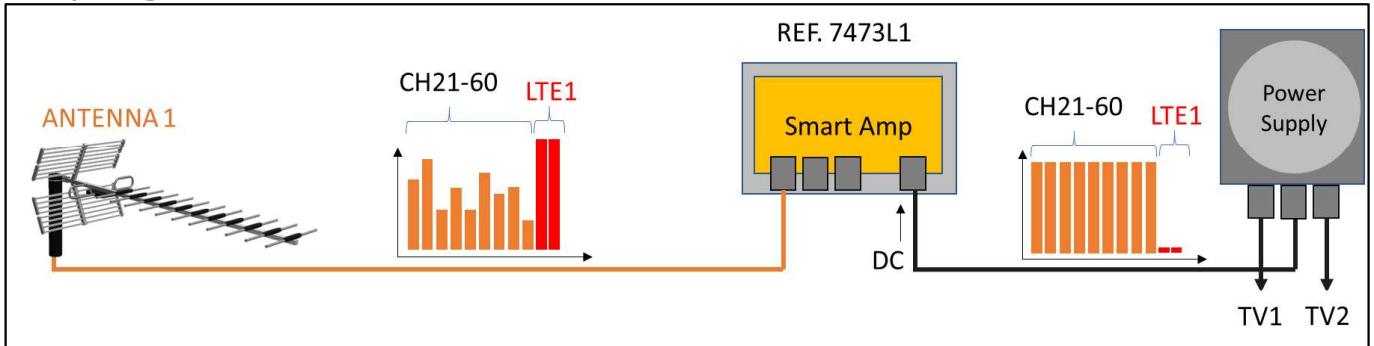
- CH30 > CH30 → CH30 is transmitted
- CH30 is converted to LTE band
- CH40 < CH40 → CH40 is converted to LTE band
- CH40 is transmitted



## LTE Filtering

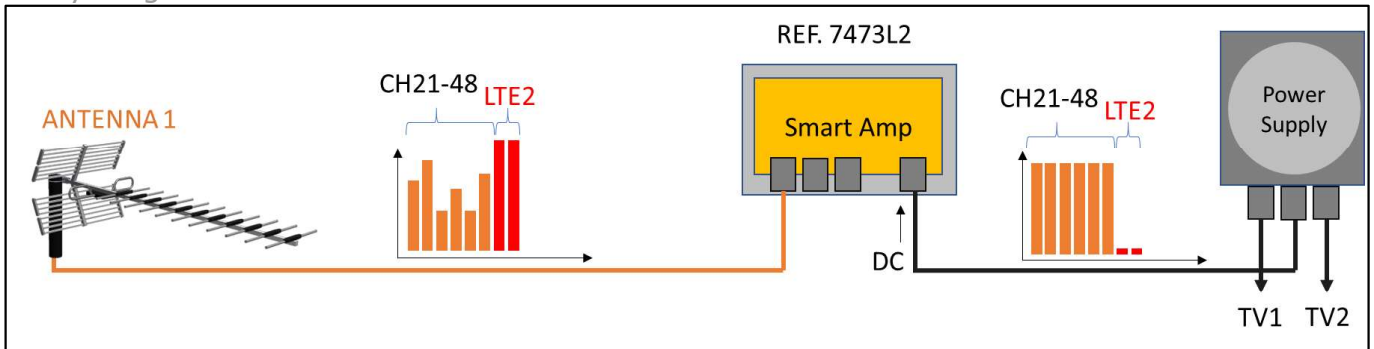
### **LTE1 = LTE800 = 4G (REF. 7473L1 & 7474L1)**

Everything above 790MHz is filtered out:



### **LTE2 = LTE700 = 5G (REF. 7473L2 & 7474L2)**

Everything above 694MHz is filtered out:



## How Autoscan works:

- Plug in Power Supply
- Status LED will blink green when scanning
- Status LED solid green when autoscan ready (This can take up to 20 seconds)
- Status LED red when error during scan. Unpower and repower within 6 seconds to restart autoscan
- **WARNING:** do not turn off the power during SCAN

## How to force channel scan:

(FORCE CHANNEL SCAN = RESET = REPROGRAM)

- Unpower and Repower within 6 sec (Status LED will blink when scanning)
- If power interruption (>6 sec) = no reprogram = settings are kept

## 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 aired location and keep a minimum distance of 15 cm around the apparatus for sufficient ventilation
- Do not place any items such as newspapers, tablecloths, 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., 2017W32 = year 2017 week 32) or "YYWW" (e.g., 1732 = year 2017 week 32).



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