

**14MM-SM90-5G INSTRUCTION MANUAL**

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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

**2. Technical Specifications**

Inputs	3
Outputs	1
Outputs	4G/5G (CH51)
Frequency range	VHF BIII + UHF Automatic channel plan selection
LTE Band Rejection	>40dB
Output Power	90 dBv
LTE band Re-use	L2 = CH52-69 (694MHz-862MHz) Switch ON-OFF
Adjacent channel isolation	>35dB
Input sensitivity	40dBµv
Operating temperature	-20 to +50 Celcius
Power Supply	External power supply (sold separately)
Power	12VDC/300mA (DC over coax) 9VDC Minimum to 18VDC Maximum

**2. 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

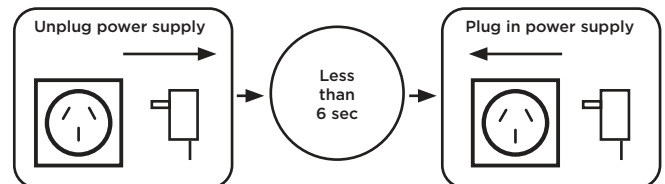
Important: Mount the module vertically to the mast or a wall in a well-ventilated room and leave a minimum space of 15 cm around the product to guarantee a maximum ventilation of the product

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

**How autoscans works**

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

**How to reprogram or force channel scan**



- When a power outage causes missing channels on your TV, a reset is needed
- Reset: pull out the power supply and put it back in within 6 seconds
- The status LED will blink when re-scanning
- If a power interruption lasts longer than 6 seconds, there is no channel scan and the initial settings are kept
- Important note for installers! Make sure the end-user or installer can easily and safely unpower and repower device

**LTE Filtering**



### Duplicate channel switch OFF

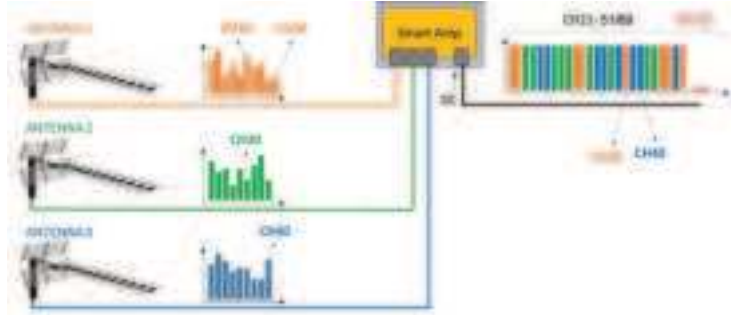
Weakest channel is rejected. See example below:

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.

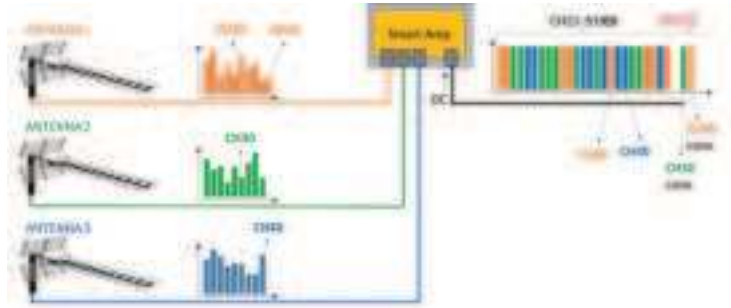
See example below:

CH30 > CH30 → CH30 is transmitted

→ CH30 is converted to LTE band

CH40 < CH40 → CH40 is converted to LTE band

→ CH40 is transmitted



## 4. Safety Instructions

### 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.

## 5. Conditions of Warranty

Matchmaster 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, Matchmaster, 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 Matchmaster. 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.