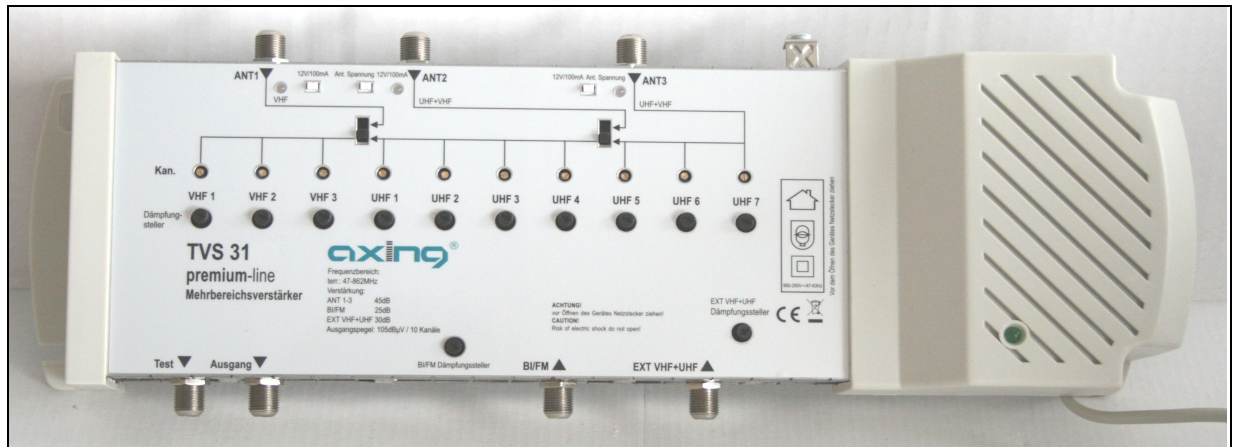


# TVS 31-02

## Adjustable LTE protected MATV amplifier

### User Manual



## 1. Purpose of use

TVS 31-02 amplifier is designed for use in antenna systems receiving terrestrial analogue and digital HD programs in detached houses, residences, terrace houses, hotels, boarding houses, holiday centers, schools, hospitals, etc. - even situated in places with difficult reception conditions, where the received signals have different levels and are coming from different directions. Ant inputs are LTE 4G filtered.

TVS 31-02 enables to receive signals, to equalize levels and to amplify.

The amplifier can be used as an independent unit, as well as a part of a bigger head-end station.



## 2. Installation

Signal paths for VHF and UHF channels are controlled with **ANT 1** and **ANT 2** switches.

**ANT 1** and **ANT 2** switches DOWN = signal for all ten amplifiers (3\*VHF + 7\*UHF) are coming from **ANT 3** input (wideband log periodic antenna)

**ANT 1** switch UP and **ANT 2** switch DOWN = signal for VHF 1... VHF 3 amplifiers are coming from **ANT 1** input, signal for amplifiers UHF 1 ... UHF 7 amplifiers are coming from **ANT 3** input.

**ANT 1** and **ANT 2** switches UP = signal for VHF 1 ... VHF 3 amplifiers are coming from **ANT 1** input, signal for amplifiers UHF 1 ... UHF 4 are coming from **ANT 2** input and signal for amplifiers UHF 5... UHF 7 are coming from **ANT 3** input

**ANT 1** switch UP and **ANT 2** switch DOWN = signal for VHF 1... VHF 3 amplifiers are coming from **ANT 1** input and signal for amplifiers UHF 1 ... UHF 7 are coming from **ANT 3** input.

## 2. Adjustments

### VHF and UHF amplifier settings

Every channel path possesses two trimmers:

- Multi-rotary trimmer **Kan.** (VHF 1 ... VHF 3, UHF 1 ... UHF 7) enables to tune the filter to the correct VHF and UHF channel
- The one-rotary trimmer **Dämpfungsteller** (VHF 1 ... VHF 3, UHF 1 ... UHF 7) is for the gain adjustment.

1. Set "Kan VHF 1 ... VHF, UHF 1... UHF 7 " trimmers in the right final position.
2. Set "Dämpfungsteller" trimmer in the middle position.
3. Connect mains plug to the power outlet.
4. Connect the level meter to the amplifiers output. If it is necessary use a right attenuator.
5. Select the right channel number on the level meter.
6. Select the trimmer respondent the chosen channel number and turning it in left, get the maximum value on the level meter. NOTE! Adjacent channels are recommend to adjust for parallel signal paths.
7. Using the gain trimmer set the required signal level.
8. Repeat steps from point 5 to 7 until all VHF and UHF channels are assigned to channel paths.

### FM band

Set BI/FM band amplifier to required level with B1/FM trimmer.

### Connecting of additional devices

Additional devices (video recorder, PC, camera with A/V modulator, etc.) can be connected after switching off the amplifier. For this purpose EXT VHF + UHF input should be used. Signal level can be adjusted by EXT VHF+UHF attenuator.

Mast amplifier can be powered (max. 12 VDC/80 mA) by pressing **Ant. Spannung** switch down.

## 3. Technical Specifications

### RF

Inputs	BI / FM	VHF	UHF1/UHF2	EXT VHF+UHF
Frequency range MHz	47-108	174-230	470-694	174-860
Gain dB	24 ±2	45±3	45 ±3	31 ±2
Gain regulation dB	0-20	0-20	0-20	0-20
Channel paths selectivity dB			≥ 20 ±20MHz	
Max input level dBuV	100	75	75	85
Min input level:				
for S/N > 30dB	35	35	37	
for S/N > 45dB dBuVdBuV	50	50	52	
Isolation between inputs:				
UHF-UHF dB			≥26	
BI/FM/VHF-UHF dB			≥26	
Max output signal level for 10 TV signals (DIN 45004B -60dB) dBuV			105	
Input/Output impedance Ω			75 / 75	

### GENERAL

Preamplifiers power supply	V DC / mA	12/ 80
Status indicator of preamplifier		LED diode:– green color
Work temperature range °C		-10...+50
Power supply	V AC / Hz	230 / 50-60
Power consumption	VA	12
Dimensions	mm	354 x 113 x 75
Weight	kg	0,9