

**PROFESSIONAL
TERRESTICAL AMPLIFIER FM
PTAF 2000**



Grundig SAT Systems

PROFESSIONAL

CONTENTS

3

General

Scope of delivery

Technical data

The FM amplifier box PTAF 2000

5

Installation

Installing the FM amplifier box into the Headend station and connecting it

6

Setup

Setting up the FM amplifier box

Service (at the end of this user manual)

Scope of delivery

1 FM amplifier box PTAF 2000
1 user manual
1 technical evaluation

Technical data



This product conforms with the requirements of the 73/23/EC and 89/336/EC guidelines of the European Council. The standards EN 50083-2, EN 50083-2/A1, EN 50083-1, and EN 60065 required for the CE certification are kept to.

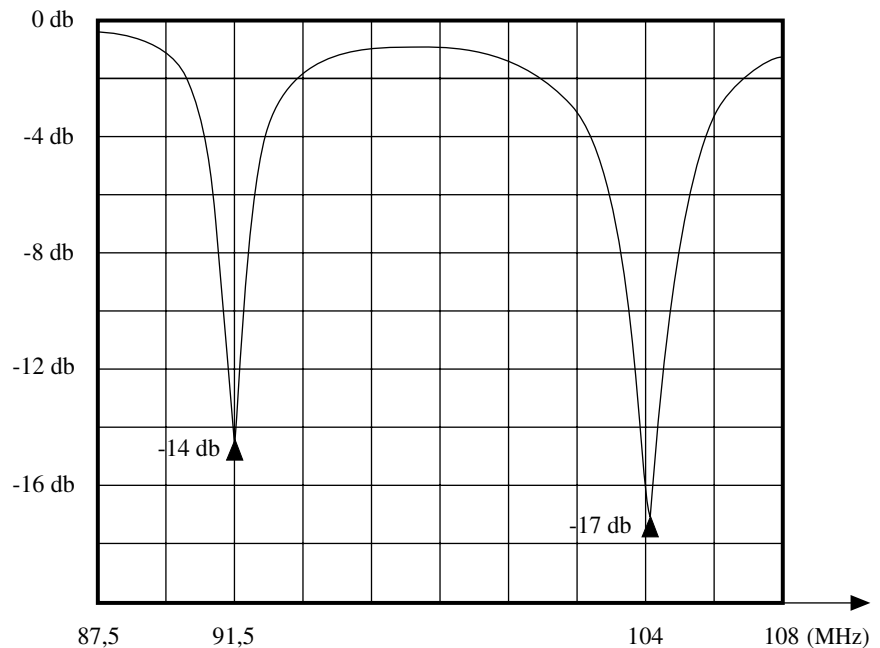
FM:

Frequency range:	87.5–108 MHz
Input level setting range:	9–20 dB
Amplification:	43 dB \pm 1.5 dB
Noise level:	6–9 dB
6 tuneable traps:	87.5–108 MHz
Max. attenuation of the traps:	typ. 15 dB
Max. output level:	100 dB μ V

Connectors:

FM input:	1 IEC socket, female
RF output:	1 IEC socket, female
10-pin connector:	for all supply voltages and the I ² C bus

Example of a tuneable trap characteristic



The FM amplifier box PTAF 2000

This FM amplifier box makes it possible to feed the FM frequency range via the Headend station into the cable distribution system.

The signals in the FM frequency range of 87.5...108 MHz are amplified in this way by about 43 dB.

The boxes are controlled via the GRUNDIG Professional Headend station's PSU 8 and PSU 12.

In order to prevent intermodulation, the possibly too high signal levels of local stations can be cut by up to 6 tuneable traps.

In this way it is possible to feed all receivable FM programmes with nearly the same signal level into the house distribution system.

If necessary, two traps can also be tuned to the same frequency. In this way a higher attenuation is obtained.

Important:

Only the controls of the first group of 3 controls (traps 1–3) can be combined with any desired control of the second group of 3 controls (traps 4–6). Within the same group, the traps influence each other when tuned to the same frequency and can therefore not be used for an appropriate signal attenuation.

The FM input signals are amplified and then fed via the RF output socket into the RF output collector of the Headend station.

The output level of the FM amplifier box can be controlled by means of the mechanical level control (max. – 20 dB) on the output collector of the basic module carrier.

After switching the headend station on, the software version of the control unit is briefly shown in the 2-line LC display.

About 5 minutes after the last key is pressed, the display is automatically switched off, or the software version of the control unit is displayed.

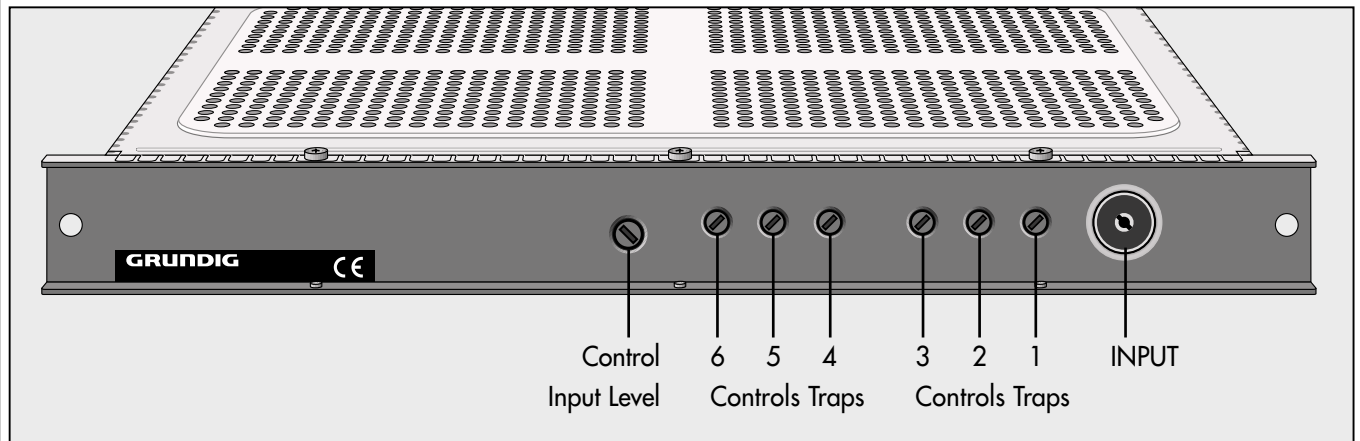
Note:

If desired, the software version of the control unit can also manually be called up and displayed as follows:

Press and hold down any two buttons on the control unit at the same time until the following occurs:

- The display turns dark. After several seconds, the software version, e.g. **V.19**, appears.

INSTALLATION



Installing the FM amplifier box into the Headend station and connecting it

Caution:

Before fitting a new transmodulator box or replacing an existing one, it is absolutely necessary to disconnect the mains plug from the Headend station.

- 1 Undo the fixing screws of the mounting frame, then fit the cassette into a free slot and refit the fixing screws.
- 2 Plug the RF aerial cable from the FM aerial into the **INPUT** socket (see Figure).
- 3 Reconnect the headend station to the mains supply.
 - The cassette is now connected with all necessary supply voltages and data lines and ready for use.

Setting up the FM amplifier box

Box 4 FM:
87 – 108 MHz UKW

After installing, switching on and calling up the box with the **+** or **-** button on the control unit of the Headend station, the box responds with the indication in the display as shown in the Fig. to the left, for example.

In order to prevent intermodulation, the possibly too high signal levels of local stations can be cut by up to 6 tuneable traps.

If necessary, it is also possible to tune 2 traps to the same frequency to obtain a higher signal attenuation.

We recommend you to use a spectrum analyzer to carry out the following settings.

Follow these steps:

- 1 Connect the RF input of the spectrum analyzer to the RF output of the Headend station then select the FM range on the spectrum analyzer.
- 2 Turn the control for the input level and the control for the output level of the box clockwise to its right end stop (= maximum level).

Important:

Only the controls of the first group of 3 controls (traps 1–3) can be combined with any desired control of the second group of 3 controls (traps 4–6). Within the same group the traps influence each other when tuned to the same frequency and can therefore not be used for an appropriate signal attenuation.

- 3 Use the level controls of the traps »1–3« and »4–6« to adjust the input level of the „strong“ FM stations (local stations) to the level of the „normal“ FM stations.
 - With that it is achieved that all receivable FM stations are fed with nearly the same signal level into the house distribution system.

Note:

To prevent interferences inside the Headend station and the cable system, it is necessary to cut the output level of the FM stations by about 10 dB with respect to the analog TV channels.

Example:

Output level of the TV channels about 100 dBµV,
output level of the FM stations about 90 dBµV.

- 4 Use the control for the input level of the FM amplifier box to cut the output signal level by about 10 dB (= 90 dBµV).
 - If this value cannot be obtained, the output signal level can also be cut (by max. - 20 dB) using the control for the output level of the amplifier box.

