



**New products!!**

**Low and medium power**

**DAB amplifiers &**

**DAB transmitters,**

**ideal as a DAB filler**

**(Gap filler)**

In 2022 HFPrints, one of the DAB partners start with developing of new and smaller amplifiers for small scale DAB radio.

We starts with a double stage amplifier for 1 mWatt in and 5 Watt (max) out. Also we implement an Easydab modulator for a complete 5 Watt transmitter. We uses a AFT05MP075 as power amp.

That new PCB was a good starting point to use other power FETs for more power, se we built some different amplifiers with a good performance. Now we built a new series amplifiers from 5 to 50 Watts, ideal as a DABfiller. (Gapfiller)

## 5 Watt versions (in production)

### amplifier.

This is an amplifier is built into a 1HE 19" case. The cooling is a small heatsink and an long life Papst fan. At the front function indicator leds and an RF ledbar

Price 5 Watt amplifier	€ 900,00	(1089.00)
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### transmitter (DAB modulator and 5 Watt amplifier in one !!)

Useful as an experiment transmitter and also good a low budged DABfiller in a 1HE 19" case

Price 5 Watt transmitter	€ 1300,00	(1573.00)
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Price GPS option (SFN)	€ 150,00	( 181.50)
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GPS antenna	€ 50,00	( 60.50)
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## 20/25 Watt versions (in production)

### Amplifier

This is an amplifier is built into a 1HE 19" case. The cooling is a small heatsink and an 2x long life Papst fan. At the front function indicator leds and an RF ledbar.

Price 20/25 Watt amplifier € 1150,00 (1391.50)

**20/25 Watt transmitter**, (DAB modulator and 20/25 Watt amplifier in one !! as an ideal DAB filler)

Price 20/25 Watt transmitter € 1550,00 (1875.50)

Price GPS option (SFN) € 150,00 ( 181.50)

GPS antenna € 50,00 ( 60.50)

Dimensions of the 5 to 20/30 Watt transmitters / amplifiers is a 1HE 19" enclosure and 30cm deep  
484 x 300 x 44 mm (w x d x h)

## 40/50 Watt versions (in production)

This amplifier (transmitter) is a complete new design. However it is easy to use a 100Watt amplifier at half power, this new amplifier is smaller (2HE) enclosure and his power consumption is much lower than the a 100W at half power. The amplifier uses 2x 20/25 Watt amplifier in a bridge design for double power. At the front function indicator leds and an RF ledbar

### 40/50 W amplifier.

This is an amplifier is built into a 2HE 19" case. The cooling is a long life Papst fan.

Price 40/50 Watt amplifier € 1600,00 (1936.00)

### 40/50 Watt transmitter, (DAB modulator and 40/60 Watt amplifier in one !! as an ideal DAB filler.)

Price 40/50 Watt transmitter € 2000,00 (2420.00)

Price GPS option € 150,00 ( 181.50)

GPS antenna € 50,00 ( 60.50)

Drawing of the 50 Watt amplifier or transmitter front.

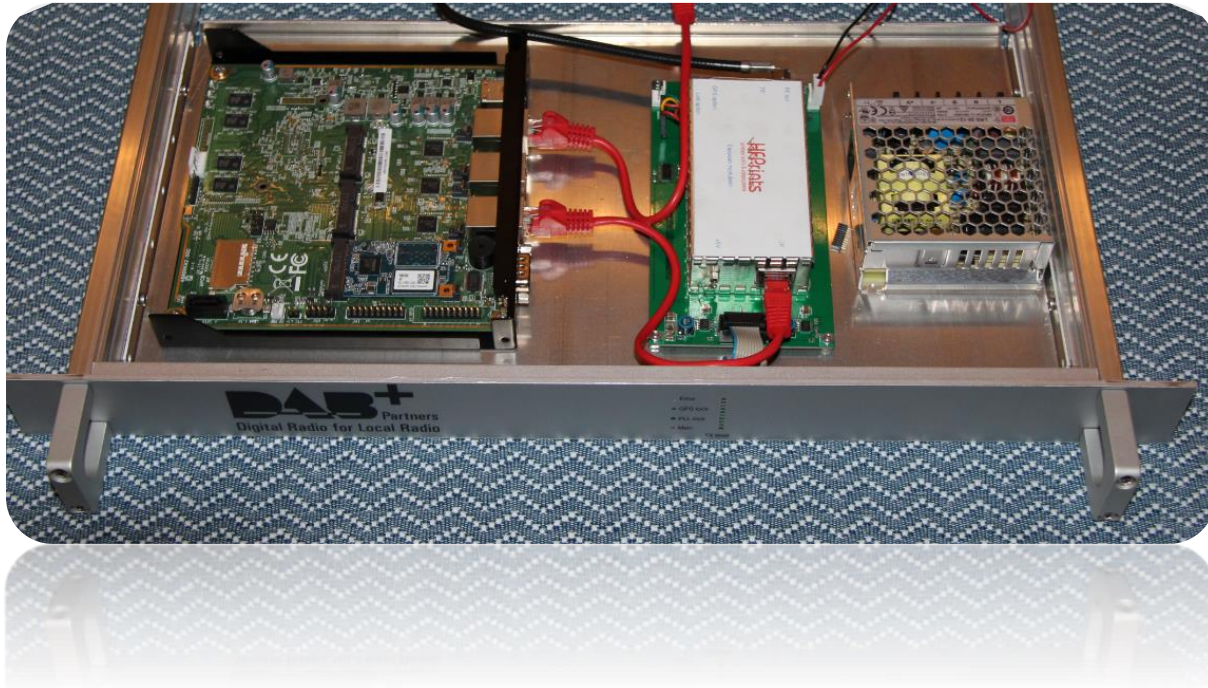


Dimensions of the 40 / 60 Watt transmitters / amplifier is a 2HE 19" enclosure and 36cm deep.  
484 x 360 x 88 mm (w x d x h)

Other products:

### 19" systems with the brand name DAB+ partners

The complete modulator, front pcb, blower and power supply to 230V in a 19" case.



(photo, prototype of the complete exciter and minicomputer as multiplexer)

Price Excl GPS	<b>€ 800,00</b>	(968.00)
Price GPS option	<b>€ 150,00</b>	(181.50)
GPS antenna	<b>€ 50,00</b>	( 60.50)

The complete modulator in a 19" case, Including a mini PC with a router and multiplex software.

Price Excl GPS	<b>€ 1150,00</b>	(1391.50)
Price GPS option	<b>€ 150,00</b>	(182.50)

**Temporally out of order**

## Lasercom AMP100/200 - low cost DAB output stages specially developed for local broadcasting

DAB+ is the new digital medium for radio. However, it must meet strict technical requirements. By using a GPS-locked Digital Signal Processor in the Exciter, extremely accurate frequency generation is possible. Thanks to a software-based modulator, all settings can be made via a PC, replacing most of the user control functions by connecting a PC. This, together with the output stage described here, results in a low-cost DAB transmitter that is still extremely reliable.

For optimal coverage, DAB works in a Single Frequency Network: all GPS synchronized transmitters in a particular region work with the same MUX and frequency. When ordering, the channel will be set up by us once completely ready for broadcast: You can take to the air immediately.



### The excellent performance of the Lasercom AMP100/200 is possible thanks to:

- 1) A good linear output stage with the latest LDMOS technology.
- 2) High efficiency with a robust temperature-controlled cooling system.
- 3) Modular power supplies and output stage module. All modules are easy to replace in the event of an unexpected defect, easy and quick maintenance at the transmitter location is possible.
- 4) LED bar and readouts on the front. Including the "on air / standby" switch.

#### Most important features:

1. Affordable and less costly than the major well-known brands.
2. Depending on the antenna gain, suitable for 100 - 1000 (AMP100) or 200 - 2500 (AMP200) Watts ERP
3. Compact, flexible and easy to use in any DAB network.
4. Especially for local broadcasting as a single channel or in small SFN networks.
5. A stable signal in combination with the Lasercom exciter
6. Typical MER > 35dB at all output levels and in all channels with shoulders > 34dB without mask filter.

#### Characteristics:

Frequency range VHF (Band III) 174 to 230 MHz in 1 Hz steps.

Digital Audio Broadcasting DAB + / DAB (determined by multiplex)

Power supply 200 to 240V 47 Hz to 63 Hz

Ambient temperature -10 ° C to + 45 ° C

Cooling Forced cooling with fans, temperature-controlled.

RF output power up to 80 W typical 100W max (AMP100)/160 Watt typical 200W max (AMP200), adjustable via exciter

RF load 50 Ohms

VSWR safety VSWR 1: 1.25

Remote control Via Exciter

shoulder distance better than -30dB with filter at 3 MHz distance better than -80dB

Dimensions 484 x 340 x 132 mm (w x d x h)

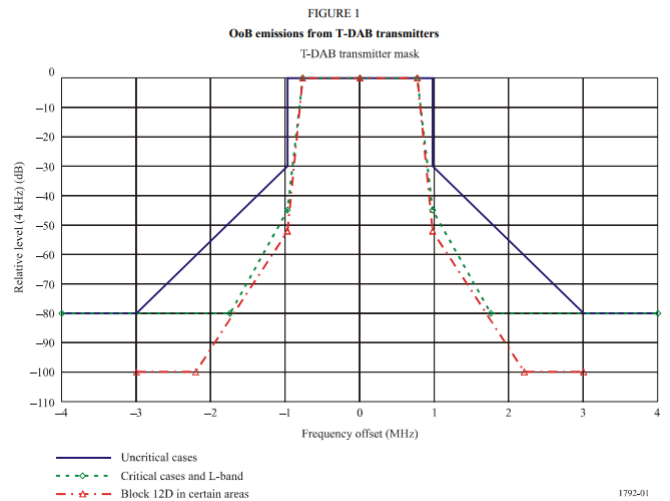
The **Lasercom exciter** together with the AMP100/200 output stage, in combination with the bandpass filter (Lasercom Filter B3), fully meets the international technical requirements for the spectrum mask according to ITU-R SM1792

Price of the Lasercom 100 amplifier	€ 1800,00	(2178)
Price of the Lasercom 200 amplifier	€ 2500,00	(3025)

## DAB spectrum mask filter

When transmitting a DAB+ signal, one must meet standards as described in the ITU-R SM1792. If you look at those requirements, you will notice a filter is necessary behind every transmitter. The better the signal from the transmitter, the simpler the filter can be.

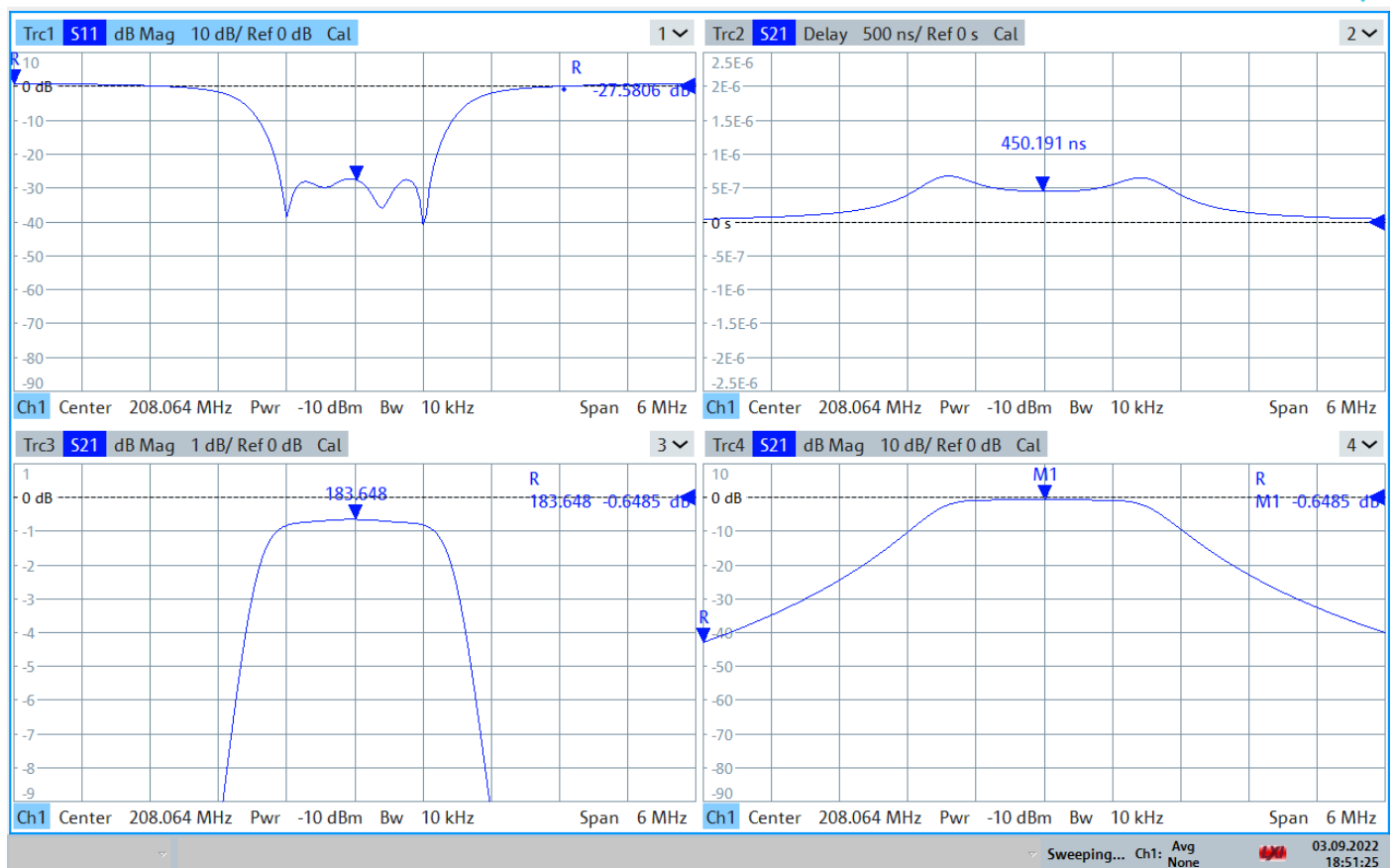
The Lasercom DAB filter is, due to its low pass attenuation of approximately 0.65 dB, extremely suitable to place behind a Lasercom transmitter. With this filter, the installation meets the non-critical spectrum mask as required (blue in the figure on the right), while the low pass attenuation means that the losses are minimal, and therefore the coverage will be optimal.



The cavity filter developed by HFPrints can handle max 600 Watts

This filter has 4 circuits as standard, so that the attenuation is extremely low, and the characteristic of the filter is sufficient to meet the requirements set by the Telecom Agencies (Ofcom) together with the Lasercom transmitters.

The cavity circles consist four passivated aluminum tubes of 120 x 120mm. Passivation ensures that the electrical contact is guaranteed.



Picture, measuring results of a (noncritical) mask cavity-filter for channel 9D in a test setup.

typical measured values:

Attenuation	typical 0,6 dB	better than 0,8 dB
Reflection loss	typical 25 dB	better than 22 dB
Bandwidth	1.56 MHz	
Attenuation at 3 MHz distance typical	45dB	better than 40dB
Group delay	max 500 ns	
Power	max 600W	
dimensions	120 x 480 x 400 - 120 x 480 x 500mm , Length depended of channel	

Prices.

4 circuits cavity filter, max power 600 Watt (when purchasing a Lasercom transmitter) 800 euro.

information: [www.hfprints.com](http://www.hfprints.com) [info@hfprints.com](mailto:info@hfprints.com)

Price is excl. VAT. For companies with a valid EU VAT NR is this your price. (in the brackets the price for non-companies)