

## BBE fm exiter fm 87.5 - 108 mhz

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### DESCRIPTION

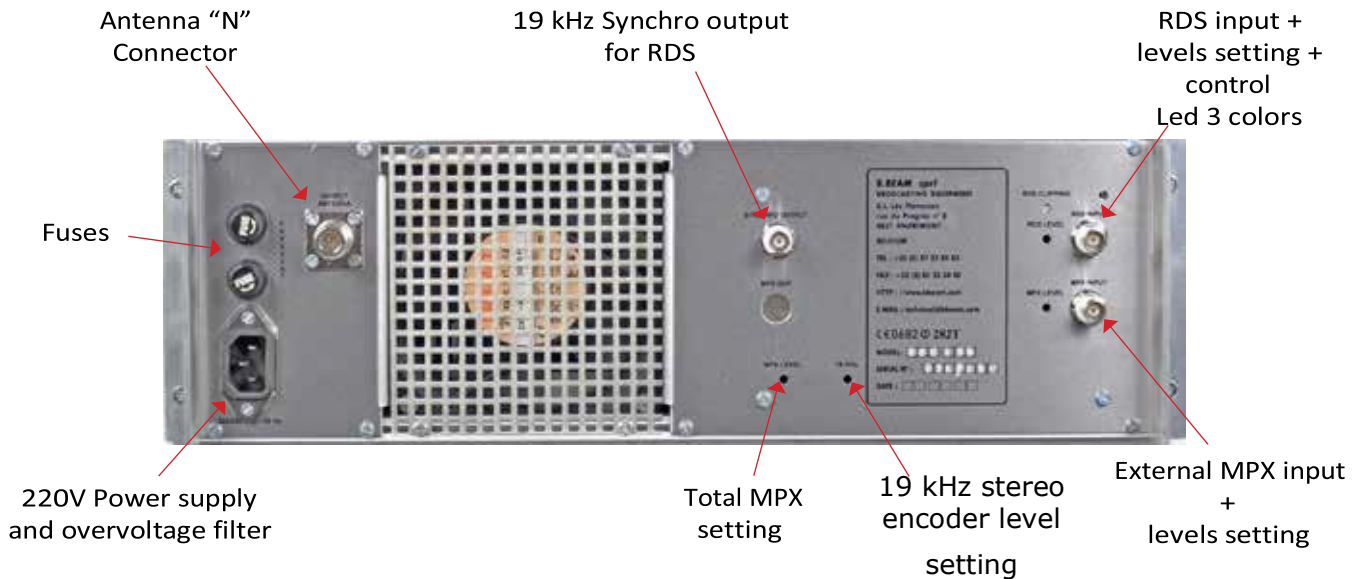
- ✓ Manufactured by BBEAM in Belgium
- ✓ Tropicalised equipment specially intended for a difficult use - 120 x 120 mm pro ventilation allows to use it without air conditioning.
- ✓ Production carried out according to the European directives CE and ETSI – SE
- ✓ Digital audio quality
- ✓ The 16 kHz audio filter is elliptic (7 elliptical filter poles)
- ✓ The 75 kHz modulation limiter uses a circuit developed by B.BEAM inaudible, without distortion. Output clipper (switched when using an audio processor).
- ✓ The temperature of the 2 ppm Quartz Crystal oscillator is oven controlled (thermostated mini oven).
- ✓ The ultra linear VCO consists of a FET and varactors.
- ✓ The PLL uses Motorola professional components.
- ✓ The printed circuit is «Strip line technology» type
- ✓ The MOSFET amplifier stages carry the output power to 35 watts (BBE35), 80 watts (BBE80) and 100 watts (BBE100).
- ✓ An AGC circuit maintains constant power regardless of the VSWR. It protects the MOSFET transistors in case of failure to antennas (VSWR) and temperature.
- ✓ The high frequency gradually starts to relieve amplifiers connected after the transmitter (SOFT START HF)
- ✓ 5 cells HF output filter with attenuation > 80 dB
- ✓ N Female antenna output
- ✓ The power supply is stabilized and voltage, current and temperature protected.
- ✓ Modular manufacturing, quick and low-cost maintenance and troubleshooting
- ✓ Exceptional value for money.
- ✓ Test lab report attached to each unit.

### Technical standards

*Pilot BBE was designed, carried out according to the CE & ETSI technical standards.*

*A particular attention is paid to the spectral purity. The output frequency is regulated by internal dipswitches every 50 kHz.*

## FEATURES



### Digital audio quality

Filter audio 16 KHz elliptic digital (7 poles elliptic filter passes band).

The audio distortion and dephasing are negligible.

The band-width is exceptional; 1 KHz of audio band-width in more compared to the other transmitters (more brightness).

The audio filter circuit is manufactured with sorted components 0.3% providing a slope of 16 KHz cut very precise.

The traditional coil filters and condensers were precise about 20% only!

BBE sound is pure and dynamic and particularly adapted to the digital sound requirements.

### MOSFET transistor

The high frequency output level and the driver use transistors MOSFET.

Advantages: robustness, low cost consumption in electrical energy, linearity, important profit, noiseless, no inter modulation, little thermal dissipation for the same power.

### AGC (Automatic gain control)

The output power is set automatically according to the operating conditions: extreme temperature, moisture, variation of tension, variation of VSWR...

### Audio balanced input

The symmetrical audio input (XLR) reduced noise of 45dB; very useful when the audio cable is very long between the studio and the transmitter. The L and R input level is adjustable from the front face.

### Modular

Each module is easily to change (eurocard 16 x 10)

### Stereo digital Coder (option/ST)

Integrated digital coder developed by BBEAM. Exceptional separation of the channels L/R; 70dB @1kHz, ratio S/N 85dB and distortion 0.05%.

Clipper MPX integrated at the output, allows a precise modulation 75 KHz.

19 KHz Output signal synchronizes the RDS. RDS input with clipper and LED input level settings.

### RDS input

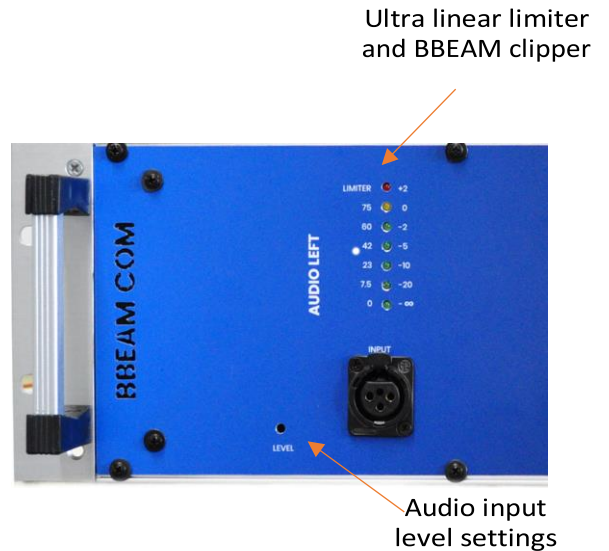
Adjustable level with 3 colors LED: green = 4%, orange = 5%, red = > 5%

## FEATURES



Protections  
Lock and VSWR

Output power adjustment



Ultra linear limiter  
and BBEAM clipper

Audio input  
level settings

### Input HF power

Frequency band:	87.5 à 108 MHz
Modulation type:	FM
Maximum excursion:	75 KHz (limiter and clipper inaudible, switchable)
Power:	adjustable from 0 to 35 Watts (BBE35) 100Watts (BBE100)
Output impedance:	50 Ohms (connector N)
Frequency selection:	dipswitches
Frequency stability:	+/- 2ppm (-10 ° C to + 50° C)
Attenuation harmonics:	better than 80 dB
Attenuation spurious:	not measurable (-90 dB)
BF input impedance:	600 Ohms
Weakening to 19 KHz	65 dB
BF mono band width:	15 à 16.000 Hz
Pre stressing:	0 & 50 µs switchable (75µs option)
Signal BF distortion :	0.05 %
BF band linearity:	0.1 dB
Power supply:	220 V AC +/- 10 % 50 Hz +/-10 %
Consumption:	120 VA (for BBE35)
Operating temperature:	-10° C to + 50° C
Humidity:	95 %
Dimensions (mm) :	H = 135 mm L = 485 mm D = 360 mm
Weight:	15 Kg

## OPTIONS

/ST	Integrated stereo coder
/RDS	Integrated RDS coder
/MPX	Additional MPX output for beam (link) or second transmitter
/Rack	19" metal Rack

## OTHER AVAILABLE VERSIONS

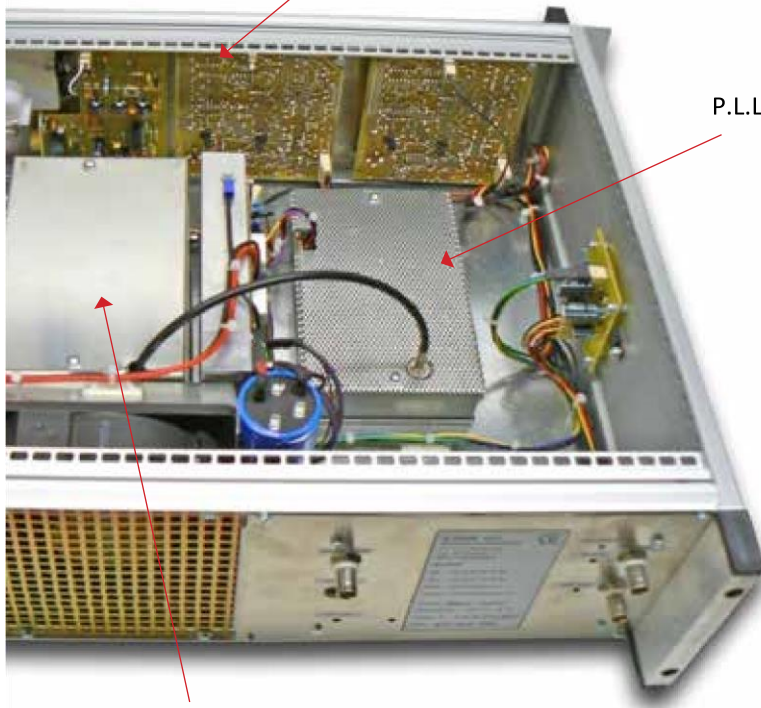
BBE 35 ( <i>Ref. 30.004</i> )	Power from 0 to 35 Watts
BBE 80 ( <i>Ref. 30.006</i> )	Power from 0 to 80 Watts
BBE 100 ( <i>Ref. 30.047</i> )	Power from 0 to 100 Watts

Mosfet Output  
Level Filter > 80dB

Protection card and  
measurement



Audio card with digital filter and limiter



P.L.L.

Mosfet output stage  
Filter > 80dB  
+ AGC

Integrated stereo coder

**(Option)**

