

## MiniStation Series - FM Broadband Exciters

### EX15 MiniStation - 15W Broadband FM Stereo Exciter



- ▶ \* 15W FM Exciter/ Mini-transmitter
- ▶ \* Broadband 87,5-108,1MHz
- ▶ \* Stereo generator included
- ▶ \* More punch, hi-fi VCO
- ▶ \* Universal Full-range power supply
- ▶ \* Audio processor card available
- ▶ \* RS232 Interface
- ▶ \* Remote/Interlock interface
- ▶ \* SCA and RDS inputs
- ▶ \* MOSFET DESIGN

MiniStation Series: Powerful FM Exciters|Transmitters, Reliable, Excellent Audio Quality CD, Stereo and Single Band Audio Processor Card Available.

The EX15 MiniStation is a complete FM Exciter/Transmitter. You can choose the frequency through the buttons located on the equipment front panel. Frequencies between 87,5 to 108,1MHz can be set by the user in 100kHz steps. The equipment is totally BROADBAND, this means, the RF power level stays the same independently of operation frequency.

The excellent audio quality is due to its hi-quality FM VCO, modulating through eight varicap diodes.

The EX15 has variable power output from 0W to 15W, this is important if you drive an external power amplifier (like Smart Series and PowerCell), this way, if your amplifier need about 12W to input this FM exciter is the most indicated.

Suitable for applications like FM exciter, the EX15 can also be used as stand alone transmitter.

The EX15 MiniStation has a stereo generator built-in, only connecting the audio cable from the mixer the FM station is on the air. Also, you can configurate if your transmission will be in MONO or STEREO mode - externally - just pressing the buttons on the front panel, and it's done.

All MiniStation series have an optional card called "Single Band Audio Processor - APCard-1" you can turn your MiniStation into even more powerful version. This card processes the audio from the mixer in a limited/compressed audio level, avoiding distortions on the audio modulation.

Also, if you have an external audio processor, the EX15 MiniStation has an option in its panel: you can configure the main audio input, if it is stereo generated internally to EX15 or externally, from the processor. To do this, you just need to press the buttons UP/DOWN and SELECT.

RDS encoders may be connected in the EX15 MiniStation, there are 2 inputs for these encoders: SCA input and 19KHz tone sync output.

The EX15 is available in American, European and also Japanese bands only pressing the overset of the equipment.

On the LCD display, parameters like operation frequency, FWD and Reverse power, Composite audio level, Left and Right audio level, selection of internal or external MPX, Stereo or Mono operating and others are shown. We present an easy to use interface in this exciter, easy to configure and operate.

The AC input is Full-Range (from 85 to 265V AC) "Switched Mode Power Supply" facilitating the main connections around the world, 47 to 63Hz.

The EX15 is a complete solution, offering superior audio performance and quality.

Get more information about EX15 in the following pages!

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#### EX15 LCD Panel, some configurations...

<b>FM FREQUENCY</b> 103,6 MHz st	Channel change directly on the front panel. You can choose the frequency from 87,5 to 108,1MHz.
<b>Fwd Power: 14W</b> <b>Rfl Power: 0W</b>	Forward and Reverse power are shown in real-time in percents. Automatic reducing power level when exceeded the SWR limit.
<b>Vpa: 12,6V &lt;Temp&gt;</b> <b>Ipa: 1,5A 28,8°C</b>	Voltage in the power amplifier stage, including total current and what is the temperature in the heatsink can be monitored in this view.
<b>Audio Modulator:</b> M-0000000	The audio level that modulates the VCO is shown in this LCD menu, very important to know if the modulation is distorting your FM transmitter.
<b>L-0000000000</b> <b>R-0000000</b>	Left and Right audio levels are monitored in this view. You can know if both channels are ok.
<b>RFI Protection</b> Max. Level : 30	You can set the maximum Reverse power admitted, if the limit is more than the set, the RF power output is turned off, protecting the equipment.
<b>Mpx Selection :</b> -Int. Ext.	External audio processor or STL links might be connected, only setting to External MPX.
<b>Internal Mpx :</b> -Stereo Mono	You can select if the audio transmission is in Stereo or Mono only pressing the button UP/DOWN.
<b>Audio Processor</b> -ON OFF	Once installed the audio processor card, this view will appear, you can set if this card will be operating or not.
<b>Config_Hold :</b> -Enable Disable	After configured the patterns you want, you can choose this option to ENABLE, this way nobody get to modify your personal configurations.

#### EX15 Front panel overview:



#### EX15 Visual-cabinet overview:



#### EX15 Rear panel overview:



#### EX15 Internal Overview:



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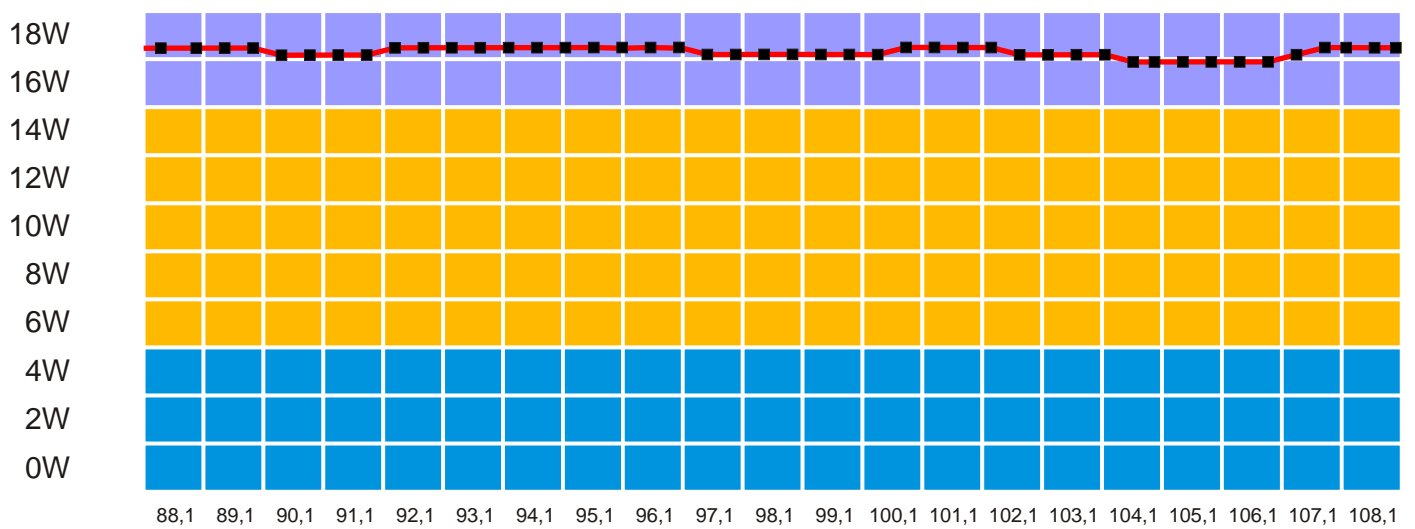
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EX15 Internal Overview:



RF Power Output:



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### Technical Features:

#### RF Features:

Output Power:	16W +/- 5% variation across the band
RF Output Impedance:	50 Ohms
RF Output Connector:	N Female
Frequency Range:	76,0 to 98MHz and 87,5 to 108,1MHz
Frequency Step:	Default 100KHz, selectable for 200KHz or others under request
Frequency Programmability:	UP/DOWN Keys, safety hold programmable on the front panel
Frequency Stability:	5 ppm, 2 or 1 ppm under request
Type of Modulation:	F3, FM direct modulation (RF oscillator directly on the frequency)
Harmonic and Spurious Attenuation:	>80dBc
Residual AM modulation (Assyncr.)	Approximately 0,05% (55dB)
Residual AM modulation (Syncr.)	Approximately 0,1% (65dB)
Intermodulation Distortion:	<0,05% @ 1kHz
Frequency Response Capability:	20Hz to 200kHz

#### Power Supply:

AC Input:	Universal Full-Range 85 to 265VAC 47 to 63Hz
DC Input:	Not available in this version
AC Surge Protection:	3 Varistor 285V, gas discharger and fuse
Power Supply Efficiency:	85% or better in 220V AC
Switching Frequency:	100kHz
Power Consumption:	Approximately 30W from AC
AC Input Connector:	IEC socket connector

#### General Features:

Weight:	1,5kgs net weight
Dimensions:	483mm (6") wide, 44,45mm (1,5") high, 150mm (4") deep
Ambient Temperature Range:	0 to +45 Degrees Celsius
Maximum Humidity:	95% at +45C without condensation

#### CPU and Display Features:

CPU:	PIC Processor, microcontrolled with Sintek Ex15 Software V.1.0
Memory:	Non-volatile, retention >40 years
Full Micro-controlled protections:	PLL out of lock, VSWR exceeded
Panel Keys Control:	UP/DOWN freq. St or Mono, Int or Ext MPX, Config Hold
LCD Display:	16 columns, 2 lines, green back light

#### Audio Inputs Left&Right:

Input Connectors:	XLR Female
Internal Jumper selection for:	50 or 75us stereo pre-emphasis
Input Impedance:	600 Ohms unbalanced
Frequency Response:	20Hz to 15kHz (THD+N < 0,1%)
Input Level:	0dB for 75KHz carrier deviation
Stereo Separation:	Better than 45dB @ 1kHz
Pilot Tone Frequency/Stability:	19kHz +/- 1Hz

#### MPX Input:

Input Impedance:	10k Ohms Unbalanced BNC Connector
Frequency Response:	20Hz to 200KHz +/- 1dB for 75kHz deviation

#### SCA Input:

Input Impedance:	10k Ohms Unbalanced BNC Connector
Frequency Response:	15kHz to 200KHz +/- 1dB for 75kHz deviation

#### RDS Tone Sync Output:

Output Impedance:	10k Ohms Unbalanced BNC Connector
19kHz sync frequency level:	Fixed 1Vpp

\*Specification subject to change without notice

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