

FM 70W Exciter - Frequency Agile

OrbitCD-RD70 70W 87.5 to 108.1MHz Broadband FM Exciter



- ▶ * 0 to 70W RF Power Adjustable
- ▶ * Frequency Agile 87.5 to 108.1MHz
- ▶ * Stereo Generator 70dB separation
- ▶ * Digital 8Th 15kHz Low Pass Filter
- ▶ * HI-FI VCO, More Punch and Brilliance
- ▶ * RDS & SCA Interface
- ▶ * High Efficiency, Switched Power Supply
- ▶ * Powerful RF Low Pass Filter
- ▶ * MOSFET DESIGN

OrbitCD-RD70: More RF Power, Less Dimensions

The OrbitCD-RD70 is a small FM exciter, frequency agile, strong (70W) and possesses some non-existent peculiarities in other FM exciters of the market.

The OrbitCD-RD70 is endowed with microcontrolled circuits, sensors of diverse failure types and an incomparable termination. In the OrbitCD-RD70, Sintek dares to manufacture equipments of high power in just 1RU or of less than 5cm high, the equipment has 70W RMS in 1RU and 3,5kgs weight. If somebody wonders, like how is it possible to fit an equipment of high power in just 1RU? The answer is summarized in: TECHNOLOGY. This technology supposes the incorporation of electronic power supply (SMPS) of high efficiency that allows to reach a total efficiency of almost 90% by equipment, that is only in SMPS terms.

The RF output section of the OrbitCD-RD70 is composed by a modern MOSFET called RD70HVF1 from Mitsubishi, the extension RD70 to its name is because in this device Sintek has used this Mitsubishi transistor. The RD70 is capable to offer more than 70W RMS output into 87.5 - 108.1MHz FM band.

What can the OrbitCD-RD70 do for my FM Station?

Built-in the OrbitCD-RD70, there is a stereo generator AMDSB/SC. The stereo separation between L&R channels is better than 65dB (70dB typical) that guarantees a perfect stereophonic division, including for those more demanding hearings. A high 3D effect was placed to the stereo image, being quickly perceived in case that the equipment is turned to transmit in monaural, available resource through a ST key located in the front panel. It is also possible the connection of an external audio multiprocessor, the Orbit has a MPX input with level adjust for these connections. After connecting it and pressing the key ST for approximately 8 seconds the audio input is transferred to the MPX connector automatically. When it is operating directly from its internal MPX generator, the OrbitCD-RD70 will transmit in stereo mode and also limited/compressed audio at a pre-adjusted modulation. We should also highlight in the equipment an innovative and consistent resource: the compressor/limiter section of high quality, this way you can compress the audio signal up to 40X. The compression is carried out in a completely natural way and it is not noted the compressor effect at all of the system, although the audio source overcomes at the 20dBs.

The OrbitCD-RD70 is the only FM exciter from Sintek to have a digital 8th. 15kHz low pass filter built-in. It means: frequencies above 15kHz that does not be transmitted, they are cut off for this filter, increasing this way the performance of high frequencies audio signals. You will think you will have a high expensive audio processor connected in your FM station, only connecting the OrbitCD-RD70 in your mixer.

Get more technical information about OrbitCD-RD70 in the following pages!

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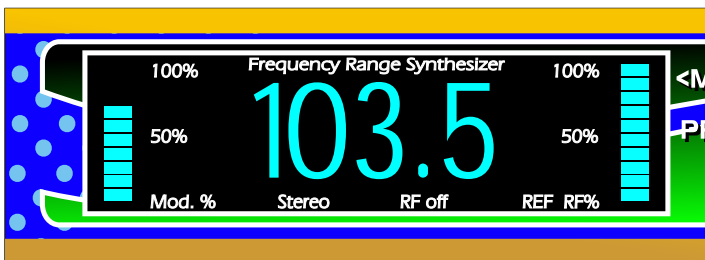
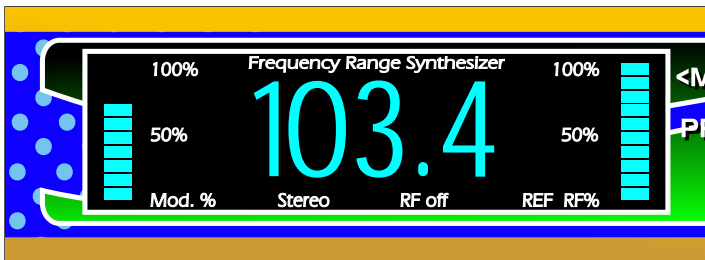
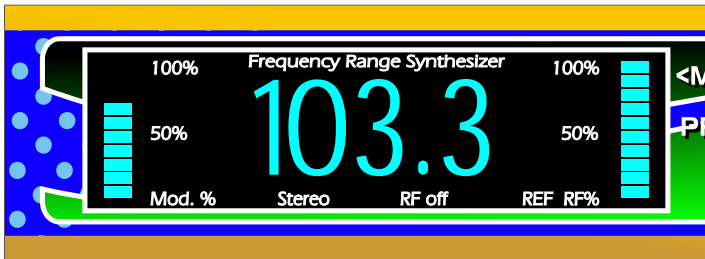
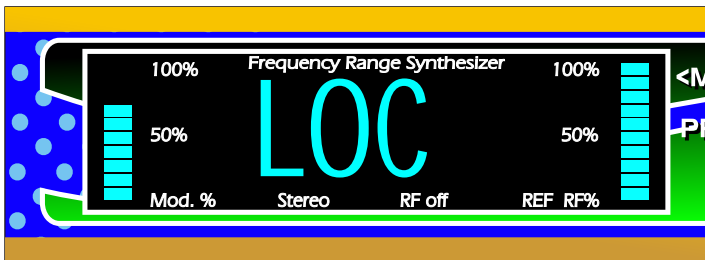
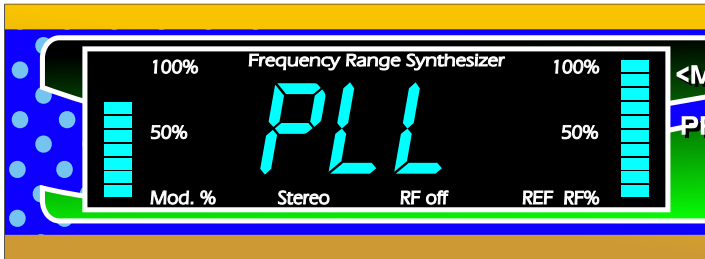
OrbitCD RD70

Developed and manufactured by
Sintek Next - Brasil

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OrbitCD-RD70 Panel, some configurations...



OrbitCD-RD70 Front Panel Overview:



OrbitCD-RD70 Visual-cabinet Overview:



OrbitCD-RD70 Rear Panel Overview:



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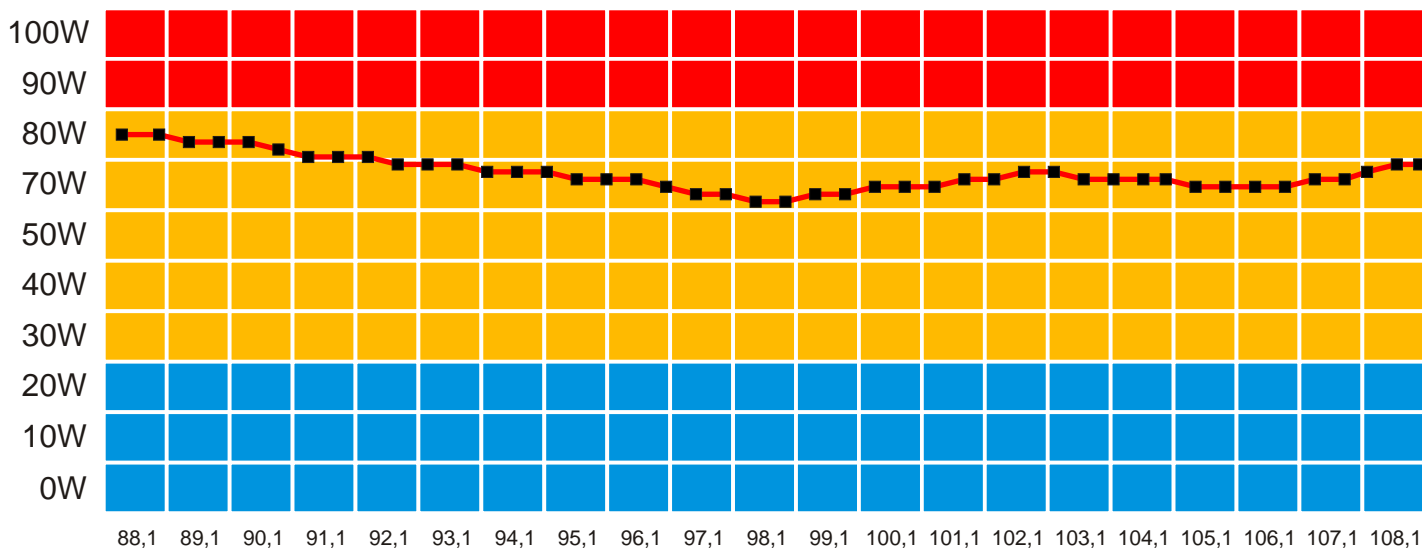
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Internal Overview



RF Power Output x Frequency



RF output power x frequency (equipment set to maximum RF power)

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Technical Features

RF Features:

Output Power:	70W +/- 5% variation across the band
RF Output Impedance:	50 Ohms
RF Output Connector:	N Female
Frequency Range:	87.5 to 108.1MHz
Frequency Step:	Default 100kHz, selectable for 200kHz or others under request
Frequency Programmability:	UP/DOWN Keys, Stereo/Mono mode operation, FWD/REF key selection
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:	62kHz
Power Consumption:	Approximately 125W from AC
AC Input Connector:	IEC socket connector

General Features:

Weight:	3,5kgs net weight
Dimensions:	483mm (6") wide, 44,45mm (1,5") high, 255mm (10") 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 ORBTCD 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, FWD or REF selection for bargraph
LCD Display:	4 x 7 segments, blue display

Audio Inputs Left&Right:

Input Connectors:	XLR Female
Internal Jumper selection for:	50 or 75us stereo pre-emphasis
Input Impedance:	600 Ohms balanced
Frequency Response:	20Hz to 15kHz (THD+N < 0,1%)
Input Level:	0dB for 75kHz carrier deviation
Stereo Separation:	Better than 65dB @ 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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