

Model 2100 FM SCPC Modulator

The Model 2100 FM SCPC (Single-Channel-Per-Carrier) Frequency Agile Modulator was designed to process and modulate an audio baseband signal onto a intermediate frequency (IF) of 52 to 88 MHz. This modulation process is the first in a series of block functions that comprise a satellite uplink.

The Model 2100 Modulator consists of a standard 19" x 1.75" (1 rack mounting space) chassis which houses the power supply and integrated modulator- audio processing assembly.

The Input and audio processing section of the Model 2100 provides for necessary audio processing (filtering, companding and emphasis). This is accomplished by on-board audio filtering and emphasizing. The companding process is accomplished by a plug-in subassembly on the main modulator circuit card. Plug-in companding is necessary since there are multiple types for various audio applications.

The Modulator section upconverts the output of the processing section to an IF carrier in the IF frequency of 52 to 88 MHz (full 36 MHz C-Band satellite transponder width). This section also facilitates the entry of keypad, frequency display, monitor points, alarm indicators and carrier switching.



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Model 2100 FM SCPC Modulator

Specifications

IF Section

Output Frequency	52 to 88 MHz
Frequency Agility	10 kHz Steps
Output Level Range	0 to -10 dBm
Output Level Adjust	Front Panel Potentiometer
Output Impedance	75 Ohm
Front Panel Monitor Port Level	-20 dBc
Output Connector	BNC, Female (Rear Panel)
Front Panel Monitor Port Connector	BNC, Female (Front Panel)
Level Stability	±0.4 dB/day, Max.
Frequency Stability	±5 ppm (-10 to +40 deg. C)
Harmonic Components	<-50 dBc
Spurious Components	<-50 dBc
Deviation	±75 kHz @ +9 dBm Audio Input Level
Occupied Bandwidth	180 kHz, Max

Audio Section

Input Frequency	30 Hz to 15 kHz
Input Level	
Average Program Level	0 dBm
Peak Program Level	+9 dBm
Input Impedance	600 Ohms, Balanced
Emphasis	75 uS
Companding	2:1, Single Band

Mechanical

Alarm Output Connector	Modular socket & plug
Size	Single 19" rack unit, 16" deep
Weight	9 Lbs
Power	90-260 VAC, 47-63 Hz, auto-sensing, 40 Watts Max
Operating Temperature	-10 to +50 C
Relative Humidity	up to 90 %, Non condensing

Ordering Info

Model Number	2100
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Other Models may be available.

Please see <http://www.satsyscorp.com> for more information.



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