

J1000

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J1000 1 kW AM BROADCAST TRANSMITTER

Save money

A value priced, high quality transmitter with traditional Nautel reliability.
High operating efficiency reduces power bills.
Compact design reduces shipping costs.

Save time

Next business day shipment from factory.
6 preset RF power levels can be programmed to automatically meet your power allocations throughout the day, 12 months of the year.
Critical parameters can be conveniently set and queried using the graphic user interface.

Diagnostic flow diagram simplifies troubleshooting and maintenance.

Save space

Both the power section and the controller mount in a standard 19" rack and only 13U (22.75 inches) total height.

Sound great

Universal switch mode power supplies automatically adjust operating voltage to optimize performance at any power level.

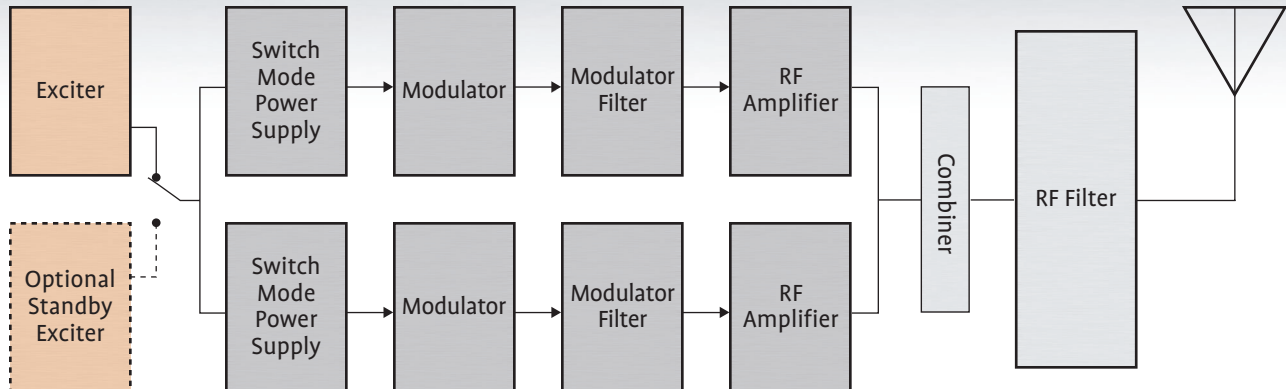
A synthesized exciter using advanced DDS technology produces the RF drive at the desired operating frequency ensuring the best possible signal reproduction.

Feed an external GPS reference clock signal to the J1000 controller for synchronous operation.

Go digital at any time just by adding an HD Radio™ or DRM signal.



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RF redundancy – A dual exciter system with automatic switchover is available to suit the highest redundancy requirements. The exciters feed two completely independent and redundant signal chains from AC to RF.



Intuitive control and monitoring provided through 240 by 64 graphic LCD, diagnostic flow diagram and a comprehensive 128 event log.

Built-in power pre-set scheduler allows for 6 preset RF power levels, selectable from 0 to 1,100 watts. The J1000's controller can program a full year of 12 month automatic, timed power level selections for "day timer" applications.

The redundant modular design has two complete and independent 500 watt broadband power modules, each with its own high efficiency RF amplifier, modulator, switch mode power supply and integral ventilation fan.

Deluxe rack available to hold the control/exciter section and the power section, with plenty of extra room for your auxiliary equipment.

Simple frequency change with optional field kit to any frequency between 531 kHz and 1610 kHz makes the J1000 ideal for multi-station back up.

Linear extended band performance supports both HD Radio™ and DRM digital transmission formats.

Direct digital synthesis exciter provides logic level RF drive.

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Nautel J1000

TECHNICAL SUMMARY
www.nautel.com | info@nautel.com

Nautel Family Name

Jazz

Nautel Model Number

J1000

Configuration

Two 500 watt RF power modules

RF Output Power

Rated – 1000 watts

Operating Range - 10 to 1100 watts

Six preset levels, selected locally or remotely

RF Frequency Range (supplied to one frequency as ordered)

531 kHz to 1610 kHz

RF Terminating Impedance

50 ohms, unbalanced

Maximum Reflected Power

150 peak reflected watts

RF Termination

Type N

Audio Frequency Response

30 Hz to 10,000 Hz, +0.2 dB, -0.8 dB

Audio Frequency Distortion

Better than 0.8% (THD) at 95% modulation
30-10,000 Hz at 1000 watts

Better than 1.2% (THD) at 95% modulation
30-10,000 Hz at 100 watts.

Reduced antenna bandwidth may degrade specification

Audio Intermodulation Distortion

1.0% or less, 60/7000 Hz 1:1 ratio

SMPTTE Standards at 85% modulation

Transient Intermod Distortion

0.5% @ 80% modulation 2.96 kHz/8 kHz,
30 kHz BW

Squarewave Tilt

0.5% 40 Hz 60% modulation

Squarewave Overshoot

1.0% 400 Hz 70% modulation
(100 μ S Risetime)

Incidental Quadrature Modulation

-36 dB reference 95% modulation 1 kHz

Modulation Capability

125% positive peak modulation

Carrier Shift

0.5% or less

RF Harmonics

-73 dB relative to carrier

Spurious Outputs

-73 dB relative to carrier

OBE Compliance

Meets FCC and Industry Canada requirements, and CCIR recommendations.

Noise and Hum

65 dB or more below 100% modulation

Frequency Stability

Internal:

\pm 2 ppm over temperature range

External:

GPS 10 MHz dependent on external source

Audio Input (600 ohms active balanced)

+10 dBm nominal

(adjustable from 0 dBm to +12 dBm)

Power Input

170 Vac - 270 Vac 50/60 Hz single phase

AC Supply Connector

Universal mate supplied

Permissible Power Supply Variations

170 Vac - 270 Vac, 47 to 63 Hz frequency

Efficiency

75%

Digital Display

Forward/reflected output power, VSWR

Dc input current/Dc voltages

Fault diagnostics

128 event log

HD Radio™

Compatible with NE IBOC - HD Radio™ signal generator

DRM

Compatible with 9 kHz mode of operation

Ambient Temperature

0°C to +50°C

Derate 3°C per 500 m
(2°C per 1000 ft above sea level)

Humidity Range

0-95% non-condensing

Altitude

0 m to 4000 m (0 ft to 12,000 ft)

Dimensions

19 inches W x 23 inches H x 20 inches D
(48 cm W x 58 cm H 51 cm D)

Weight

50 lbs (23 kg)

Specifications subject to change without notice.

