



PUSHRADIO



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Making Digital Radio Work.

Nautel has emerged as one of the world's largest manufacturers of radio broadcast transmitters with more than 12,000 deployments in 177 countries.

nautel

**BACKUP AUDIO
AUTOMATION**

**PUSH
RADIO**

MORE CONTROL

**AUTOMATIC "FAIL-SAFE"
SWITCHOVER OF AUDIO
SOURCES**

VS Series transmitters accept a broad variety of IP, digital and analog inputs and give you the opportunity to define automatic fail-over modes should an input be disrupted. As a final level of backup, a playlist can be configured to play from a connected USB device.

**NEW LOCAL AND
DISTRIBUTED
AUTOMATION OPTIONS**

PushRadio builds on the local audio storage capabilities of Nautel's VS transmitters and leverages the AUI control system. From anywhere in the world, you can set-up basic automation capabilities, send new content as audio files, and send updated playlists to the transmitter, which then plays the content locally. Small stations gain added programming flexibility while networked broadcasters can dramatically reduce program distribution costs, improve reliability and facilitate local content.

**AWARD WINNING ADVANCED USER
INTERFACE (AUI)**

In addition to a front panel LCD that offers quick control of key functions, VS transmitters support Nautel's renowned Advanced User Interface (AUI). An extensive array of parameters is available in real time at your fingertips. Imagine knowing in advance what parts and tools you'll need at the transmitter site. Having that much control remotely can help you avoid trips, save time and save money. Advanced control features include:

- RF and audio spectrum analyzers
- Comprehensive monitoring and control
- Extensive logging of all events
- Email notifications
- SNMP Support

REAL TIME BUILT-IN INSTRUMENTATION

VS Series transmitters include built-in instrumentation that would cost tens of thousands of dollars if purchased separately.



QUICK SPECS		VS300	VS1	VS2.5
Analog Power FM Only	Max Power	330W	1400W	2800W
	Typical Efficiency	62%	59%	66%
Analog Power -14dB Hybrid	Max Power*	180 W	730 W	1795 W
	Typical Efficiency	38%	42%	55%
Analog Power -10dB Hybrid	Max Power*	120 W	525 W	1270 W
	Typical Efficiency	30%	37%	50%
AC Input	180 V ac to 264 V ac, 1 phase, 50/60 Hz			
Rack Units	2 RU	3 RU	5 RU	
Height (in/cm)	3.5 (7.7)	5.25 (13.3)	8.75 (17.8)	
Width (in/cm)	19 (48.3)			
Depth (in/cm)	23.8 (60.5)	25.5 (64.8)		
Weight (kg/lbs)	9.1 (20)	18.1 (40)	30.8 (68)	

*Typical power measured at midband in MP1 mode with better than 1.2 VSWR. Compliant with NRSC measurement standards. Power out puts vary with injection level, frequency, VSWR, MP operating mode, symmetrical vs. asymmetrical sidebands. Numbers shown do not include HD PowerBoost which can provide up to 25% additional hybrid mode power and up to 5% increased efficiency. Efficiency shown at rated power. Please contact your Nautel representative to discuss your specific HD power requirement.



VSSERIES
FM Analog



300W – 2.5kW FM Transmitters
with Integral Digital Exciter

VS Series



VS1 1kW Analog

VS SERIES: THE NEW STANDARD IN LOW POWER FM

Nautel's new VS Series FM transmitters are engineered to meet today's most challenging broadcast requirements with an exceptional combination of robustness and reliability in a cost effective design. But the VS Series goes even further with industry first innovations such as IP audio I/O, Axia Livewire™ support, Nautel's Advanced User Interface (AUI) and a simple upgrade path to digital transmission ensuring that your VS transmitter is future ready. Each VS transmitter has been optimized for its specific power output to maximize functionality and quality resulting in outstanding value.

Outstanding FM Performance: The Nautel Sound

More and more customers are commenting on the Nautel sound or to be more specific, the lack of it. With VS Series transmitters it is simply audio in and RF out without audio coloration. To achieve this sonic clarity the VS Series incorporates one of the most advanced FM exciters available today. Direct to-channel digital modulation at more than 600 MSPS eliminates microphonics and spurious outputs and results in a composite signal-to-noise ratio of -90dB or better.

Simple Serviceable Design

VS Series transmitters are ruggedly engineered to ensure maximum on-air continuity. The simplicity and reliability of the VS Series' proven RF design is further enhanced with redundant fans and RF power amplifiers in the VS1 and VS2.5. Service friendly design considerations include washable air filters that are easily accessed from the VS front panel. Even the VS Series power transistors are field replaceable with common tools and absolutely no biasing or tuning is required. The integrated digital exciter approach also means there are no pots or switches to worry about. All exciter adjustments are done easily using the Advanced User Interface in a web browser either locally or remotely. In addition there is no warm-up or lock time. Power up and you're on the air in a fraction of a second.

Frequency Agile

The VS Series' broadband design allows the exciter to select the required presets for operating frequency and output power level, enabling the transmitter's use anywhere in the FM band. Using the remote capability of the AUI, all settings including frequency presets can be managed anywhere there is internet access.

Nautel Reliability

With forty years of worldwide transmitter experience and one of the industry's most recognized reliability track records, your Nautel VS Series transmitter can be counted on for years to come.

NAUTEL INNOVATIONS

- Ultra compact: just 5 RU
- Integrated digital exciter
- Advanced user interface (via web)
- Front panel LCD control
- IP Audio I/O, an industry first
- Advanced instrumentation and management
- Easy upgrade to HD Radio
- USB backup audio automation

ADVANCED APPLICATIONS

VS Series Replacement Exciter

The VS300 features an Input/Output interface compatible with virtually any tube or solid-state transmitter. With a 300+ watt output capability it can also replace IPA sections of many older transmitters for enhanced reliability and performance. Breathe new life into your tube transmitter by adding the most advanced and reliable low power FM transmitter available as a replacement exciter and instantly gain the entire feature set of the VS series transmitters. New features, superior audio performance, improved reliability and a host of audio input and audio back-up sources make the upgrade to a VS replacement exciter one of the most cost effective, feature rich improvements you can make to your main or stand-by transmitter.

Single Frequency Networks

The VS Series is ideal for use in a single frequency network. Whether you are looking to expand you coverage area, create a long unbroken coverage chain (along a highway), or fix holes in your coverage area due to terrain shielding, the VS Series is the ideal transmitter for the job. SFN functionality is built in to all VS Series transmitters and the built-in remote capability of the AUI, combined with GPS synchronization and time delay adjustment in millisecond increments, helps simplify the complex task of setting up a single frequency network.

N+1 Cost Effective Automated Transmitter Backup

For facilities that broadcast multiple programs from a single site, N+1 capability can provide even higher levels of redundancy that is both automated and cost effective. Nautel N+1 configurations can support up to six identical main transmitters plus a backup.



MORE DIGITAL

ORBAN INSIDE

MORE IP AUDIO

STREAMING INPUT

PROACTIVE STATUS MONITORING

EVEN MORE FEATURES

EASY UPGRADE TO DIGITAL BROADCASTING

Crystal clear programming, four channels on one frequency, song tagging, and the delivery of advanced Program Associated Data. These exciting new capabilities are available using digital broadcasting. When you are ready to implement digital transmission your VS Series transmitter will be ready too with HD Radio broadcasting standards. The optional VS HD add-on unit and Nautel's integrated digital solutions make your move to digital broadcasting easy and economical.

OPTIONAL CARD FOR ORBAN™ AUDIO PROCESSING

Orban's premier audio processing can be integrated directly into a VS transmitter via an optional \$1,200 plug-in DSP card. Nautel's Orban Inside offers features of the Optimod 5500 Series digital processor with 5 band processor and dual band window-gated AGC. Utilizing the Nautel AUI, users have full control over processing functions.

INDUSTRY FIRST AXIA LIVEWIRE™ IP AUDIO SUPPORT

IP audio transport is becoming the industry norm for connecting studio equipment. Transmitters too can benefit from the move to IP. Nautel was the first manufacturer to offer an IP audio input in addition to AES and traditional mono and composite inputs. Nautel's VS and NV™ Series transmitters are also the first to support the Axia Livewire protocol. Now broadcasters can connect their Livewire networks directly to a Nautel transmitter to achieve an all-digital transmission path from studio to transmitter without intermediary connections or D/A conversions.

NEW INPUT OPTIONS

SHOUTcast™ and IceCast streaming input provides even more audio source options. Consider that over 40,000 stations worldwide stream their audio to the internet using SHOUTcast and IceCast. Now the VS Series gives you added flexibility by supporting these streaming services as a transmitter payout option. Streaming support opens up many new possibilities for broadcasters including the option to stay on-air by transmitting the stations SHOUTcast stream in the event of a failed STL.

AWARD WINNING TOOLS HELP MAINTAIN YOUR TRANSMITTER

Phone Home is a system developed by Nautel that takes advantage of the vast amount of data collected by Nautel transmitters by proactively sending information to the cloud via the internet once a user enables Phone Home on their transmitter. This data includes logs, alarms and meter readings which are then stored in a database. When this data is used by Nautel customer support staff for diagnostics purposes it cuts down on repair time and gets you back on air faster.

MORE FEATURES GIVING YOU MORE OPTIONS

VS Series transmitters are unlike any other. There are more useful time saving capabilities than there is room in this brochure to describe. Please contact your representative for more information about the features highlighted above.

RDS GENERATOR

Powerful Presets

Scheduler

INSTRUMENTATION

Play lists

MOD MONITOR

SCA CODER

Audio Spectrum Analyzer