



## AM Radio Solutions

### ***DAX 1-6kW AM HD Radio Transmitter***



*The DAX 1-6kW line of transmitters continues the legacy of high-quality, solid design by Harris.*

This line of low power transmitters is designed from the ground up to provide enhanced audio and superior performance in both HD Radio™ and analog transmission. Built with exceptional linearity and bandwidth, the DAX 1-6kW line delivers the cleanest analog sound and the most accurate reproduction of the HD Radio signal in the low power ranges. This accurate reproduction is necessary to maximize digital coverage.





## Make these Harris DAX 1-6kW transmitter benefits yours:

### »» An unmatched high-performance modulation solution

The DAX uses Harris' new wide bandwidth and high-performance modulation technique called Digital Adaptive Modulation. Designed to provide the linearity demanded by digital transmission, Digital Adaptive Modulation uses a digitally generated AM waveform with DSP-based adaptive correction, giving users a high performance transmitter in a cost effective platform. This technology enables sampling of the transmitter output, and corrects for load-induced distortion. Reduced distortion and noise translates to cleaner sounding analog, and extended digital coverage.

### »» Exceptional transmitter reliability and serviceability

The DAX features a modular architecture and "hot-swappable" PA modules that enhance reliability as well as provide on-air serviceability. The DAX-5/6 occupies less than 24 x 34 inches of floor space, yet no compromises were made to provide easy access to all components and user connections. The DAX-1 and DAX-3 are rack mount transmitters (16RU), ideal for installations where space is premium.

### »» Intelligent user interface designed for low power transmission

The DAX is designed with extensive diagnostic, control and lower-stage metering capabilities. The software-driven dot matrix display allows for easy control and monitoring of the DAX and provides parameter metering, status, fault log retention and a set-up/configuration menu.

### »» A cost-effective and flexible migration path

The DAX provides a cost-effective solution for the HD Radio transition. With the DAX, users can broadcast a clean analog signal now and can easily make the transition to digital by simply adding a Harris DEXSTAR™ HD Radio exciter, which can be mounted right in the DAX cabinet or rack.

### »» A complete end-to-end solution

Only Harris can provide everything you need as you plan your transition to digital radio...from source through studio through STL HD through transmission. And our systems team is available to help you put together the system that makes the most sense for your operation—*now and in the future.*

## DAX 1-6KW

### 1 Main Controller

The Controller is the heart of DAX and Digital Adaptive Modulation. It contains the on-board synthesized exciter, and performs all the DSP-based supervisory and adaptive correction to the modulated envelope. It also performs power control, module turn on, fan control, and analog/IBOC audio input selection. In addition to the parallel user I/O, a serial interface is included, enabling extended and redundant off-site diagnostics and control.

### 2 User Interface Display

The lighted 1.5" x 2.75" Optrex dot-matrix display offers in-depth monitoring and diagnostic capability not possible with conventional analog meters. It constantly meters nine critical parameters, and can display a time-elapsd fault log. IBOC mode control, Power limit settings, and setup functions are also controlled from this display.

### 3 User Input/Output Board

All user signal connections are located at convenient eye-level for ease of installation and service, and are RFI filtered and transient protected.

### 4 Power Supplies

The high voltage power supply in DAX is a 300 VDC SCR-regulated linear supply. Electronic tap switching assures no compromised performance, even when operated at very low reduced power levels. The +48 VDC and +12VDC supplies are modular and easily replaceable. +5 VDC is derived through on-board linear regulation.

### 5 PA Modules

RF PA modules are based on the same conservatively designed FET-based wideband amplifiers in the Harris Destiny 3DX-50. Each hot-swappable module can support 1.1 kW of modulated (+145%) RF power. And all RF modules are fully interchangeable with other DAX family transmitters, independent of frequency. Each module is individually fused and thermally protected.

### ★ DEXSTAR Exciter (optional)

Dexstar generates the required IBOC magnitude and phase signals to drive the DAX transmitter directly through dedicated IBOC inputs, and provides the necessary diversity delay to the analog signal. The DEXSTAR can be integrated into the DAX transmitter cabinet, eliminating the need for separate extra deep rack space. DEXSTAR features an all-XLR Audio I/O, all BNC RF I/O, and an intuitive Harris graphical user interface. These enhancements allow for maximum performance and functionality.

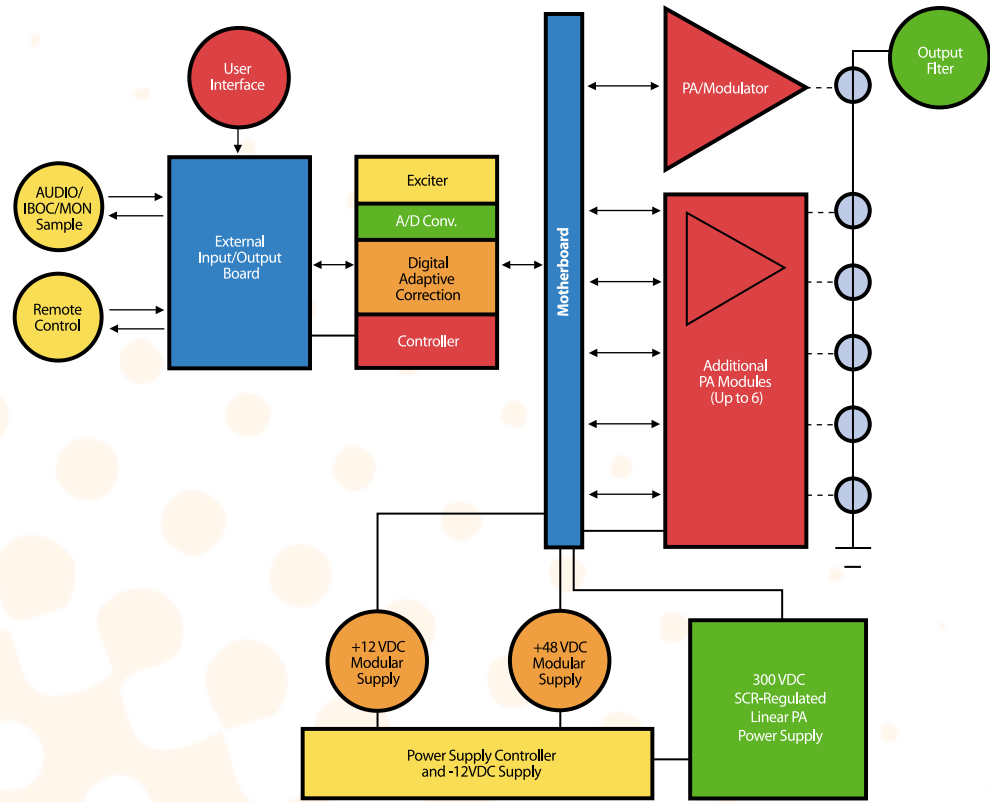
The DEXSTAR is available with the exclusive ePAL™ option. ePAL provides the required synchronization and sample rate conversion to the incoming STL signal, Dexstar audio bypass switching, and digital audio distribution.

The DEXSTAR-AM also features:

- Remote control of digital carrier on/off and day/night setups.
- A standard internal GPS receiver which provides stable and accurate time reference for all subassemblies
- Easy operation locally or remotely with Harris' exclusive Graphical User Interface (GUI)
- Extensive diagnostics with automatic fault-logging for troubleshooting

Another benefit of the DEXSTAR is the investment security that comes with Harris technology. Harris has delivered more DTV exciters than all of its competitors combined. Harris has also provided HD Radio equipment for major HD Radio field tests.





### Service and Support

Like all Harris radio products, DAX 1-6kW users receive Harris' industry leading service and parts support. The Harris service and support team can provide the information and product knowledge necessary to keep your stations on the air – 24/7.



Specifications are subject to change. For a complete listing of the most current specifications, please visit our Website at [www.broadcast.harris.com](http://www.broadcast.harris.com).



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Printed in USA on Recyclable Paper HMC 15184 HG ADV. 1164B 5/03