

HARRIS DIGIT™ 50 WATT DIGITAL FM EXCITER



 **HARRIS
ALLIED**

The World's First Digital FM Exciter for Today's Air Chains . . . and Tomorrow's

- Direct Digital Synthesis technology produces signal quality that rivals and exceeds compact disc players in many key areas.
- Direct digital composite inputs for tomorrow's air chains.
- Sustainable digital performance that does not deteriorate over time.
- Unique Numerically Controlled Oscillator eliminates problems of analog modulated oscillator technology.
- Analog-to-digital converter option allows compatibility with today's air chains.
- Ideal for N+1 operation -- allows channels to be selected in any increment with no requirements for output tuning.
- Rugged wideband amplifier with FET output devices produces up to 50 watts of drive for compatibility with all major transmitters.
- Can be used to upgrade almost every FM transmitter.
- FCC type-notified as emergency backup or low-power transmitter¹.

¹ With addition of low pass filter and RF sample port.

Direct Digital Synthesis board





A New Dimension of Exciter Performance

Harris' Digit™ 50 watt Digital FM Exciter -- the world's first truly digital FM exciter-- provides 32-bit Direct Digital Synthesis precision for signal quality that rivals or exceeds compact disc performance.

Direct Digital Synthesis eliminates the modulated oscillator with its inherent non-linearities that require pre-correction. Instead, a revolutionary 32-bit Numerically Controlled Oscillator produces the sinusoidal FM waveform.

With Digit, such annoying problems as poor low-frequency separation and PLL unlock due to audio transients-- problems associated with traditional VCO/PLL technology-- are things of the past. Since Digit incorporates precise digital control of modulation, it allows optimum level settings, offering the advantage of added loudness without overdeviation.

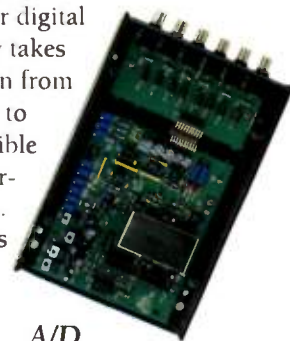
A New Level of Reliability

Unlike analog exciters that degenerate over time, Digit delivers sustainable performance. This digital exciter will deliver exceptional signal quality on the day of final test-- and a year, even a decade, after installation.

Direct Digital Synthesis needs no distortion correctors, so there's no possibility of circuit drift. The digital input dramatically reduces susceptibility to magnetic and RF interference, microphonics, and environmental extremes. Even after an AC power interruption, Digit returns to normal operation in about one second.

A New Degree of Compatibility

Digit is ready for tomorrow's technological advances with linear digital composite inputs along with interfaces for other digital devices. As digital technology takes over both ends of the air chain from source material to processing to stereo generation, Digit's flexible design and outstanding performance are ready to keep pace. For compatibility with today's air chains, an optional plug-in analog-to-digital (A/D) converter is available.



A/D

A New Standard of Simplicity

Because Direct Digital Synthesis needs no linearity correction, Digit completely eliminates the need to continually adjust linearity correction circuits. For N+1 operation, Digit allows channel selection in 50 Hz steps with no output tuning.

The Ultimate Transmitter Upgrade

Digit can be used to upgrade almost every FM transmitter. This advanced exciter accepts a wide range of AC input voltages and frequencies. Digit's rugged wideband amplifier produces up to 50 watts of drive using FET output devices. However, to ensure safe and reliable operation under all conditions with older transmitters, output power can be limited to 15 watts or lower. From today's most advanced solid state FM transmitters to older tube models, Digit brings any FM transmitter to its highest level of performance.



On The Air With Harris Allied

Since its founding in 1922, Harris innovations have set the pace for the broadcast equipment industry worldwide. From its 1926 introduction of the transcription turntable, Harris has pioneered more than 50 major breakthroughs in broadcast technology and service. Many Harris innovations have become world standards.

Harris transmission products are supported by most comprehensive service in broadcasting, including 24-hour technical assistance and 24-hour parts support. Additionally, Harris Allied sponsors the industry's only Broadcast Technology Training Center at its Quincy, Illinois headquarters.

Beyond a full line of AM, FM, VHF and UHF transmission equipment, Harris Allied is serving broadcasters in more than 150 countries as the world's leading distributor of radio studio products and as a pre-eminent resource for fully-integrated turnkey systems.



Harris Allied Broadcast Division Radio RF Products

3200 Wasmann Lane, P.O. Box 4290
Quincy, Illinois 62305-4290 U.S.A.
U.S. 217-222-8200; FAX: 217-224-1439
Canada: 800-268-6817; FAX: 416-764-0729
International: 217-222-5290; FAX: 217-224-2754

