DPR

TECHNICAL DATA

Digital Plug-on Transmitter

DPR, DPR/E01

D-SQUARED™ DIGITAL WIRELESS

- Wideband UHF tuning range
- Accepts microphone or line level signals
- Selectable 5, 15, 48 volt phantom power
- Selectable 25/50 mW output power
- Adjustable low frequency roll-off
- Powered by two AA batteries
- IR (infrared) port for fast setup
- Remote controlled “dweedle” tones (audio tone set-up control)
- Time code jam sync
- Solid machined aluminum housing
- On board recording
- Encryption 256 Bit AES, CTR Mode

DPR Digital Plug-on Transmitter

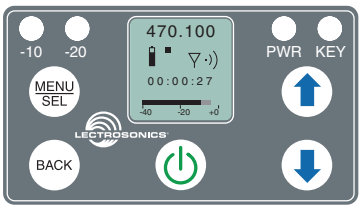
This unique digital plug-on transmitter design will ideally match any microphone or line level source via a standard XLR connector. The DPR can tune in coarse or fine steps across the UHF television band from 470.100 to 607.950 MHz, with a selectable output power of 25 or 50 mW. The purely digital architecture utilizes AES 256-CTR encryption for high level security applications.

The transmitter is specially designed with high efficiency digital circuitry for extended operating time on two AA batteries, with status indicated by a multi-color LED. An IR (infrared) port is included to simplify setup with IR enabled receivers. Updates can be made via SD card.

The input amplifier uses an ultra low noise op-amp for quiet operation. It is gain controlled with a wide range, dual envelope limiter, providing over 30 dB of headroom above full modulation. A 24-bit A-D converter digitizes the audio, then filters out supersonic noise above 21 kHz.

The antenna is formed between the machined aluminum housing of the transmitter and the attached microphone or cable. It functions as a dipole radiator when attached to a hand-held microphone and somewhat like a ground plane antenna when connected with a cable or plugged directly into a mixer. The conical shaped collar on the input coupler is made of DuPont™ Delrin® to improve the ERP of the antenna in the uppermost frequency bands.

Setup and adjustments are achieved through a backlit LCD, membrane switches and an intuitive menu structure. The DPR also offer hands free setup and adjustment using audible tones via the LectroRM mobile app. Remotely, the DPR can be powered on and off, and the frequencies and audio levels can be adjusted. Other features include input gain adjustment in 1 dB increments over a 55 dB range and adjustable low frequency audio roll-off for 3 dB down points at 25, 35, 50, 70, 100, 120 or 150 Hz to control subsonic and very low frequency audio content.



Dual color LEDs indicate audio input level and the power LED changes color under low battery conditions.

Alternate Recording Function

The DPR transmitter may also be used as a stand alone recorder. The industry standard .wav (BWF) file format employed is compatible with essentially any audio or video editing software. The DPR can be jammed with timecode sync for each audio file alignment during post production.

NOTE: The transmitting and recording functions cannot be used simultaneously. Users must choose to transmit or record.

LECTROSONICS®
Rio Rancho, NM, USA
www.lectrosonics.com

DPR Specifications

Transmitter

Operating Frequencies:	US: 470.100 - 607.950 MHz E01: 470.100 -614.375 MHz
Frequency Selection Steps:	25 kHz
RF Power output:	Selectable 25/50 mW
Frequency stability:	± 0.002%
Digital modulation:	8PSK
Spurious radiation:	US: Compliant with ETSI EN 300 422-1 v1.4.2 E01: Compliant with ETSI EN 300 422-1 v2.1.2
Equivalent input noise:	–125 dBV (A-weighted)
Input level:	Nominal 2 mV to 300 mV, before limiting Greater than 1V maximum, with limiting
Input impedance:	1K Ohm
Input limiter:	Dual envelope type; 30 dB range
Gain control range:	US: 44 dB in 1 dB steps; digital control E01: 55 dB in 1 dB steps; digital control
Modulation indicators:	• Dual bi-color LEDs indicate modulation of -20, -10, 0, +10 dB referenced to full modulation • LCD bar graph
Encryption:	AES 256-CTR (per FIPS 197 and FIPS 140-2)
Audio Performance:	
Frequency Response:	US: 25 Hz to 20 kHz, (+0, -3dB) E01: 20 Hz to 20 kHz, (+/-1dB)
Low frequency Roll-off:	US: Adjustable for -12dB @ 10, 20, 80, or 135 Hz E01: Adjustable for -3dB @ 20, 35, 50, 70, 100, 120 or 150 Hz
Input Dynamic Range:	110 dB (A), before limiting 125 dB (with full Tx limiting)
Controls & Indicators:	• LCD w/membrane switches • LED audio level indicators
Audio Input Jack:	Standard 3-pin XLR (female)
Phantom Power:	5V @ 18 mA max., 15V @ 15 mA max. and 48 V @ 4 mA max., plus “OFF”
IR (infrared) port:	For quick setup by transferring settings from an IR enabled receiver
Antenna:	Housing and attached microphone form the antenna.
Battery:	Two 1.5 Volt AA (lithium recommended)
Battery Life:	
AA lithium; No Phantom Power:	6h 0m*
AA lithium; 48V Phantom Power:	3h 30m**
	*Tested with a dynamic microphone **Tested with a Sanken CS1 for a phantom-powered microphone
Weight:	7.8 ozs. (221 grams)
Dimensions:	4.21” L [excluding antenna: DPR-A] x 1.62” W x 1.38” H (106.9 L x 41.1W x 35.0 H mm)
Emission Designator:	170KG1E

The battery compartment door is hinged to the housing and remains attached to the transmitter when opened. It latches securely in place and applies pressure to the batteries when closed. The two AA batteries are connected in series through a conductive plate on the door.

Recorder

Storage media:	microSDHC memory card (HC Type)
File format:	.wav files (BWF)
A/D converter:	24-bit
Sampling rate:	48 kHz
Recording modes/Bit rate:	HD mono: 24 bit - 144 kb/s
Input:	
Type:	Analog mic/line level compatible; servo bias preamp for 2V and 4V lavaliere microphones
Input level:	• Dynamic mic: 0.5 mV to 50 mV • Electret mic: Nominal 2 mV to 300 mV • Line level: 17 mV to 1.7 V
Input connector:	TA5M 5-pin male
Timecode:	
Connector:	3.5 mm TRS
Signal voltage:	0.5 Vp-p to 5 Vp-p
Input impedance:	10 k Ohms
Format:	SMPTE 12M - 1999 compliant
Audio Performance:	
Frequency response:	25 Hz to 20 kHz; +0.5/-1.5 dB
Dynamic range:	110 dB (A), before limiting 125 dB (with full Tx limiting)
Distortion:	< 0.035%
Operating temperature range:	
Celsius:	-20 to 50
Fahrenheit:	-5 to 122

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