

## 1RU Solid State / USB Audio Recorder

# DN-F650R

**100<sup>th</sup>**  
*Anniversary*  
**DENON**  
since 1910

Denon Professional, a name synonymous in broadcast, is proud to introduce its next generation solid state audio recorder.

Housed in a compact 1U-rackspace enclosure, the DN-F650R offers contractors and system integrators a versatile solid-state audio recorder / player at an extremely cost-effective price point. The DN-F650R has RS-232c and USB keyboard control, making it perfect for integrated sound systems. Additionally, a full host of inputs and outputs from AES/EBU to Balanced XLR in and out allow for its inclusion into nearly every application. Its playback features also include +20% / -40% pitch control, likewise ideal for dance and aerobics/fitness. Additionally, the optional RC-F400 Remote Controller features a large LCD display and enhances the DN-F650's capability by providing an ergonomically designed, intuitive control unit for instant playback of audio or audio elements (sound effects) via its hot-buttons, making it ideal for live events, radio, television, etc.



### Key Features

- 1 RU Rackmount size for easy installation
- Records and plays back from stable, industry-standard SD/SDHC flash media and USB drives (Thumb / HDD)
- Records WAV (.wav) at 44.1 / 48 / 96 kHz
- Records MP3 (.mp3) at 32-320 kbps
- Balanced (XLR) and unbalanced (RCA) analog inputs and outputs
- S/PDIF and AES/EBU digital input and output
- +20% / -40% Pitch Control with tempo lock
- Power on auto-play
- Various playback modes (single / continuous, repeat, random)
- Audible quick search
- Skip back playback
- Marking and mark search
- Large, easy-to-read OLED display
- Front-panel mounted USB for connecting to a computer
- Front-panel mounted USB keyboard input for file naming and control
- Serial (RS-232c) and parallel remote inputs
- Headphone output with level control

### Overview

The Denon DN-F650R is a highly versatile professional solid state recorder offering recording to and between SD/SDHC flash card and USB external drives. Designed to fulfill the most demanding playback and recording applications in AV installation, audio production, live sound, theatre and broadcast, the DN-F650R is a professionally specified, up to date replacement for cassette, DAT, MD, CDR and commodity PC based systems currently fulfilling such roles. Balanced XLR analog audio and AES/EBU digital I/Os are featured, as well as unbalanced analog and S/PDIF connectivity. Serial, parallel and contact closure remote control

are supported, and the unit can be operated with Denon Professional's latest RC-F400S 'Hot Start' serial remote controller.

### Advanced Usability

The OLED display and easy file search jog wheel enable simple front panel operation. A USB keyboard input allows for simple file name editing. A variety of playback modes includes single, repeat, random, continuous and skip back play. Pitch control (between +20 and -40%), tempo lock, and a headphone out with volume control are also included.

### Recording and Formats

Stereo and mono audio channels are simultaneously available and both WAV and MP3 file formats are supported, with selectable sample rates of 96, 48 and 44.1 kHz, 24 and 16 bit resolution, and MP3 bit rates between 32 and 320 kbps. Cascade recording and file management capabilities between the SD / SDHC card and connected USB drive, and USB connectivity to PC enables file transfer.



\*RC-F400S compatibility available 10/2010

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PLEASE NOTE: Specifications are based on measurement conditions and proper care for the machine, and are subject to change without notice.

# DN-F650R

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## Specifications

### System

Media: SD / SDHC, USB drives  
File Format: WAV / MP3 (MPEG-1 Layer III)  
Media Format: FAT / FAT32  
MP3 Bit Rate: 32 - 320 kbps / stereo  
Sampling Frequency: 96 / 48 / 44.1 kHz  
Quantization: 24 / 16 bit

### Audio Section

Audio Channels: 2 (Stereo) / 1 (Mono)  
Frequency Response: 20 Hz ~ 40 kHz  $\pm$  1.0 dB  
S/N Ratio: 96 dB (1 kHz, 0 dB playback, A filter)  
Channel Separation: 86 dB (1 kHz, 0 dB playback)  
Total Harmonic Distortion: 0.01% (1 kHz, 0 dB playback)  
Dynamic Range: 96 dB  
Variable Pitch Control: +20% / -40% (0.1% step)

### Inputs

Balanced Input: Type XLR (1:GND, 2:Hot, 3:Cold)  
Input Sensitivity: +24 / +18 / +12 / 0 dBu  
Input Impedance: 24 kohms  
Unbalanced Input: Type RCA  
Input Sensitivity: 500 mVrms  
Input Impedance: 22 kohms  
Digital Input (AES/EBU): XLR  
Digital Input (S/PDIF): RCA

### Outputs

Balanced Output: Type XLR (1:GND, 2:Hot, 3:Cold)  
Level: +24 / +18 / +12 / 0 dBu  
Unbalanced Output: Type RCA  
Level: 2 Vrms  
Digital Output (AES/EBU): XLR  
Digital Output (S/PDIF): RCA  
Headphone Output: Type TRS 1/4"  
Level: 20 mW / 32 ohms

### General

Power Supply: 100V to 230V, 50/60Hz  
Power Consumption: 22 W  
Dimensions (W x H x D): 483 x 44 x 325 mm  
Weight: 3.7 kg

### Environmental Conditions

Operating temperature: +5°C to +35°C  
Operating humidity: 25% to 85%, no condensation  
Storage temperature: -20°C to +60°C  
Storage humidity: 25% to 85%, no condensation

### Included Accessories

Stereo Audio Cable: 1  
USB Cable: 1  
AC Cord: 1  
SD door screw: 2  
Retainer: 1  
Operating Instructions: 1  
CD-ROM for multi-language DFUs  
& DMP Mark Editor software: 1

### Optional Accessories

RC-F400S\*



RC600PMD



### Other Information

Carton Size (W x H x D): 593 x 198 x 464 mm  
Carton Weight: 6.0 kg  
Country of Origin: Japan

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\*Updated firmware will be released in Oct. 2010.