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Digital Audio Programmable Player

DAPP-RM1

Hardware Features

- **1U Rack-Mount form factor**
- **AC powered**
- **64 MByte: 2 hours of near CD quality mono playback, or 4 hours "high quality" mono voice playback**
- **Mono, balanced line out**
- **16 hardware triggers**
- **62 scheduled timer triggered events**
- **Each Hardware trigger can be individually programmed to be active high or low**
- **Each trigger can be assigned a priority level**
- **Programmable via USB**

Hardware Connections

- **230 VAC IEC Power Socket**
- **16 Hardware Triggers**
- **RS-232 Communications**
- **Balanced Audio Line-Out**
- **Front USB Port**

Hardware Indicator LED's

- **Power LED**
- **System Operational LED**
- **System Playback LED**

DAPP-CONSOLE

SOFTWARE DESCRIPTION

The DAPP-RM1 is supplied with DAPP-CONSOLE; a Microsoft® Windows based graphical user interface software, which allows easy setup, configuration and programming.

DAPP-CONSOLE uses any MP3 (MPEG 1 or 2, Layer 3 Audio) compatible files for playback. Audio files can be prepared in any program that can generate a MP3 compatible file.

For each "event" a trigger is configured that has an audio file assigned to play when the "event" triggers its playback. Programmable audio file playback triggers can be Externally Hardwired Triggers or Programmed Timed Events.

The timers can be programmed to trigger at a certain time of day, and on specific days of the week. The onboard Real Time Clock has a battery backup time of more than 5 years.

Once your setup and configuration is complete, the DAPP-CONSOLE will download the MP3 audio files to the DAPP-RM1. Every audio file's compression level can be set individually, to optimize compression and/or audio output quality.

Each of the 62 audio files can be tested by playback from within the DAPP-CONSOLE software application.

After downloading and testing, the DAPP-RM1 can be disconnected from the PC, and installed on site. Data retention exceeds 10 years with no battery backup.

HARDWARE ORDERING OPTIONS

Part Number	Description
DAPP-RM1	Rack Mount form factor, including all features as described above;

DAPP-RM1 DATASHEET April 2012

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DAPP-CONSOLE

Software Requirements

- **Requires an IBM PC/AT Compatible Computer**
 - Available USB Port
- **Recommended Platforms:** IBM-compatible PC running Windows 7 (32/64 bit), Windows XP*, NT4* SP3+, ME* or 98SE* at a minimum screen resolution of 800×600 (Small Fonts).

* NOTE: DAPP-CONSOLE has been tested successfully on these alternative Microsoft Windows platforms, but ALFTECH makes no recommendation of the use of such alternatives. Only LIMITED support is provided if the DAPP Products are installed or connected to such alternatives.

DAPP-RM1 Electrical Specifications

Recommended Operating Conditions

(0° C to + 55 °C)

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT	NOTES
Trigger Voltage		0		15	V	1

Electrical Characteristics

(Over the Operating Range)

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT	NOTES
Power Consumption	230VAC, normal operation		2		W	
Trigger input Current	Trigger pulled to GND		3.5		mA	
Trigger pull up resistance			6.8		kΩ	
LOW level Trigger Voltage				1	V	1
Minimum Trigger pulse width		20			mS	
Real Time Clock Accuracy	0°C to +40°C		±4		Min/Yr	2
Battery Backup time	Power off	5			years	
Audio Output Level	0 dBFS digital		+3		dBu	3
Audio Output Impedance	Differential		44		Ω	
Frequency Response	20 Hz to 18 kHz		± 1		dB	4
Signal-to-Noise Ratio	-3 dBFS digital			84	dB	4
Total Harmonic Distortion	-3 dBFS digital			0.01	%	4
Memory data retention time		10			Yr	

Notes

1. The trigger inputs should be left floating when not triggered, and must be pulled to GND when triggered, with a relay contact or an open collector transistor.
2. The Real Time Clock may vary to ±4 Min/Yr over 0°C to +85°C.
3. The output level is between the hot and cold terminals. Peak-to-Peak voltage of 3.096 V, RMS voltage of 1.095 V.
4. Tested with 44100 Hz sample rate, 16 bits and 192 kbps data rate.

Audio Output

The output is balanced, and impedance matched. The output is driven out of phase, and is not floating like a transformer output. If an unbalanced output is required, connect the cable ground to ground, and the signal to the HOT output terminal. Leave the COLD terminal open. This however will only supply half the output level of a balanced output. The outputs can easily drive the large capacitive loads associated with long audio cables.

Electrostatic Discharge

The inputs and outputs can be damaged by electrostatic discharge, thus care must be taken when handling the product. Failure to observe proper handling and installation procedures can cause damage. ESD damage can range from performance degradation to complete product failure.

Physical Layout and Dimensions

DAPP-RM1

(All Dimensions in mm)

