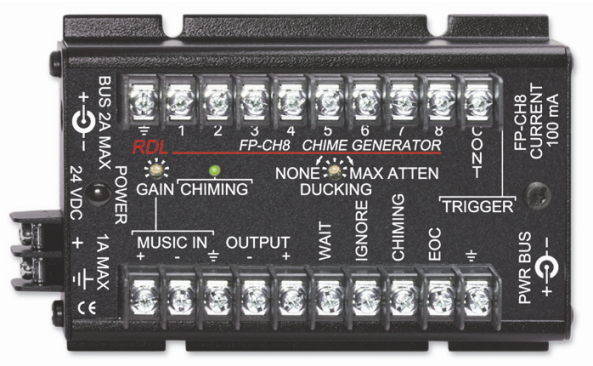
RDL®
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

FLAT-PAK™ SERIES

Model FP-CH8
Chime Generator

- 8 Individually Selectable Electronic Chimes
- Selectable Single or Repeated Chime
- Synthesized Bell Harmonics for Natural Sound
- External Chime Actuation
- Input for Background Music or Paging Audio
- Automatic Ducking



The FP-CH8 is part of the group of versatile FLAT-PAK products from Radio Design Labs. The unique FLAT-PAK case can be directly screwed or bolted to cabinets or shelves. Optionally available rack-mounting accessories permit single or multiple FLAT-PAK module mounting. All FLAT-PAK modules are supplied with a power interconnect cable for daisy-chaining multiple modules from a single power supply.

APPLICATION: The FP-CH8 is an electronic chime generator that produces eight different synthesized chimes. Each chime can consist of up to 3 tones and 3 harmonics selected to produce sonically natural effects. Certain chimes are single tones and some are a sequence. Each of the 8 chimes is triggered by an individual external closure to ground. A momentary closure to ground is required to start a chime. A single additional **CONT** (continuous) terminal is also provided. Each chime plays once unless the **CONT** terminal is grounded. The continuous function causes a chime strike or sequence to repeat until the **CONT** terminal is ungrounded. This function causes tone chimes (Chimes 4 and 8) to be extended in duration until the **CONT** terminal is released. Background music or paging audio may be connected to the **MUSIC IN** input. When a chime plays, the music source will be quickly faded to a level set on the front-panel **DUCKING** trimmer. The ducking fade depth may be set for 0 dB to fully off, allowing chimes to be mixed with the music or to interrupt the music. The front-panel **CHIMING** indicator illuminates while the music is ducked and a chime is playing.

Chime patterns are described as follows:

1: Single strike	2: Double strike	3: Triple strike	4: Tone ring
5: Manual strike	6: Descending triple strike	7: Eurosiren	8: Multi-tone alert

A chime is activated by a remote momentary closure to ground. The external trigger causes the chime to play each time the terminal is grounded. Single chime patterns (Chimes 1, 4 and 5) will restart immediately if they are re-triggered. This allows a pushbutton to initiate repetitive strikes. If the FP-CH8 receives trigger inputs for sequential chime patterns (Chimes 2, 3, 6, 7 and 8) while any chimes are playing, up to 3 such trigger requests will be stored. Following the chime that is playing, the module will play the stored chime requests in the order received with 2 seconds between each chime playback. If a stored chime request was accompanied by a simultaneous closure of the **CONT** terminal, that chime will play continuously for 5 seconds.

A **WAIT** terminal is provided to prevent the module from ducking the music audio and playing the chime. As long as the **WAIT** terminal is grounded, the module will not play, but up to 3 chime requests will be stored. Upon release of the **WAIT** terminal, each chime request is played in the order received with 2 seconds between chimes. If a stored chime request was accompanied by a simultaneous closure of the **CONT** terminal, that chime will play continuously for 5 seconds. An **IGNORE** terminal is also provided. When the **IGNORE** terminal is grounded, all incoming chime triggers are ignored. Grounding the **IGNORE** terminal while a chime is playing will abort the event. While the module is chiming, the **CHIMING** output terminal is held low. This terminal is used to control other equipment or modules. At the conclusion of each chime, the **EOC** (end of chime) terminal pulses to ground for 100 mS. This terminal may be used to trigger other equipment or modules.

Used alone or in conjunction with other RDL RACK-UP®, STICK-ON®, TX™, or FLAT-PAK series products, the FP-CH8 can be the foundation for many innovative audio systems!

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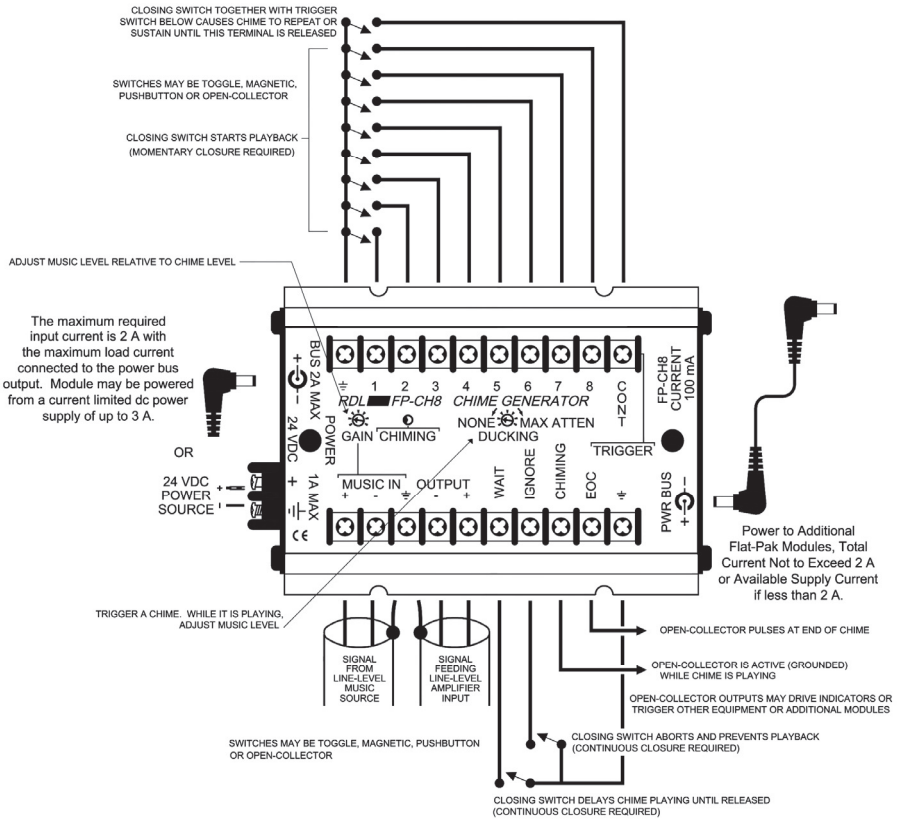
Installation/Operation

CE **Declaration of Conformity available from rdlnet.com.**
Sole EMC specifications provided on product package.
Specifications are subject to change without notice.



TYPICAL PERFORMANCE

Music Input	
Inputs:	50 kΩ balanced or unbalanced
Input Signal:	-20 dBV (unbalanced) to +4 dBu (balanced)
Maximum Input Level:	+22 dBu
Frequency Response:	20 Hz to 50 kHz (+/- 0.5 dB)
THD+N:	< 0.05% (unity gain, 50 Hz to 20 kHz)
Noise below +4 dBu:	< -70 dB (unity gain)
Headroom:	> 16 dB (above +4 dBu)
Gain:	Unity to +22 dB (adjustable)
Ducking Level:	Unity to fully off (adjustable)
Control Terminals	
Input Configuration:	Pull to ground, 0.5 mA
Trigger Inputs (8):	Trigger on high to low transition
Control Inputs (3):	**WAIT** (play delay), **IGNORE**/Abort (no playback)
	CONT (continuous repeat of triggered chime)
Output Configuration:	Open collector @ 100 mA
Control Outputs (2):	CHIMING (low when chiming),
	EOC (low 100 mS at end of chime)
Output	
Output:	150 Ω balanced or 75 Ω unbalanced
Output Signal:	+4 dBu nominal
Power Requirement:	24 to 33 Vdc @ 100 mA, Ground-referenced
Dimensions:	Width: 3.25 in. (8.26 cm)
	Length: 5.00 in. (12.70 cm)
	Height: 1.36 in. (3.46 cm)

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rule. These limits are designed to provide reasonable protection against harmful interference in a residential installation. The equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off an on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Radio Design Labs Technical Support Centers
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