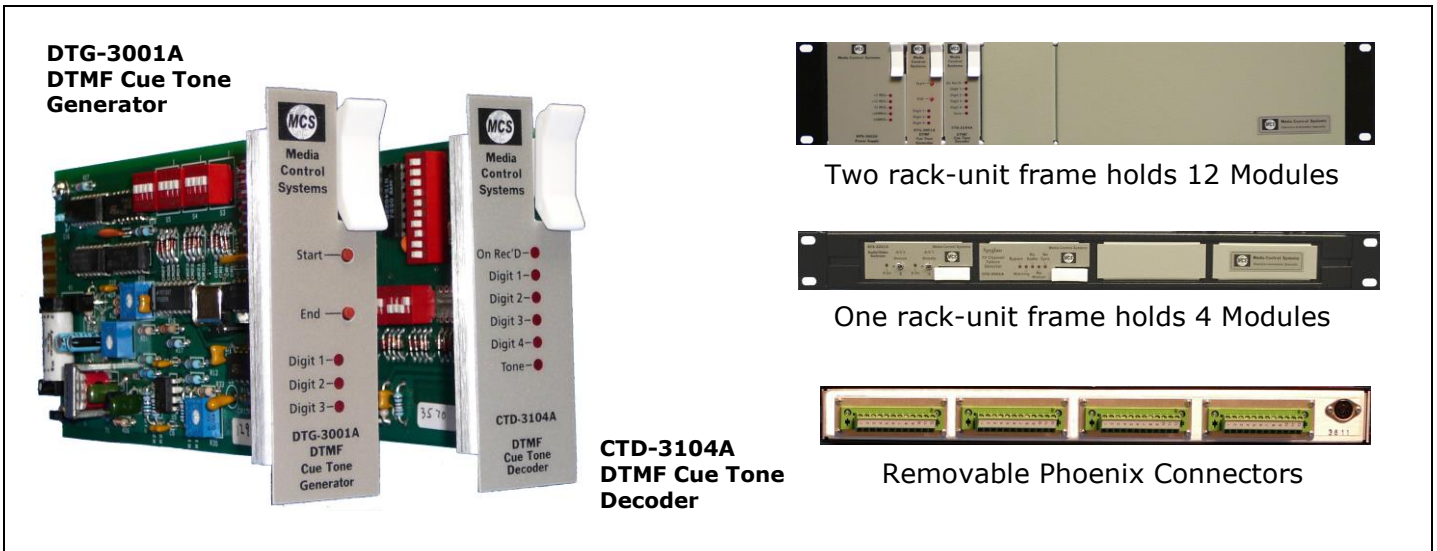


Media Control Systems



DTMF Cue Tone Control System

Cueing for Advertisement Insertion
into Cable and Broadcast Networks



DTG-3001A DTMF Cue Tone Generator

- Manual Front Panel Send On/Off Control
- Single or Two GPI Wired Remote Control
- Dip Switch Selectable Tone Digits
- Three Digits plus On/Off Tones, 0-9, *, #
- Optional Fourth Digit, 0-9
- Program Audio Mute
- Tones-Generated LED Indicators

DTG-3001A DTMF Tone Generator

The DTG-3001A generates CATV Network Industry Standard DTMF cue tone sequences for signaling local ad insertion equipment. The generator creates two sequences of four DTMF tones, comprising of either a START or END function.

The DTG is a plug-in module that requires a rack frame and power supply. Two frames are available. One is a single EIA standard rack unit (1.75-in) and holds four modules. The other is two rack units (3.5-in) and holds twelve modules. DTGs and CTDs can be housed in the same frame.

CTD-3104A DTMF Cue Tone Decoder

- Decode Industry Standard Cue Sequences
- Dip Switch Selectable Tone Digits Decoded
- Three Digits plus On/Off Tones, 0-9, *, #
- Optional Fourth Digit, 0-9
- Relay Closure Tone-Received Output
- Tones-Received LED Indicators
- Decoded Sequence On or Off LED Indicator

CTD-3104A DTMF Tone Decoder

The CTD-3104A receives CATV Network Industry Standard DTMF cue tone sequences and provides a GPI relay closure for triggering Ad Insertion equipment. The relay closure activates when an On-tone sequence is received and deactivates when the Off-tone sequence is received.

The CTD is a plug-in module that requires a rack frame and power supply. The CTD uses the same rack frames as the DTG and other 3000 series modules. The frames are wired at the factory on a custom basis. Unused slots in the frames can be prewired for future expansion.

DTMF Tone Generator

The DTG-3001A provides two sequences of four DTMF tones, three tones and * for start and the same three tones and a # for stop. Front panel pushbutton switches, internal jumpers, and control inputs on the edge connector can be used to select various output combinations.

Three sets of DIP-switches on the circuit board determine the first three digits in the sequence. The last digit is determined by the pushbutton or control signal. If an audio signal has been connected to the module input, the audio will be muted, and the tone sequence will be inserted in its place.

Operational Modes

Normal Single Sequence

The START and END buttons, or edge connector control inputs, initiate a single sequence of tones. Either sequence (START or END) may be repeated on completion of the previous output. The pushbutton or logic signal must be released before successive tones can be transmitted.

Normal Repeat Sequence

Tone sequences will be repeated as long as the pushbutton is depressed. Logic inputs will generate a "Normal Single Sequence".

Single START/END

The START and END sequences must alternate. One sequence cannot be repeated until the other sequence has been generated.

Single START and END Sequence

To initiate a combination of both sequences, only the START input is used. The START input must remain active until the START sequence has finished. Once the START input goes inactive, the END sequence is automatically initiated.

Audio Output Specifications

Standard ITT DTMF tones.
Greater than 2.2 V-pp into 600 ohms
Adjustable from 0 V-pp to 2.2 V-pp
Tone duration 40ms on, 40ms off

Digital High-Speed DTMF Tone Decoder

The cue tone decoder monitors satellite receiver program or cue tone audio and provides start and stop signals to activate automation and/or signal switching equipment.

The CTD-3104A is used to add locally generated material in the pre-designated spots identified with cue-tones. Compatible with standard telephone touch-pad tones, the module can be adapted to many remote control applications.

PCB mounted programming switches are provided for selection of a number of digits to be decoded and type of output signal desired.

Operational Modes

Momentary Mode

The output turns on for approximately 1 second after the last tone of the selected group is received. No "OFF" tone (#) is utilized: each time the appropriated code is applied (say 729*), a momentary relay closure will occur.

Alternate Action Momentary Mode

The output turns on for approximately 1 second after the last tone of the "ON" group is received (usually*) and the "ON" LED lights. The last tone in the next group received must be the "OFF" group tone selected (usually #): this will give a momentary output and turn the LED off.

On/Off Latching Mode

The output is turned on and stays on after the last tone of the "ON" group is received (usually*). The same group must be received again to turn the output off, no "OFF" group is utilized.

Alternate Action Latching Mode

Same as ON/OFF LATCHING, but the last tone group must be an "OFF" group (say 729#) to turn the output off.

Audio Input Specifications

Input level: 0.7 to 2.0V p-p.
Input impedance: (dual) High: 50K ohms, Low: 600 ohms.

Sample System Configurations and Pricing

1RU, 1000 Series Frame

1 Cue Tone Generator

Quantity	Model #	Description	Price	Total
1	CMF-1000A	1RU Frame for 4-modules, includes external power supply	\$350	\$350
1	FWD-3000A	Frame Wiring and Connector Panel, One FWD per module.	\$100	\$100
1	DTG-3001A	4-Digit High Speed DTMF Cue Tone Generator	\$300	\$300
Total Price of Frame and Modules				\$750

1 Cue Tone Decoder

Quantity	Model #	Description	Price	Total
1	CMF-1000A	1RU Frame for 4-modules, includes external power supply	\$350	\$350
1	FWD-3000A	Frame Wiring and Connector Panel, One FWD per module.	\$100	\$100
1	CTD-3104A	4-Digit High Speed DTMF Cue Tone Decoder	\$300	\$300
Total Price of Frame and Modules				\$750

2 Tone Generators with 2 Decoders

Quantity	Model #	Description	Price	Total
1	CMF-1000A	1RU Frame for 4-modules, includes external power supply	\$350	\$350
4	FWD-3000A	Frame Wiring and Connector Panel, One FWD per module.	\$100	\$400
2	DTG-3001A	4-Digit High Speed DTMF Cue Tone Generator	\$300	\$600
2	CTD-3104A	4-Digit High Speed DTMF Cue Tone Decoder	\$300	\$600
Total Price of Frame and Modules				\$1,950

2RU, 3000 Series Frame

6 Cue Tone Generators, Frame wired for 12

Quantity	Model #	Description	Price	Total
1	CMF-3000B	Rack Mounting Frame, 3.5" X 19". Holds 12 3000-series modules.	\$400	\$400
1	BFP-30XXA	Blank Filler Panel for CMF-3000B, Specify number of spaces	\$25	\$25
13	FWD-3000A	Frame Wiring and Connector Panel, One FWD per module.	\$100	\$1,300
1	RPS-3002E	Regulated Power Supply, 110/220 60/50 Hz	\$200	\$200
6	DTG-3001A	4-Digit High Speed DTMF Cue Tone Generator	\$300	\$1,800
Total Price of Frame and Modules				\$3,725

4 Tone Generators and 4 Tone Decoders

Quantity	Model #	Description	Price	Total
1	CMF-3000B	Rack Mounting Frame, 3.5" X 19". Holds 12 3000-series modules.	\$400	\$400
1	BFP-30XXA	Blank Filler Panel for CMF-3000B, Specify number of spaces	\$25	\$25
9	FWD-3000A	Frame Wiring and Connector Panel, One FWD per module.	\$100	\$900
1	RPS-3002E	Regulated Power Supply, 110/220 60/50 Hz	\$200	\$200
4	DTG-3001A	4-Digit High Speed DTMF Cue Tone Generator	\$300	\$1,200
4	CTD-3104A	4-Digit High Speed DTMF Cue Tone Decoder	\$300	\$1,200
Total Price of Frame and Modules				\$3,925