

**OPERATOR'S MANUAL
MODEL CM10A/CT10A**

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All requests for repairs should be directed to the factory.

This instrument is warranted against defective workmanship and materials for a period of six months. There will be no warranty when the instrument is misused, or when the factory seal on the instrument is broken.

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SECTION 1

INTRODUCTION

Micro Seven, Inc. model CM10A or CT10A contains Alarm-Receiver Simulator/Tester or alarm receiver. The Alarm-Receiver Simulator/Tester function provides simulated telephone-line and alarm receiver for testing and demonstrating alarm panels for Contact ID, and 4+2 pulse format protocols. The simulated telephone-line functions include generation of dual-frequency-type dial and ring-back tones, detection of DTMF and rotary-pulse dialing pulses, and battery-feed function. CM10 or CT10 provides handshake tones for both 4+2 pulse and Contact-ID formats. The 4+2 pulse format includes features for SIA DC-02-1992.02 (R2000.05) 4.1.3 SIA Pulse Format P3. As a contact-ID alarm receiver, CM10 or CT10 provides functions of generation of handshake tones and kiss-off tones, receiving alarm messages, check-sum calculation, and transmitting alarm messages in ASCII format at RS232C interface to a PC. An alarm panel is connected directly bypassing telephone companies at CM10A or is connected to telephone lines at CT10A.

SPECIFICATIONS

Handshake tone priority:

Unless 4+2 pulse mode is disabled by the control software, handshake tone for 4+2 pulse is generated first.

Handshake tones for Contact-ID:

1400: 1400 \pm 1 Hz, duration of 100 ms \pm 1.5 ms, silence period of 100 ms \pm 1.5 ms, and 2300Hz: 2300 \pm 2 Hz duration of 100 ms \pm 1.5 ms

Kiss-off tones for Contact-ID:

1400 \pm 1 Hz with duration of 750 ms

Handshake and kiss-off tones for Pulse 4X2: 1400 Hz, handshake duration of 1 sec, kiss-off tone duration: 750ms minimum

Pulse 4X2 Format supports SIA DC-02-1992.02, 4.1.3 SIA Pulse Format P3:

Data carrier frequency: 1900 Hz

Data modulation rate: 20 pulses/sec

Data inter-digit time: 500ms

Subscriber ID field: 4

Event code: 2

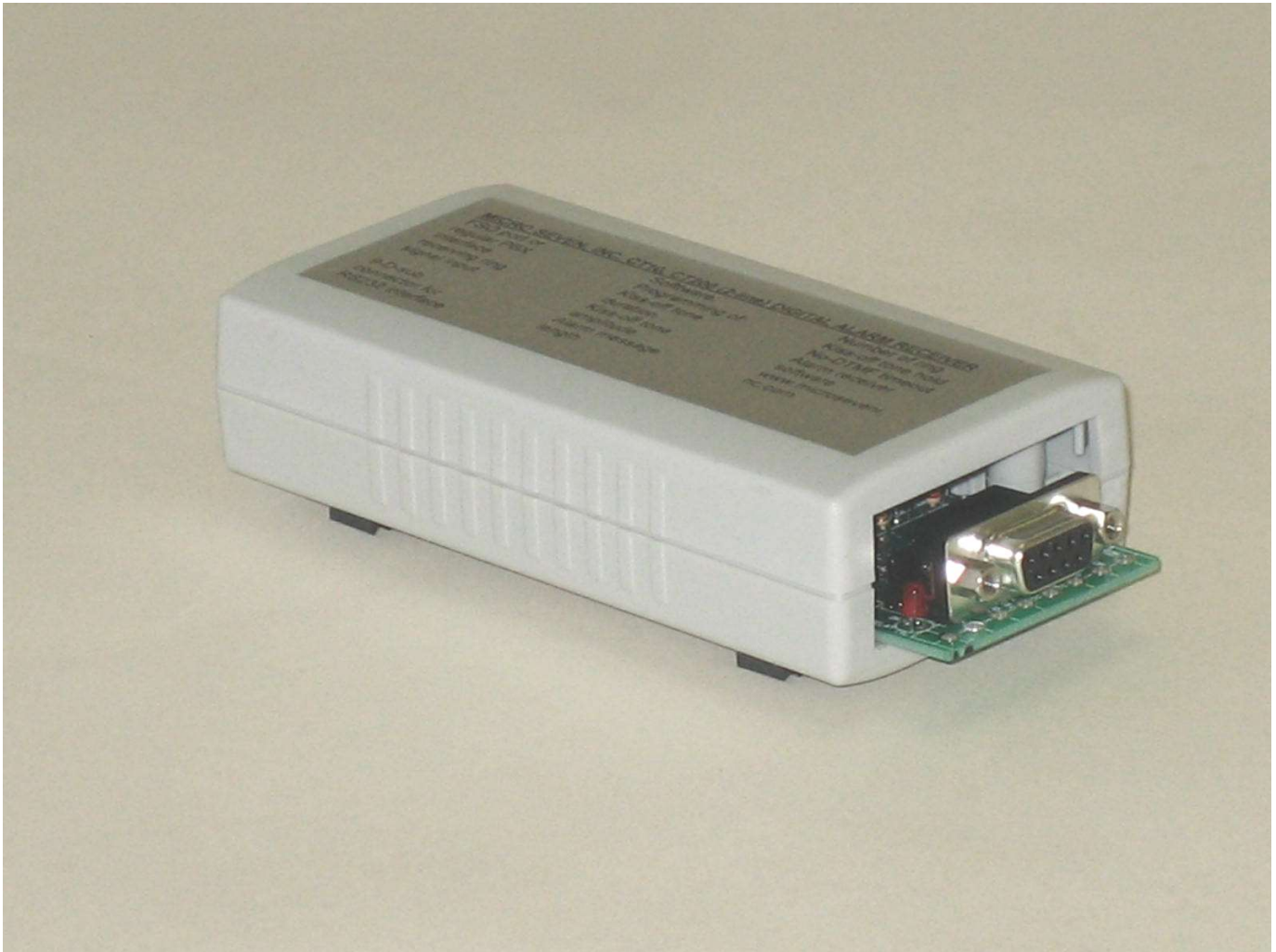
Verification: double transmission

Battery-feed voltage at CM10A: (loop voltage): -20 volts

Off-hook impedance requirement for CM10A: 400 ohms maximum DC, 600 ohms nominal AC(same as the telephone line simulator function)

Call Progress Tones at CM10A: single frequency or dual frequency type selected by control software

Stutter dial tone at CM10A: selected by control software



Line Input Jack: USOC-RJ11-C, standard modular phone jack

CT10:

High voltage isolation: 1500VRMS between lines and RS232C connector.

Ring signal detector: opto-coupler

Signal isolation: telephone coupling transformer

Off-hook impedance: 50 ohms typical

High o-hook impedance is obtained by off-hook mechanical relay.

Handshake tone is produced after 1.8 seconds when the off-hook relay is turned on.

RS232C Interface:

Speed: 115200 baud, with eight data bits, one stop bit, no parity bit

AC/DC Adapter: 117VAC +/- 5%, or 230VAC +/- 5%(for optional 230V AC/DC Adapter)

AC/DC Adapter or Car Battery Adapter input: 12VDC for CT10A or 24VDC for CM10A

International AC/DC adapter is available as an option for either type.

Line Status Display: red to indicate off-hook status (continuous on)

Calibration: not required because digitally synthesized tones

Power-On Indicator: green LED display

Dimensions: 19 cm (4") W x 4.5 cm (1.75") H x 10 cm (7.5") L

Weight: 400g (0.8 LBS.)

Environmental: Operating temperature: 0 to 35 degree C, Humidity: 85% RH at 35 degree C

Warranty/Service: 6 months limited warranty. No warranty if any factory seal is broken. Service is performed at the factory, usually within 5 working days.

Reference for Contact-ID: Digital Communication Standard-SIA DC-05-1999.09, Ademco Contact ID Protocol for Alarm System Communications

Reference for Pulse 4X2: Digital Communication Standard-SIA DC-02, 4.1.3 SIA Pulse Format P3

SECTION 2

Control Software, CM10A.exe

Installation procedure

The following files are required in your disk file to operate cm10a.exe.

cm10a.exe

Commport

Caution: “commport” file must contain RS232 port number as exactly as “COM1:”. To read port number assignment, go to “communication port” in the “device manager”. The port number must be in single digit number. New single digit port number may be assigned in the “device manager”. Restart of PC may be required to set the port assignment.

SHOW ALARM MESSAGE

Showing received Contact-ID alarm messages in the display window area below.

MOVE CURSOR TO RIGHT WINDOW AREA FOR MINI-TERMINAL MODE

Reading and writing data memory between PC and LS15E+ may be done by moving the cursor to the edit window on the right and type for example “R55”, and the data memory content is shown in the large display window below.

KISSOFF TONE LENGTH (CONTACT-ID)

Enter a new number in the edit window on its right. Each count is 10 ms long.

HANDSHAKE AND KISSOFF TONES (AMPLITUDE) PROGRAMMING (Contact-ID):

selectable among MAX, -6 dB, and -12 dB.

RS232 COMMPORT NUMBER-enter RS232 communication port number in the edit window area.

SECONDARY TELEPHONE NUMBER METHOD IN STEAD OF PRIMARY (SINGLE DIGIT) TELEPHONE NUMBER:

The secondary telephone number is selected, ten different telephone numbers are provided as shown in the ten edit windows. Each telephone number is compatible for dialing at both line 1 and line 2. Programmed telephone numbers are stored in EEROM.

SINGLE FREQUENCY CALL PROGRESS TONES

When it is not selected, the dual frequency call progress tones are enable.

PBX MODE

Dialing "9" would produce dial tone again.

STUTTER TONES

When it is enabled, the dial tone is interrupted several times.

SAVE PROGRAMMED VALUE IN THE FILE BELOW

Click the button for storing programmed value in EEROM for 256 bytes in selected file name below. It takes about 60 seconds, and a character "D" is shown in the large display area.

LOAD FROM FILE BELOW

Click the button for loading programmed value into EEROM from the file which is shown in the edit window area. . It takes about 60 seconds, and a character "D" is shown in the large display area. The factory default file is "def0512.14", which is provided in a CD.

ACCEPTS ANY PHONE NUMBERS CM10A

Instead of receiving certain telephone numbers for primary or secondary telephone number, any sequence of telephone numbers are accepted. Received telephone number is displayed in the edit window of the status display area when the "**DISPLAY PHONE NUMBERS**" is marked.

DISABLE 4+2

When it is highlighted, answer tone for 4+2 mode is not generated.

No ring-back tone, CM10A

When it is highlighted, ring-back tone is not generated.

SuGard Format:

Heartbeat function, receiver number and line number

SECTION 3

ADDITIONAL FEATURES

Note: the following programming is normally not required for most of operations, and its programming is done by using commercially available Hyper-terminal software or by using the alarm monitor mode (MOVE CURSOR TO RIGHT WINDOW AREA FOR MINI-TERMINAL MODE)as described in the section 3.4.

4.1 Number of ring programming

The number of ring period before the off-hook relay at line 2 is turned on for an incoming call is programmed by:

MF9 n1 n2, where n1 and n2 in hexadecimal notation forms one byte. MF902 programs the factory-default two ring-period. MF900 programs the shortest ring signal. Note that one ring period consists of ring-on period and ring-off period, and the off-hook relay is turned on the beginning of next ring period.