OPERATOR'S MANUAL
MODEL AP70
PC-ALARM PANEL

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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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Specification and price change privileges are reserved.

SECTION 1

INTRODUCTION

Micro Seven Model AP70, PC-Alarm Panel or Alarm-Panel Simulator, transmits Contact-ID, Pulse 4X2 and SIA-FORMAT alarm messages to alarm receivers by starting commands sent at RS232C interface in PC. PC sends ASCII alarm message for Contact-ID and Pulse 4X2 or Hexadecimal messages to AP70. PC also sends telephone number to AP70. After AP70 dials a telephone number for a receiver, the receiver answers the call and transmits the handshake tones. Depending on which protocol mode that is selected, AP70 transmits one of three protocol messages to alarm receiver. AP70 sends status messages back to PC. If the alarm reporting is not successful, AP70 transmits a different status message to PC. Transmission of alarm messages is repeated for three times if AP70 does not receive positive acknowledge tone. The sequence, which involves re-dialing of telephone number, may be repeated for three times. AP70 contains audio monitor internally to hear dialing process, handshake signals, alarm signal transmission, and acknowledge tone/kiss-off tone. AC/DC adapter for 117VAC and interfacing cable between PC and AP20 is provided. International AC/DC power adapter is available as an option. Alarm receiver with FXS and FXO ports, model LS15E+TRIPLE, with all three protocols, Contact-ID, SIA-Format, and Pulse 4X2, is available for your alarm receiver/simulator. AP70 also runs auto-dial sequence for standard 52 line, which dials telephone numbers and transmits multiple alarm messages for each of three different alarm protocols for each telephone number. The PC software is required to start auto dialer, and it continues auto dialer operation without PC.

SECTION2

SPECIFICATIONS

Telephone number entry: D<telephone number-maximum fifteen digits><CR>
for example D5035551212<CR> for dialing 5035551212. Note <CR> is a carriage return. It is stored in EEROM (non-volatile memory) in AP20.

Alarm message entry for Contact-ID or Pulse 4X2:
S(in maximum 15 ASCII characters for Contact-ID or 6 ASCII characters for Pulse 4X2 or any length of characters for SIA-FORMAT)<CR> for Contact-ID or Pulse 4X2
Note: AP70 prepares checksum at the end of string for Contact-ID and SIA-FORMAT.

Alarm message entry for SIA-FORMAT:
Because alarm message for SIA-FORMAT may contain binary data, alarm message may be difficult to be entered into AP70. Instead of entering alarm messages using the “S” character in the beginning of character string, memory write command for storing memory address 0D0H or 0xD0 may be used. The memory address is 0D0h, 0D1H, 0D2H, 0D3H, 0D4H------. The end of message is indicated by 0FFH. In this method, check-sum byte needs to be entered.
For example, sending an address block data of 06 23 30 30 30 31 31 31 31 DA FF requires the following:
KD006KD123KD230KD330KD430KD531KD631KD731.
Note: The column parity byte is automatically prepared and attached at the end of message by AP70.

Another new entry format is available to enter hexadecimal notation with ‘S’ header as follows:

S(hexadecimal two character ASCII) (hexadecimal two character ASCII)-----.
For example, sending an address block data of 46 23 30 30 30 31 31 31 31 requires the following:
S0623303030313131<CR>
Note: The column-parity byte is automatically prepared and attached at the end of message by AP70.

Protocol selection:
W7F00 for selecting Contact-ID, W7F01 for selecting SIA-FORMAT, or W7F02 for selecting Pulse 4X2.

DTMF dialing signal power: 0 dBm total for two frequency components, 100 ms on, 100ms off

Pulse dialing: Break period: 60 ms, make period: 40 ms, inter-digit wait time: 1 sec

Alarm message signal power: -12 dBm (factory default), 0 dBm with Control Register bit 7 on

Alarm message DTMF tone timing: burst ON time: 50 ms (factory default), burst OFF time: 50 ms (factory default), programmable by DTMF register

SIA-FORMAT baud rate of FSK signal: 110 or 300 selectable by bit 1 of AB register

Handshake tone and kiss-off tone signal detection: -26dBm minimum (factory default), -38dBm with x4 gain by Control Register bit 6 off

Front panel controls:

Power switch
Power-On Indicator: green LED display

Rear panel controls:

DC power input, DC12V, 800 ma
RS232C interface connector, 9-pin D-sub, female
RJ11 connector

Audio monitor: monitoring receiving signal (handshake tone and kiss-off tone) and transmitted signal (dialing signal and alarm message), 0.1 watts maximum with internal speaker

RS232C interface: 9600 baud nominal (may be changed to 1200 baud by control register 2), no parity, and 8-bit character

There are no RS232C data communication handshakes available for AP70 and PC. The hardware and software handshakes involving with CTS, RTS, XON, and XOFF are not required for AP70 because AP70 does not require any delay between character inputs and AP70 transmits few characters for messages normally. However, if the AP70 Control Register bit 5 is cleared to enable nonvolatile memory operation for storing telephone numbers and alarm messages, minimum 10 ms delay is required between characters inputs for telephone number and alarm message entry.

Start alarm reporting: G
Start alarm reporting process by dialing the telephone number, receive handshake tones, transmit alarm messages, receive kiss-off tones and hang up the line if AP70 Control Register is programmed.
A carriage return is not needed.

Continuous message transmission mode without turning off telephone relay:
Instead of transmitting single message, multiple messages are transmitted by sending "WACB2".

Single message transmission mode:
WACB0

Hang-up command or Abort command: A
Turn off off-hook relay in AP70 or abort alarm reporting process. A carriage return is not needed.

Repeat alarm message command: B
It transmits alarm message when AP70 is off-hook condition. A carriage return is not needed.

Reading telephone-number command: T
AP70 transmits programmed telephone numbers to PC. A carriage return is not needed.

Reading alarm-message command: U
AP70 transmits programmed alarm message in sixteen digit-long including check sum to PC. A carriage return is not needed.

Status messages from AP70 to PC

MESSAGE SUCCESS
MESSAGE FAILED or CALL FAILED

Telephone interface: use of mechanical relay, optical-coupler, and telephone coupling transformer to obtain high voltage isolation and high on-hook impedance

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

AP70 REGISTERS: Caution: We recommend factory default values for all AP70 registers.
AP70 registers are written by a command format of "M m1 m2 n1 n2" for EEROM/data memory operation or "W m1 m2 n1 n2" for data memory operations. EEROM/data memory operation saves copy of data memory in EEROM for restoring data memory contents on power-up. The “m1 m2” is address, and “n1 n2” is the data. There is a character “C” is returned to PC after each EEROM operation. The "W m1 m2 n1 n2" operation writes new value in data memory only and not in EEROM. The content of EEROM is not changed.

1. DTMF Register
DTMF Register operation writes new value of on/off timing of DTMF generation of alarm messages.
Each increment is 10 ms, and the factory default condition is 5 for 50ms on and off timing. Ademco specification limits 50ms minimum and 60 ms maximum. The command format is:
MA5 n1 n2 for EEROM/data memory operation
Or
WA5 n1 n2 for data memory operation.
Where n1 and n2 forms increment of 10 ms. For example, MA506 or WA506 selects 60 ms on/off times.
The content of DTMF Register may be done by "RA5", and AP70 outputs "06".

2. Tone Detect register

Tone Detect register contains threshold value for detecting handshake and kiss-off tones for poor line conditions or for long-distance telephone calls.
The threshold value for long-distance telephone line condition when Control Register bit 6 is off is programmable by the following command:
MA7 n1 n2 for EEROM/data memory operation, and WA7 n1 n2 for data memory operation, and when smaller hexadecimal value provides lower threshold value and higher sensitivity. The factory default value is 20 hexadecimal value. The content of Tone Detect register may be read by RA7.

3. Control Register

It is written by the following command:

MAC n1 n2, where n1 n2 form one byte in hexadecimal notation or WAC n1 n2.

Note: "MACB0" programs the factory default conditions.

Status of the control register is performed by entering "RAC", and AP70 generates "B0".

Bit 7: "1" selects higher signal power output (0 dBm) for alarm message, and "0" selects lower signal power output (-12 dBm). The factory default is "1".

Bit 6: "1" disables input signal amplification (x4) for detecting weak handshake and kiss-off tones, and "0" enables input signal amplification. The factory default is "0".

Bit 5: "1" disables storing telephone number in non-volatile memory for telephone number input command, and "0" is for storing telephone number in non-volatile memory. The factory default is "1".

Bit 4: AP70 does not detect busy tone and it requires to be “1”.

Bit 3: "1" selects rotary-pulse dialing, and "0" selects DTMF dialing of telephone numbers. The factory default is "0" for DTMF dialing.

Bit 2: "1" disables re-dialing of telephone numbers when "MESSAGE FAILED" is generated. "0" enables re-dialing of telephone number for maximum times. The factory default is "0" for re-dialing telephone numbers when "MESSAGE FAILED" is displayed.

Bit 1: "1" keeps telephone line off-hook after successful delivery of alarm messages. "0" enables hanging up the line after successful of alarm messages. The factory default is "0" for hanging up the line.

Bit 0: "1" disables re-dialing telephone numbers when message "CALL FAILED" is displayed. "0" enables re-dialing telephone numbers. The factory default is "0" for re-dialing telephone numbers.

4. Redial Register
The number of times that AP70 repeats dialing when there is a “CALL FAILED” or “DIALED # BUSY” message is output to PC is written by the following command:
MA3 n1 n2, where n1 n2 form one byte in hexadecimal notation or WAC n1 n2. The factory default is three times.

5. Message Length Register
The alarm message length for AP70 is normally sixteen digits as defined in SIA DC-05-1999.09, Ademco Contact ID Protocol for Alarm System Communications, but it may be changed for fewer length by the following command:
MF0 n1 n2

For example, "MF010" programs the factory-default condition. The command "MF00F" programs fifteen-digit alarm message.

The Message Length Register is in EEROM.

6. AP70 control register 2 (address location AE, Factory default condition is obtained by MAE05.**)**

Bit 0 of AP70 control register 2 enables CTS handshake between AP70 and PC. In null condition, CTS is asserted to allow PC to transmit characters. During alarm message transmission, CTS is de-asserted to stop transmission of characters to AP70. As soon as transmission of alarm message is completed or aborted because of error conditions, CTS is asserted. The factory default condition is CTS-enabled.

Bit 1 of AP70 control register 2 selects baud-rate. When it is cleared, 9600 baud is selected. When it is set, 1200 baud is selected. Factory default is cleared.
Caution: changing this bit affects baud-rate.

Bit 2 of AP70 control register 2 enables clearing CTS signal when “MESSAGE SUCCESS” or telephone line is disconnected or AP70 goes on-hook. When the bit 2 is off, CTS signal is cleared when the telephone line is disconnected or AP70 goes on-hook. Factory default is set.

7. AB Register

It is written by the following command:

MAB n1 n2, where n1 n2 form one byte in hexadecimal notation for writing in EEROM or WAB n1 n2 for writing data memory.

Note: "MAB00" programs the factory default conditions.

Status of the AB register is read by entering "RAB", and AP70 may generate "00".

Bit 7: "1" disables audio monitor.

Bit 6: The following debug messages are generated after start alarm message command G:

1. p (protocol) m(alarm message) <CR>
   The following debug messages are generated after start alarm message command G:
   d(telephone number) p (protocol) m(alarm message) <CR>
   Example of the Debug message:

   After programming telephone number of 18005551212 and contact-ID message of 123418313112345, the following debug message is generated by microAP1:
   d18005551212 p00 m123418313112345<CR>

2. When the Control Register bit 1 is set for not hanging up telephone line after the first message is successfully transmitted and next consecutive alarm message is transmitted, The following debug messages are generated after repeat alarm message command, B:
   p (protocol) m(alarm message) <CR>

   Example: after programming consecutive message of 234518313112345, the following debug message is generated by microAP1:
   p00 m234518313112345<CR>

Bit 5: the following status messages are generated at RS232 interface when this bit is set:
S00<CR>: telephone relay is on

S01<CR>: begin to dial
S02<CR>: contact-ID handshake signal is detected
S03<CR>: SIA format handshake signal is detected
S04<CR>: 4+2 handshake signal is detected
S05<CR>: transmission of Contact-ID message
S06<CR>: Sequential synch signal transmission
S07<CR>: SIA-FORMAT message transmission
S08<CR>: Pulse 4+2 message transmission
S0A<CR>: hang up telephone line

Bit 4: SIA-FORMAT transmitter continue spacing as a test circuit, must be 0 for normal operation

Bit 3: SIA-FORMAT transmitter continue marking as a test circuit, must be 0 for normal operation

Bit 2: "1" for SIA-FORMAT FSK baud rate for 110, “0” for 300.

Bit 1: continue generating speed synch signal in SIA-FORMAT, must be 0 for normal operation

Bit 0: run auto dialer. It is cleared on power-up.

8. Speed synch signal register A8

MA8(n1)(n2) for writing EEROM, and each count results 33ms, and the factory default value is 9 and 300ms.
Speed synch signal register determines the speed synch signal period in SIA-FORMAT mode. .
AP70 control register 2 (address location AE, Factory default condition is obtained by MAE05.)

SECTION3

OPERATION

3.1 First-time operation

Connect AC adapter to an appropriate AC power source, and connect power plug to AP70. Push power switch on AP70 front panel. You will see green power indicator turned on. Connect RS232C interface cable between PC and AP70. Connect telephone cord to RJ11 connector on rear-panel of AP70, and connect the other end to an inside line of PBX. In your PC, go to Hyper-terminal with communication set in 9600 baud. Local echoing of input character may be desirable to view key board entries.

3.2 Programming telephone number

If a telephone number for dialing alarm receiver is 9-503-555-1212, input the following:
D9,5035551212<CR>
Note: “CR” is a return or carriage return on PC-key board. And a comma, “,” , provides 2.5 second delay that may be necessary to reach outside line in PBX equipment after dialing "9".

To verify the above telephone number entry, enter the following:
T
Then AP70 outputs 9,5035551212.

You will also see the front-panel LED, “DATACOMM” is turned on momentarily when each character is output to AP70. Telephone numbers are stored in EEROM (non-volatile memory) and data memory when Control Register bit 5 is off as a factory default condition.

When Control Register bit 5 is on, programmed telephone numbers and alarm messages are stored only in data memory and not in EEROM. And verification of telephone numbers is done by the same command “T”.
Note: During power-on initialization of AP70, data in EEROM is brought to data memory.

3.3 Programming alarm message for Contact-ID

Select alarm message mode for Contact-ID by the following command:
W7F00

If an alarm message is sixteen digit-long, 123418113101015 and a checksum, input the following:

S123418113101015<CR>
Note: “CR” is a return or carriage return on PC-key board. Do not enter a checksum. AP70 prepares check sum by itself.
To verify alarm message entry, input the following:
U
Then AP70 outputs 1234181131010158. Note: 8 at the end is a check sum that AP70 has produced.

If sixteen character alarm command is entered, i.e., S1234181131010158<CR>, AP70 prepares a wrong checksum for an alarm message. Generating wrong checksum may be useful in testing AP70 for repeating generation of alarm message for four times.

Alarm messages are stored in EEROM (non-volatile memory) and data memory when Control Register bit 5 is off as a factory default condition.

When Control Register bit 5 is on, telephone numbers and alarm messages are stored only in data memory and not in EEROM. And verification of alarm message is done by the same command “U”.
Note: During power-on initialization of AP70, data in EEROM is brought to data memory.

3.4 Start alarm message transmission

To start sending alarm message, input the following:

G

You will hear a relay is turned on, front-panel LED is turned on, and dialing telephone numbers in DTMF tones. If the dialed number is alarm receiver, handshake tones with 1400 Hz and 2300 Hz is heard. Then AP70 transmits alarm message very quickly. After AP70 completes transmission of alarm message, the alarm receiver transmits kiss-off tone (1400Hz) for short period. After the end of kiss-off tone, AP70 hangs up the line. The front-panel LED is turned off.

The following message is output to PC:
MESSAGE SUCCESS

3.5 Testing no loop current, no dial tone, or dialing wrong number for an alarm receiver

When there is no loop current, no dial tone received or dialing wrong number, the following message is output:
CALL FAILED
When re-dialing is enabled with Control Register bit 2 off, AP70 tries three times as a factory-default condition.

3.6 Poor telephone line or long-distance telephone calls

Under poor telephone line or long-distance calls, the following sequence may be necessary:

3.6.1 Adjustment of DTMF signal power for alarm messages

Signal power of alarm message is increased from normal –12 dBm to 0 dBm when the Control Register bit 7 is on. The factory default condition is –12 dBm for signal power with the Control Register bit 7 off.

3.6.2 Sensitivity adjustment for detecting handshake and kiss-off tone

When handshake and kiss-off tones are difficult for AP70 to recognize because of poor telephone line condition or long-distance call, tone input is amplified by four times when the Control Register bit 6 is off.

When the Control Register bit 6 is off, tone detection threshold value is determined by value in Tone Detect Register. The factory default of the Tone Detect register is hexadecimal 20. Smaller value makes detection much sensitive.

3.7 Multiple alarm message transmission

When several types alarm messages need to be transmitted without hanging up the line, set bit 1 on of the Control Register. After successful delivery of alarm message, it remains off-hook without hanging up the line. Also setting bit 5 of Control Register prevents alarm message stored into EEROM area, then input the following new alarm message:
S123418313101015<CR>
Type the following command to deliver the above message:
B
When the alarm message delivery is successful, “MESSAGE SUCCESS” is output from AP70 to PC.
To hang up the call, input the following:
A

3.8 testing MESSAGE FAILED operation

An alarm message with incorrect checksum is prepared by entering extra character as follows:
S1234183131310158<CR>
G
AP70 dials a telephone number stored in AP70, and sends the above alarm message. But an alarm receiver does not generate kiss-off tone because the alarm message contains an incorrect checksum. AP70 sends four times because it does not receive kiss-off tones. The AP70 sends the following:
MESSAGE FAILED
AP70 hangs up the call, and re-dials the telephone number four times, but AP70 will not receive kiss-off tone because the alarm message contains an incorrect checksum. AP70 sends "MESSAGE FAILED" messages three times.

When the Control register bit 2 is on, AP70 does not redial the telephone number. AP70 sends "MESSAGE FAILED" message once.

3.9 testing SIA alarm receiver with sending wrong parity or no 9th bit parity

When CIDFLG register with address of 73hex is written as the following bit pattern, AP70 generates alarm messages in wrong syntax.

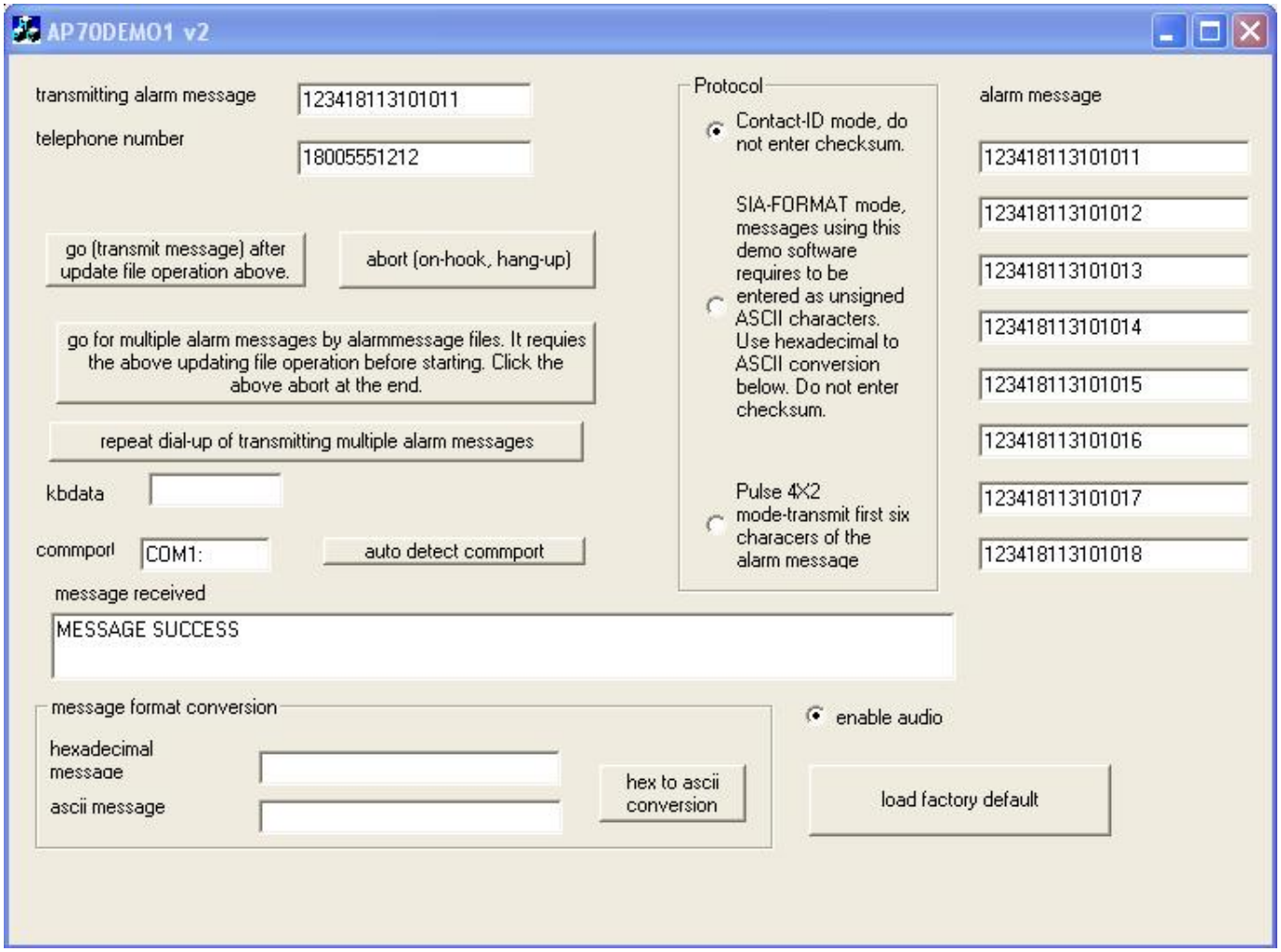
Bit 3: alarm messages with wrong column parity
By outputting W7308, AP70 generates alarm message with wrong column parity.

Bit 2: alarm messages with no 9th bit parity
By outputting W7304, AP70 generates alarm messages withouts 9th bit parity.

SECTION 4

AP70DEMO1.EXE SOFTWARE

The screenshot of AP70DEMO1.EXE is shown below.



4.1 Enable audio

“Enable audio” indicates current state of audio amplifier/speaker which sounds detected dial-tone, ring-back tone, dialing telephone numbers, handshake signals, alarm signals and kiss-off tones.

4.2 Load factory default

“Load factory default” button loads the factory default parameters into AP70.

4.3 RS232 communication port setting

Enter communication port number into the edit window if it is known. Otherwise click “auto detect commport” button. The detected commport number will be displayed in both “message received” edit window and commport edit window.

4.4 Protocol selection

Select one among Contact-ID, SIA-FORMAT and Pulse 4X2 modes. When the mode is changed, this software must be exited and reentered.

4.5 Operation of AP70DEMO1

4.5.1 Single message delivery mode

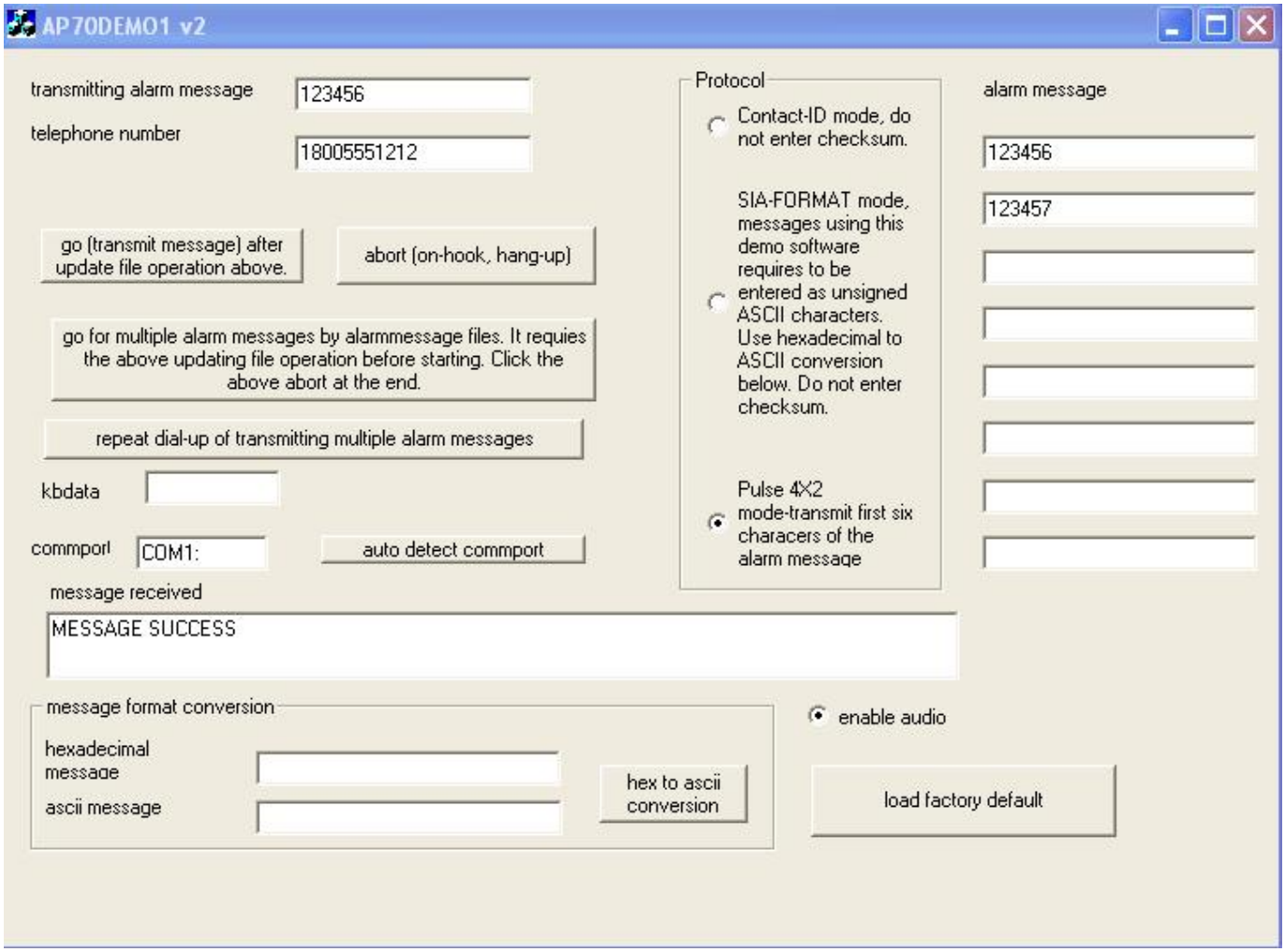
(a) Enter dialing telephone number in the “telephone number” edit window.
(b) Enable audio if audio is not enabled.
(c) Select one of protocol among Contact-ID, SIA-FORMAT and Pulse 4X2 modes.
(d) Click “go(transmit message) after update file operation above”. AP70 will dial the telephone number after going off-hook and detecting dial tone. Dial tone and dialing of the telephone number is heard through speaker inside AP70.
(e) Handshake signal is heard, and message is transmitted by the selected protocol.
(f) Kiss-off tone is heard if the message is received correctly. “MESSAGE SUCCESS” is displayed in the “message received” edit window. Otherwise, “call failed” or “message failed” is displayed.
(g) AP70 goes on-hook of telephone line.

4.5.2 Multiple message delivery mode

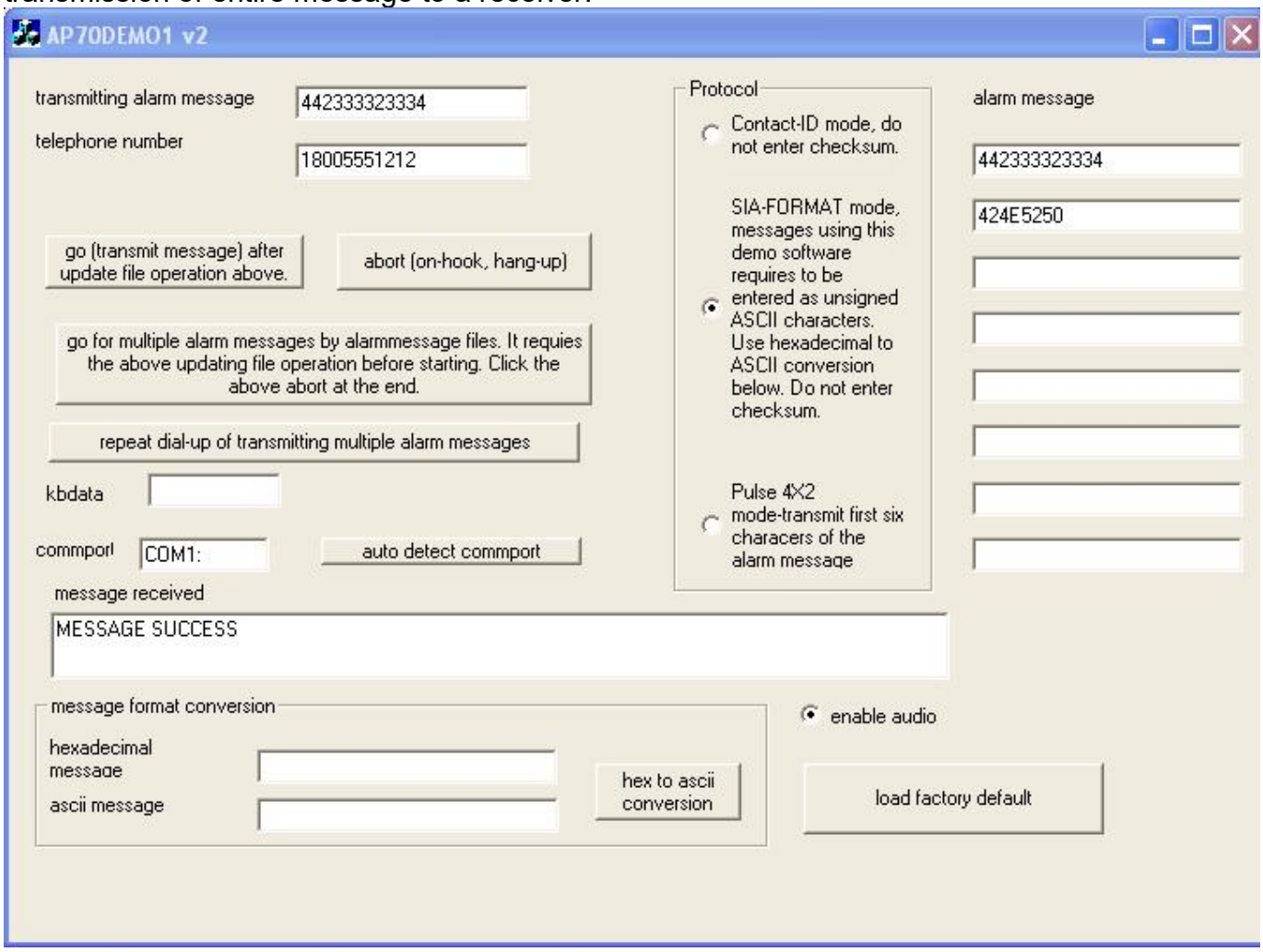
(a) AP70DEMO1 software can transmit eight messages continuously in single telephone call. Enter several alarm messages in ten edit windows on the right hand side. Leave blank if there is no more alarm messages to be transmitted.
(b) Click “go for multiple alarm messages by alarm message files-----“
(d) Handshake signal is heard, and message is transmitted by the selected protocol. Kiss-off tone is heard if the message is received correctly. “MESSAGE SUCCESS” or “CALL FAILED” is displayed in the “message received” edit window.
(c) “transmitting alarm message” window shows current message transmission.
(d) The transmission of alarm messages continues with next alarm message. Each time “MESSAGE SUCCESS” or ‘CALL FAILED” is displayed in the “message received” edit window.

4.5.3 Repeat dial-up operations of transmitting multiple alarm messages

4.5.4 Screenshot of Pulse 4+2 mode is shown below.



Screen shot of SIA-FORMAT for using AP70demo1 software is shown above. Please note that the message is entered as hexadecimal. Here in the above example, the message of “442333323334” is an address block message indicating account number “3234”. The first byte “44” indicates that four bytes long address requesting acknowledgement signal (kiss-off signal) from a receiver. Entering column parity is not required because AP70 prepares it before transmission of entire message to a receiver.



4.6 KB ENTRY

Transmitting ASCII data at RS232 interface is available by moving cursor to the edit area “kbdata”. Any received data at RS232 interface is shown in the “message received” window.

SECTION 5

Autodialer software, ap70autodialer52line.exe and optional ap70 autodialer104line.com

The screenshot of the autodialer software, ap70autodialer52line.exe, is shown below. This dialer software starts, stops or monitors dialer operation and displays any messages in the edit window on its upper right part of the screen. Once started, it stores test results in history file “al” in the same directory as this dialer software resides. Please note that AP70 can run dialer operation without presence of PC, it required to be start. The ap70autodialer104line.exe expands to 104 lines.

This software writes protocol mode, telephone number and alarm messages (single or multiple) into AP70. The programmed data may be stored in a disk file, or new program data may be loaded by another disk file into the screen and AP70.

Up to 52 different telephone calls may be originated by AP70.

5.1 Initial time delay in seconds

Enter a number of seconds in the edit window for waiting for starting a new sequence of test of maximum 52 calls.
When “100” is entered, a new test sequence does not start before one hundred second lapses.

5.2 maximum line number/4

Enter maximum line number divided by four in the edit window. If 1 is entered, test is repeated among 0, 1, 2, and 3.
If “2” is entered, test is repeated among 0, 1, 2, 3, 4, 5, 6, and 7.

5.3 Enable audio

“Enable audio” indicates current state of audio amplifier/speaker which sounds detected dial-tone, ring-back tone, dialing telephone numbers, handshake signals, alarm signals and kiss-off tones.

5.4 RS232 communication port setting

Enter communication port number into the edit window if it is known. Otherwise click “auto detect commport” button. The detected commport number will be displayed in both “message received” edit window and commport edit window.

5.5 Message format conversion

Note: Alarm messages using AP70DEMO1.EXE need to be entered as ASCII. Because some parts of SIA-FORMAT messages are binary numbers. Message format conversion converts hexadecimal messages for SIA-FORMAT mode into ASCII type messages for building alarm messages for SIA-FORMAT mode.

Enter alarm message in hexadecimal notation for SIA-FORMAT. Click the “hex to ascii conversion” button once. The converted ASCII message will be shown in the edit window of “ascii message”. Then move the converted messages into alarm message windows on the right hand side.

5.6 “Write programming data to AP70”

After entered data of mode, telephone number and alarm message in the screen, clicking “Write programming data to AP70” writes data to AP70.
5.7 “read programmed data from AP70”

Clicking this button, reads programmed data from AP70. The auto-dialer must be disabled .

5.8 START (enable dialer) or STOP (disable dialer)

When enabled, AP70 continues dialing and alarm-message deliveries. Note that recycling power of AP70 also stops auto dialer operation.

5.9 “Send email or IP message upon failed line (optional feature)

Optional feature of sending email or IP messages when failed line reports are received from AP70 is available.

6.0 alarm message protocol mode entry

Enter “0” for Contact-ID mode, “1” for SIA-FORMAT mode, or “2” for Pulse 4X2. Leave blank for skipping the line.

6.1 telephone number entry

Maximum 14 digit-long telephone number may be entered.

6.2 alarm message entry

Maximum 47digit-long alarm messages may be entered without check-sum. Multiple messages are entered with space character between messages. For SIA-FORMAT mode, enter hexadecimal noted data, which is separated by space character.

6.3 load data

Screen data may be loaded after entering disk file name and clicking “load” button.

6.4 save data

Screen data may be saved as a disk file after entering disk file name and clicking “save” button.

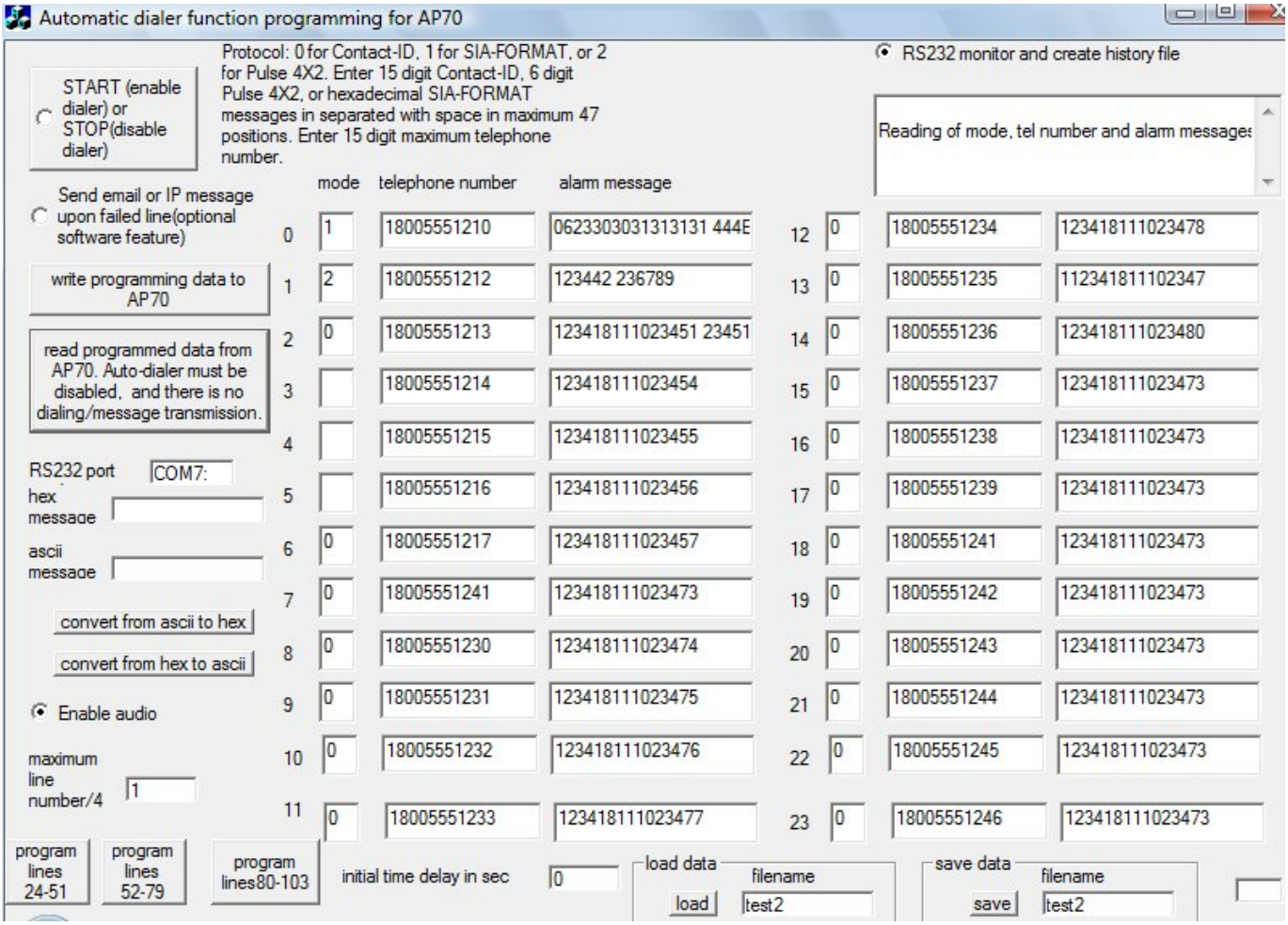
6.5 RS232 monitor and create history file

When enabled, received messages are displayed in the edit window below, and history file in disk file “al” is created as follows:

Sun Dec 07 06:10:23 2014
L000P1#18005551210 M0623303031313131 MESSAGE SUCCESS

M444E51413030 MESSAGE SUCCESS
M424C3930 MESSAGE SUCCESS
Sun Dec 07 06:10:42 2014
L001P2#18005551212 M123442 MESSAGE SUCCESS
M236789 MESSAGE SUCCESS
Sun Dec 07 06:11:23 2014
L002P0#18005551213 M123418111023451 MESSAGE SUCCESS
M234518113012345 MESSAGE SUCCESS
M999118337098765 MESSAGE SUCCESS
Sun Dec 07 06:11:56 2014
L003P
L004P
L005P
L006P0#18005551217 M123418111023457 MESSAGE SUCCESS
Sun Dec 07 06:12:20 2014
L007P0#18005551241 M123418111023473 MESSAGE SUCCESS
Sun Dec 07 06:12:44 2014
L000P1#18005551210 M0623303031313131 MESSAGE SUCCESS
M444E51413030 MESSAGE SUCCESS
M424C3930 MESSAGE SUCCESS

The “al” file shows date and time, line number, P with protocol mode for 0 for Contact-ID, 1 for SIA-FORMAT, or 2 for Pulse 4X2, # with dialed telephone number, M with alarm message, and result message (MESSAGE SUCCESS or CALL FAILED).


Automatic dialer function programming for AP70
Protocol: 0 for Contact-ID, 1 for SIA-FORMAT, or 2 for Pulse 4X2. Enter 15 digit Contact-ID, 6 digit Pulse 4X2, or hexadecimal SIA-FORMAT messages in separated with space in maximum 47 positions. Enter 15 digit maximum telephone number.
START (enable dialer) or STOP(disable dialer)
RS232 monitor and create history file
Reading of mode, tel number and alarm messages
Send email or IP message upon failed line(optional software feature)
write programming data to AP70
read programmed data from AP70. Auto-dialer must be disabled, and there is no dialing/message transmission.
RS232 port COM7:
hex message
ascii message
convert from ascii to hex
convert from hex to ascii
Enable audio
maximum line number/4 1
mode telephone number alarm message
0 1 18005551210 0623303031313131 444E
1 2 18005551212 123442 236789
2 0 18005551213 123418111023451 23451
3 18005551214 123418111023454
4 18005551215 123418111023455
5 18005551216 123418111023456
6 0 18005551217 123418111023457
7 0 18005551241 123418111023473
8 0 18005551230 123418111023474
9 0 18005551231 123418111023475
10 0 18005551232 123418111023476
11 0 18005551233 123418111023477
12 0 18005551234 123418111023478
13 0 18005551235 112341811102347
14 0 18005551236 123418111023480
15 0 18005551237 123418111023473
16 0 18005551238 123418111023473
17 0 18005551239 123418111023473
18 0 18005551241 123418111023473
19 0 18005551242 123418111023473
20 0 18005551243 123418111023473
21 0 18005551244 123418111023473
22 0 18005551245 123418111023473
23 0 18005551246 123418111023473
program lines 24-51
program lines 52-79
program lines80-103
initial time delay in sec 0
load data
load
filename test2
save data
save
filename test2