HF-Mini Owners Manual

December 2013
Revision 1.2

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Operation:

Push the call button. The unit will autodial a single pre-programmed phone
number. When call is answered, both parties may speak with each other. The
called party may then choose one of the following options:

1. Send tone "0" (zero) or Alternate to unlock door or activate gate.
2. Send tone "7" (seven) to dismiss call and force unit to hang up.
3. Just hang up. In most cases unit will sense a hang up and reset itself.
4. Any undefined tone will restart call length timer.

Programming:

Call unit. It will normally answer after 3 rings with a 3 tone sequence.

You have the following options:
1. Send tone "0" (zero) or Alternate to unlock door or activate gate.
2. Send tone "4" (four) to activate voice circuits to converse.
3. Send tone "7" (seven) to dismiss call and force unit to hang up.
4. Send tone "*" (star) to hear it dial the programmed phone number.
5. Send tone sequence: "#*0" (pound,star,zero) to set parameters.
6: Send tone sequence: "#*1" (pound,star,one) to set autodial number.
7. Any undefined tone will restart call length timer.
8. Just hang up. In most cases unit will sense a hang up and reset itself.

Setting Parameters:

The command to set parameters is "#*0" followed by 5 digits as defined:
1st digit is **Ring Count**. Factory default is "2" (2 rings)
2nd digit is **Gate Time**. Factory default is "2" (10 seconds.. 2x5 seconds)
3rd digit is **Call Time**. Factory default is "2" (2 minutes)
4th digit is **Dial Mode**. Factory default is "2" (False audio dialing on)
5th digit is **Open Tone**. Factory default is "0" (Tone to open gate)
Unit will now respond with 2 beep tones for acknowledgement.

Setting the normal factory parameters thus uses tone command sequence:
Example: #*0 22220 (beep-beep reply)
Note: See **Parameter Definitions** for specific details about the parameters.

Setting the Autodial Number:

The command to set the autodial number is "#*1" followed by the phone
number unit is to dial on activation of the unit's call button.

Setting the autodial number thus uses tone command sequence:
Example: #*1 5551212 # (beep-beep reply)
Limit is 24 digits and the final "#" tone marks the end of phone number.
You may also embed "*" tones into the autodial number. These are not dialed
but instead act as a 2 second delay each occurrence.

Note: Not supplying a phone number causes unit to work in **Ring-down** Mode.
Example: "#*1# (beep-beep reply) forces **Ring-down** mode operation.

Note: After the autodial number you may embed some extra delay then add some more digits. These extra digits may be ignored by the telephone exchange and serve as a site identification code. The receiver of such a call may request the autodial number using the "*" key during the call.

The extra numbers can also be use to finish a dialed number to a PBX system extension if the PBX is consistent in its answering timing.

Parameter Definitions:

Ring Count: Range is "0" to "9". (factory default is 2)
This is how many rings are counted before unit auto answers an incoming call. It is actually Ring Count multiplied by 6 seconds. (3=18 seconds)

Note: If unit is phone line powered only, then this parameter has no effect and the unit always answers automatically on the start of the 4th ring.

Gate Time: Range is "0" to "9". (factory default is 2)
This is the timing used for the activation of the on-board relay, usually tied to a door locking device or gate activation input expecting an electrical contact change. This value is multiplied by 5 seconds. Thus a "1" is 5 seconds, "2" is 10 seconds, 3 is 15 seconds, etc. A "0" produces a brief pulse of about 1 second duration.

Call Time: Range is "0" to "4". (factory default is 2)
This value sets the call length limitation so that the unit may auto terminate a call and prevent the unit from staying off hook forever if something goes wrong. This value is multiplied by 60 seconds to produce a time value used for limiting a call length.

Note: A "0" defaults to NO-TIMEOUT. A "5" or greater produces results that are unpredictable, so don't exceed the value of "4", for 4 Minutes.

Dial Mode: Range is "0" to "7". (factory default is 2)
"0" = Not line sharing, Not false dialing, Not emergency mode.
"1" = Yes line sharing, Not false dialing, Not emergency mode.
"2" = Not line sharing, Yes false dialing. Not emergency mode.
"3" = Yes line sharing, Yes false dialing. Not emergency mode.
"4" = Not line sharing, Not false dialing, Yes emergency mode.
"5" = Yes line sharing, Not false dialing, Yes emergency mode.
"6" = Not line sharing, Yes false dialing. Yes emergency mode.
"7" = Yes line sharing, Yes false dialing. Yes emergency mode.

Use "Yes" line sharing if unit is sharing the phone line with another unit.
Use "Yes" false dialing to give user a sense of dialer activation.
Use "Yes" emergency mode to activate relay for the duration of the call.

Gate Tone: Range is "0" to "9". (factory default is 0)
This defines what tone to use to Grant Entry. (cycle the relay)

Note: Don't use reserved tones 4,7,* or # as these are already defined.

Misc Notes:

Note: Unit confirms unbroken dial tone for 3 seconds in line share mode.
Note: Unit false dials "5551234" to speaker only, even in **Ring-down** mode.
Note: User cannot stop a call being placed by 2nd use of the Call Button.
Note: Led lamp flashes when unit is active, solid when audio is enabled.

Electrical Connections:

This Unit has 5 connectors as follows:

ADA: This goes to the LED lamp and indicates unit's active status.
HOOK: This goes to a push button type activation switch.
SPKR: This goes to a loud speaker.
MIC: This goes to a powered microphone.
8pin: This is where connections to external world devices are made.

Pins: 1-2 are power inputs expecting 12V AC or DC, not polarity sensitive.
Pin 3: Is relay "Normally Open" for access door/gate control.
Pin 4: Is relay "Common" for access door/gate control.
Pin 5: Is relay "Normally Closed" for access door/gate control.
Pin 6: Is one side of the phone line wire pair (Telco Tip).
Pin 7. Is Protective Grounding for the phone line. Goes to Earth Ground.
Pin 8. Is the other side of the phone line wire pair (Telco Ring).
See Drawing (last page) for details. (Pin 1 is closest to boards corner)

Adjustments:

Two trim pots share the same label as the Speaker and Mic connections.
The pot nearest the label "SPKR" is the speaker volume adjustment.
The pot nearest the label "MIC" is the microphone sensitivity adjustment.
These pots can be adjusted using a very small flathead screw driver.

Note: Unlike the speaker volume pot, the Mic pot doesn't actually make the
microphone louder or softer. The MIC feeds an automatic MIC volume control
circuit called an AGC. So what this pot actually adjusts is how much local
sound change is required to switch directions of a half-duplex VOX switched
conversation. In half-duplex conversation, the Speaker and the Mic are
never both activated at the same time, else audio feedback howl may occur.
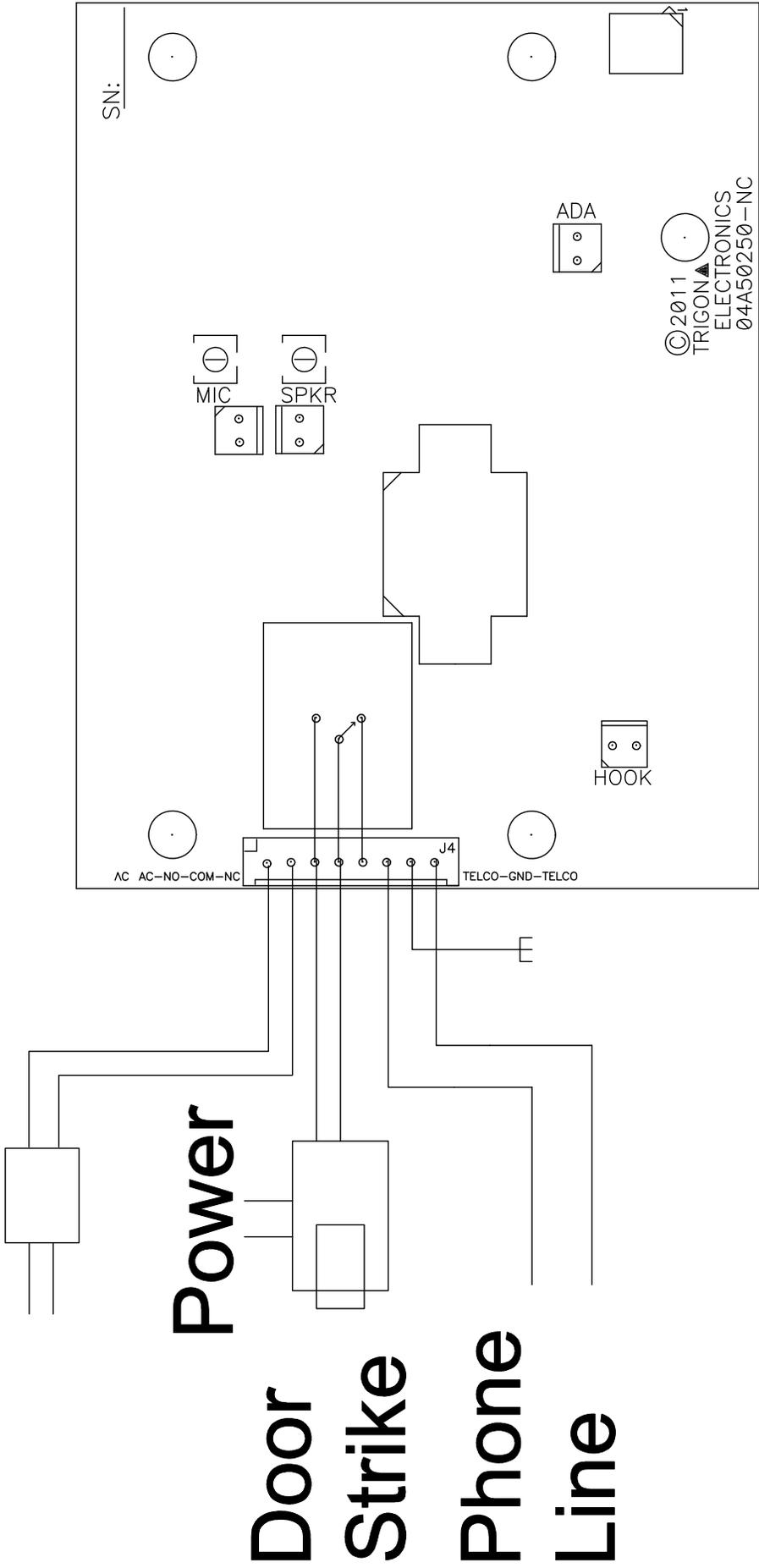
Additional Facts:

This unit can operate as an auto-dialer without the AC power source. In
this mode the Relay will not operate, as it needs 12 volts and substantial
current for its coil. Also being un-powered, the unit will not perform the
false dial method as any tones generated are placed on the phone line,
being the phone line is its only source of power.

The speaker volume is automatically controlled when phone line powered, so
as to limit the loading on the phone line allowing enough reserve power to
keep the computer circuits operating correctly.

The Call Button can not be used to disconnect a call once it's started. The AC-DC Power input is isolated to 5,000 volts from the phone line. Minimum AC-DC external Power can be as low as 7 volts, but the Relay won't operate below 12 volts. External power is recommended for best performance.

For additional help or if any questions, please contact Trigon Electronics. See cover page for details.

MiniHF2 Drawing

SN:

ADA

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TRIGON
ELECTRONICS
04A50250-NC

MIC

SPKR

HOOK

AC AC—NO—COM—NC   J4   TELCO—GND—TELCO

120V to 12V Transformer

Power

Door
Strike

Phone
Line