ACA-1A<br>Single Port Automated Call Attendant

February 21, 2002

# Affordable, User-Friendly Auto-Attendants For Centrex, PABX and Many Key Systems 



The ACA-1A Automated Attendant provides a professional solution for increasing call handling capacity without adding costly staff. The ACA-1A answers promptly and courteously and allows callers to route themselves, with a Touch Tone phone, to an extension or department. Callers can interrupt the message at any time by dialing a single digit or extension. Callers without Touch Tone phones default to a live attendant.

The ACA-1A is a single-port Automated Attendant with a user recordable digital voice announcer. One minute of non-volatile digital memory is available to provide a greeting and a menu of up to 10 departments or extensions.

> This product does not eliminate the possibility of toll fraud! To further protect against fraudulent calls, use with a TR-1 toll restrictor (Fax Back Document 705).

## Features

- Professionally greets and processes calls
- Bilingual mode offers menu selection in two languages
- Compatible with Centrex, PABX, Hybrid, Key and many other systems
- Processes approximately four calls per minute (stackable for greater capacity)
- Separate announcements for greeting/menu, confirmation and busy message
- Remote or local recording
- Non-volatile E ${ }^{2}$ memory
- Stores up to (9) 16 digit speed dial numbers and (1) 32 digit number
- Record announcements with a standard carbon handset or tape player
- Blocks 8+ and 9+ dialing
- Touch Tone interruptible announcement
- CPC disconnect detection
- Programmable ring delay


## Applications

- Increase call capacity without adding staff
- Operator back-up during high-traffic hours
- Use as the first level of a multi-level announcer with additional ACA-1A's

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## Specifications

[^0]
## ACA-1A Compatibility

To use a Viking ACA-1A on your Electronic Key System, you MUST be able to do the following:
a. Connect a standard " 2500 " single line phone directly or via an OPX station card.
b. Program your key system to send incoming calls to the " 2500 " phone.
c. The " 2500 " phone must be able to answer, then hookswitch flash and blind transfer* the call to another extension.
d. If the other extension is busy, the " 2500 " phone must be able to get the incoming call back to advise: "The extension is busy."

* A blind transfer means that the " 2500 " set hookswitch flashes, dials an extension, but does not require that extension to answer before releasing the call.

| Manufacturer and Model | Compatible | Required Software | Busy Protocol |  | Manufacturer and Model | Compatible | Required Software | Busy Protocol |  | Manufacturer and Model | Compatible | Required Software | Busy Protocol |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sw1 | Sw2 |  |  |  | Sw1 | Sw2 |  |  |  | Sw1 | Sw2 |
| ATLAS 824/2E | Yes |  | Off | Off | ITT |  |  |  |  | PREMIER |  |  |  |  |
| AT\&T |  |  |  |  | 501 (1A2) | No |  |  |  | 1648 | Yes |  | Off | Off |
| Horizon | Yes |  | On | On | 3100/ECS56/136 | Yes |  | Off | Off | SLS | Yes |  | Off | Off |
| Dimension | Yes |  | On | On | IWATSU |  |  |  |  | PROSTAR |  |  |  |  |
| Com-Key 416 | No |  |  |  | ADIX | Yes |  |  |  | 120 | Yes |  | Off | Off |
| Merlin | Yes |  | On | On | Omega III | No |  |  |  | 816/DCS | Yes |  | Off | Off |
| Merlin 1030/3070 | Yes |  | On | On | Omega IV | Yes |  | On | On | ROLM |  |  |  |  |
| 820D | Yes |  | On | On | IDSI28 | Yes |  |  |  | Redwood |  |  |  |  |
| Merlin II | Yes |  | On | On |  |  |  |  |  | Redwood PABX | Yes | AA1-RLM |  |  |
| Merlin Plus | Yes |  | On | On | $95 / 200$ | Yes |  |  |  | PABX | Yes | AA1-RLM |  |  |
| Partner | Yes |  | On | On |  | Yes |  |  |  | SAMSUNG |  |  |  |  |
| Partner Plus | Yes |  | On | On | KANDA |  |  |  |  | 816 | Yes |  | Off | Off |
| System 25/75/85 | Yes |  | On | On | EK616 | No |  |  |  | SANYO |  |  |  |  |
| CENTREX | Yes |  | On | On | Keystar 616 | No |  |  |  | S6120/6160 | No |  |  |  |
| CMX <br> Citation 1648 | No |  |  |  | MACROTEL <br> Excel 308/616 16H | No Yes |  |  |  | $\begin{aligned} & \text { SIEMENS } \\ & \text { SD-192/192MX } \\ & \text { SD232 } \end{aligned}$ | Yes No |  | Off | Off |
| COMDIAL |  |  |  | Off | MARSHALL |  |  |  |  | 8-16/12-24/20-40 | No |  |  |  |
| Executech 1432 | Yes | AAA1-CSS | Off | Off | TLC412 | No |  |  |  | S.W. BELL |  |  |  |  |
| Executech 1432 | Yes | AA1-CSS | Off | Off | ST-B616 | No |  |  |  | $246$ | No |  |  |  |
| 2264 | Yes | AA1-CSS | Off | Off | MARUBENI |  |  |  |  | SPRINT |  |  |  |  |
| 2296 | Yes | AA1-CSS | Off | Off | DX-H1240/2470 | No |  |  |  | Protege | Yes |  |  |  |
| In Touch 22/32 | Yes | AA1-CSS | Off | Off | MITEL |  |  |  |  |  |  |  |  |  |
| 64/96/128 | Yes |  | Off | Off | SX20/50 | Yes |  |  |  |  |  |  |  |  |
| EC60PT | Yes |  | Off | Off | Analog SX100/200 | Yes |  | Off | Off | Prostar 120/816 | Yes |  | Off | Off |
| System 2000 (all) | Yes |  | Off | Off | Digital SX200 | Yes |  | Off | Off | Pro-XL 616/1032 | No |  |  |  |
| Digitech (all) | Yes |  | Off | Off | Digial SX200 |  |  |  |  | TADARAN |  |  |  |  |
| Unisyn TO616 | Yes |  | Off | Off | NAKAYO |  |  |  |  | Emerald | Yes |  | Off | Off |
| CSE |  |  |  |  | DKX32/88 | Yes |  |  |  | Coral | Yes |  | Off | Off |
| Criterion | No |  |  |  | NEC |  |  |  |  | TELRAD |  |  |  |  |
| ERICSSON |  |  |  |  | Electromark II | Yes |  |  |  | 2464 | Yes |  | Off | Off |
| Prodigy | Yes |  |  |  |  | Yes | AA1-824 |  |  | 2464 w/software | Yes | AA1-RAD | Off | Off |
| ESTECH |  |  |  |  | 2400/12A 1648 | Yes |  |  |  | 818 Digital | Yes |  | Off | Off |
| Candella Card. 30/45 | Yes |  |  |  | Electra 824 | No |  |  |  | TIE |  |  |  |  |
| Candella Card. 60 | No |  |  |  | Electra Pro II | Yes |  |  |  | TCX 128 | No |  |  |  |
| EXECUTONE |  |  |  |  | NIPPON |  |  |  |  | Businesscom Plus | Yes |  | Off | Off |
| Encore CX | Yes | AA1-ECX | Off | Off | All PABX's | Yes |  |  |  | Businesscom 16/32 Businesscom 2260 | No |  |  |  |
| FUJITSU |  |  |  |  | NITSUKO |  |  |  |  | DSOI/Onyx/OnyxII | Yes |  | Off | Off |
| Focus 50 | Yes |  |  |  | Portrait 824/DMIG | Yes |  |  |  | Ultracom AT/UMT | Yes |  | Off | Off |
| Focus 196 | Yes | AA1-FJS |  |  | NORTHCOM |  |  |  |  | Ultracom TC12 | Yes |  | Off | Off |
| Elite | Yes | AA1-FJS |  |  | Premier/1648 | Yes |  |  |  | TOSHIBA |  |  |  |  |
| GALAXY |  |  |  |  | N. TELECOM |  |  |  |  | DK16/DK280 | Yes |  | Off | Off |
| Delta 2464 | Yes | AA1-DEL | Off | Off | N. TELECOM |  | AA1-ATA |  |  | Strata 6E/DK56/DK96 | Yes |  | Off | Off |
| Delta 514/824/1232 | No |  |  |  | SL-1 | Yes |  |  |  | Perception | Yes |  | Off | Off |
| HARRIS |  |  |  |  | Meridian Norstar | Yes | AA1-ATA |  |  | TRILLIUM |  |  |  |  |
| All PABX's | Yes | AA1-HAR | Off | Off | Vantage/1A3 | No |  |  |  | Panther | No |  |  |  |
| HATACHI |  |  |  |  | NW BELL |  |  |  |  | Panther II <br> Panther II (Canada) | Yes No |  | Off | Off |
| All PABX's | Yes |  |  |  | Integra 208/412/616 | No |  |  |  | Panther Il (Canada) | No |  |  |  |
| INTEL |  |  |  |  | OKI |  |  |  |  | VODAVI | Yes |  |  |  |
| SCX80 | Yes |  | Off | Off | PABX's | Yes |  |  |  | 616EX/616Flex | Yes |  |  |  |
| INTERTEL |  |  |  |  | Discovery III | Yes |  |  |  | 616EX/616Flex | Yes |  |  |  |
| GMX48 | Yes |  | Off | Off | OPTIMA |  |  |  |  | Digital Systems (all) | Yes |  |  |  |
| Aires 616 | No |  |  |  | Digital Key | No |  |  |  | STX/1224 EX | Yes |  |  |  |
| EKS 1664 | No |  |  |  | PANASONIC |  |  |  |  | WALKER (WIN) |  |  |  |  |
| Hitec Phoenix | No |  |  |  | VA (all) | No |  |  |  | 100D | Yes |  | Off | Off |
| 824/1232 | No |  |  |  | DBS (all) | Yes |  | Off | Off | Marathon | Yes |  | Off | Off |
| GLXIIMX 84 | Yes |  | Off | Off | KX-T-ESS (all) | Yes |  | Off | Off | Poet/24A | Yes |  | Off | Off |
| ISOTECH | No |  |  |  | EMS-336 | Yes |  | Off | Off | Reliant | No |  |  |  |

## Installation

Important: To protect the micro-processor and provide maximum efficiency, the installation of a surge protector is recommended. The ACA-1A uses non-volatile message storage. In the event of a power loss, the messages and programming will be retained indefinitely. For applications requiring full operation during power failures, use a commercially available uninterruptable power source (UPS).

## A. Installing Behind a PABX or Electronic Key System



## B. Installing Behind a Centrex Line



## Programming


A. Security Code (memory position \#47)

The security code allows the ACA-1A to be programmed remotely. The factory set code is 845464 (V-I-K-I-N-G). It is recommended that the security code be changed after installation.
Note: The security code must have six digits and cannot contain a $*$ or \#.

## B. Accessing the Programming Mode

1. From a Touch Tone phone, call the line attached to the ACA-1A.
2. When the ACA-1A answers, enter a "*".
3. When the recording stops, enter the six digit security code (see section $\mathbf{A}$ ).
4. To leave the programming mode, simply hang-up. The ACA-1A will time out after 20 seconds and disconnect.

## C. Speed Dial Numbers

Up to 10 speed dial memory locations can be programmed: (9) 16 digit and (1) 32 digit.
Note: Special characters such as *'s, \#'s and pauses require 1 digit (see section J. Programming Features).


## D. Speed Dial Memory Positions

## 1. Memory Position 07

Memory position 07 can store up to 32 digits for international numbers or pager numbers.

## 2. Memory Position 08

Memory position 08 can be used to store the appropriate Touch Tone code needed to re-access a call transferred to a busy extension (see section E. DIP Switch Programming). This memory position may also be used as a standard speed dial position if this feature is not required.
3. Memory Position 09

Memory position 09 is reserved for the extension a caller will default to if a Touch Tone code is not entered during the "busy" announcement or within 2.5 seconds after. This memory position may also be used as a standard speed dial position by dialing a 9 .
4. Memory Position 00

Memory position 00 is reserved for the extension a caller will default to if a Touch Tone code is not entered during the "answer" announcement or within 6 seconds thereafter. The ACA-1A can be forced to hang-up if no selection is made by moving DIP switch 4 to the ON position (see section E).
5. Unprogrammed Memory Positions

Unused speed dial memory positions should be programmed to duplicate memory position 00.
6. Extension Numbers that Begin with " 0 "

Callers that attempt to dial an extension number that begins with a "0" will be transferred to the extension number programed into memory position 00.

## 7. Maximum Busy Extension Attempts

After three attempts to a busy extension, the caller will be transferred to the extension number programmed in memory position 09.

## E. DIP Switch Programming

Four DIP switches are provided on the back of the ACA-1A to program busy protocols, operational modes, etc.


| Switch 1 | Switch 2 | Description |
| :---: | :---: | :--- |
| OFF | OFF | Hook flash to reaccess a caller attempting to transfer to a busy <br> extension. |
| OFF | ON | Hang-up required to reaccess a caller attempting to transfer to <br> a busy extension. |
| ON | OFF | Hook flash and Touch Tone code, memory position 08, required <br> to reaccess a caller attempting to transfer to a busy extension. |
| ON | ON | Double hook flash required to reaccess a caller attempting to <br> transfer to a busy extension. |


| Switch | ON/OFF | Description |
| :---: | :---: | :--- |
| 3 | ON <br> OFF | Bilingual Mode <br> Normal Mode |
| 4 | ON <br> OFF | ACA-1A drops the line if the caller does not make a selection. <br> Normal Mode |

## F. Ring Delay (memory location \#45)

The ACA-1A can be programmed to answer the incoming call after a preset number of rings. The ring delay number is stored in memory position \#45 and can be set with any number between 1 and 9 ( 0 is not allowed).

## G. Dialing Speed

The dialing speed of the ACA-1A can be set for normal (4 Touch Tones per second) or fast ( 8 Touch Tones per second) speed. While in the programming mode, enter $* 4$ to select fast speed dialing. If the phone system cannot accept fast speed dialing, enter $\boldsymbol{* 5}$ for normal speed.

## H. Centrex Mode

If the ACA-1A is being used in a Centrex application, it may take up to 15 seconds for a transfer to complete and the ACA-1A must allow for this delay. If the application requires this additional delay, select the Centrex mode by entering $\boldsymbol{* 6}$ while in the programming mode (see section B). The period of delay can be adjusted by programming memory position \#44 with a number from 0 to 9 (see chart to the right).

| Enter | Delay in Seconds |
| :---: | :---: |
| 0 | $6^{*}$ |
| 1 | 7 |
| 2 | 8 |
| 3 | 9 |
| 4 | 10 |
| 5 | 11 |
| 6 | 12 |
| 7 | 13 |
| 8 | 14 |
| 9 | 15 |

* Factory Default
I. Recording

All recordings must be made consecutively in the order shown in the chart below, right.
Note: All announcements must be recorded for the ACA-1A to operate properly. If no announcement is desired, a 1 second moment of silence must be recorded.

## 1. Local Recording

a. Insert a carbon handset into the REC/MON jack or connect a tape player to the TAPE jack.
b. Set the PLAY/RECORD switch to the REC position.

| Record Order for <br> Normal Mode |  |
| :---: | :--- |
| $\mathbf{1}$ | Greeting |
| $\mathbf{2}$ | Transfer |
| $\mathbf{3}$ | Busy |

Note: The LED will flicker with the audio level. Use this to set the audio level when down loading from a tape. The optimum audio level is reached when the LED flickers but is not mostly on or mostly off.
c. Momentarily press the START button, wait for the start tone, then begin speaking or start your tape player. When finished press the button again.

| Record Order for <br> Bilingual Mode* |  |
| ---: | :--- |
| 1 | Greeting in both languages |
| 2 | Language 1 Greeting |
| 3 | Language 1 Transfer |
| 4 | Language 1 Busy |
| 5 | Language 2 Greeting |
| 6 | Language 2 Transfer |
| 7 | Language 2 Busy |

* DIP switch 3 must be set to ON prior to recording
d. Repeat step c for the remaining messages (see chart to the right).

Note: The LED indicates overflow by flashing high/low.
e. To review all the announcements, set the PLAY/RECORD switch to the PLAY position and momentarily press the START button.
Note: The LED indicates playback by flashing on/off.

## 2. Remote Recording

a. Access the programming mode (see section $\mathbf{B}$ ).
b. Enter *1, wait for the start tone, then begin speaking. When finished, enter any Touch Tone.
c. Enter $\boldsymbol{*} 2$ to record each additional message (up to 7 total, see chart above).

Note: Three beeps indicate overflow and errors.
d. To review all of the announcements, enter $\boldsymbol{*} 3$.
e. If a mistake is made, use $\boldsymbol{* 1}$ to start recording from the beginning.

## Recording Tips and Hints

- Write a script for each announcement. Before recording, read the script while timing yourself. Remember, total record time cannot exceed 60 seconds.
- For faster call processing, keep your "greeting" announcement short. The unit will not answer additional calls until a call has been transferred!
"Greeting" Example: "Viking Electronics. Please press 1 for sales, 2 for product support or 3 for customer service. If you do not have a Touch Tone phone, stay on the line for an operator."
"Transfer" Announcement Example: "Please hold while your call is transferred."
"Busy" Announcement Example: "That extension is busy. Please make another selection or dial 0 to talk to the operator."
J. Programming Features
Digits + Location
Record from start (remote only) ..... *1
Record next message (remote only) ..... *2
Playback from start (remote only) ..... *3
Set dialing speed to fast (8 Touch Tones per second) ..... *4
Set dialing speed to normal (4 Touch Tones per second - factory setting) ..... *5
Enable Centrex Mode ..... *6
To add a four second pause at any point in the dialing string ..... *7
Disable Centrex mode (factory setting) ..... *8
Standard speed dial memory positions (1-16 digits) ..... 1-16 digits + \#00-\#06, \#08, \#09
Extended speed dial position (1-32 digits) ..... 1-32 digits + \#07
Centrex delay ..... 0-9 + \#44
Ring delay ..... 1-9 ..... + \#45
Security code (factory set to 845464) 6 digits ..... + \#47
To program a "*" at any point in the dialing string ..... **
To program a "\#" at any point in the dialing string ..... *\#


## Operation

The PLAY/REC switch must be set to PLAY for the ACA-1A to answer. Volume of the messages may be adjusted with the volume control.

## A. Normal Mode (DIP switch 3 OFF)

The ACA-1A will process approximately 4 calls a minute. When an inbound call is detected, the ACA-1A will answer the call with a user recorded announcement.

The ACA-1A then allows you to reach up to 10 departments by entering a single digit speed-dial memory location number. Callers familiar with the system can easily interrupt the menu by dialing an extension number at any time. If the caller enters a " 0 " or fails to enter a number, the call will be sent to a user-programmable default number. After entering a department code or direct extension number, the ACA-1A confirms the caller's selection with a "transfer" announcement. If the incoming call is transferred to a busy extension, a "busy" announcement will give the caller instructions.
If a break in loop current is detected prior to the ACA-1A making a transfer, the ACA-1A will drop the line. This CPC feature is used in some systems to signal the ACA-1A that the calling party has disconnected.
Note: If a caller enters an extension longer than 8 digits or attempts $8+$ or $9+$ dialing, the call will be disconnected.

## B. Bilingual Mode (DIP switch 3 ON)

The Bilingual mode operates similarly to the normal mode except it allows the messages to be recorded in two different languages. In this mode, a main greeting is issued that should direct the caller to enter a Touch Tone " 5 " if they want the language 1 messages. Once this selection is made, the operation is the same as the normal mode. The messages include the following:

1. Main Greeting: This greeting should provide instructions in both languages.
2. Language 1 Greeting: The greeting played if a Touch Tone 5 is entered during the main greeting.
3. Language 1 Transfer Message: The message played during a transfer if language 1 is selected.
4. Language 1 Busy Message: The message played when a busy extension is reached if language 1 is selected.
5. Language 2 Greeting: The greeting played if any other numerical key is pressed.
6. Language 2 Transfer Message: The message played during a transfer if language 2 is selected.
7. Language 2 Busy Message: The message played when a busy extension is reached if language 2 is selected.

## C. Optional Software

The Multiple Directory Software, model AA1-MD, provides multi-leveled directory announcements to help callers reach the correct extension. For more information on this option, call Viking's Fax Back System at (715) 386-4345 and retrieve Fax Back Document 828.

## Product Support Line...715.386.8666

Fax Back Line...715.386.4345
Due to the dynamic nature of the product design, the information contained in this document is subject to change without notice. Viking Electronics, and its affiliates and/or subsidiaries assume no responsibility for errors and omissions contained in this information. Revisions of this document or new editions of it may be issued to incorporate such changes.


[^0]:    Power: 120V AC/12V DC 500mA, UL listed adapter provided Shipping Weight: $1.0 \mathrm{Kg}(2.2 \mathrm{lbs})$
    Environmental: $0^{\circ} \mathrm{C}$ to $32^{\circ} \mathrm{C}\left(32^{\circ} \mathrm{F}\right.$ to $\left.90^{\circ} \mathrm{F}\right)$ with $5 \%$ to $95 \%$ non-condensing humidity
    Hook Switch Flash: $512 \mathrm{~ms} \pm 50$ milliseconds
    Busy Detect Cadence: $200 \mathrm{~ms}-300 \mathrm{~ms}$ or $450 \mathrm{~ms}-550 \mathrm{~ms}$ on/off
    Speed Dial Timing: 120ms on/off (typical) - normal, 60ms on/off (typical) - fast
    Answer Message Default Time-out: 6 seconds
    Busy Message Default Time-out: 2.5 seconds
    Message Length: 1 minute
    Sampling Rate: 64K (equivalent)
    Connections: (1) RJ11 jack, (1) 3.5 mm (1/8") tape jack, (1) modular handset jack

