

The logo for Blue Sky Network features a stylized blue swoosh that starts at the top left, curves upwards and to the right, then loops back down and to the left, ending in a thin line that extends towards the bottom left. The text "Blue Sky Network" is positioned to the left of the swoosh.

Blue Sky Network

# **ACH1000**

# **Advanced Control Head**

## **User Guide**

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# **ACH1000 Advanced Control Head**

User Guide

Version 1.3

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## NOTICE

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**TABLE OF CONTENTS**

**NOTICE ..... 4**

**ABOUT THIS USER GUIDE ..... 7**

**SYSTEM OVERVIEW ..... 7**

    Compatibility and System Requirements .....7

**FRONT PANEL ..... 9**

    Turning the ACH1000 On and Off .....9

    Viewing Signal Strength Indicators .....9

**ACH1000 FEATURES & CAPABILITIES ..... 10**

**Using Speed Dial Functions .....10**

*Menu Navigation.....10*

*Quick Keys .....10*

**Calling Blue Sky Network Customer Support (Toll Free) .....11**

**Using Standard Dial Functions .....11**

*To The United States.....11*

*To Other Countries.....11*

*To Other Iridium Satellite Phones.....11*

**Receiving A Call .....12**

**Calling the Aircraft .....12**

*In The United States .....12*

*Outside The United States.....12*

**Using ‘Call in Process’ Functions .....13**

*Volume Adjustments.....13*

*Mute Function .....13*

*Quick Position / Mayday Alert.....13*

*End Call .....13*

**Using Short Code Functions .....14**

<i>Menu Navigation</i> .....	14
<i>Quick Keys</i> .....	14
<b>Handling Incoming Messages</b> .....	15
<i>Retrieve &amp; Read Messages</i> .....	15
<i>Acknowledge Messages</i> .....	15
<i>Delete Messages</i> .....	15
<b>Using the Flight Plan Option</b> .....	16
<i>Create &amp; Send a Flight Plan</i> .....	16
<b>Using Quick Position / Mayday Alert</b> .....	17
<b>Using Setup Features</b> .....	17
<b>Creating ACH1000 Profiles in SkyRouter</b> .....	18
<i>Locate the ACH1000 Profile Management Section</i> .....	18
<i>Customizing the Profile Set</i> .....	19
<b>Assigning an ACH1000 Profile to a D1000</b> .....	21
<b>TECHNICAL SUPPORT</b> .....	<b>22</b>

## ABOUT THIS USER GUIDE

Thank you for purchasing the ACH1000 Advanced Control Head by Blue Sky Network! This User Guide was designed to be easy to read and follow. It describes the device's physical attributes, features, and use. Separate guides detail device installation and how to use the SkyRouter asset management portal.

Please continue to read on or choose a starting point from the list below:

- [Making and receiving calls](#)
- [Receiving messages](#)
- [Creating a Flight Plan](#)
- [Using Quick Position / Mayday Alert](#)
- [Creating ACH1000 profiles in SkyRouter](#)

## SYSTEM OVERVIEW

The ACH1000 Advanced Control Head integrates with the onboard intercom system, allowing the pilot/co-pilot to easily dial or receive calls directly through the headset. This unique and exceptional D-series upgrade is the perfect tool for pilots, operators, and fleet managers around the globe.

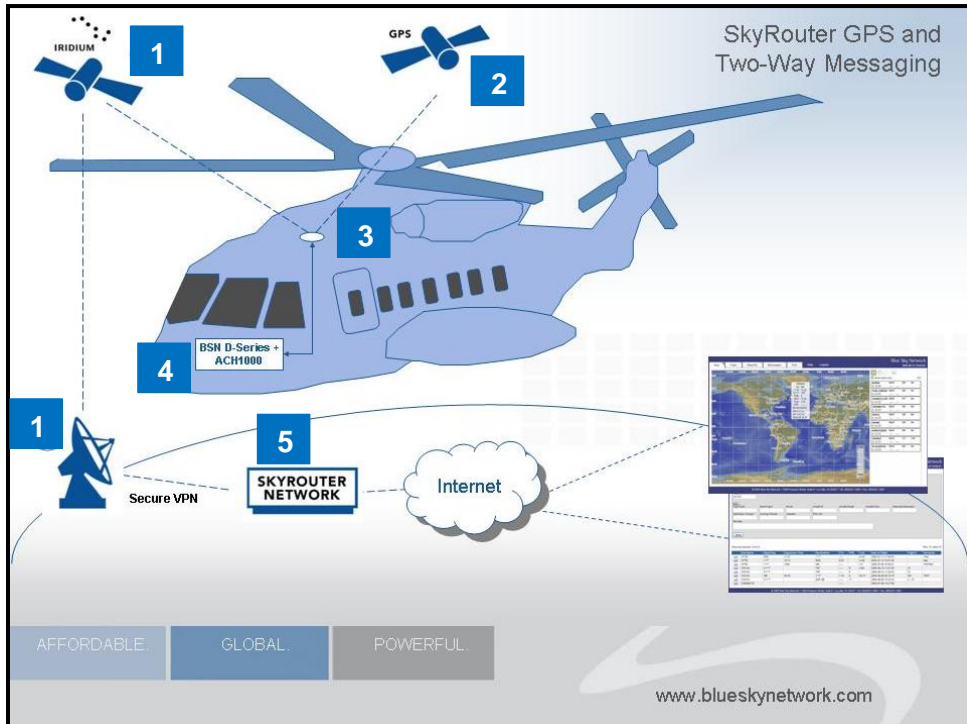
Pilots can be in easy voice contact with dispatch centers and other operations offices through an integrated audio system/phone feature. With the push of a button, the pilot can use the speed dial or standard dial features to place a call to dispatch, who can also place calls to the aircraft directly.

Using the pre-programmed Short Codes, pilots can signal special events, such as Request Wx, Diverting Router, and Special Interest Point, during any trip. This feature is completely configurable and unique to each user. Additionally, the unit offers a simple Flight Plan option. Prior to a flight, the pilot can send information to dispatchers/fleet manager's SkyRouter portal with integrated global mapping.

## Compatibility and System Requirements

**NOTE:** The ACH1000 requires a Blue Sky Network D1000 (serial numbers ending in "A") or D1000C asset tracking product. If your D1000 serial number does not end in "A," you will need to upgrade the product. You may also need to install the latest firmware version on your D1000 unit. Firmware is available on our [support site](#).

A laptop or similar device is required to program the ACH1000 locally. It can also be performed remotely via the SkyRouter asset management portal (see the SkyRouter help menu for more information).



*For illustration only. The SkyRouter network works equally well with fixed wing aircraft, marine vessels, and land mobile vehicles.*

- 1) Iridium satellite constellation
- 2) GPS satellite constellation
- 3) Single-channel antenna for both Iridium and GPS
- 4) Blue Sky Network Iridium terminals and control heads
- 5) The SkyRouter asset management portal



## FRONT PANEL



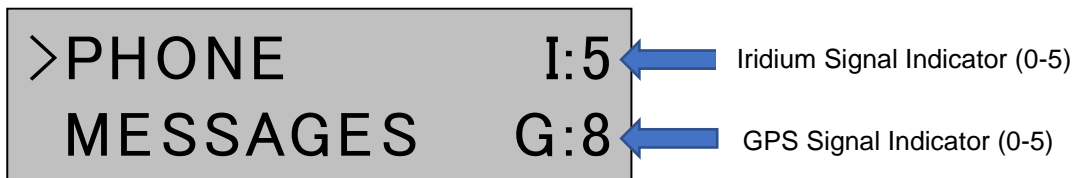
- |   |                                    |
|---|------------------------------------|
| A. Menu navigation button               | E. Clear button                    |
| B. LCD display screen                   | F. Numerical keypad                |
| C. Quick position / Mayday alert button | G. Customer support speed dial (*) |
| D. Power / OK button                    | H. Mute / Un-mute (#)              |

### Turning the ACH1000 On and Off

Press the 'OK' PWR button for three seconds to turn the unit on or off. This will reset the unit to the main menu. All parameters are stored.

### Viewing Signal Strength Indicators

The signal strength indicators can be found on the right side of the LCD display screen.



**NOTE:** If the letter that precedes the strength level is capitalized, the signal strength is considered fully functional. In the rare instance that the letter is lowercase, the signal is operating at a minimal level.

## ACH1000 FEATURES & CAPABILITIES

### Using Speed Dial Functions

The combination of the ACH1000 and the D1000 or D1000C allows the user to easily pre-program up to 10 speed dial numbers. Each number can be given a name, such as "Dispatch," for a more intuitive display to the pilot.

Speed dial numbers can be configured directly on the system or remotely via SkyRouter. There are two methods to dial the stored speed dial numbers: menu navigation and quick keys.

#### MENU NAVIGATION

Use menu navigation to see the complete list of configured speed dial numbers.

- 1) In the Main Menu, select 'PHONE' by using the up or down menu navigation buttons and then pressing the right menu navigation button.
- 2) Select 'SPEED DIAL' and use the right button to be forwarded to the 'SPEED DIAL' submenu.
- 3) Use the up and down buttons to select the desired speed dial number. Press 'OK.'
- 4) The LCD screen will ask for your confirmation to dial the number being displayed. Press 'OK' to accept and begin calling.

In the below example, the phone number for Dispatch is stored inside speed dial field '2.' To call them, the user would select 'PHONE,' press the right menu navigation button three times, then press 'OK.'



2: DISPATCH  
3: MAINTENANCE

#### QUICK KEYS

- 1) Select the 'PHONE' option in the Main Menu.
- 2) Using the numerical keypad, press the speed dial key that corresponds with the pre-configured phone number in your custom speed dial list.
- 3) The LCD display screen will show a confirmation message asking you to verify that the name being shown is the correct name for the number to be dialed. Press 'OK' to initiate the phone call.

In the below example, if you were to press '1' on the numerical keypad while 'PHONE' is selected from the Main Menu and then press 'OK,' a call would be made to the phone number stored in the first field of your custom speed dial list.



>PHONE I:5  
MESSAGES G:8

### Calling Blue Sky Network Customer Support (Toll Free)

You can call Blue Sky Network customer support directly using our speed dial feature. Select 'PHONE' in the Main Menu and click the asterisk (\*) button. Press 'OK' to place the toll free call.

**SPEEDDIAL OK?**  
**Customer Support**

### Using Standard Dial Functions

The ACH1000 allows for normal dial pad dialing to anywhere in the world, from anywhere in the world.

- 1) Select the 'PHONE' option in the Main Menu. Press the right menu navigation button to view the 'PHONE' submenu.
- 2) Choose 'STANDARD DIAL' and press the right button to enter the phone number you wish to dial. Two zeros will already be placed in front of the numbers that you enter; these are represented by the '+' symbol.
- 3) Press 'OK' to begin calling.

---

#### TO THE UNITED STATES

Because the '+' symbol represents '00,' you only need to enter '1' followed by the area code and phone number. For example, to call the number in the picture below, you would dial 1 858 551 3894

**ENTER NUMBER:**  
**+18585513894**

---

#### TO OTHER COUNTRIES

Similar to dialing in the US, you only need to enter the country code and the phone number. The example picture below is dialing a number in the United Kingdom.

**ENTER NUMBER:**  
**+442081234567**

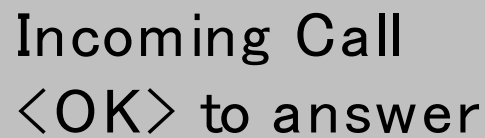
---

#### TO OTHER IRIDIUM SATELLITE PHONES

Enter 8816 followed by the phone number you wish to dial. For example, 8816 214 12345

## Receiving A Call

When there is an incoming call, the LCD display screen will show 'Incoming Call.' If an LED indicator has been installed, it will begin to blink on and off as well. Press 'OK' to accept the call or 'CLR' to ignore.



Incoming Call  
<OK> to answer

## Calling the Aircraft

### IN THE UNITED STATES

Dial the International Direct Dial (IDD) access code for the US and the MSISDN when originating a call from a landline phone in the US and terminating to an Iridium satellite phone (e.g., an ACH1000 or D-series product). This format is used no matter the location of the satellite phone.

For example, from the landline phone, dial 011 8816 XXX XXXXX

### OUTSIDE THE UNITED STATES

Dial the IDD for the country you are dialing to and the MSISDN when originating a call from a landline phone outside the US and terminating to an Iridium satellite phone. This format is used no matter the location of the satellite phone.

For example, from the landline phone (e.g., France) dial 00 8816 XXX XXXXX

## Using 'Call in Process' Functions

When a call is in process, there are several options that are available, including Quick Position/Mayday Alerts, Volume Adjustments, and a Disconnect Call button.

---

### VOLUME ADJUSTMENTS

Press the up or down menu navigation buttons at any time to adjust the volume of the signal that is being transmitted to the headset.

---

### MUTE FUNCTION

This button disables the microphone; you will be able to hear the person speaking, but they cannot hear you. When this feature is activated, the LCD screen will display 'Call muted.' Press the button again to turn off the feature.



Customer Support  
Call muted

---

### QUICK POSITION / MAYDAY ALERT

Pressing the 'Quick Position' button disconnects the call and prompts the system to immediately send a Quick Position report to SkyRouter.



QuickPOS Mode  
\*\*\*ACTIVE\*\*\*

---

### END CALL

To end a call, press the 'OK' or 'CLR' button and you will be returned to the Main Menu.

## Using Short Code Functions

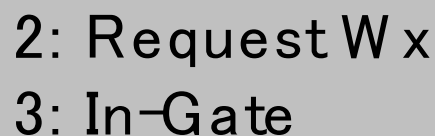
The ACH1000 allows the user to send pre-programmed Short Code messages to dispatch via SkyRouter. There are two methods that can be used to send Short Code messages: menu navigation and quick keys.

### MENU NAVIGATION

Use this method to see the complete list of available Short Codes currently configured on your ACH1000.

- 1) Navigate to the 'Messages' option from the Main Menu. Press the right menu navigation button.
- 2) Select 'Short' and use the right menu navigation button to be forwarded to the Short Code submenu.
- 3) Using the up and down menu navigation buttons, select the desired Short Code and press 'OK.'
- 4) The LCD screen will ask for your confirmation to send the Short Code being displayed. Press 'OK' to send your message.

In the example below, if you set Short Code 1 to send an In-Gate message, you can send the message by first selecting the 'Messages' option via the up and down menu navigation buttons, then pressing the right menu navigation button three times.



2: Request W x  
3: In-Gate

### QUICK KEYS

- 1) When the 'Messages' option is selected in the Main Menu, press the key on the numerical keypad that corresponds with the pre-configured Short Code.
- 2) The LCD display screen will show a confirmation request message asking the user to verify that the name being shown is the correct name for the Short Code message to be sent.
- 3) Press 'OK' to send the message.

For example, in the picture below, the user could select the '1' button on the numerical keypad, then press 'OK' and the ACH1000 will send Short Code 1 to the SkyRouter web portal.



PHONE I:5  
> MESSAGES G:8

## Handling Incoming Messages

When there is an unread message, the LCD screen will display a blinking cursor over the colon (:) in the Iridium signal strength indicator. If an optional LED indicator light is installed, it will remain a solid color.



> PHONE I:5  
MESSAGES G:8

## RETRIEVE & READ MESSAGES

Follow these steps to view the messages that have been sent to you.

- 1) Select 'MESSAGES' in the Main Menu and press the right menu navigation button.
- 2) Using the menu navigation button, select 'READ MESSAGES,' then press the right menu navigation button. The screen will display 'INBOX' on line 1 of the LCD screen. Line 2 will display 'Message = [Current message number] \ [Total messages]' where the highest current message number is the most recent.

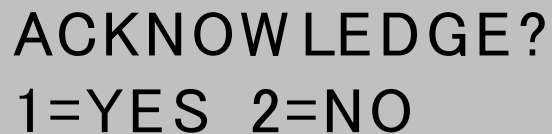


SHORT  
> READ MESSAGES

- 3) View the message by using the up and down menu navigation buttons until the message number that you would like to read is displayed.
- 4) Press 'OK' and use the up or down menu navigation buttons to view the entire message.

## ACKNOWLEDGE MESSAGES

Press 'OK' to see the acknowledge and delete options. When the LCD screen displays 'Acknowledge?' Select '1' to send an acknowledgement receipt or '2' to not send one. Pressing '1' will send an email to the sender, who will only see the subject of the message (not the body) and the preceding text 'ACKN: .'



ACKNOWLEDGE?  
1=YES 2=NO

## DELETE MESSAGES

After you have been prompted to send an acknowledge receipt, you will be given the option to delete the message. Press '1' to delete, or '2' to return to the 'READ MESSAGES' menu.



DELETE?  
1=YES 2=NO

## Using the Flight Plan Option

A Flight Plan containing data such as ETE, People on Board, Fuel, Cruising Altitude, and Departure Time can be sent from the ACH1000 to the SkyRouter portal.

**NOTE:** This is not a formal filing of a flight plan and should be used for informational purposes only.

### CREATE & SEND A FLIGHT PLAN

Follow the steps below to create and send a Flight Plan.

- 1) Select 'FLIGHT PLAN' from the Main Menu.
- 2) Press the right menu navigation button. **NOTE:** Depending on how the Flight Plan option is configured, some or all of the following Flight Plan data may be displayed. For the purpose of this user guide, we will assume all options have been activated.
- 3) Use the left or right menu navigation buttons to input and edit the information in the order you wish. Pressing 'CLR' erases all data in the field. The 'OK' button stores data and will progress you to the next field.
- 4) Press 'OK?' after filling out the Flight Plan, which will be sent to the SkyRouter portal.

Below is a list of possible fields that can be activated and their acceptable input formats.

<b>FLIGHT RULE</b>	Choose between Instrument Flight Rules (IFR) and Visual Flight Rules (VFR). Press '1' for IFR and '2' for VFR.
<b>ETE</b>	Estimated Time En-route (ETE); this field accepts data in the format of hours and minutes and is used to calculate the ETA displayed on SkyRouter. <i>Ex: 2:35 (2 hours and 25 minutes)</i>
<b>POB</b>	People On Board; this field requires a number between 1 and 999. <i>Ex: 12 (12 people on board)</i>
<b>FUEL</b>	This field accepts the hours of fuel remaining on the aircraft in hours and minutes format. <i>Ex: 2:15 (2 hours and 15 minutes of fuel remaining)</i>
<b>CRUISING ALT</b>	This field requires a 1-5 digit number represented in feet. <i>Ex: 6500 (cruising altitude is 6500 feet)</i>
<b>DEPARTURE TIME</b>	This field will accept data in the format of a 24 hour clock; it is used to calculate the ETA displayed on SkyRouter. <i>Ex: 13:30 (departure set for 13:30 or 1:30 PM)</i>



## Using Quick Position / Mayday Alert

When the pilot activates the 'Quick Position' button, all other actions will be discontinued, and the system will send a special alert. Ground personnel can be notified via email, SMS, or the SkyRouter portal.

Press the 'QuickPOS' button to override all other functions and begin sending Quick Position Reports immediately. The LCD screen will display 'QuickPOS Mode Active' and the 'Quick POS' button will flash. Press the button again to deactivate the function.

**QuickPOS Mode**  
**\*\*\*ACTIVE\*\*\***

## Using Setup Features

In the Main Menu, use the menu navigation buttons to select the 'SETUP' option (located below 'FLIGHT PLAN'). Next, press the right menu navigation button to see the list of options below. Choose your desired option, then press the right menu navigation button. Once the LCD screen displays the desired settings, press 'OK' to save your changes.

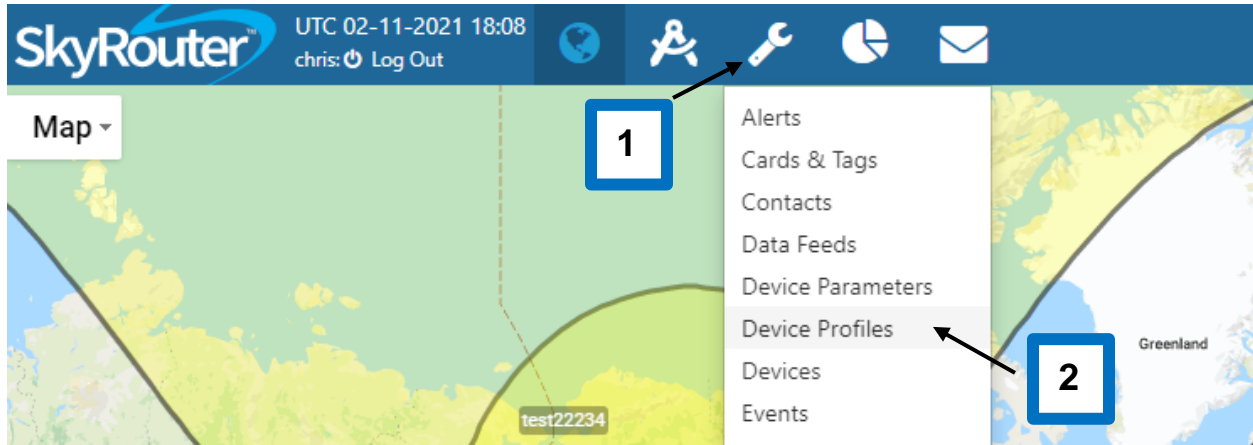
<b>VOLUME</b>	These settings can be set in the range of 1-10. Use the up or down menu navigation buttons to adjust the volume.
<b>BRIGHTNESS</b>	These settings include 'Dimmer' and levels of brightness between 1-10 for the LCD screen. Use the up or down menu navigation buttons to adjust.
<b>EXTERNAL BRIGHTNESS</b>	The brightness of the ACH1000 LCD screen can be controlled by an outside power source. To enable this feature, set the brightness level to 'Dimmer' and ensure the proper installation procedure is used.
<b>CONTRAST</b>	These settings can be set in the range of 1-10 and adjusted by using the up or down menu navigation buttons.
<b>IMPEDANCE</b>	There are two options: 600Ω and 8Ω. Use the up and down menu navigation buttons to adjust the settings.
<b>VERSION</b>	Press the right menu navigation button to view the current firmware version for the ACH1000 and D1000.
<b>RESET</b>	The screen will display 'Updating...' Once the ACH1000 is done updating its parameters from the D1000, you will be returned to the previous menu. This process typically takes about 30 seconds.


## Creating ACH1000 Profiles in SkyRouter

You are able to customize aspects of an ACH1000 profile using your SkyRouter asset management portal, including personal Speed Dial, Short Code, and Flight Plan options.

### LOCATE THE ACH1000 PROFILE MANAGEMENT SECTION

After signing in to the SkyRouter portal, you will automatically be directed to the Map screen. Hover the mouse over the Manage tab (1), then select Device Profiles (2) from the drop-down menu.















Once the screen loads, click either 'New Profile Set' to add a profile or select the  icon to edit an existing profile.

Profile Sets
Device Profile Assignments

### Device Profile Sets

New Profile Set

- ⓘ Device profile sets allow you to control the behavior of devices attached to an asset. For example if you have a control head unit for your device, profile sets allows you to control the operation and availability of the dialing feature (if equipped).
- ⓘ Sets can be assigned to many devices at once.
- ⓘ To create a profile set follow these steps:
  1. Create the profile set based on the product family you wish to assign the set to.
  2. Adjust the settings to your liking.
  3. Assign the profile set to a device via the 'Device Profile Assignments' page.
  4. Check that the assignment process was successful from the 'Device History' report.

Name	Type	Created Date
   15 Minute Reporting	HE7200(A) / HE5500 Device Profile Group	10-06-2017 13:35:16
   7200A IO Testing	HE7200(A) / HE5500 Device Profile Group	07-07-2021 10:23:34
   7200ShortCodeMC	HE7200(A) / HE5500 Device Profile Group	04-02-2014 09:40:36
   ACH	ACH Control Head Profile (D1000)	11-09-2020 08:19:51

## CUSTOMIZING THE PROFILE SET

For the following settings, tick the 'Enable Feature' box to turn the capability on or off. Remember to press the 'Save' button at the bottom of the screen to apply any changes.

In the Flight Plan Settings section, check each field that you would like to make available during flight plan creation (see [Create & Send a Flight Plan](#) for more information).

**Flight Plan Settings**

ⓘ This section controls the availability of the device side flight plan entry feature and what fields are available for entry.

**Enable Feature**

<input type="checkbox"/> Flight Rule	<input type="checkbox"/> Cruising Altitude	<input type="checkbox"/> Origin
<input type="checkbox"/> Destination	<input type="checkbox"/> Fuel	<input type="checkbox"/> People on Board
<input type="checkbox"/> Estimated Time En-route	<input type="checkbox"/> Departure Time	

Under Short Code Settings, there are seven event types that you can choose from by using the drop-down menu. Each event type sends a short code with the type name except for None and Text. The None type will not send a short code at all and the Text type will send a short code with the information you input in the Event Title field.

**NOTE:** The Text type is the only option that can be customized.

**Short Code Settings**

ⓘ Short codes are specific events or user customized messages that can be sent from the device on command.

ⓘ When triggered the device sends the event along with its current location. It can then be viewed like any other position event.

**Enable Feature**

Button #	Event Type	Event Title
1	None	
2	Text	
3	Take-Off	
4	Landing	
5	Min Enroute	
6	Off-Gate	
7	In-Gate	
8	None	
9	None	
0	None	

Tick the boxes in the Phone Settings section if you would like to enable standard free dial and speed dial features. In the 10 number fields, enter the display name and phone number that you would like to save. Remember that the number must be entered in the following format:

**Format:** 00 + country code + area code + phone number

**Example:**0018585513894

### Phone Settings

Phone numbers must start with 00 and then followed by country code (ex. 0018585513894 [00 + country code + area code + phone number])

Standard free dial allows the user to call any number they wish.

Allow Standard Free Dial

Allow Speed Dial

Button #	Display Name	Phone Number
1	<input type="text"/>	<input type="text"/>
2	<input type="text"/>	<input type="text"/>
3	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>
6	<input type="text"/>	<input type="text"/>
7	<input type="text"/>	<input type="text"/>
8	<input type="text"/>	<input type="text"/>
9	<input type="text"/>	<input type="text"/>
0	<input type="text"/>	<input type="text"/>

In the Modification History section, view details of the profile set’s revision history, including an optional note that can be created in the Modification Note section above.

### Modification Note

Optionally enter a note that will be saved with the profile and viewable in the modification history.

### Modification History

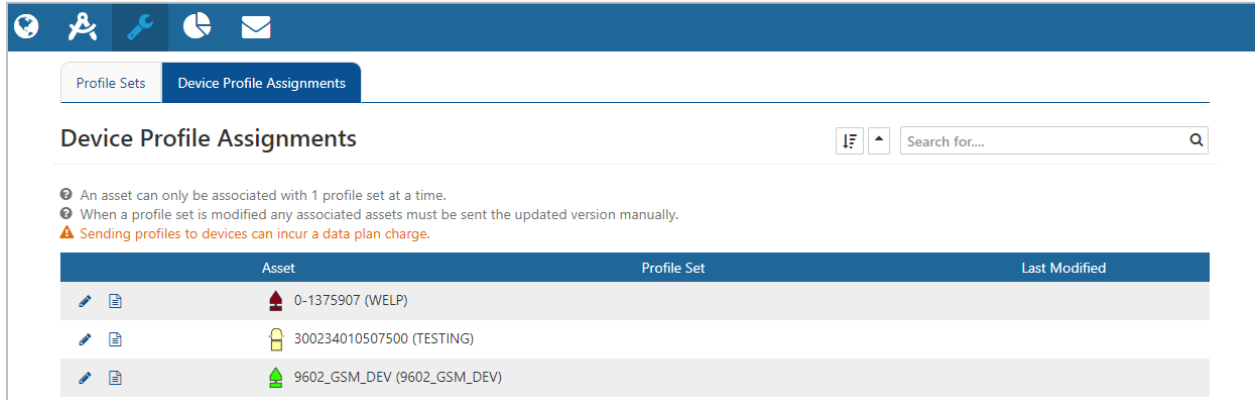
Profile set modification history is tracked so that each revision can be viewed or reverted to at any time.


	Revised By	Note	Revision UTC
<a href="#" style="background-color: #2c5e8c; color: white; padding: 2px 5px;">View</a>	Blue Production Sky (tttester)		11-09-2020 15:19:51

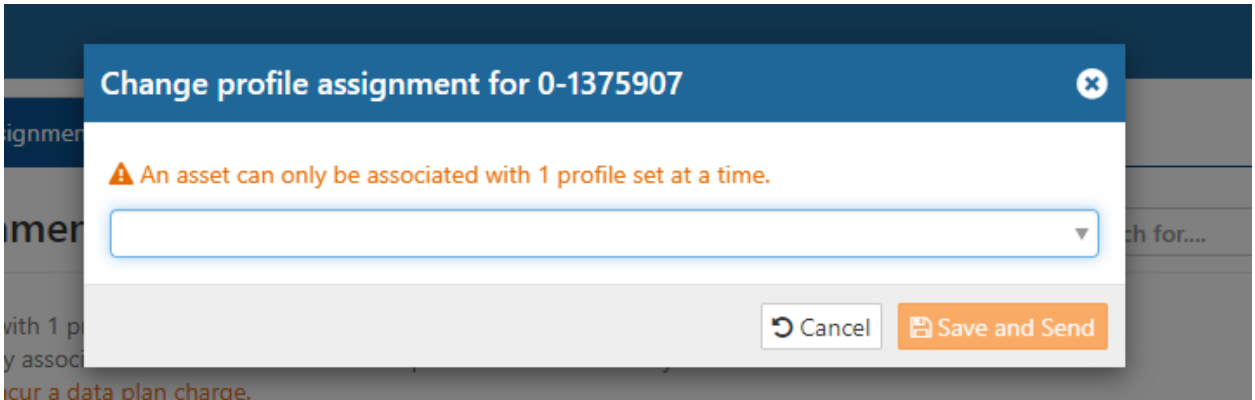
Cancel
Save

## Assigning an ACH1000 Profile to a D1000

Under the Manage screen, select Device Profiles and then click the Device Profile Assignments tab.



Locate the desired asset from the list and click the  icon next to its name. Then, use the drop-down menu to select the profile set that you would like to assign to the asset. Press 'Save and Send.'



If successful, you will see the profile set's name next to the asset name.



## TECHNICAL SUPPORT

Blue Sky Network is committed to providing the highest level of service and support. If you have any questions or concerns, please feel free to contact us by email or phone; contact information is available at the bottom of this page.

You can also call Blue Sky Network customer support directly from the ACH1000 using our Speed Dial features. Select 'PHONE' in the Main Menu and click the asterisk (\*) button. Then, press 'OK' to place the toll free call.

For self-help, please visit <https://support.blueskynetwork.com/>.

Thank you for choosing Blue Sky Network for your airborne communications needs!



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