

# MAGNASTAR C-2000 DIGITAL AIRBORNE TELEPHONE SYSTEM

## 7.1.2.7.1 Handset Alerter and RJ-11 Gain Settings

The Handset Alerter gain setting sets the audio level for the handset ringer on C-2000 digital handsets. The handset speaker provides the ringer output. The Handset Alerter gain can be adjusted between 0 to 31. The default value is 27. There is very little discernible audio level difference between 27 and 31.

```

Station
Setup ->1
To Disable
Ringer >2
Dialing
Plan -->3
Link --->4
Modem -->5

More --->+
Go Back >#
    
```

Select +  
for more  
-->

```

Gains
Handset 27
Alerter
(+) ->1
(-) ->7

RJ-11 31
(+) ->3
(-) ->9

More --->+
Go Back >#
    
```

Select the appropriate  
number to change the gain  
settings.

Select + to reach other  
Handset Attribute screens

## 7.1.2.7.2 Auxiliary Call Alerter and Auxiliary Call Alerter Cadence

Each active port can be configured to activate any combination of the ten output switches of the Call Alerter Switch (CAS) when the port is called. The CAS configuration is station dependent and must be programmed for each individual active port. When an auxiliary call alerter is selected from the maintenance screen, it will activate the associated output of the CAS. The output will stay active until another screen is selected. The current auxiliary call alerter output values will be highlighted on the maintenance screen. Note that if CAS 0 is configured as a service availability indicator or if CAS 9 is configured as a call in progress indicator, CAS 0 and CAS 9 (respectively) will not appear on either the Call Alerter or Cadence menus shown in this section.

There are two different cadence patterns in which the CAS outputs can be configured. They are either one second "on" followed by three seconds of "off" to simulate a ring, or continuous "on". Each of the ten individual outputs can be configured for either one of the types of cadence. The cadence is a system function and need only be programmed from one handset. The cadence handset maintenance screen will display the current setting values. A highlighted number corresponds to a simulated ring with a one second "on" followed by a three second "off". The output will activate when selected (assuming the output is also selected in the auxiliary call alerter screen) and will stay active until another screen is selected.

```

Auxiliary
Call
Alerter(s)

>1 >2 >3
>4 >5 >6
>7 >8 >9
>0

Cadence >*
More --->+
Go Back >#
    
```

Select the appropriate  
number(s) of the Auxiliary  
Call Alerter required.

Press the number again to  
deselect an output.

Press \* to view the  
Cadence screen. -->

Press + to reach other  
handset attribute screens

```

Auxiliary
Call
Alerter
Cadence

>1 >2 >3
>4 >5 >6
>7 >8 >9
>0

Go Back >#
    
```

Select the appropriate  
number(s) to change the  
Cadence of the CAS  
output.

**MAGNASTAR C-2000 DIGITAL AIRBORNE TELEPHONE SYSTEM****7.1.2.7.3 Speaker Gain:**

The audio level of the earpiece on a digital handset can be changed with the speaker gains screen. The range of values for the coarse speaker gain is from 0 to 31. Values greater than 24 may cause the receive audio quality to degrade and become distorted. For this reason values above 24 are not recommended. Values in the range of 19 to 24 are normal for most aircraft. The speaker gain can temporarily be adjusted using the volume control on the handset. However, to make permanent changes, this screen must be used. The fine speaker gain resolution is small enough that it usually is not discernible and therefore it is suggested that this value not be changed. The default value for Coarse Speaker Gains is 24 and 0 for Fine Speaker Gain.

```

Speaker
Gains

Coarse 24
  (+) ->1
  (-) ->7
Fine   000
  (+) ->3
  (-) ->4

More --->+
Go Back >#

```

**Press the appropriate number to change the Speaker Gain as required.**

**Press + to reach other handset attribute screens**

**7.1.2.7.4 LED Blink Rates**

A digital handset incorporates an LED which can be used to visually indicate an incoming call. It is possible to enable the LED to signal in conjunction with the handset ringer. The LED displays two different blinking patterns to discern between an inplane call and an uplink call. The rate at which these patterns blink can be varied. To enable the LED to blink for an inplane call a minimum value of 5 must be entered. A value of 5 also represents the maximum blink rate for this signal. Values greater than 5 will result in a slower blinking rate for the inplane call signaling. Values of 4 or less will disable the inplane call LED signaling. To enable the LED to blink for an uplink call a minimum value of 5 must be entered. A value of 5 also represents the maximum blink rate for this signal. Values greater than 5 will result in a slower blinking rate for the uplink call indicator. Values of 4 or less will disable the uplink call LED indicator.

```

LED Blink
Rates for
Calls

      005
Inplane
  (+) ->1
  (-) ->7
Uplink 005
  (+) ->3
  (-) ->9
More --->+
Go Back >#

```

**Press the appropriate number to increase or decrease the values of the LED Blink Rates.**

**Press + to proceed to the next Handset Attribute screen.**

**MAGNASTAR C-2000 DIGITAL AIRBORNE TELEPHONE SYSTEM****7.1.2.7.5 Sidetone Gains**

Audio that is fed from the microphone to the earpiece speaker is called sidetone. The value of the sidetone audio can be adjusted. The default value for voice sidetone is 13 and DTMF is 70. Values higher than these are not recommended. They may be found to be too loud and uncomfortable for the user.

```
Gains
Sidetone
Voice  013
  (+)  ->1
  (-)  ->7
DTMF   070
  (+)  ->3
  (-)  ->9

More --->+
Go Back >#
```

**Press the appropriate number to increase or decrease the voice or DTMF sidetone audio level**

**The DTMF sidetone adjustment screen will not appear unless a MMTI is not connected to the ARTU.**

**Press + to proceed to the next Handset Attribute screen.**

**7.1.2.7.6 Autodial DTMF Monitor**

The autodial DTMF Monitor values are used for auto detection of DTMF tones on the handset RJ-11 interface. The default values are 3 for scale and 80 for sense. These values should not be changed.

```
Autodial
DTMF
Monitor

Scale  003
  (+)  ->1
  (-)  ->7
Sense  080
  (+)  ->3
  (-)  ->9
More --->+
Go Back >#
```

**The Autodial DTMF Monitor screen will not appear unless a MMTI is connected to the ARTU.**

**Press + to proceed to the next Handset Attribute screen.**

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## 7.1.2.7.7 Microphone TX Gain

It is possible to adjust the microphone audio gain. Because the digital handset incorporates a noise canceling microphone, changing the microphone gain level can significantly degrade the sound quality and therefore it is not recommended that the microphone gain level be adjusted. The microphone gain level does not have a standard default value and therefore is adjusted individually at the factory. Depending on the software version in the digital handset, the Microphone TX Gain may consist of one or two screens.

```

Microphone
TX Gain

Fine 000
(+1) ->7
(-1) ->7

(+5) ->3
(-5) ->9

Go Back >#
    
```

The Microphone TX Gain screen will only appear if a MMT is connected to the ARTU.

This screen is one of two different possible microphone TX gain adjustment screen progressions.

```

Microphone
TX Gain

Fine 049

More ---->+
Go Back >#
    
```

```

TX Gain
Adjustment

203

____
Enter new
value
Clear -->*
Go Back >#
    
```

These two screens are the second of two possible Microphone TX Gain adjustment screen progressions.

The value 203 is the factory default for the TX Gain Adjustment

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## 7.1.2.8 Aircall Screens

The aircall screens are used to enter personal aircall numbers, retrieve stored aircall messages from memory, review programmed aircall and SATCOM terminal ID's.

### 7.1.2.8.1 Personal Aircall Number Register

It is possible for users to enter their personal GTE Airfone Aircall number in the C-2000 system. As many as nine personal aircall numbers can be entered in the C-2000 system. A personal aircall number will only be active on the handset on which it is entered. Personal aircall numbers are different from station and aircall numbers in that they are temporary and will be erased from memory when power is removed from the system.

<pre>Air-Ground Voice ---&gt;1 Inplane -&gt;2 FAX -----&gt;3 Modem ---&gt;4 Satcom ---&gt;6 HF Radio -&gt;7 Aircalls &gt;8 Setup ---&gt;9 GTE Oper &gt;0 Spd Dial &gt;*</pre>	<p>Select 8 to view aircall screens. --&gt;</p>	<pre>Personal Register &gt;1 View Messages Aircraft &gt;2 Station -&gt;3 Personal &gt;4 More ----&gt;+ Main ----&gt;#</pre>	<p>Select 1 for a personal aircall register --&gt;</p>	<pre>Pass Your Airfone Calling Card Thru Slot on Right Keypad Entry -&gt;+ Exit ----&gt;#</pre>	<p>Swipe aircall card through card reader to enter. If keypad entry, see aircall number entry in the setup section.</p>
---	---	---	--	---	---

### 7.1.2.8.2 Viewing Stored Aircall Numbers (Messages)

If an aircall number is stored, then it is possible to review the stored aircall number. The text "Messages" will appear on the Services screen when the handset is on-hook if an aircall number is stored. The following screen progressions show how to review stored aircall numbers.

<pre>Services Inplane Air-Ground Satcom HF Radio ----- Messages Inplane: 2 TermID: 001 (219) 429-0000</pre>	<p>"Messages" will appear on the services screen if there are stored aircall messages. --&gt;</p>	<pre>Air-Ground Voice ---&gt;1 Inplane -&gt;2 FAX -----&gt;3 Modem ---&gt;4 Satcom ---&gt;6 HF Radio-&gt;7 Aircalls &gt;8 Setup ---&gt;9 GTE Oper &gt;0 Spd Dial &gt;*</pre>	<p>Select 8 to view aircall screens. --&gt;</p>	<pre>Personal Register &gt;1 View Messages Aircraft &gt;2 Station -&gt;3 Personal &gt;4 More ----&gt;+ Main ----&gt;#</pre>	<p>Select 2,3 or 4 to view stored aircraft, station or personal aircall numbers. ----&gt;</p>
---	---	--	---	---	---

```
Msg ID: 02
Call from:
  011 2194
  290002
Call Back
Direct ->1
Credit ->2
Delete -->3
Previous >*
Next ---->+
Main ---->#
```

Aircall numbers are stored in the following format. If more than one aircall number is stored, then it is possible to scroll through the different numbers using the Next or Previous options.

Stored aircall numbers may also be deleted with the appropriate selection.

### 7.1.2.8.3 Viewing Programmed Aircall and SATCOM Terminal ID Numbers

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It is possible to view Aircall and SATCOM Terminal ID numbers programmed in the maintenance setup screens. Aircall and SATCOM Terminal ID numbers stored as station type can also be viewed from the Services screen on a digital handset. Aircall and SATCOM Terminal ID numbers programmed as aircraft type can only be viewed using the following screen progressions.

```
Air-Ground
Voice --->1
Inplane ->2
FAX -----3
Modem --->4
Satcom -->6
HF Radio >7
Aircalls >8
Setup --->9
GTE Oper >0
Spd Dial >*
```

Select 8 to  
view aircall  
screens.  
-->

```
Personal
Register >1

View
Messages

Aircraft >2
Station ->3
Personal >4

More ---->+
Main ---->#
```

Select +  
to review  
programmed  
Aircall and  
SATCOM  
Terminal ID  
numbers.  
-->

```
Aircall
Number(s)

Aircraft
(219)
429-0001

Station
(219)
429-0000
More ---->+
Go Back >#
```

Select +  
to review  
programmed  
SATCOM  
Terminal  
ID numbers  
-->

```
Assigned
Terminal
ID(s)

Aircraft
(100)

Station
(001)

Go Back >#
```

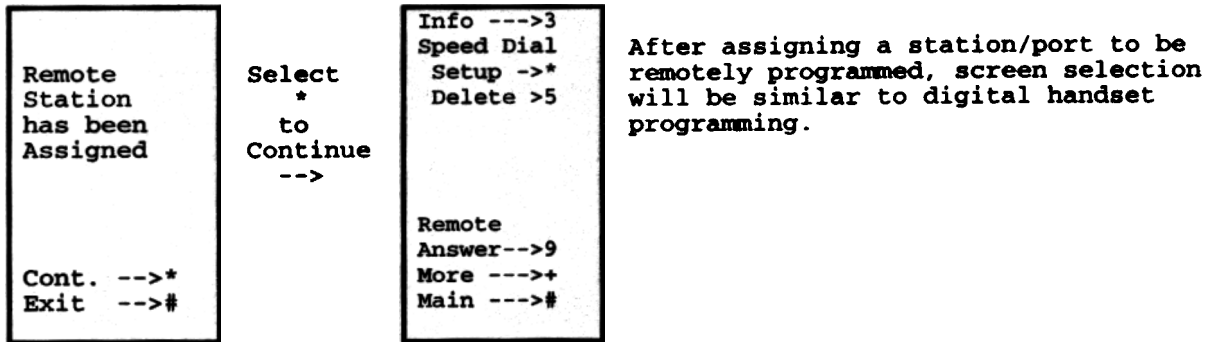
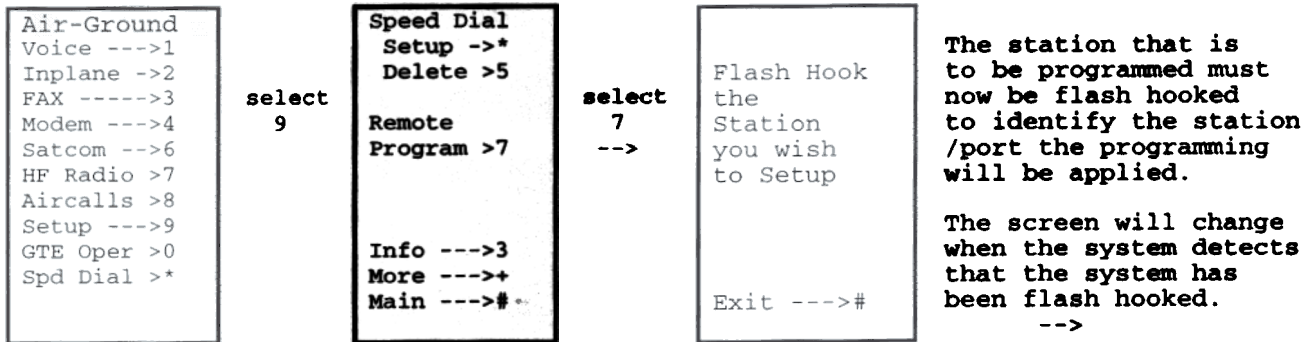
Programmed SATCOM Terminal ID numbers screen

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## 7.1.2.9 Remote Station Programming

Remote station programming is used to program CDBR-2 analog interface ports. Equipment connected to these ports do not have LCD display capabilities. Therefore, the programming of these interfaces must be performed remotely from a digital handset which is then applied to the assigned interface port. An interface port that is to be assigned must be flash-hooked (taken off hook and then placed back on hook) in order to identify the analog interface port that is to be programmed. Once the interface port has been flash-hooked, all screens then apply to that assigned interface port. The maintenance screens can then be used to program new features or to view items currently programmed for the assigned analog interface port.

The screen progressions shown in this section describe only the steps necessary to start a remote programming session and do not detail each programming step for the interface port. The programming features and functions that are applicable for remote programming are similar to those programming features previously described in this document.



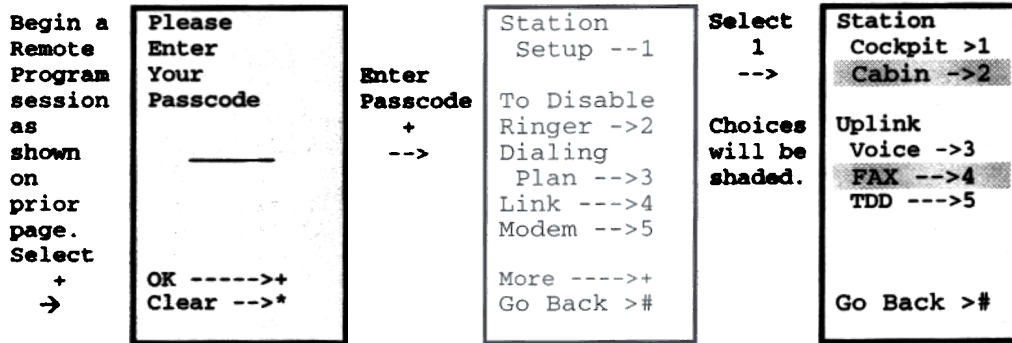
## 7.1.2.10 CDBR-2 Station Setup

A MagnaStar CDBR-2 analog port when connected to the LAN is considered a station. It is possible to configure a CDBR-2 analog port for different types of operation or station types. A Cabin station is the system default mode and is considered the normal condition. A Cockpit station is the same as a Cabin station except for operation when the system Billing mode is configured for credit card. If the system Billing mode is set for credit card use, then any station configured as a Cockpit station will bill the aircraft account and not require the use of a credit card. There is no limit on the number of stations that can be configured as Cockpit stations.

A CDBR-2 analog port can also be configured as a FAX, Modem, TDD or PC station. Configuring the CDBR-2 analog port as a Fax, Modem or TDD station has the following effect; because the device type or call type is identified, only the ten digit number needs to be dialed (for domestic calls). When configured as a PC station, any dialing activity must be preceded by a "3" or "4" prefix to identify the type of operation; Fax (3) or Modem (4). Both functions can be used as long as the prefix identifies the type of operation. When a CDBR-2 analog port has been configured as a PC station, it can be programmed to treat an incoming ground to air call as either a Voice, FAX, or TDD call with 4.0B software and above. This is a system function that affects all CDBR-2 ports configured as a PC station. Note that incoming ground to air MODEM calls are not

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supported. Follow the steps below to program a CDBR-2 port configured as a PC station to treat an incoming ground to air call as either a Voice, FAX, or TDD call.



## 7.2 AIRCRAFT CONFIGURATION SHEET

The aircraft configuration sheets are used to provide the customer with a permanent record of the programming set-up of the C-2000 system in the aircraft. It should be filled out prior to aircraft delivery. Because the programming of the system is stored in the ARTU memory, if the ARTU needs to be replaced, the system would have to be reprogrammed. The use of the aircraft configuration sheets can be used to help the person programming the system recall the exact set-up.