



INSTRUCTION MANUAL

Cellcast RBS - 400
900 TRANSCEIVER

REMOTE BROADCAST STUDIO

MARTI

TEST SHEET FOR VERSION 3.6 UNITS

S/N _____ ESN _____ DATE _____
HEX VALUE _____

COMMAND MODE SETUP

- 1- TIME and DATE displayed correctly _____
- 2- LANDLINE/CELLULAR selection _____
- 3- INTENSITY levels Ext = 99 Int = 20 _____
- 4- TIME and DATE programming _____
- 5- MIC/LINE selection _____
 - LINE level verified _____
 - MIC level verified _____
- 6- AUDIO assignment ALL = Yes (1) Volume = 75 _____
- 7- TONE Volume Volume = 99 _____
- 8- 1 Khz test tone _____
- 9- TIMER Count Up/Count Down _____
- *- ESN displayed correctly _____
- 0- METER function Battery/VU _____
- #- User settings function properly _____

BASIC OPERATIONS SETUP

- AUDIO LOCK tested _____
- PROG/CUE leds off/on _____
- AUDIO checked on channels 1 - 4 _____
- LINE OUT audio tested _____
- BATTERY system check Charge current draw _____
Battery longevity _____

LANDLINE TESTING

- TRANSMIT audio good _____
- RECEIVE audio good _____
- FREQUENCY EXTENDER tested _____
- LANDLINE RINGER tested _____

CELLULAR SETUP/TESTING

- SYSTEM ID _____
- PHONE NUMBER _____
- GROUP ID _____
- SECURITY CODE _____

- SEL 1 - AUTO _____
- SEL 4 - TONE ON _____
- SEL 5 - UNLOCK CODE SET TO: 0000 _____

MARCONI TEST

CURRENT DRAW _____ VOLTAGE _____
OUTPUT POWER DURING CALL _____

CELLULAR CALL MADE _____

MARTI

World Class Performance * World Class Value

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PROCEDURE NECESSARY FOR REBOOTING THE MARTI/CELLCAST RBS-400 UNIT

Warning: If you fail to follow steps 1 through 9 you may lose valuable information during rebooting.

1. Turn the mode light on, press SEL to get ENTER COMMAND on the display.
2. Press * and record the ESN _____.
3. Turn the mode light off (you must be on Cell mode at this point) press SEL 1 and record the information _____.
4. Press SEL.
5. Press *3001#12345 SEL 9. The screen should have INSTALL displayed.
6. Press END until SYS ID appears, record this number _____.
7. Press END. Record the Phone number _____.
8. Press END. Record the Group ID _____.
9. Press SEL CLR.
10. Turn the mode light back on. Press SEL. ENTER COMMAND should appear.
11. Press 1 for time and date, the following key sequence will not appear on the screen.
12. Press REBOOT (732668) END. The unit will appear to shut down and power back up. However, not all the lights will come back on as in a normal power up.
13. Turn the unit off, wait 15 seconds and turn the unit back on.
14. Turn the mode light on and then back off.
15. Press *3001#12345 SEL 9. Once again INSTALL should appear. Press END until SYS ID appears and re-enter the number recorded above.
16. Press END and re-enter the phone number recorded above.
17. Press END and re-enter the Group ID number recorded above.
18. Press SEL CLR.
19. Press SEL 1 and verify the information above. If it is not the same then continue pressing 1 until it is the same.
20. Press SEL.
21. Turn the mode light on. Press 1 for date and time. Once again the following key sequence will not appear on the screen.
22. Press ESNN (3766) END. The screen should display the ESN number in 0's. If not, repeat steps 19 - 22.
23. Press # and re-enter the ESN number recorded above.
24. Press END and SEL. ENTER COMMAND should appear. Press * and verify the ESN number.

If you have any questions, please do not hesitate to call

INTRODUCTION
&
REVISED PROGRAMMING INSTRUCTIONS

3/6/96

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CELLCAST FAST PAGES
BRIEF DESCRIPTION OF OPERATION

CELLCAST FAST PAGES

INTRODUCTION:

Welcome to the easiest remote broadcast equipment that you'll ever use. This document has been created to provide fast, straight forward operating instructions. However, if you experience any difficulty, please call for Technical Support at (817) 645-9163. An engineer or field support tech will return your call .

CELLULAR PROGRAMMING:

Use the following instructions to program your cellular telephone number into the Cellcast RBS-400. It is not necessary to take the RBS-400 into a cellular company service center. Just call your cellular company, establish an account, or transfer existing service from one of your current cellular telephones. Inform your cellular company that you are using a Cellcast RBS-400 unit with a built-in Nokia Technophone 900.

You will have to provide the cellular company with the ESN (Electronic Serial Number) of the Cellcast unit (shown on your invoice or enter **Mode Sel*** to display the number). The cellular company will in turn provide you with a new telephone number, or if you are "transferring service" the same one you currently have.

Important: Your cellular provider should also give you their programming parameters to enter into the Cellcast. We have provided the manufacturer default entries for each programming command in bold in Section 1. A space has been provided for you to write in the defaults from your cellular provider on page 2 of this document under Programming Your Cellular Telephone Number, step 3.

Programming your unit will take about 1 minute after you have the information from your cellular company. It is easy to do - but if you have any problems with performing the programming or getting the default information from your cellular company, just call Cellcast direct (817) 645-9163. Any one in Technical Support can assist you.

SECTION ONE: PROGRAMMING - Things to do First

1. Call your cellular company to establish service or transfer service from a current cellular telephone.
2. Tell your cellular company the ESN (Electronic Serial Number) of the Cellcast RBS-400. A copy of the ESN is on the worksheet placed in your manual or you may display it by turning the unit on and pressing **MODE*** (the red LED light above mode must be on). The number that appears in the Information Display Window should be given to the cellular company with 165/ in front of it. So if your unit displays 00615096 you would give your cellular company 165/00615096 as the ESN.
3. Attach the antenna. (always attach the antenna before using cellular service or you can damage the unit - it is a good habit to always attach the antenna so if your switch from landline to cellular the unit is ready.)
4. If the batteries have not been charged and are in the unit, remove them or open both of the battery caps to disconnect the battery circuit. Power the unit on using the external power supply.
5. If the mode light is on when you power the unit on, push the mode switch to turn it off.
6. The information Display Window will show "No Service", "Roam", "A", "B", "Roam A" or "Roam B". You might see an "I" flash on and off the screen - it is normal and is generated by "noise" on the cellular transceiver.
7. Now you are ready to proceed to the next section, Programming your Cellular Telephone Number.

CELLCAST FAST PAGES

SECTION ONE: PROGRAMMING

1. Press the MODE button. Its red LED should come on.
2. Press SEL, then press * (asterisk).
3. There should be an eleven digit number in the Display Window. This is your ESN number and it may be displayed in either Decimal or Hexadecimal form. This number can also be found on the TEST SHEET included with the unit. Ex: displayed ESN is 1651111111. Verify the Display Window ESN with TEST SHEET ESN and have this number ready when you call the cellular company...save the TEST SHEET! (All other versions have 8 digits displayed....3 number prefix is on Test Sheet).
4. Next, press SEL. "ENTER COMMAND" should be displayed. Now, press 2. You have a choice of 1-cellular or 2-landline. Press 1. Momentarily, the display will scroll to "receive volume: 99". Press END. This sets the unit up for cellular activity.
5. Press MODE. Its LED should go out. The unit should now be in cellular mode. The Display Window should have "NO SERVICE", "ROAM", etc., displayed.
6. Next, you will enter the cellular programming mode by selecting a 13 button sequence as follows: * 3 0 0 1 # 1 2 3 4 5 SEL 9. The word INSTALL should appear in the Display Window. If you make a mistake entering these numbers, press SEL CLR and start the sequence again.
7. Pressing the END key will scroll you thru several fields that will require data supplied by your service provider. The current data stored in these fields are manufacturer's defaults. Listed below are the fields:

PRIMARY NAM: (If programming single account, just press END here. For multiple accounts, see instructions related to "SEL-7" found under "Key Sequences...").

Enter SYSTEM ID: 0 0 1 1 1 (END to scroll)

Enter phone number: 0 0 0 - 0 0 0 - 0 0 0 0

Enter group ID: 1 0

Enter security code: 1 2 3 4 5

Program done: (SEL-CLR to exit. END to repeat scrolling)

You will be replacing the above data (except security code) with information supplied by your service provider. The security code is a user option for preventing unauthorized access to the programmed parameters in these fields. This code can be changed and as with all "secret" information, it should be written down and stored in a safe place, in case the number is forgotten.

8. Now that you have accessed the programming fields, it is time to call your service provider. On a nearby phone, call them and inform them that you need to activate the CellCast RBS-400 with a built-in Nokia Technophone 900. They will ask for the ESN. They will give the phone number, system ID, and group ID information. You can enter the numbers immediately as they are given, or you can write them in the spaces provided below and enter them at your convenience. Writing them down will help with verification with the cell provider if there are any activation problems.

CELLCAST FAST PAGES

PRIMARY NAM: (No Data)

SYSTEM ID: _____ (END to scroll)

PHONE #: _____ - _____ - _____

GROUP ID: _____

SECURITY CODE: 1 2 3 4 5

PROGRAM DONE (**When finished, press SEL - CLR to exit or END to repeat scrolling)

**Before exiting the programming fields, it is a good idea to scroll back through the values that have been entered to verify accuracy.

This completes the Cellular Programming process. **Important:** In order for the data to be saved, the unit must be powered off, then back on. You can verify the changes by going back into the programming field and confirming the data. The cellular capability of your RBS-400 will be available as soon as your service provider activates your account.

CELLCAST FAST PAGES

SECTION TWO: KEY SEQUENCES RELATED TO CELLULAR FEATURE

Note: The following sequences are accessed while in cellular mode.

SEL - 0 **Locks transmitter** (prevents unauthorized use).

Note: Most units can be unlocked by typing in the 4 digit code while in cellular mode. For version 3.5, see "SEL-5" procedures.

SEL - 1 **Sets roaming capabilities of cell phone.**
(Scroll the following options by pressing 1. Set by pressing [SEL])
AUTO: communication possible with home and non-home systems.
HOME: no roaming function - restricted to specific subscriber carrier.
PREFERRED SYSTEM: communicates only with preferred system.
NON-PREFERRED SYSTEM: communicates only with non-preferred system.

The last digit of the SYSTEM ID will determine preferred/non-preferred.
Example: SYSTEM ID: 00111

	PREFERRED	NON-PREFERRED
EVEN	B	A
ODD	A	B

SEL - 4 **TONE: ON/OFF** (DTMF tones)

SEL - 5 **Changing phone lock code** (all versions or unlocking ver. 3.5): Press [SEL][5]. "SECURITY ID" appears. Enter the 4 digit code 0000 and **** will appear as you type. When the correct code is entered, "UNLOCK CODE:" appears. (At this point, version 3.5 units should unlock). To change the code press [SEL]. "OLD: 0000" appears. Enter new lock code, then press [END] to save, or [SEL] to exit without saving.

SEL - 7 **Multiple NAMs:** This key sequence will access your account options. (Two accounts only) (This option not available for version 3.5). The second account has to be programmed in before this sequence will work. To program a second account, enter program mode while in cell mode by pressing *3001#12345 SEL 9. "INSTALL" will appear. Press [END]. "PRIMARY NAM" is displayed. Press [SEND]. "OPTIONAL NAM" is displayed. Press [END]. "ENABLE" or "DISABLE" appears. Use [SEND] to toggle between these two choices. After selecting "ENABLE", press [END]. You will be placed in a field identical to the one used for your primary account. (System ID, Phone#, etc.) Use [END] to scroll through options. When "PROGRAM DONE" appears, press [SEL] [CLR] to exit programming. You will be placed back in the cell mode screen. Press [SEL] [7] to access primary/optional NAM choices. Use [7] to toggle between the two accounts. Press [SEL] to exit. The phone numbers for each account can be viewed on the cell mode screen. Use [SEL] [7] to verify which account is to be viewed. Press [SEL] then, press [SEL] [#]. "RECALL:" will appear with some number after it. Press [6] then [END]. The phone number for the account you selected (primary/optional) should appear. Press [SEL] [CLR] to exit. If necessary, use [SEL] [7] to re-select the account

CELLCAST FAST PAGES

you will currently be using.

SEL - *
_

Storing Phone Numbers: To store a number displayed on the screen, press [SEL] [*]. "STORE: 1" will appear. To store at location "1", press [END]. To store at another location, enter its number (1-5) and press [END]. If that location is occupied, "REPLACE CONTENT" will appear. Press [SEL] to replace, [END] to not store. If an error occurs storing, "STORE NOT DONE" is displayed. To store a number to the next available location, press [SEL] [*] [SEL]. If there is no available location, "NO SPACE" is displayed.

SEL - #

Recalling Phone Numbers: To recall a number from memory and place it on the display, press [SEL] [#]. "RECALL: 1" will appear. To recall location 1's number, press [END]. To recall another location's number, enter that location (1-6) and press [END]. If that location is empty, "NOT FOUND" will be displayed.

Speed Dialing Stored Numbers: After pressing [SEL] [#] and entering a memory location number, press [SEND]. That location's phone number will be displayed. Press [SEND] again to dial. If the memory location is empty, "NOT FOUND" will be displayed.

**CELLCAST OPERATION
INSTRUCTIONS**

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3. Attach the antenna. (always attach the antenna before using cellular service or you can damage the unit - it is a good habit to always attach the antenna so if your switch from landline to cellular the unit is ready.)
4. If the batteries have not been charged and are in the unit, remove them or open both of the battery caps to disconnect the battery circuit. Power the unit on using the external power supply.
5. If the mode light is on when you power the unit on, push the mode switch to turn it off.
6. The information Display Window will show "No Service", "Roam", "A", "B", "Roam A" or "Roam B". You might see an "I" flash on and off the screen - it is normal and is generated by "noise" on the cellular transceiver.
7. Now you are ready to proceed to the next section, Programming your Cellular Telephone Number.

PROGRAMMING YOUR CELLULAR TELEPHONE NUMBER

Unit Revision Level 3.5

To establish cellular service, plug in the AC power supply and power up the Cellcast.

Press MODE and its red LED will come on.
Press SEL, then press * (asterisk).

The liquid crystal display will show an eight digit number. Call your local cellular service and give them your Electronic Serial Number (ESN). (Number may be in HEXadecimal or decimal.)

Your complete ESN is 165/ followed by the eight digit number. Your cellular company will give you a ten digit phone number, including area code, and some other numbers to enter in cellular programming where the arrows are shown.

Press MODE again to turn off the red LED.

The following sequence is for cellular programming.

When you are to enter the phone number, use CLR to remove the previous number or string of "ones". Enter your new number a digit at a time, as shown.

Tonepad entry: * 3 0 0 1 # 1 2 3 4 5 SEL-9
"install" will appear on the LCD. Use END to scroll.

- END Enter SYSTEM ID: _ _ _ _ _
- END Enter phone number: _ _ - _ - _ - _ - _ - _ - _
- END Enter group ID: _ _
- END Enter security code: 1 2 3 4 5
- END Program done

SEL - CLR to exit. END to continue scrolling.

MODE setup: Valid Entries underlined, “quotation” marks denote a “standard” entry.
MODE (LED on) and “enter command” will display on screen. If “enter command” does not display on screen, press SEL to scroll back to “enter command”.

- 1 Shows date, time. Press SEL to exit.
- 2 Shows choice of 1 - cellular or 2 - landline operation.
scrolls to receive volume: “2 0” keypad entry. END to exit.
- 3 Enter backlight intensity - ext: “9 9”, int: “20” keypad entry. END to exit.
- 4 Time __ : __ : __ keypad entry, observe cursor.
SEL to scroll to Mo/Day/Yr to correct. END to exit.
- 5 Enter channel: 1 (choice of 1,2,3, or 4) scrolls to SEL: 1-Mic 2-Line
(choice of 1 or 2 is made) scrolls back to enter channel: 2, etc., when all
your channels are set individually as Mic or Line, END or SEL to exit.
- 6 Assign program 1-yes or 2-no, scrolls to assign cue, assign receive audio,
assign test tones in the same manner, same choices, then scrolls to enter line
out volume: “7 5” (Internal Speaker) Keypad entry. END to exit.
- 7 Enter volume for Headset tones: “9 9” . END to exit.
- 8 Test tone sounds. SEL to cease
- 9 Timer: 1 - up 2 - down
- 0 VU 1 Battery (power source level) / 2 VU Audio VU meter
- * ESN
- # User settings (1,2,3) 1 - Restore 2 - Save

MODE (LED OFF)

LANDLINE:

When SEL - "2" (Landline Selection) entries are completed and MODE LED is off. ("on hook" should be displayed).

To place a call, press SND, ("off hook" should be displayed & dial tone should be heard) keypad (enter) the phone number being called.

LOCK 1 1 1 1 To hold audio settings LOCK 1 1 1 1 to release. (Default setting 0 0 0 0)

CELLULAR:

When SEL - 2 entries are completed and MODE LED is off. ("on hook" should be displayed).

To place a call, press SND, ("off hook" should be displayed) keypad (enter) the phone number being called.

LOCK 1 1 1 1 To hold audio settings LOCK 1 1 1 1 to release. (Default setting 0 0 0 0)

MODE * To display the ESN number

SEL - 0 Locks transmitter

SEL - 1 (scroll the following options using 1):

AUTO: communication possible with home and non-home systems.

HOME: no roaming function - restricted to specific subscriber carrier

PREFERRED SYSTEM: communicates only with Preferred System.

NON-PREFERRED SYSTEM: communicates only with Non-Preferred System

<u>SYSTEM ID</u>	<u>PREFERRED</u>	<u>NON-PREFERRED</u>
Last Digit EX.: 0011 <u>1</u>		
EVEN	B	A
ODD	A	B

SEL - 4 TONE = ON / OFF

SEL - 5 Unlocking phone: To unlock the phone press [SEL] [5] and the prompt "SECURITY ID" appears. Enter the 4 digit phone lock code 0 0 0 0 and **** will appear as you type. If the correct code is entered, "UNLOCK CODE:" appears. To change the code press [SEL], press [END] to exit. If [SEL] is pressed to change the code, "OLD: 0000" appears.

Enter new lock code and press [END] to save and [SEL] to abort without save.

SEL 9 Programming NAM: The procedure is the same to get into NAM programming mode. The operator types: #3001*12345 [Security Code Display] (1 2 3 4 5 is phone security code default value) and then [SEL] [9]. "INSTALL" appears on the display. [END] is pressed to save a value and advance to the next item. To change an item, enter the new value on the keypad. [CLR] deletes the last item entered and [SEL] [CLR] exits the routine. The values which must be entered are: SYSTEM ID, PHON, GROUP ID, and SECURITY. (If SECURITY# is changed, the new # will need to be written down for later access. Please make note of #change when returning unit for service)

SEL * Storing Phone Numbers: To store a number on the display, press [SEL] [*]. "STORE: 1" will appear on the display. To store at location one, press [END]. To store at another location enter that location (1-6) and press [END]. If that location is occupied, "REPLACE CONTENT" will be displayed. Press [SEL] to replace, [END] to not store. If an error occurs storing, "STORE NOT DONE" displayed. To store a number to the next available location press [SEL] [*] [SEL]. If there is no available locations, "NO SPACE" is displayed.

SEL # Recalling Phone Numbers: To recall a number in memory and place it on the display, press [SEL] [#]. "RECALL: 1" will appear on the display. To recall location 1's number, press [END]. to recall another location's number enter that location (1-6) and press [END]. (location 6 is the Cellcast's phone number). If that location is empty, "NOT FOUND" will be displayed.

Speed Dialing: To speed dial a stored memory location, enter the memory location (1-6) for the phone number and press [SEND]. That memory's number will appear on the display. Press [SEND] again to dial. If the memory location is empty, "NOT FOUND" is displayed after attempting to recall it.

PROGRAMMING YOUR CELLULAR TELEPHONE NUMBER

Unit Revision Level 1.8 or older

Power the unit "ON" using the external power supply. Attach the antenna and follow the instructions below.

1. Using the keypad, enter the following programming access code, unless you have changed your security code: *3001#12345 then enter SEL 9
2. The unit will respond with:
inStall "install"
Press **END**
The unit will respond with:
IDENTIF INFO PRI
Press **END**

THE FOLLOWING INFORMATION IS REQUIRED FROM YOUR CELLULAR COMPANY

3. Use the **END** key to scroll to: home ID
Enter home ID as assigned by your cellular company.
HO - ID _____ **Default is: 00111**
4. Use the **END** key to scroll to: access overload
Enter

Congratulations! You have officially programmed your unit. To check to see if the Telephone number has been entered correctly, enter SEL #31. The telephone number you entered should appear in the Information Display Window. (If it doesn't, repeat the previous process.)

Your unit will be ready to use in cellular mode as soon as the cellular company has activated your telephone.

END OF PROGRAMMING COMMANDS

SECTION TWO: SOFTWARE FUNCTION COMMANDS:

Use these commands to access the various software functions of the Cellcast RBS-400. These commands for the most part will only be set once. To use any of the software functions, you must activate the software by pushing the **MODE** switch. The red LED above the **MODE** switch will light when activated.

Press the **MODE** switch. The unit will respond with "Enter Command" or another command in the Information Display Window. If the unit displays something other than "Enter Command", press the **SEL** key to return to "Enter Command". *Note: You may access any of the commands in any order - read through the following options and change only those you require.*

1. To display Current Date and Time:

Press Mode until red LED is on. Press End or Sel until "Enter Command" displays.

Press 1.
The unit will respond with:
Month Date Year
Time displayed in 12 or 24 hour format
Press the SEL key to exit.

2. To select Cellular or Landline operation:

Press Mode until red LED is on. Press End or Sel until "Enter Command" displays.

Press 2.
The unit will respond with:
Select Phone
1 = Cell 2 = Land

To select Cellular
Press 1 to select Cellular operation.
The unit will respond with:
Receive Volume: 99
You may enter 0 through 99 for receive volume with 99 being the loudest.
We recommend you leave the setting at 99.
Press the SEL key to exit.

To select Landline
Press the 2 to select landline operation.
The unit will respond with:
Please Wait
Select Dialing
1 = Tone 2 = Pulse
Select tone or pulse. **Important**, if you choose pulse for a rotary system, you must power the unit off and back on to activate the pulse system after you complete this command.
The unit will respond with:
Receive volume: 99
You may enter 0 through 99 for receive volume with 99 being the loudest.
We recommend you leave the setting at 99.
Press END to exit.

3. **To select the intensity of the backlight for the Information Display Window and the legend LED's:**

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays.

Press 3.

The unit will respond with:

Enter Backlight

Intensity - Ext 99 NOTE: Ext denotes using external power

Enter 0 through 99 to increase / decrease information display window backlight.

Press SEL

The unit will respond with:

Enter Backlight

Intensity - Int 50 NOTE: Int denotes using battery power

Enter 0 through 99 (use a low setting to conserve batteries)

Press SEL to increase / decrease information display window backlight.

The unit will respond with:

Enter Legend

Intensity - Ext 99 NOTE: Ext denotes using external power

Enter 0 through 99 (use a low setting to conserve batteries)

Press SEL to increase / decrease information display window backlight.

The unit will respond with:

Enter Legend

Intensity - Int 50 NOTE: Int denotes using battery power

Enter 0 through 99 (use a low setting to conserve batteries)

Press SEL to increase / decrease information display window backlight.

4. **To change the Time and/or Date**

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays.

Press 4 (TIME)

The unit will respond with:

TIME HH:MM:SS

The cursor will appear over the 1st hour digit. To change the time enter the complete correct time using the numeric keys on the keypad.

Press SEL

(FORMAT)

The unit will respond with:

0 = 12HR 1=24HR

Enter 0 for 12 hour format

Enter 1 for 24 hour format

Press SEL

(MONTH)

The unit will respond with:

Month, Day, Year

Year (0-99)

Enter the last two digits of the current year

Press SEL

(DAY)

The unit will respond with:

Month, Day, Year

Day (1-7)

Enter 1 through 7, 1 = Sunday

Press SEL or END to exit

5. **To select MIC or LINE level for each channel**

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays.

Press 5

The unit will respond with:

Enter Channel

Enter channel 1 through 4

The unit will respond with:

Enter Channel X (number of channel entered)

SEL 1 - MIC 2 - LINE

Enter "1" to select MIC level for the selected channel.

Enter "2" to select Line level (to use a CD/cassette player, portable radio, or other input device)

Continue for each channel to be selected

Press SEL or END to exit. Either MIC or LINE will display in red above the channel

PROG/CUE switches.

6. **To assign the audio output/receive and/or DTMF tones to the external speaker.**

NOTE: Assigning the audio output/receive and/or DTMF tones to the external speaker does not turn off the audio to the headsets.

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays.

Press 6

The unit will respond with:

Assign Prog

1 - Yes 2 - No

Select 1 to send PROGRAM to the *external speaker

Select 2 to not send PROGRAM to the *external speaker

* there is an internal speaker that will be put into operation unless you use the Speaker Jack (Release Levels 1.6 or less) or Line Out Jack (Release Level 1.8) and attach another speaker.

The unit will respond with:

Assign CUE

1 - Yes 2 - No

Select 1 to send CUE to the external speaker

Select 1 to not send CUE to the external speaker

The unit will respond with:

Assign REC

1 - Yes 2 - No

Select 1 to send REC to the external speaker

Select 1 to not send REC to the external speaker

The unit will respond with:

Assign TONES

1 - Yes 2 - No

Select 1 to send TONES to the external speaker

Select 2 to not send TONES to the external speaker

The unit will respond with:

Enter Line Out

Volume 99

Enter 0 - 99 with 99 being the loudest

Press SEL or END to exit

7. **To adjust the volume you hear in your headset for all keypad and telephone tones:**

Press Mode until Red LED is on. Press END or SEL until "Enter Command" displays.

Press 7

The unit will respond with:

Enter VOLUME

For TONES 99

Enter 0 - 99 with 99 being the loudest.

Press SEL or END to exit.

8. **To activate a 1 khz test tone:**

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays

Press 8

The unit will respond with:

An audible 1 khz test tone.

To send it back to the station, place the mic next to the headset. (The tone is generated through the headset.)

To end the test tone, press SEL.

9. **To activate the use timer function:**

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays.

Press 9

The unit will respond with:

Select Timer:

1 = Up 2 = Down

To count up press 1

The unit will respond with:

SEL = Start

END = Stop

As soon as you press SEL for start the unit will start marking time. You can leave this function and do others and the timer will stay activated until you stop it. You can stop the count and restart it without losing the total time.

SEL = Run (or restart)

CLR = Clear

Press 2 to COUNT DOWN

The unit will respond with:

HH:MM:SS

Enter start time

Press SEL to start the counter

Press END to stop the counter

The unit will begin to count down the hours or minutes that you entered. You may stop and restart the counter by using the SEL and END keys.

You may stop the count down and/or restart it.

END = Stop

The unit will respond with:

SEL = Run CLR - Clr

HH:MM:OO

Enter SEL to restart the count down or CLR to clear the counter. Pressing CLR will bring you back to Enter Command.

10. **To check the power level of the current power source being used. This is useful for determining the power level of batteries or to isolate a problem with the external power source of supply.**

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays.

Press 0

The unit will respond with a bar graph



1.

^ This level is the maximum for batteries

Press SEL to exit to Command

END OF SOFTWARE COMMAND FUNCTIONS

LOCK SWITCH

The lock switch was designed for those stations that want to lock the switches on the front panel to keep them from being accidentally changed during operation or to set the unit up for someone so that all they have to or can do is to power the unit on and dial the station.

Some people find the LOCK operation a little confusing, so we have done two things. First, we have tried to document it as simply as possible, and second, *we ship the unit with the lock set to work in a temporary mode only - meaning that while the lock light is on it will function in lock mode, but may be unlocked by simply repressing the lock key and turning off the light. This "Temporary Lock" mode is discussed below.*

1. The first thing you have to do to change the lock to Full Lock is to change the code from 0000 to any other 4 digit code. Step one of that operation is to view the current lock ID code. Continue below.

TO VIEW THE LOCK ID CODE

To view the LOCK ID code that has been installed in the unit (if other than the manufacturer's default of 0000) the mode light must be on and ENTER COMMAND displayed in the Information Window Display.

Press 1

Date and time should now be displayed.

Press 5625 (it spells the word 'lock' and will not display)

Press END

The lock code will be displayed

Now if you want to change the code - continue with the next step or ..

Press END, then MODE to exit.

Step two of changing to Full Lock mode is entering your own secret code.

TO CHANGE THE LOCK CODE (you must be in View Lock ID Code mode)

This process is for those serious about pre-setting the settings and not wanting them changed during the remote. It is also for those people who will write down the code somewhere so it is not lost forever.

Otherwise if the unit requires unlocking by someone who doesn't know the code or how to view the Lock ID (or has forgotten it) they will not be able to.

Press # and enter your personal four-digit number

Your code will be shown on the Information Display Window

Press END

The unit will display the date and time

The new lock code (your secret code) is installed.

Press MODE to exit MODE

TO SET UP USER SETTINGS FOR UP TO THREE USERS

Use this function when you have different remote types that require different settings, or you want to customize the unit for individuals. You can program up to three different settings in memory.

NOTE: User Commands 2,3,5,6 and 7 can also be set. but must be done before you start this function.

You can also add a telephone number to be dialed by using the cellular memory function. **(For Instructions:** See the "Using Memory Dialing" under the Cellular Telephone Feature and Function Information Section.

To set user settings

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays

Press #

The unit will respond with:

SELECT SETTINGS

USER 1,2 OR 3

Enter a 1,2 or 3

The unit will respond with:

USER SETTINGS

1 = RESTORE 2 = SAVE

At this time make any adjustments using the volume control knobs for each channel.

Press 2 to save your selections.

TO RETRIEVE A PREVIOUSLY SET UP USER SETTING

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays

Press #

The unit will respond with:

SELECT SETTINGS

USER 1,2 OR 3

Enter the corresponding number for selected setting

The unit will respond with:

USER SETTINGS

1 = RESTORE 2 = SAVE

Press 1 to restore / activate the selected user setting

NOTE: The unit will always come up in LOCK mode, which is what keeps each setting. To release the setting from being in effect, you must turn off lock.

TO EXIT A USER SETTING CONDITION

Press LOCK (if using Temporary Lock with the 0000 code)

Press LOCK (with your secret code if using full lock)

The unit will allow all settings to be released and/or changed. The unit will not revert to a prior setting.

END OF USER SETTINGS

BATTERY POWER FEATURES

All release levels of the Cellcast RBS-400 model have the following features which make using the batteries easier.

Power Switching Warning Tone

When the unit is switched to or from battery power you will hear (via headsets or external speaker) a short tone (sounds like) "ditditditdit".

This signals to you that you have switched power sources, either from battery to AC or AC to battery. So if you were using the external power supply and it was plugged in out of your sight, you would know it had been unplugged. If your batteries are fully charged and in place, you should not drop your call. The audible warning tone does not go out over program (your listeners don't hear the tone). Now earlier in the manual you may remember we don't recommend you using the external power supply with the batteries in the unit - so you may be asking why do we have a warning tone to tell you that you are now on battery power. We don't recommend you using the external power supply with batteries installed because too often the batteries are not completely charged and the unit will use power to trickle charge them during a broadcast. This can sometimes result in a problem. This occurrence only appears in release level 1.6 units.

Low Battery Condition

When the batteries fall below approximately 11.3 volts, the Cellcast unit will emit a series of one short beep (via headset or external speaker - sounds like: "ditdit").

This signals to you that you have about 5 minutes to find an alternate power source; i.e., another set of batteries, 110 Volt AC power source, or 12 volt via cigarette lighter receptacle (see section below regarding cigarette lighter receptacle use).

You can monitor the power of the batteries or other power source by using command SEL 0 under MODE operation.

Low Battery Condition Warning

There is a condition that can occur if you have batteries in the Cellcast unit that are in a non-charge state or low charge condition. As the Cellcast unit continuously monitors for a low battery condition, it will also attempt to charge batteries in a low battery condition. If you are using the unit to broadcast at the same time there are low or no charge batteries in the unit it will try to charge them. This can cause a state to happen where the unit will become unresponsive to any switch input, including Power On or Power Off.

The only way to break this cycle is to unplug the unit from the 110 V power source and disconnect both of the battery caps or remove the batteries. When you plug the unit back in using 110 V or 12V power it will work correctly. (You could also replace the uncharged batteries with charged batteries.)

END OF BATTERY INFORMATION

SWITCHES, INPUTS AND CONTROLS

following is a brief functional description of the various Cellcast switches, inputs, and controls.

CUE - Assigns the audio to the headphone mix bus and internal amplifier powering the headphone. A lighted indicator signals that CUE is on. Cue assigns the channel selected audio to all four headphones.

END - ends a call in both Cellular or Landline mode. Scrolls through programming functions.

EXTEND - Activates the resident encoder (Frequency Extender). This function requires the use of a single line decoder such as a Comrex or Gentner at the station.

HEADSET OUTPUT - Controls the headset level. The HDST inputs are standard 1/4 inch mono phone jacks.

LINE/MIC INDICATOR - Located below each MIC control, indicated whether the channel is set to accept a MIC input or to accept a LINE input.

LOCK - locks certain switches when invoked - see LOCK section under Software Functions.

MIC INPUT LEVEL - Controls the mic or line level. The MIC inputs are balanced female 3-pin XLR connectors (Pin 1 is ground or shield, pin 2 is high, pin 3 is low).

MODE - Used to access software commands.

PEAK INDICATOR - Located between the MIC and HDSET pots, the indicator lights when audio volume level is excessive. Works with or without the VU Meter on Release 1.8 units.

POWER - Power ON/OFF switch - press to turn unit on or off.

PROG - Assigns the audio output for the channel to the internal program mix bus (summing point) of all audio going "on-the-air". A lighted indicator signals that PROG is on.

SEL - In Cellular mode SEL works with associated SEL functions. In MODE functions, SEL may select or end some commands - see each command instruction.

SND - In Cellular mode, enter the telephone number being called then push SND. In Landline mode pushing SND is the same as picking up the receiver on a telephone - push SND to hear the dial tone.

NOTE: Three cellular telephone function switches are present, but not shown on the key pad, include the following: The function of these keys are covered in the Cellular Telephone Feature and Function section of this manual.

STO - (Store) Located on the * key.

LCK - (Lock) Located on the O (oper) key.

RCL - (Recall) Located on the # key.

END OF SWITCHES, INPUTS AND CONTROLS

HOW TO MAKE A LANDLINE CALL

The unit must be in landline mode with ON HOOD in the Information Display Window. The unit must be connected to a landline telephone system by plugging in the telephone cord to the telephone into the Cellcast. The Cellcast is equipped with a standard RJ-11 C 6 pin connector to receive a modular plug. See Command 2 of the Software Command Functions to switch the Cellcast into landline mode.

Press SND (to emulate picking up the receiver)
The unit will respond with:
OFF HOOK (you will hear a dial tone in the headset)
Dial the desired telephone number
The unit will respond with:
Displaying the number entered
Ringing the number (you will hear the ring in the headset)

If you make an error dialing

Press END
Restart the calling procedure as outlined above

To end the call

Press END (to emulate hanging up the receiver)
The unit will respond with:
ON HOOK

HOW TO MAKE A CELLULAR CALL

The unit must be in cellular mode with activated cellular service. Depending upon the cellular provider, "Roam B A" or "A" or "B" may appear in the Information Window Display. Occasionally an "I" will flash on the second line of the display. This is simply "noise" and is not an error condition.

Dial the desired telephone number
PRESS SND
The unit will respond with:
Displaying the number entered
Ringing the number (there may be a slight delay - you will hear the ring in the headset)

If you make an error dialing

Press CLR to erase the last digit entered
Press SEL CLR to erase the entire number
Restart the calling procedure as outlined above

To end the call

Press END
The unit will respond with:
ROAM B A or A or B

ANTENNA INFORMATION

The antenna shipped with the Cellcast Unit will work in most areas without problem. It should be mounted in a vertical position regardless of the position of the Cellcast unit. If you experience a problem in making a call, dropping calls, or hear excessive noise, moving the Cellcast slightly (even an inch in some cases) can make a difference. Since the Cellcast is built with a full 3-Watt transceiver it will work in many locations that a portable or bag cellular telephone will not.

However, if you are going to use the Cellcast in a fringe area of cellular coverage or in a building not conducive to RF transmission, you can use a variety of other antennas such as a five or nine db omni-directional antenna or a high gain directional Yagi. You can even use a standard magnetic mount car phone antenna for better transmission.

These antennas are available from a variety of sources including Radio Shack or your local electronics supply house. If you have any problems in deciding which alternate antenna might be best for your application or need assistance in obtaining one, please call our product support number (800) 852-1333. One last tip about traveling into different cities or rural locations - call the cellular company providing coverage in that area and ask where their towers are. By knowing the location of the tower you will have better information to determine if you will need a higher gain antenna.

When using an antenna requiring cable, a low loss transmission cable must be used, especially for cable lengths over 10 feet. Also avoid splices and in-line cable adapters, all of which can cause signal loss. The connector for the antenna on the Cellcast RBS-400 is a standard TNC connector.

CIGARETTE LIGHTER RECEPTACLE USE

The Cellcast is designed to work with the 12VDC supply from any 12VDC source such as an automobile or truck. Use of this feature provides for broadcasting in route to remotes as opposed to using batteries. It also provides an easy method to do golf tournaments and boat shows as well. *NOTE: There is an in-line fuse in the receptacle cord. Replacement fuses must be rated as 3A 250V.*

As a note, high resistance or heavily corroded cigarette lighter receptacle contacts can present an unstable voltage source to the Cellcast and may cause overheating or a fire hazard at the receptacle. So care should be exercised when using this power source. Other considerations include determining that no low voltage battery conditions, excessive alternator noise or regulator-alternator problems exist.

To Use the Cigarette Lighter Receptacle Cord

NOTE: It is necessary to remove the batteries before using this method of powering the unit.

1. Disconnect the external power supply.
2. Connect the Cigarette Adapter Receptacle Cord to the power connections.
3. Plug the 12VDC adapter into the cigarette lighter receptacle.
4. Power on the unit and proceed.

VU METER (RELEASE LEVEL 1.8 ONLY)

The Cellcast VU meter works as follows:

The reference voltage is 1.23 VAC peak to peak. (dB is calculated by $\text{dB} = 20 \text{ Log Output over Reference Voltage}$). It is measured at the program bus (no amplification after measurement). The peak light is at approximately 4 dB at 4 VAC. Headroom is 20 dB above the peak light. The landline is 10 dB below the program bus per FCC regulations (this is to prevent the over driving of the phone line.)

The VU meter only indicates what is being transmitted (PROG). What is assigned to the CUE bus only, is not measured.

1. To activate the VU Meter:

Press MODE until Red LED is on. Press END or SEL until "Enter Command" displays.

Press SEL 0

The unit will respond with:

-20 VU 0 +3 +6



A bar graph will reflect the audio level as audio is processed over the mixer.

Press SEL or END to exit.

LINEOUT JACK 1.8 RELEASE LEVEL

The lineout jack is rated at 200 mV peak through 1 V peak. It is designed for any standard PA system or amplifier. To activate the LINEOUT follow the instructions for Command 6 and choose Yes for each option you wish directed to the lineout. The lineout is unbalanced and a matching transformer may be required when feeding balanced inputs of other equipment.

SPEAKER OUTPUT - 1.6 RELEASE LEVEL AND BELOW

A monitor speaker is located internally that can be turned on or off using MODE Command 6. The external connector is identified as SPKR on the left side of the unit. This output will drive an 8 ohm load at 300 milliwatts or 1/3 watt. It can be adapted using a "loss pad" and transformer isolation to feed line or microphone level balanced inputs of a larger external PA system. Connection of an external speaker disconnects the internal speaker.

LANDLINE and CELLULAR RINGER INFORMATION

The Cellcast RBS-400 1.8 Release Level will ring in landline or cellular mode if the Line Out Volume under command 6 is greater than 0. Under Release Level 1.8, all of the parameters under Command 6 control the line out only. The internal speaker is completely by-passed.

IF YOU NEED TO KNOW VERY QUICKLY THE:

Telephone Number Assigned to the Cellcast RBS-400

Press SEL #31

The unit will respond with the programmed telephone number in the Information Display Window.

ESN (Electronic Serial Number) of the Cellcast

*Press MODE **

The unit will respond with the ESN of the transceiver in the Information Display Window.

EXTENDER INFORMATION

The Cellcast RBS-400 (all Release Levels) has a built in encoder to use with a decoder at the station to broadcast high quality radio over the telephone (cellular or landline). As you are aware, a normal telephone circuit is limited in its bandwidth to about 300 Hz and 3200 Hz. Frequencies below 300 Hz, the warmer bass tones (and a portion of many males voices) are lost on the telephone line. Use of the frequency extender recovers the low end frequencies by shifting, or encoding, them to fit within the fixed telephone bandwidth (300 Hz to 3200 Hz). At the other end, the audio is shifted back, or decoded, with the low end frequencies in place.

This process allows the frequencies between 50 Hz and 300 Hz to pass over the standard telephone line, greatly improving the audio quality of the remote.

The Cellcast RBS-400 works with any manufacturer of single line decoders. For specific, detailed information on how to connect a decoder such as a Comrex or Gentner EFT100, refer to their operations or installation guide. A pictorial overview follows this page.

TO ACTIVATE or DEACTIVATE THE ENCODER FUNCTION

To activate the encoder function is simple. Once the call to the radio station is connected, simply press the EXTEND switch. The Red LED over the EXTEND switch will light when activated. To turn off the encoder, simply push the EXTEND switch again. The Red LED will turn off.

To verify that the frequency extension is working a simple test can be done once the call has been initiated and answered. The station can switch their decoder on (from bypass to extend) causing normal voice to sound like a "Darth Vader" effect - muffled tunnel like. The station then can turn off their decoder (extend to bypass) and have the remote turn the Cellcast EXTEND on. Normal voice should now sound like a "Donald Duck" imitation. Then both ends should be activated, and the resulting sound should be extended to the 50 Hz to 3Khz for a quality sounding remote.

A WORD ABOUT MICROPHONES AND HEADSETS

The Cellcast will work with just about any microphone or headset you currently have at your studio. We carry the Telex V220, an all in one headset/microphone unit that we like, but there are a lot of other good products available.

Be aware that some sportscaster's headset/microphone combinations will effect a much higher output since the mic is so close to the mouth. Although the Cellcast is designed to accommodate a wide range of microphones, the result is that since the output level can be as much as 20 dB higher, they may actually overdrive the mic pre-amps in the mixer, causing problems, especially in extend mode. (If you run into this condition you can use an in-line attenuator between the headset microphone and mixer.) The microphone inputs are electronically balanced, not transformer isolated. Just a few other things to keep in mind.

1. The unit is mono - so stereo headsets will process the audio in one side only. You may want to use a mono 1/4 inch phone plug adapter or "monotize" a set.
2. Any good microphone will work well. One that has a low proximity effect and rising response characteristic is best. The unit will not support microphones requiring phantom power, unless they incorporate a means of isolating DC phantom voltage from the non-transformer isolated electronically isolated electronically balanced inputs of the Cellcast.
3. Wireless equipment works great with the Cellcast - just check the distances as you would for any remote.

CELLULAR TELEPHONE FEATURE AND FUNCTION INFORMATION

CALLING HINTS

NOTE: Three cellular telephone function switches are present, but not shown on the key pad, include the following:

- STO-** (Store) Located on the * key
- LCK** - (Lock) Located on the O (oper) key
- RCL** - (Recall) Located on the # key

The cellular transceiver in your Cellcast does not actually dial the digits as you enter them. You can verify the entire phone number before placing a call.

If you hear a warning tone, the cellular phone company is not able to process your call or you dialed incorrectly. Press [END] and begin again.

If you are out of the service area and you press [SEND], no SrCE ArEA appears on the display.

If erroneous parameters are entered, CLEAR SCREEN appears on the display and a tone is heard.

DISPLAYING A LONG NUMBER

You can enter phone numbers of up to 32 digits, but the display can show only 14 digits at a time. Press and hold [SEL] to display the previous part of a telephone number that is longer than 14 digits.

ANSWERING A CALL

When the phone rings, CALL appears on the display. Press [SND] to answer the call. IN USE appears on the display. To end the call, press [END].

USING TONE SERVICES

If you press a number key, [#] or [*], during a call, the unit produces a standard touch-tone signal that is used for special tone services, such as alternate long distance or voice mail.

USING MEMORY DIALING

The memory-dialing feature lets you store and dial up to 30 telephone numbers using two-digits codes (01-30). You can store up to 32 digits in each memory.

STORING A NUMBER

1. Enter the phone number you want to store. Correct entry errors using the [CLR] key.
2. Press [SEL] [STO]-(* Key)
3. STO will appear on the display.
4. Enter a code 01 - 30. *NOTE: The number stored in code 30 can be dialed even if the transceiver is locked.*
5. Press [SEL].

The display will clear briefly and show the code number you entered if the number was stored. If rEPLACE ContEnt appears on the display, you have entered a code where a number was already stored. You can press [SEL] to replace the previously stored number or do nothing for 10 seconds and the phone number returns to the display. You must select a new code to store it under.

If you enter a code other than 01 - 30, the unit will display the error message not FOUnd.

If you want to store the number into the first empty memory location, enter the phone number. then, press [SEL] [STO] - (*Key) [SEL]. The first empty memory location appears on the display for a few seconds. Then, the display clears. If you don't press [SEL], the phone number is automatically stored after 10 seconds. Also, storing can be done in groups (0, 1, 2). If you want to store the number into the first empty memory location in one of the ten groups, enter the phone number. Then press SEL STO, desired group number, [STO]-(*Key) [SEL]. The first empty memory location in the group you entered appears.

If all memories are full no SPACE appears on the display. Then, the phone number returns to the display. To store the number you have to replace one of the currently stored numbers.

If StorE not donE appears on the display, repeat the process.

CALLING A MEMORY NUMBER (SHORT METHOD)

1. If the display is not already clear, press [SEL] [CLR].
2. Enter the 1 or 2 digit code for the memory location. You do not have to enter a zero before a single digit code.

CALLING A MEMORY NUMBER (LONG METHOD)

1. Press [SEL] [RCL]-(#Key). rCL appears on the display.
2. Enter the 1 or 2 digit code for desired memory location.
3. The stored number will appear on the screen. If it isn't the number you want to call, press [SEL] [CLR] and return to step 1.
4. Press [SND] to dial the displayed number.

ERASING A NUMBER

1. Clear the display by pressing [SEL] [CLR]. Then, press [SEL] [STO]-(*Key).
2. Enter the memory location you wish to clear. rEPLACE CONTENT will appear on the display.
3. Press [SEL] within 10 seconds to clear the desired memory location.

MEMORY SCANNING

If you are not sure which memory location a telephone number is stored in, you can scan the memory.

1. Press [SEL] [RCL]-(#Key). rCL appears on the display.
2. Enter the code where you think the number is stored. If the desired number is not displayed, press [#] to scan forward or [*] to scan backward until the desired number appears on the display.

LOCKING THE CELLULAR TELEPHONE

You can lock the cellular telephone to prevent unauthorized outgoing calls. When the transceiver is locked you can only call:

- 911
- *911
- the number stored in memory location 30

You can always receive calls, even when the phone is locked.

NOTE: Before you proceed with locking the phone or changing the lock code, lets be sure that you fully understand the Security Code that is used in programming and the Lock Code that is used to lock and unlock the phone. You remember when you went through the programming section, that we noted that if you ever change your security code, you need to have it written in a safe place. It is important for three reasons:

1. You have to know your security code to be able to program the unit - anytime you would change the telephone number or cellular service.
2. The last four digits of the 5 digit security code will also unlock the phone when it is in LOCK mode due to SEL LCK (0) being entered.
3. You have to know your security code to change the factory default lock from 1234 to your own code.

To Lock the Phone

1. Press [SEL] [LCK]-(Lock). LOCK appears on the display.

To Unlock the Phone

1. To unlock the phone enter the factory default 4 digit Cellular Telephone Lock Code 1234. Or the code you selected if your purchased your unit and changed the code.

NOTE: If you have forgotten the cellular telephone lock code you set for the unit you can use the last four digits of the security code. (Remember the section about the security code earlier? This is another reason why it is important to have it as well as your lock code written down somewhere.) Do Not change the Cellular Telephone Lock Code for Loaner, Demo or Try-To-Buy Units.

CHANGING THE UNLOCK CODE

Do not change the code for Loaner, Demo or Try-To-Buy Units. The phone must not be locked at the time you are trying to change the code.

1. Press [SEL] [5]. SECUritY id appears on the screen.
2. Enter the 5 digit security code - it will not display on the screen, but appear as - - - - -.
3. If you enter an incorrect security code, the unit will show - - - - - and then blank. Start over with step 1.
4. The unit will display UnLOC CoDE when the correct code is entered.
5. Press [SEL] to check the current four digit unlock code. The current code will display Old nnnn.
6. Enter your new four digit code or press [SEL] to stop the process and not change your code. If you make an error while entering it, press [CLR] and re-enter.
7. Press [SEL] to store the new code.

USING THE CALL TIMER

The transceiver will record the length of time for the last call and the total time that the transceiver has been used.

To view the length of the last call or total in-use time.

1. Press [SEL] 3. The call length will appear on the display in hours, minutes, and seconds.
2. Press [SEL] to end this function, or press [3] to view the total in-use time.
3. Press [SEL] or [3] to clear the display.

UNANSWERED CALL INDICATOR

CALL remains on the display when the cellular phone rings but is not answered. The display clears when you press any key on the keypad.

SCRATCH-PAD MEMORY

During a call, digits that you enter (a phone number or any other numerical information) are displayed. These digits remain on the display when the call ends. You can call the number by press [SND] or you can store it as you do any other phone number - even during the call. You and the other party will hear the tones when you enter the digits during a call.

TROUBLE SHOOTING

This is the section for when things go “bump in the middle of the night” and they are supposed to go “bimp”. We hope that if you should encounter a problem that you can easily resolve it by checking through these notes. If not, you can call for assistance at 817 654-9163 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST.

HOW-TO TO FIX - MOST FREQUENTLY ASKED QUESTIONS

PROBLEM:

The display shows LOCK and I can't use the phone.

The lock light is on (or flashing) and the controls are locked.

I can't make a cellular call.

I don't hear in both sides of the headsets.

I can hear them but they can't hear me.

SOLUTION:

Enter SEL 12345. Unless of course, you changed your lock code. If you changed your lock code, you should enter it.

1. Enter LOCK and press the Lock Key.
2. If that doesn't work, go to the UNLOCKING FULL LOCK CONTROL section. Be patient, and work through each step. If you can't resolve it after that, call product support.

1. Is the antenna on? If no, add the antenna, if yes, go to 2.
2. Check to see that a telephone number has been entered into the Cellcast by entering SEL#31. If it has and is correct, go to 3. (If not - go to the Programming Section).
3. Has your cellular company activated the telephone number? If you are unsure, call them. If yes go to 4.
4. Have you made any successful calls? If no, call your cellular company, if yes, go to 5.
5. Is the telephone in cellular mode? If no, correct and try again, if yes, go to 6.
6. Have you checked all the power connections? If no, check them, and try again. If yes, go to 7.
7. Have you tried to make a call in landline mode? If no, try this. If the unit still doesn't work call for product support.

1. Change your stereo headsets for mono ones or use an adapter.
2. If you are using mono headsets, try another pair. If you still have a problem call product support.

1. Check that the PROG LED is on over the channel you have the microphone plugged into. If not, push the PROG switch.
2. Adjust the MIC knob to a position about 11:00 a.m. on the setting and re-adjust from there.

They can hear me, but I can't hear them.

1. Check that the Receive Volume is set to greater than 0. Adjustment of the receive volume is under Mode Command 2, after selecting Cellular or Landline. The setting is left at 99 from the factory.
2. Be sure that the CUE LED is on over the channel you have the headset plugged into. Adjust the CUE MON knob to a position about 11:00 a.m. on the setting and re-adjust from there.

We were using the unit and then all the switches became non-functional and we couldn't even turn it off.

(non-technical)

You were using the external power supply and had batteries in the unit that were not fully charged or in a no-charge state. The external power supply was trying to run the transceiver at 3 watts and provide a steady charge to the batteries. Something else required some more power (maybe a cellular handshake) and the relay became confused, shut the unit controls down and "froze".

1. Unplug the unit, remove the batteries, and plug the unit back in or use fully charged batteries.

You should have heard the low battery warning tone (ditditdit) to alert you of the condition prior to the shut down. This problem has been alleviated in Release Level 1.8 units.

GENERAL TELEPHONE INFORMATION

All connections to the telephone network should be made using standard plugs and standard telephone company provide jacks or equivalent. These connections should be installed so as to allow for quick and easy disconnection of the terminal equipment. Standard jacks should be arranged so as to not cause interference if the associated plug is disconnected.

NOTE: The Cellcast RBS-400 (all release levels) will not work with the Merlin System in landline mode. It is the only telephone system known not to be compatible with the Cellcast.

FCC NOTICE

This equipment generates and uses radio frequency energy and if not installed and used as instructed in this document, may cause interference to radio and television reception.

It has been tested and found to comply with the limits for Class A Computing Device in accordance with the specifications in Subpart B of Part 15 of the FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. If this equipment does cause interference to radio or television reception, which can be determined by turning off the equipment, and seeing if the interference stops, the user is encouraged to try and correct the interference by one or more of the following measures:

1. Reorient the receiving antenna.
2. Relocate the Cellcast with respect to the radio or television.
3. Plug the Cellcast into a different outlet so the other devices are on different circuits.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment and warranty.

EQUIPMENT MALFUNCTION

In the event that the Cellcast RBS-400 (all release levels) should fail to operate, the cause of the problem should be isolated to see if the problem is with the telephone service. To make a quick check, switch the service being used by the Cellcast: e.g., change service from cellular to landline by connecting the Cellcast directly to a suitable landline telephone line (or alternately, change from landline operation to cellular operation).

If the Cellcast unit fails to operate on the alternate telephone system, contact product support at (800) 852-1333.

Cellcast will make every effort to insure quick turn-around on all customer repairs. However it is the policy of Cellcast Communication Products, Inc. to burn-in all units for 100 hours to insure the best quality product possible. You will be advised by Product Support of the time and charges (if applicable) for all repairs for authorization.

LOANER/RENTAL UNIT PROGRAM

All customers have access to the Cellcast Loaner/Rental Unit Program. The Loaner/Rental Program provides the customer a unit to use while their's is being repaired. The program works as follows:

Customer with units under warranty

1. No charge for the loaner unit.
2. No charge for ground shipping (4-5 days delivery).
3. 50% of the charges for overnight, same-day, or two-day delivery (U.S. only).
4. No handling charges.
5. International customers are responsible for all shipping charges outside of the U.S. and may have to pay duties or taxes - the invoice from Cellcast will show that the unit is for emergency replacement at no charge.

Customers with units out of warranty

1. There will be a \$25/day charge for the rental unit. (Minimum 1 week charge of \$125.00)
2. All freight charges are the responsibility of the customer.
3. International customer are responsible for freight and may have to pay duties or taxes - the invoice from Cellcast will show that the unit is for emergency replacement at no charge.

REPLACEMENT PARTS PRICE LIST

MODEL: CELLCAST RBS-400

Release Level: 1.0 - 1.8

The following replacement items are available for immediate shipment.

Items may be shipped the same day C.O.D. by calling Customer Service (501) 750-0277.

Customer Service hours are Monday through Friday, 8:00 a.m. to 4:30 p.m. CST.

Non-emergency orders received after 2:00 p.m. will ship the next day. All prices are FOB Fayetteville, Arkansas, freight charges will be added to your invoice.

ITEM	PART #	COST
12v DC Power Cord	10930	\$ 9.00
Manual	20930	\$ 15.00
Antenna (3 db)	21036	\$ 30.50
TNC Adapter	21053	\$ 10.00
Power Supply Cable	21009	\$ 15.00
Power Supply	10944	\$120.00
Batteries (10)	21078	\$ 98.70
Telex V220 Headsets	20932	\$305.00
Soft Pack	20937	\$ 75.25

Unless otherwise noted, replacement parts are covered by a 90 day warranty.

TO ORDER CALL: (501)750-0277

