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# PROGRAMMING THE D6500

## Create Custom Programs for Your Needs

The D6500 Receiver can contain up to eight telephone line cards.

Users may load special programs into the D6500 that allow it to properly receive messages from communicators.

### Define the Operation of Line Cards

Use the D5200 to choose Program Item selections that customize the line card to accept various incoming signal formats and verify the accuracy of the incoming message.

### Customize Interaction Between the D6500 and Computer Automation System

Use the **MPU** record to condition the D6500 to operate with the computer automation system. Program Items in the **MPU** record identify the D6500 to the automation system and group line cards together when a rotary hunt is used on the phone lines.

## Before You Begin

Review the *D6500 Installation Manual* (74-04651-000) and the *D5200 Operation Manual* (74-06176-000). Also, be familiar with the operation and transmission characteristics of the communicators that report to the receiver. Refer to the installation, operation and/or user's guides provided by the communicator's manufacturer.

**Radionics ships the D6500 Receiver with the default settings shown in this Program Entry Guide.** Review the Program Entry Guide before you program the receiver. Program items to suit your receiver application. Store a current copy of custom programs in the D5200 Programmer and keep the programmer near the receiver. In the event of an emergency, a receiver operator can quickly load the proper program into the receiver or back-up receiver.

### Know When to Program

The best time to program your receiver is during slow periods of the day.

### Use the Program Record Sheet

Before connecting the programmer to the D6500, locate the *Program Record Sheet* (74-05314-000) for the receiver. Follow these important programming rules:

- Read through this program entry guide and select the entries that are the best choices for your application.
- Write down all program changes onto the *D6500 Program Record Sheet*.
- Store the *D6500 Program Record Sheet* where you can easily locate it when an emergency occurs.
- Update the *D6500 Program Record Sheet* each time you change the receiver's program.

## Inside the 6500 Product Handler

The 6500 Product Handler contains two default records, the **LINE CARD** record and the **MPU** record. Use these records to define the operating characteristics for your D6500 Receiver. When you create records, they are also stored in the 6500 Product Handler.

### LINE CARD Record

The **LINE CARD** used to program the receiver's digital telephone line cards. Use the **LINE CARD** record to set the parameters for acknowledging incoming calls from communicators, for enabling telephone line supervision, and for the D6500 Receiver's Listen-In options.

### MPU Record

The **MPU** record is used to program the receiver's Main Processor Unit. Use the **MPU** record to set the operating characteristics of the D6500. The **MPU** record also formats report generation and message transmission between the D6500 Receiver and peripheral reporting devices like external printers or computer automation systems.

### User Created Records

Other records in the 6500 Product Handler are records that users create for their specific application of the D6500 Receiver. The record titles listed in the menu were given to the record at the time that it was saved.

## Find the 6500 Product Handler

1. At **PRODUCT HANDLERS**, press the red down-arrow key on the D5200 until the cursor is on **6500**. Press the red **ENTER GROUP** key.
2. The menu shows **LINE CARD**, **MPU**, and the names of records you have saved. Use the red up- or down-arrow keys to move the programmer display until the cursor is moved to the desired record title.
3. Choose which program that you will edit, then press the red **ENTER GROUP** key.

### Categories

The program items in the record are grouped in Categories. To enter a Category with the programmer, press the red up- or down-arrow keys and move the flashing cursor to the name of the desired Category. If a Category is not needed for your application, you can use the default entries inside. Move past a Category by pressing the red down-arrow key until the cursor flashes on a Category that you want to edit. Press the **ENTER GROUP** key to show the first Program Item in the Category. After you enter into a Category, you can edit the Program Items inside.

### Leaving the Record

Exit from any place within the record. To leave the record without causing any changes to it, press the **EXIT GROUP** key multiple times until the top line of the programmer's display shows **6500 [##.##]**. When the D5200 displays this, you have completely exited the record.

## Copy Records from the D6500 Receiver

This section describes how to copy records from the D6500 Receiver and store them in the D5200 Programmer. When copying a program, the D5200 creates a new record that you can edit, save, and load back into the receiver.

**While the receiver is in the PROGRAMMING MODE, it does not answer incoming calls.** If the D6500 detects an incoming call, the line card RING indicator lights. Do not attempt to enter the Programming Mode until all line cards are free from incoming calls.

1. Plug the D5200's data/power cord into the Programmer Jack on the D6500's MPU Card. (The D6500 continues to receive and process incoming signals until step 3 is completed).
2. At the list of programs, choose which record you will copy by moving the cursor until it flashes on **LINE CARD, MPU**. Do not enter the chosen record, you will copy from this location. The D5200 allows only the **LINE CARD** and **MPU** records to be used for copying. After you edit them, you must save your edits under a new record name.
3. Press and hold the SLNC button, then press the TEST button on the D6500 to enter the programming mode. The D6500's display shows `Prog: Programmer ready.`
4. While the cursor is flashing on **LINE CARD**, or **MPU**, press the **RECV (COPY)** key.
5. If copying **MPU**, then go to step 6. If copying **LINE CARD**, then the programmer displays **RECV from Line Crd \_**.

Type the line card number that you want to copy, then press the white **ENTER** key.

6. While the D5200 is receiving the record, the top line of the D5200 display changes to **RECEIVING**. When the D5200 is finished receiving the record, the top line of the display changes to **RECEIVE SUCCESSFUL**.

You may now view, edit, or save the record.

7. You may now disconnect the D5200's data/power cord from the programmer jack on the MPU card. You can end the programming session by pressing the SLNC and TEST buttons at the same time. (You can disconnect the data/power cord before or after you press the buttons.) The D6500 display shows `Prog: Programming done.`

If you do not manually end the programming session, the D6500's display shows `Prog: Programming done` approximately 20 seconds after you disconnect the data/power cord. This indicates the D6500 has ended the programming mode. The internal printer and the D6500 display receive reports indicating the time the D6500 began and ended the Programming Mode:

MM/DD HH:MM      PROGRAM MODE IN      RCVR 01 — for time programming began

MM/DD HH:MM      PROGRAM MODE OUT      RCVR 01 — for time programming ended

**Receive functions are disabled while the D6500 is in the Programming Mode:** You can leave the D6500 in the Programming Mode while you edit the record, but doing so will disable the line cards from answering incoming calls from communicators. The D6500 indicates an incoming call when the RING lights on the line cards flash. The RING lights on the line cards can flash even when you are in the Programming Mode.

## Edit Records in the Programmer

It is not necessary to connect the programmer to the D6500 in order to edit saved records. However, if your D5200 has a low battery, you can plug it into the receiver's MPU card to provide emergency power. If the D6500 Receiver is not in the Program Mode, it will continue to receive calls until you begin the Programming Mode by pressing the SLNC and TEST buttons.

### Using the Program Entry Guide

In this Program Entry Guide, each programming item is shown as it appears in the programmer display. Below the display is the **Default**, a set of **Selections**, and a **Description** for each selection.

The Selections are the only entries available for a particular Program Item. For example, the program item **Tone 1** can only use **1400 Hz, 2300 Hz, No Tone, Modem II, MDM IIe/IIIA2, or Dual Tone**. Do not use unlisted entries.

### Make changes to an existing record

Follow these steps when making changes to a saved record:

1. Scroll to the appropriate record title using the red up- or down-arrow keys, and press the red **ENTER GROUP** key.
2. Scroll to the appropriate Category using the red up- or down-arrow keys, and press the red **ENTER GROUP** key.
3. Scroll to the appropriate Program Item using the red up- or down-arrow keys, and edit the entry. Press the white **ENTER** key to enter the new data. Continue making changes to Program Items until you are finished making desired changes in the Category.
4. Press the red **EXIT GROUP** key to return to the Category Level.
5. To continue editing other Program Items, repeat steps 2 through 5.

## Saving Changes to the Record

Radionics recommends saving changes in the D5200 Programmer before loading a changed record into the D6500. After editing a record, from inside the record follow these steps:

1. Press the red **EXIT GROUP** key to step out of the record. The **SAVE** display appears if you made changes to any program items in the record.
2. If you want to update the original record with new information that you just edited, press the red **EXIT GROUP** key one time. See *Replacing the Original Record with an Updated Version*. Updating the record causes the old version of the record to be over-written with new changes that you made.

**Do not press the red EXIT GROUP key if the programmer display is similar to the one shown below.** You will lose all changes to the record. If you lose your changes, you will have to start over.

<p><b>RECORD NAME</b> <b>SAVE</b> <b>REPLACE</b> <b>CATEGORY NAME</b></p>
---

If you want to save changes in a new record, not changing items in the original record, at the **NAME:** prompt, give the record a new meaningful name (see *Use Meaningful Record Names* below), then press the white **ENTER** key. The D5200 displays **RECORD SAVED**.

## Use Meaningful Record Names

A record title describes the line number or type of line card the record is used to program. To save a record, it must have a unique title different from any other record within the Product Handler.

Create, then enter a title for the record at the **NAME:** prompt. The title can be up to twelve characters in length. Use any of the custom display characters, numbers, or punctuation marks listed on the D5200 Programmer's cover label. Listed below are some suggested titles and their meanings.

**R01 LINE 1**.....Receiver 01, line card 1  
**R01 LINE 2**.....Receiver 01, line card 2  
**R01 MPU ACTIVE** .....Receiver 01, MPU record for the active receiver  
**R01 MPU BACKUP** .....Receiver 01, MPU record for the backup receiver

After typing the appropriate characters for the selected title, check the programmer's display to make sure your entry is correct, then press the white ENTER key. The programmer shows **RECORD SAVED** at the top of the display.

## Replacing the Original Record with an Updated Version

These instructions continue from *Saving Changes to the Record*, step 2.

**Do not press the red EXIT GROUP key if the programmer display is similar to the one shown below.** You will lose all changes to the record. If you lose your changes, you will have to start over.

<b>RECORD NAME</b> <b>SAVE</b> <b>REPLACE</b> <b>CATEGORY NAME</b>
---

1. When the D5200 displays **REPLACE**, press the **ENTER GROUP** key.
2. The D5200 shows the name of the original record. DO NOT type a new name. While the D5200 displays the original record name, press the white ENTER key to update and replace the original record. The top line of the D5200 shows **RECORD REPLACED** at the top of the display.

## Read Only Records

Records with the name **LINE CARD** or **MPU** are "Read Only Records." If you entered into either of these records, you must save the record with a new name. If the D5200 displays **READ ONLY RECORD**, follow these steps:

1. Press the red **EXIT GROUP** key one time.

**Do not press the red EXIT GROUP key if the programmer display is similar to the one shown above.** You will lose all changes to the record. If you lose your changes, you will have to start over.

2. Use the red up-arrow key to move the cursor to the **SAVE** menu item.
3. At the **NAME:** prompt, type in a new name, then press the white ENTER key. The programmer displays **RECORD SAVED** at the top of the display.

## Loading Records into the D6500 Receiver

After saving new records, load them into the D6500 Receiver. The **LINE CARD** and **MPU** records hold the D6500 default settings that are loaded at Radionics before shipment.

**While the receiver is in the PROGRAMMING MODE, it does not answer incoming calls.** If the D6500 detects incoming calls, the Line card RING indicator lights. Do not attempt to enter the Programming Mode until all Line cards are free from incoming calls.

1. If the D5200 is already plugged into the MPU Card and the D6500 display shows Prog: Programmer ready, go to step 5.
2. Plug the D5200's data/power cord into the Programmer Jack on the D6500's MPU Card. (The D6500 continues to receive and process incoming signals until step 4 is completed.)
3. At the list of programs, move the cursor until it flashes on the record title you are loading. Press the **ENTER GROUP** key to enter into the record.
4. Press and hold the SLNC button, then press the TEST button on the D6500 to enter the Programming Mode. The D6500's display shows Prog: Programmer ready.
5. From anywhere within the record, press the **SEND (LOAD)** key.
6. If loading **MPU**, then go to step 7. If loading **LINE CARD**, then the programmer displays **SEND to Line Card** \_.

Type the line card number that you want to load, then press the white **ENTER** key.

7. While the D5200 is loading the record, the top line of the D5200 display changes to **SENDING**. When the D5200 finishes receiving the record, the top line of the display changes to **SEND SUCCESSFUL**.
8. Disconnect the D5200's data/power cord from the programmer jack on the MPU card. You can end the programming session by pressing the SLNC and TEST buttons at the same time. (You can disconnect the data/power cord before or after you press the buttons.) The D6500 display shows Prog: Programming done.

If you do not manually end the programming session, the D6500's display shows Prog: Programming done approximately 20 seconds after you disconnect the data/power cord. This indicates the D6500 has ended the Programming Mode. The internal printer and the D6500 LCD receive reports indicating the time the D6500 began and ended the Programming Mode:

```
MM/DD HH:MM    PROGRAM MODE IN    RCVR 01 — for time programming began
MM/DD HH:MM    PROGRAM MODE OUT   RCVR 01 — for time programming ended
```

The D6500 now operates according to the newly loaded program.

**Receive functions are disabled while the D6500 is in the Programming Mode:** There is no reason to leave the D6500 in the programming mode after loading a new program. **End the Programming Mode by following instructions in step 8.** If you do not, you will disable the line cards from answering incoming calls from communicators while the receiver is in the Programming Mode. The D6500 indicates incoming calls when the RING lights on the line cards flash. The RING lights on the line cards flash even when you are in the Programming Mode.



# LINE CARD

**LINE CARD** is the record used to program the receiver's digital telephone line cards. Use the **LINE CARD** record to set the parameters for acknowledging incoming calls, and telephone line supervision.

You can program line cards as a part of a group of cards, or individually.

Listed in this section are the program items of the **LINE CARD** record. Each program item is shown as it appears in the D5200 Programmer display. If the default entry is not suitable for the line card you are programming, you may change the entry to one of the choices shown in the "Selections" line. Choose the appropriate selection according to the description shown for each program item.

## Find the LINE CARD Record

These instructions assume that you have read through this Program Entry Guide and have written your choices on the *Program Record Sheet* (74-05314-000).

1. At **PRODUCT HANDLERS**, press the red down-arrow key until the cursor is on **6500**. Press the red **ENTER GROUP** key.
2. The cursor appears on the **LINE CARD** menu item. The D5200 also displays **MPU** and other records that are saved in the D5200. Use the red up- or down-arrow keys to move the cursor to **LINE CARD** or to the desired **LINE CARD RECORD NAME**.

**Creating a new LINE CARD record:** Move the cursor to **LINE CARD** and proceed with step 3.

**Editing a saved LINE CARD record:** Move the cursor to the saved **LINE CARD RECORD NAME** and proceed with step 3.

3. Press the red **ENTER GROUP** key to access this record. When you first enter a **LINE CARD** record, the display looks similar to Figure 1.

<b>LINE CARD RECORD NAME</b>
<b>ACK TONES</b>
<b>PHONE SUPERVISION</b>
<b>LINE FORMAT</b>

Figure 1: Initial LINE CARD Program Display

The top line of the D5200 display shows **LINE CARD**, or the **LINE CARD RECORD NAME** that you are editing.

If the last three lines of the display are different from those shown in Figure 1, then this is not a **LINE CARD** record. Press the red **EXIT GROUP** key to leave the record. Go back to step 2 to choose a different record.

# Ack Tones

Acknowledgment (or Ack) tones notify a communicator that is waiting to transmit, when the D6500 Receiver is ready to receive the communicator's next message.

The D6500 starts the process by answering the phone line, then presenting up to six tones. When the D6500 presents the correct tone for the communicator, the communicator sends its first message.

If the D6500 verifies the message is free of errors, the D6500 sounds the tone to notify the communicator that the message has been accepted, and when it is ready for another message. This process repeats until all of the communicator's messages for this phone call are complete. The communicator disconnects from the phone line, the D6500 hangs up the phone, and is ready for the next phone call.

This Category allows you to choose which acknowledgment tones will be sent, in what order, how many will be sent, and how long the tones will sound.

Press the red ENTER GROUP key to access this Category, or press the red down-arrow key to bypass this Category.

## Tone 1

Default: 2300 Hz

Selection:

1400 Hz  
2300 Hz  
No Tone  
Modem II  
MDM IIe/IIIA2  
Dual Tone

Use the space bar to select the first tone transmitted by the D6500 to acknowledge an incoming call. The D6500 transmits the tones selected in program **Tone 1** through **Tone 6** in sequence until the calling communicator receives the proper acknowledgment tone and transmits its message.

**1400 Hz**----- Sounds a 1400 Hz tone for the time programmed in **Tone Duration**, then pauses for the time programmed in **Ack Wait**.

**2300 Hz**----- Sounds a 2300 Hz tone for the time programmed in **Tone Duration**, then pauses for the time programmed in **Ack Wait**.

**No Tone**----- Causes an absence of a tone for the length of time programmed in Tone Duration then an additional pause for the length of time programmed in **Ack Wait**.

**Modem II**----- Radionics recommends programming two consecutive **Modem II** acknowledgment tones when using this format. This tone is not affected by Tone Duration, however a pause for the length of time programmed in **Ack Wait** follows the tone.

**MDM IIe/IIIA2** ----- This tone is compatible with the D9412, D9124, D9112, D9112B, D7412, D7212, D7212B, D2812, D2412, D2212, D2112, and D2012. It is not affected by **Tone Duration**, however a pause for the length of time programmed in **Ack Wait** follows the tone.

**Dual Tone**----- This tone is compatible with most DTMF communicator formats. Included are: Contact ID, "Express" formats, "High Speed" formats, most "Super Fast" formats, and other popular DTMF formats. It is not affected by **Tone Duration**, however a pause for the length of time programmed in **Ack Wait** follows the tone.

*continued on next page*

**Replacing an old receiver with a D6500:** If the D6500 is replacing another receiver currently in operation, program **Tone 1** to send the same frequency tone as the receiver being replaced. Radionics recommends that you program **Tone 1** for compatibility with existing communicators that may not wait through a sequence of tones.

**Mixing transmission formats on this line card:** When a line card is configured to accept both Modem II and pulse formats, do not set **Tone 1** to **Modem II**. This can cause pulse errors. Choose 1400 Hz or 2300 Hz for this entry when mixing transmission formats.

## Tone 2

Default: 1400 Hz

Selection: 1400 Hz  
 2300 Hz  
 No Tone  
 Modem II  
 MDM IIe/IIIA2  
 Dual Tone  
 End of Table

Using the space bar, select the tone transmitted by the D6500 to acknowledge an incoming call. The D6500 transmits the tones selected in program **Tone 1** through **Tone 6** in sequence until the calling communicator receives the proper acknowledgment tone and transmits its message.

- 1400 Hz**----- Sounds a 1400 Hz tone for the length of time programmed in **Tone Duration**, then pauses for the length of time programmed in **Ack Wait**.
- 2300 Hz**----- Sounds a 2300 Hz tone for the length of time programmed in **Tone Duration**, then pauses for the length of time programmed in **Ack Wait**.
- No Tone** ----- Causes an absence of a tone for the length of time programmed in **Tone Duration** then an additional pause for the length of time programmed in **Ack Wait**.
- Modem II**----- Radionics recommends programming two consecutive **Modem II** acknowledgment tones when using this format. This tone is not affected by **Tone Duration**, however a pause for the length of time programmed in **Ack Wait** follows the tone.
- MDM IIe/IIIA2** ----- This tone is compatible with D9000 series, D7000 series, D2000 series, and the D10024 panels.. It is not affected by **Tone Duration**, however a pause for the length of time programmed in **Ack Wait** follows the tone.
- Dual Tone**----- This tone is compatible with most DTMF communicator formats. Included are: Contact ID, "Express" formats, "High Speed" formats, most "Super Fast" formats, and other popular DTMF formats. It is not affected by **Tone Duration**, however a pause for the length of time programmed in **Ack Wait** follows the tone.
- End of Table** ----- This selection causes the D6500 to stop sending tones, disconnect from the phone line, and await the next telephone call.

The actual number of tones that would be most effective in your application depends on the available "acknowledgment tone wait time" for communicators reporting to the line. Radionics communicators wait approximately 30 seconds after the communicator dials the last phone number digit.

The timing sequence for the D6500 is as follows: Two seconds after picking up the incoming line, the D6500 sends the first acknowledgment tone. It sends the next tone in the sequence four seconds after the end of the last tone. Program the duration of the 1400 Hz and 2300 Hz tones with the **Tone Duration** prompt. Modem II acknowledgment tones are pre-set and have a fixed duration.

### Tone 3

Default: Modem II

Selection: 1400 Hz  
2300 Hz  
No Tone  
Modem II  
MDM Ile/IIIA2  
Dual Tone  
End of Table

See the descriptions of these tones in **Tone 2**.

### Tone 4

Default: Modem II

Selection: 1400 Hz  
2300 Hz  
No Tone  
Modem II  
MDM Ile/IIIA2  
Dual Tone  
End of Table

See the descriptions of these tones in **Tone 2**.

### Tone 5

Default: Modem Ile/IIIA2

Selection: 1400 Hz  
2300 Hz  
No Tone  
Modem II  
MDM Ile/IIIA2  
Dual Tone  
End of Table

See the descriptions of these tones in **Tone 2**.

### Tone 6

Default: Dual Tone

Selection: 1400 Hz  
2300 Hz  
No Tone  
Modem II  
MDM Ile/IIIA2  
Dual Tone  
End of Table

See the descriptions of these tones in **Tone 2**.

### Tone Duration

Default: 12

Selection: 002 - 100

Set the 1400 Hz and 2300 Hz acknowledgment **Tone Duration** time. Make selections in 1/10 second increments. Default setting (12) provides a 1.2 second acknowledgment tone. Radionics set Modem II acknowledgment tones to 600 milliseconds. This prompt does not adjust **Dual Tone**, **Modem II** or **MDM Ile/IIIA2** tones.

# Phone Supervision

Phone supervision allows the D6500 Receiver to indicate trouble when problems exist. This Category allows you to program the D6500 to test the phone line, and notify users when problems with signal clarity exist.

Press the red ENTER GROUP key to access this Category, or press the red down-arrow key to bypass this Category.

## Line Sniff

Default:	Yes
Selection:	Yes No

Each D6540/D6541 Line card has a phone line monitor that measures the voltage and current of the telephone line to which it is connected.

This entry enables or disables phone line supervision. If **Line Sniff** is **Yes**, and the phone line is disconnected or out of service, the TRBL LED on the D6540/D6541 Line Card will light and a **LINE TROUBLE** message appears on the display. If enabled, the message prints and is sent to the computer automation system.

**Certified central stations choose Yes:** Set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----The Line card is connected to an operating phone line.

**No**-----The Line card is not connected to an operating phone line, or if the Line card is configured for demonstration mode. See the *D6500 Security Receiver Operation and Installation Manual* for Line card jumper settings for demonstration mode.

## Pulse Errors

Default:	Yes
Selection:	Yes No

This program item enables or disables supplementary **PULSE ERROR** reports. See the *D6500 Security Receiver Operation and Installation Manual* for an explanation of **PULSE ERROR** reports.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----Enable supplementary messages for Pulse Error reports.

**No**-----Disable supplementary messages for Pulse Error reports.

## AA Ring Count

Default: 0

Selection: 0-9

AA (Auto Answer) Ring Count allows the line card to wait for the programmed number of rings before answering the call. This item can be used to allow capture of Caller ID information between rings.

**Note:** *This option can only be used with Line Card v8.00 or higher.*

**0**-----Line card will answer as soon as a ring is detected.

**1-9**-----Sets the ring count number for the Auto Answer function. The receiver waits this programmed number of rings before picking up the phone line.

# Line Format

## How Line Format Affects the Line Card

These entries choose how many digits the D6500 considers to be a round. Configure the D6500 to properly interpret the arrangement of the digits within a round by programming the items in this section.

Each D6540/D6541 Line Card decodes 3 x 1 double round messages, one of three possible 5 digit formats, one of three possible 6 digit formats, and one of two possible 8-digit formats. In this section, choose the **5-Digit**, **6-Digit**, and **8-Digit** formats used for each line card.

Press the red ENTER GROUP key to access or the red down-arrow key to bypass this Category.

### 5-Digit

<b>Default:</b>	<b>3x1 Checksum</b>
<b>Selection:</b>	<b>3x1 Checksum</b> <b>3x2 Dbl Rnd</b> <b>4x1 Dbl Rnd</b>

This entry determines how the D6500 interprets and displays the information from a communicator transmitting a 5 digit format. Use *Table 3: Five Digit Format* to determine what kind of signals are being received on this line card. Make selections with the space bar, then press the white ENTER key to accept the change.

5 Digit Format	Digit 1	Digit 2	Digit 3	Digit 4	Digit 5
<b>3x1 Checksum</b>	Account #	Account #	Account #	Zone Digit	Checksum Digit
<b>3x2 Double Round</b>	Account #	Account #	Account #	Zone Digit	Zone Digit
<b>4x1 Double Round</b>	Account #	Account #	Account #	Account #	Zone Digit

**Table 3: Five Digit Format**

<b>3x1 Checksum</b>	Three digit account number, 1 zone digit, and 1 checksum digit
<b>3x2 Dbl Rnd</b>	Three digit account number, 1 group digit, and 1 zone digit
<b>4x1 Dbl Rnd</b>	Four digit account number, and 1 zone digit

### 6-Digit

<b>Default:</b>	<b>4x2 Dbl Rnd</b>
<b>Selection:</b>	<b>4x2 Dbl Rnd</b> <b>3x2 Checksum</b> <b>4x1 Checksum</b>

This entry determines how the D6500 interprets and displays the information from a communicator transmitting a 6 digit format. Use *Table 4: Six Digit Format* to determine what kind of signals are being received on this line card. Make selections with the space bar, then press the white ENTER key to accept the change.

6 Digit Format	Digit 1	Digit 2	Digit 3	Digit 4	Digit 5	Digit 6
<b>4x2 Double Round</b>	Account #	Account #	Account #	Account #	Zone Digit	Zone Digit
<b>3x2 Checksum</b>	Account #	Account #	Account #	Zone Digit	Zone Digit	Checksum Digit
<b>4x1 Checksum</b>	Account #	Account #	Account #	Account #	Zone Digit	Checksum Digit

**Table 4: Six Digit Format**

<b>4x2 Dbl Rnd</b>	Three digit account number, 1 group digit, and 1 zone digit
<b>3x2 Checksum</b>	Three digit account number, 1 group digit, 1 zone digit, and 1 checksum digit
<b>4x1 Checksum</b>	Four digit account number, 1 zone digit, and 1 checksum digit

## **8-Digit**

**Default:** 4-1 Express

**Selection:** 4-1 Express  
DSC 4-3 cksm

This entry determines how the D6500 interprets and displays the information from a communicator transmitting 4-1 Express or DSC 4-3 with checksum formats. Select which of the two formats you would like this line card to receive. Make selections with the space bar, then press the white ENTER key to accept the change.



# Timing Adjustments

Items **Ack Wait**, **Rnd Wait**, **Modem Time**, **3x1 10 Cycle**, and **Digit Threshold** should not be changed from the default entry unless you are having difficulty receiving signals. Variations in different manufacturers equipment may require some adjustment in these parameters. Contact Radionics before changing these entries.

Press the red ENTER GROUP key to access this Category, or press the red down-arrow key to bypass this Category.

## Ack Wait

Default: 40

Selection: 00 - 100

This entry determines the time interval between acknowledgment tones (**Tone 1** through **Tone 6**). Make selections in 1/10 second increments. A default of 40, provides a four second wait time between acknowledgment tones. 100 (10 seconds) is the maximum setting.

If the communicator begins sending a message as the next tone begins, it may be necessary to increase **Ack Wait** by entering a higher number.

If the communicator hangs up after waiting too long to reach the compatible tone, it may be necessary to enter a lower number into **Ack Wait**. Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

## Rnd Wait

Default: 60

Selection: 00 - 100

This entry determines how long the receiver will wait for the second half of a double round message. Make selections in 1/10 second increments. A default setting of 60 provides a six second wait time. 100 (10 seconds) is the maximum setting.

If Pulse Errors reports are generated, **Rnd Wait** may need adjustment. Adjust this entry if the number of digits received in the round are different than anticipated.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

## Modem Time

Default: 60

Selection: 00 - 255

Contact Radionics Technical Support for information about this entry.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

### **3x1 10 Cycle**

**Default:** Yes

**Selection:** Yes  
No

Digital communicator manufacturers offer many report formats. The D6500 receives three different speeds; 10, 20, or 40 pulses each second.

Because a ten pulse per second signal is slower than 20 or 40 pulses per second, certain program items may need adjustment so the D6500 can properly receive the message.

**Yes** ----- Enables the D6500 to decode 3x1 formats by relying on the digit threshold time programmed in ***Digit Threshold***.

**No**----- Allows the D6500 to decode 10 PPS, 3x1 format by measuring the pulse width.

### **Pulse Plus %**

**Default:** 75

**Selection:** 0 to 100

Contact Radionics Technical Support for information about this entry.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

### **Pulse Minus - %**

**Default:** 75

**Selection:** 0 to 100

Contact Radionics Technical Support for information about this entry.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

### **Digit Threshold**

**Default:** 14

**Selection:** 9 to 20

This setting determines how long the line card looks for the next digit. Make selections in 1/10 second increments. The default setting of **14** provides a 1.4 second window.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

# Listen-In

Listen-In systems allow the monitoring facility to listen to, or record conversations or other noises that could be helpful in identifying events during an alarm activation. These entries configure features for the D6500 Receiver when used for monitoring Listen-In systems.

Press the red **ENTER GROUP** key to access this Category, or press the red down-arrow key to bypass this Category.

## Duration

Default: 0

Selection: 0 to 15

This entry determines how long the D6500 stays on line when a Listen-In message is received. The time is set in one minute increments. A setting of **0** means no Listen-In time.

**Certified central stations choose 0:** Set this item to **0** to meet the requirements for UL certification.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

## Low Acct Digit

Default: B

Selection: 0 to 9, B to F

This entry determines the low digit of the range of digits that activate Listen-In.

**The account number's first digit counts:** The D6500 decodes the first digit of the account number to determine when to start Listen-In. **Low Acct Digit** and **High Acct Digit** set a high and low range of digits used to activate Listen-In. If the first digit of the account number falls within that range, Listen-In is activated.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

## High Acct Digit

Default: F

Selection: 0 to 9, B to F

This entry determines the High digit of the range of digits that will start Listen-In.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

## Refresh

Default: 0

Selection: 0 to 15

This entry determines how many refresh cycles the D6500 allows for BFSK, Modem II, and MDM IIe/IIIA2 Listen-In accounts. An entry of **0** will give no refresh cycles.

**Special programming for Radionics Communicators:** Program Radionics communicators for one, two, or three minutes of Listen-In time in order for **Refresh** to activate additional Listen-In times.

**Certified central stations choose 0:** Set this item to **0** to meet the requirements for UL certification.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

# MPU

**MPU** is the record used to program the receiver's Main Processor Unit. Use the **MPU** record to set the operating characteristics of the D6500. The **MPU** record also formats report generation and message transmission between the receiver and peripheral reporting devices like external printers or computer automation systems.

Before attempting to program the D6500 Security Receiver you should be familiar with its operation (see the *Radionics D6500 Operation and Installation Manual*). You should also be familiar with the operation and transmission characteristics of the communicators that report to the receiver and the peripheral devices connected to the D6500 Receiver. Refer to the installation, operation and/or user's guides provided by the communicator's manufacturer.

Radionics ships the D6500 Receiver with default settings shown in this Program Entry Guide. As you review the Program Entry Guide, you may find that some of the parameters must be changed to suit your receiver application. **Radionics recommends that you store a current copy of your customized records in the D5200 Programmer and keep the programmer near the receiver.** In the event of an emergency, the receiver or back up receiver can be reprogrammed quickly with the proper parameters.

Listed in this section are the program items for the **MPU** record. Each program item prompt is shown as it appears in the D5200 Programmer display.

## Find the MPU Record

These instructions assume that you have read through this Program Entry Guide and have written your choices on the *Program Record Sheet* (74-05314-000).

1. At **PRODUCT HANDLERS**, press the red down-arrow key until the cursor is on **6500**. Press the red **ENTER GROUP** key.
2. The cursor appears on the **LINE CARD**. The D5200 also displays **MPU**, and the names of records you have saved. Use the red up- or down-arrow keys to move the cursor to **MPU** or to the desired **MPU RECORD NAME**.

**Creating a new MPU record:** Move the cursor to **MPU** and proceed with step 3.

**Editing a saved MPU record:** Move the cursor to the saved **MPU RECORD NAME** and proceed with step 3.

3. Press the red **ENTER GROUP** key to access the record. When you first enter an **MPU** record, the display should look similar to Figure 4.

```
MPU RECORD NAME
GLOBAL
LINE CARD GROUPS
LINE CARD SUPV
```

Figure 4: MPU Program Initial Display

The top line of the D5200 display shows **MPU**, or the **MPU RECORD NAME** that you are editing.

If the last three lines of the display are different from those shown in Figure 4, then this is not an **MPU** record. Press the red **EXIT GROUP** key to leave the record. Go to step 2 to choose a different record.

For more information about Copying, Editing, Saving, or Loading Records, see *Programming the D6500* in this manual.

# Global

This part of the program controls settings for all line cards installed in the receiver. It also covers some program entries associated with the over all operation of the D6500 Receiver.

Press the red ENTER GROUP key to access this Category, or press the red down-arrow key to bypass this Category.

## Receiver Number

Default: 01

Selections: 00 to 99

Enter the Receiver Number. This number will print and/or display when receiver status messages are processed.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

## Armed Status

Default: No

Selections: Yes or No

Prints the Armed Status of the D4112/6112 at test time.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----Armed Status of D4112/6112 prints at test time.

**No**-----Armed Status of D4112/6112 does not print at test time.

## Auto Ack

Default: Yes

Selections: Yes or No

Automatic Acknowledgment of incoming signals.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----for the Automatic Mode.

**No**-----for the Manual Mode. In Manual Mode, the operator must press the SLNC button once to silence the buzzer, and once again to acknowledge incoming calls, clear the display and advance to the next message.

***If your D6500 includes a Fastlink C6560 Line Card, and you program Armed Status to Yes, your D6500 will generate an Opening event with the receipt of every Restoral Zone E event (for example, Automated Test Report).***

## Buzz In Auto

Default: Yes

Selections: Yes or No

Activate operator alert buzzer In automatic mode.

**Certified central stations choose Yes:** Set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----causes the operator alert buzzer to sound when signals are received. When **Buzz In Auto** is **Yes**, and **Auto Ack** is **Yes** for the Automatic Mode, the buzzer will sound on incoming signals if either Internal Printer or External printer **Device** is set to **Primary** or **Always On**. The buzzer turns off when either the signal is acknowledged by the automation system, or when an operator presses the SLNC button.

**No**-----disables the operator alert buzzer for incoming signals when program item **Auto Ack** is programmed **Yes**.

## Buzz Alarm

Default: No

Selections: Yes or No

Operator Alert buzzer to activate only on alarm events. All internally generated D6500 alarm events will activate the buzzer and alarm relays when Buzz Alarm is programmed **YES**. Other alarm events that will activate the buzzer and relays are listed in Table 5.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----Operator Alert buzzer activates only on alarm events. When programmed **Yes**, the programming of **Auto Ack** and **Buzz In Auto** are overridden.

**No**-----Operator Alert buzzer activates for all events.

	Pulse	BFSK	Modem		Pulse	BFSK	Modem
AC FAIL		x	x	FIRE ALARM			x
ALARM (Unexpanded)		x		FIRE CANCEL			x
ALARM (Points 1-256)			x	FIRE MISSING			x
ALARM (Zones 0-9)	x	x	x	INVALID ACCESS			x
ALARM (Zones 9-16)			x	INVALID REMOTE ACCESS			x
ALARM (Zones 100-815)			x	INVALID REMOTE ACCESS (CallBack)			x
ALARM (Door Forced)			x	MISSING ALARM			x
BATTERY LOW			x	NETWORK FAIL			x
BATTERY MISSING			x	POINT BUS FAIL			x
CANCEL (Non-Fire)			x	RF TAMPER ALARM			x
COMM FAIL (Route Group)			x	RF TRANSMITTER BATTERY LOW			x
COMM FAIL (SDI Device)			x	RF TRANSMITTER TAMPER ALARM			x
DOOR LEFT OPEN (Alarm)			x	SDI DEVICE FAIL			x
DURESS			x	TAMPER ALARM			x
DURESS ID #			x	USR ALARM (CMD 7 or 9)			x
EQUIPMENT FAIL			x	USR ALRM (Zones 0-9, B-F)			x
FIRE (FR 1-8)		x	x				

Table 5: Alarm Events Activating Buzzer and External Relays

## ***Busy Second Rpts***

**Default:** Yes

**Selections:** Yes or No

Enable busy seconds reports.

**Certified central stations choose Yes:** Set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----Busy seconds reports for UL applications.

**No**-----No busy seconds reports.

## ***Call Blocking***

**Default:** Yes

**Selections:** Yes or No

Call Block separation allows real time printout of messages in the order that the D6500 processes them, or printouts of messages stored until the incoming call is completed.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----stores messages, then prints when the call is completed.

**No**-----prints messages in real time, as the D6500 processes them.

## ***Point/User Text***

**Default:** Yes

**Selections:** Yes or No

Print POINT TEXT and USER TEXT on the internal/external printer.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----Point/User Text prints.

**No**-----Point/User Text does not print.

## ***Time Set Enable***

**Default:** Yes

**Selections:** Yes or No

Enable Time/Date Setting from receiver controls.

If programming does not allow setting the date and time from a computer automation system, you may still use the toggle switch on the D6510 MPU card to set the date and time. See the *D6500 Operation Manual* for more information about how to set the date and time.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----allows the operator to change the date and time from the receiver

**No**-----allows the automation system to change the date and time.

## **Time Set Report**

**Default:** Yes

**Selections:** Yes or No

Print and/or display a Time Set Report on reporting devices when time/date is adjusted.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----generate reports of time/date changes when the time or date is changed by the operator or computer automation system.

**No**-----no time/date changes are reported until the next incoming message occurs.

## **Power Supv Rpts**

**Default:** Yes

**Selections:** Yes or No

Enable Power supply Supervision.

**Supervision is always visually annunciated:** Whether programmed **Yes** or **No**, all conditions are visually displayed by LEDs. The indicator LEDs on the front display of the D6500 are not affected by the receiver's program.

**Certified central stations choose Yes:** Set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----reports all power trouble conditions to the internal printer and to other enabled devices like external printers and the automation system.

**No**-----disables reporting of power trouble conditions.



# Line Card Groups

This section contains program items that determine the way that Line Cards are supervised and the way that incoming messages are identified by the D6500.

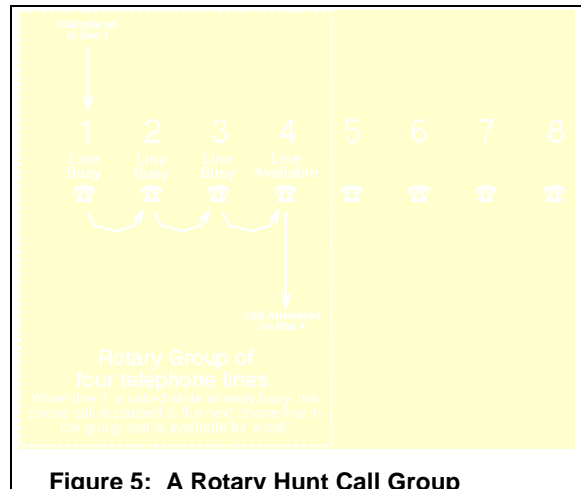
**Group cards when using rotary lines or hunt groups:** When receiver phone lines are included in a rotary hunt group (as shown in Figure 5), use the entries in Line Card Groups to assign each Line Card to a group.

All of the Line Cards assigned to a specific Group "adopt" the Line Card program loaded into the line card with the same number as the group number. For example: if you assign Lines 1 through 4 to Group 3, you only need to load a Line Card program into Line 3. The other lines in Group 3 use the program you loaded into line card 3 to determine how the line cards will process incoming calls.

If you load programs for Lines 1, 2, and 4, the D6500 ignores these programs unless you assign that line card number to a different group.

## Phone Calls Into a Line Card Group

As shown in Figure 5, the communicator calls the phone number assigned to line card 1. If Line 1 is busy, the call is transferred (by the phone company) to the next available line in the rotary hunt group. In this case, the next available line is Line 4, so the call is automatically transferred to Line 4, and the receiver answers the call. Since the receiver is available to answer all of the line cards all of the time, the possibility of the communicator getting a busy signal is greatly reduced.



## Information Out of the Call Group

The reports generated by incoming calls on lines assigned to a call group can be identified by the group number (e.g.: G1), not the line number (e.g.: L4, L5, or L6) if **Group Reporting** is programmed Yes. This causes the D6500 computer automation output to recognize all of the line cards in the group as a single line card.

**Treat all grouped line cards as if they were a single line card:** You would not duplicate account numbers from separate communicators that call the same line card. When grouping line cards, do not duplicate account numbers from separate communicators that call the group. The D6500 output to the computer automation system is the same for all grouped line cards when **Group Reporting** is set to **Yes**. The D6500 treats grouped line cards as it would a single line card.

**Group Line Cards to reduce Busy Seconds:** The lines in a call group are combined in Busy Seconds Reports. These reports indicate the percentage of time that the line or group is busy or out of service. For example, if Lines 1 and 2 are assigned to Group 1, **BOTH** of the lines must be busy or out of service for more than 10% (one minute) of the 10 minute period to generate a Busy Seconds Report. Busy Seconds will be reported on the lowest numbered line card in a group. If the lines are *not assigned to a group* (or if there is only one line in the group), a Busy Seconds Report is generated if the line is busy for more than 10% (1 minute) of the 10 minute period. Example: MM/DD HH:MM L#  
BUSY SECONDS 10% RCVR 01.

**Account 888 on line 8 is a D6500 internal account number:** Do not use account number 888 for any communicators reporting to Line 8, this account number is used for the printer test, various reports sent to the automation system, and other system reports.

Press the red ENTER GROUP key to access this Category, or press the red down-arrow key to bypass this Category.

### Line Card 1

Default: Blank

Selections: Blank or 1 - 8

Line 1 Group? Enter a Group number (1 through 8) to make this line part of a line group. Reports on this line may be identified by group # (see **Group Reporting**).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

**Blank**-----identifies reports by line number and reporting format (L1, B1, or M1).

### Line Card 2

Default: Blank

Selections: Blank or 1 - 8

Line 2 Group? Enter a Group number (1 through 8) to make this line part of a line group. Reports on this line may be identified by group # (see **Group Reporting**).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

**Blank**-----identifies reports by line number and reporting format (L2, B2, or M2).

### Line Card 3

Default: Blank

Selections: Blank or 1 - 8

Line 3 Group? Enter a Group number (1 through 8) to make this line part of a line group. Reports on this line may be identified by group # (see **Group Reporting**).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

**Blank**-----identifies reports by line number and reporting format (L3, B3, or M3).

### Line Card 4

Default: Blank

Selections: Blank or 1 - 8

Line 4 Group? Enter a Group number (1 through 8) to make this line part of a line group. Reports on this line may be identified by group # (see **Group Reporting**).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

**Blank**-----identifies reports by line number and reporting format (L4, B4, or M4).

### Line Card 5

Default: Blank

Selections: Blank or 1 - 8

Line 5 Group? Enter a Group number (1 through 8) to make this line part of a line group. Reports on this line may be identified by group # (see **Group Reporting**).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

**Blank**-----identifies reports by line number and reporting format (L5, B5, or M5).

### Line Card 6

**Default:** Blank

**Selections:** Blank or 1 - 8

Line 6 Group? Enter a Group number (1 through 8) to make this line part of a line group. Reports on this line may be identified by group # (see **Group Reporting**).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

**Blank**-----identifies reports by line number and reporting format (L6, B6, or M6).

### **Line Card 7**

**Default:** Blank

**Selections:** Blank or 1 - 8

Line 7 Group? Enter a Group number (1 through 8) to make this line part of a line group. Reports on this line may be identified by group # (see **Group Reporting**).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

**Blank**-----identifies reports by line number and reporting format (L7, B7, or M7).

### **Line Card 8**

**Default:** Blank

**Selections:** Blank or 1 - 8

Line 8 Group? Enter a Group number (1 through 8) to make this line part of a line group. Reports on this line may be identified by group # (see **Group Reporting**).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

**Blank**-----identifies reports by line number and reporting format (L8, B8, or M8).

# Line Card Supervision

The D6500 constantly supervises the condition of line cards. When the receiver is first powered-up and during system initialization tests, the receiver checks each of the line card positions and reports missing or failed line cards. A new report is generated at intervals of approximately one hour for each failed line card, or for a line card that becomes missing *after* the initial power up, unless you disable supervision of the line card position.

**Disabling card supervision disables the Line Card:** D6540/D6541 Line cards must be supervised in order to operate. Set this selection to **No** when not using the associated line card.

**Disabling phone supervision:** To disable phone line supervision, in Line Card, program **Phone Supervision Line Sniff No**.

Press the red ENTER GROUP key to access this Category, or press the red down-arrow key to bypass this Category.

## Line Card 1

Default: **Yes**

Selections: **Yes or No**

Enable supervision of Line 1.

**Certified central stations choose Yes:** If using this line card, set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables the Line Card and supervision.

**No**-----disables the Line Card.

## Line Card 2

Default: **Yes**

Selections: **Yes or No**

Enable supervision of Line 2.

**Certified central stations choose Yes:** If using this line card, set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables the Line Card and supervision.

**No**-----disables the Line Card.

### Line Card 3

Default: Yes

Selections: Yes or No

Enable supervision of Line 3.

**Certified central stations choose Yes:** If using this line card, set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables the Line Card and supervision.

**No**-----disables the Line Card.

### Line Card 4

Default: Yes

Selections: Yes or No

Enable supervision of Line 4.

**Certified central stations choose Yes:** If using this line card, set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables the Line Card and supervision.

**No**-----disables the Line Card.

### Line Card 5

Default: Yes

Selections: Yes or No

Enable supervision of Line 5.

**Certified central stations choose Yes:** If using this line card, set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables the Line Card and supervision.

**No**-----disables the Line Card.

### Line Card 6

Default: Yes

Selections: Yes or No

Enable supervision of Line 6.

**Certified central stations choose Yes:** If using this line card, set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables the Line Card and supervision.

**No**-----disables the Line Card.

### Line Card 7

Default: Yes

Selections: Yes or No

Enable supervision of Line 7.

**Certified central stations choose Yes:** If using this line card, set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables the Line Card and supervision.

**No**-----disables the Line Card.

### Line Card 8

Default: Yes

Selections: Yes or No

Enable supervision of Line 8.

**Certified central stations choose Yes:** If using this line card, set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables the Line Card and supervision.

**No**-----disables the Line Card.

# Internal Printer

The D6500 Receiver contains an internal printer. Enable, disable, or use the Internal Printer as a back-up device in case an external printer or computer automation system fails. Use the program items in this section to program the reporting characteristics of the D6500's internal printer.

Press the red ENTER GROUP key to access this Category, or press the red down-arrow key to bypass this Category.

## Device

Default: Primary

Selections: Primary  
Secondary  
Always On  
Always Off

Select the reporting mode for the internal printer. Enter **Primary**, **Secondary**, or **Always On** to supervise the internal printer for printer off-line, printer trouble, and paper out conditions and reports. **Supervision** can stop supervision reports from going to other devices when the internal printer fails.

**UL Burg/Automatic certified central stations choose Primary:** If you are **not** using a computer automation system, set this item to **Primary** in order to meet the requirements for UL Burg/Automatic certification.

**UL Fire/Burg/Automatic certified central stations choose Always On:** If you are using a computer automation system, set this item to **Always On** in order to meet the requirements for UL Fire/Burg/Automatic certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Primary**----- All reports go to this device.

**Secondary**----- Reports go to this device only after all primary devices fail.

**Always On**----- All reports go to this device whether functional or not.

**Always Off**----- Device is disabled. No reports are sent to this device.

## Supervision

Default: Yes

Selections: Yes or No

Enable Supervision of the Internal Printer.

**Certified central stations choose Yes:** Set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----sends supervision reports to other reporting devices when the internal printer fails or is restored. (i.e. printer off-line, printer trouble, paper out.)

**No**-----disables supervision reports. No reports are generated when the internal printer fails or is restored.

# External Printer

The D6500 Receiver supports an optional RS-232 external serial printer. The program items in this section are used to program the reporting characteristics of the optional external printer.

Press the red ENTER GROUP key to access this Category, or press the red down-arrow key to bypass this Category.

## Device

Default: Always Off

Selections: Primary  
Secondary  
Always On  
Always Off

Select the reporting mode for the external printer. Enter **Primary**, **Secondary**, or **Always On** to supervise the external printer for printer off-line, printer trouble, and paper out conditions and reports. **Supervision** can stop supervision reports from going to other devices when the external printer fails.

**UL Burg/Automatic certified central stations choose Primary:** If you are **not** using a computer automation system or the internal printer, set this item to **Primary** to meet the requirements for UL Burg/Automatic certification.

**UL Fire/Burg/Automatic certified central stations choose Always On:** If you have an external printer and you are using a computer automation system, set this item to **Always On** to meet the requirements for UL Fire/Burg/Automatic certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Primary**----- All reports go to this device.

**Secondary**----- Reports go to this device only after all primary devices fail.

**Always On**----- All reports go to this device whether functional or not.

**Always Off**----- Device is disabled. No reports are sent to this device.

## Supervision

Default: Yes

Selections: Yes or No

Enable supervision of the external printer.

**Certified central stations choose Yes:** Set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----sends supervision reports to other reporting devices when the external printer fails or is restored. (i.e. printer off-line, printer trouble, paper out.)

**No**-----disables supervision reports. No reports are generated when the external printer fails or is restored.



## **XON/XOFF**

**Default:** Yes

**Selections:** Yes or No

Allow XON/XOFF protocol for the external printer.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables XON/XOFF protocol.

**No**-----disables XON/XOFF protocol. No signals are received from the external printer.

## **CR/LF**

**Default:** Yes

**Selections:** Yes or No

Enable carriage return and line feed for the external printer.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enables a carriage return and a line feed between reports.

**No**-----prints continuous reports with no separating carriage returns and line feeds.

## **Parity**

**Default:** No

**Selections:** No  
Even  
Odd

Set the Parity for the external printer.

Make selections with the space bar, then press the white ENTER key to accept the change.

## **Baud Rate**

**Default:** 1200

**Selections:** 1200  
2400  
110  
300  
600

Select the data transmission baud rate for the external printer.

Make selections with the space bar, then press the white ENTER key to accept the change.

## **Data Bits**

**Default:** Eight

**Selections:** Eight  
Seven

Select the data transmission bit value for the external printer.

Make selections with the space bar, then press the white ENTER key to accept the change.

# Automation Config

The D6500 Receiver send messages to the computer automation system using RS-232 protocol. The program items in the following section are used to configure the input/output format for the D6500 when a computer automation system is connected to the D6500. See *D6500 Computer Interface Installation Manual (part #74-05313-000)* for details on configuring the D6500 for operation with a computer automation system.

Press the red ENTER GROUP key to access this Category, or press the red down-arrow key to bypass this Category.

## Output Format

Default:	6500
Selections:	6500 SIA

Enable Computer Output messages in the selected format.

**Output format affects time setting:** If **Time Set Enable** is set to **No**, the **Output Format** must be set to **6500** in order to change the date and time. If **Output Format** is set to **SIA**, and **Time Set Enable** is set to **No**, the operator can not change the date and time with the automation system. The operator can change the date and time using the toggle switch on the MPU card.

See the *D6500 Operation Manual (74-04651-000)* for more information about setting the date and time.

Make selections with the space bar, then press the white ENTER key to accept the change.

**6500** -----21 character format output (expanded reporting).

**SIA**-----Computer Interface Standard format output. See Technogram No. 73-06413-000 for additional information on Radionics' implementation of the SIA Computer Interface Standard protocol.

**Radionic's 6000 Mode Automation Output Format is not supported in D6500 MPU code revision 7.74 or higher.**

## Device

Default: Always Off

Selections: Primary  
Secondary  
Always On  
Always Off

Select the reporting mode for the D6500 computer output. Set **Handshake** to **Ack** or enable hardware handshake to supervise the computer automation system.

**UL Burg/Automatic certified central stations choose Always Off:** If you are **not** using a computer automation system, set this item to **Always Off** to meet the requirements for UL Burg/Automatic certification.

**UL Fire/Burg/Automatic certified central stations choose Primary:** If you are using a computer automation system, set this item to **Primary** to meet the requirements for UL Fire/Burg/Automatic certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Primary**----- All reports go to this device.

**Secondary**----- Reports go to this device only after all primary devices fail.

**Always On**----- All reports go to this device whether functional or not.

**Always Off**----- Device is disabled. No reports are sent to this device.

## Supervision

Default: Yes

Selections: Yes or No

Enable supervision of the computer automation system.

**Certified central stations choose Yes:** Set this item to **Yes** to meet the requirements for UL certification.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----enable computer automation system Trouble and Restoral reports at reporting devices (other than the computer automation system itself).

**No**-----disables supervision reports. No reports are generated when the computer automation system fails or is restored.

## Group Reporting

Default: Yes

Selections: Yes or No

Enable incoming Reports from grouped lines to be identified by Group.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----Reports line Group number, not transmission format.

"G" if line is assigned to a Group

**No**-----Reports the actual line number and transmission format:

"B" for BFSK transmissions

"L" for Pulse transmissions

"M" for Modem transmissions

## BFSK Fire Bit

Default: No

Selections: Yes or No

Some communicators offer enhanced Fire messages in BFSK format. This entry determines how the D6500 presents BFSK fire messages to automation (see table below). This entry has no affect on how the messages are printed.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----Fire messages are sent to the automation output with new digit/character codes as shown below (for interpretation of digit/character codes, refer to the *Computer Interface Installation Manual RPN # 74-05313-000*). If set to **Yes**, you must restructure your automation account data base to accept the new event codes. If this is not done, fire messages could appear as unlinked messages.

**No**-----Fire messages are sent to the automation output as standard alarms, troubles, and restorals.

### Internal/External Printer, 40 Character Mode (BFSK Fire Bit = Yes or No)

```
MM/DD HH:MM B3 ACCT 485 FIRE FR 1
MM/DD HH:MM B3 ACCT 485 TROUBLE FR 1
MM/DD HH:MM B3 ACCT 485 RESTORAL FR 1
```

### Automation Output (BFSK Fire Bit = No) D6500 Mode

```
hlrrlssssssaaaaasAsssst
hlrrlssssssaaaaasTsssst
hlrrlssssssaaaaasRsssst
```

### Automation Output, SIA Mode Yes)

#### (BFSK Fire Bit = Yes)

#### (BFSK Fire Bit = No)

```
<header>[#aaaa|NriaFAppp] <header>[#aaaa|NriaBAppp]
<header>[#aaaa|NriaFTppp] <header>[#aaaa|NriaBTppp]
<header>[#aaaa|NriaFRppp] <header>[#aaaa|NriaBRppp]
```

### Automation Output (BFSK Fire Bit =

#### D6500 Mode

```
hlrrlssssssaaaaasFsssst
hlrrlssssssaaaaasGsssst
hlrrlssssssaaaaasHsssst
```

## ModemIle Fire

Default: Yes

Selections: Yes or No

Some communicators offer enhanced Fire messages in Modem IIe/IIIA2 format. This entry determines how the D6500 presents Modem IIe/IIIA2 fire messages to automation (see table below). This entry has no affect on how the messages are printed.

Make selections with space bar, then press the white ENTER key to accept the change.

**Yes** ----- Fire messages are sent to the automation output with new digit/character codes as shown below (for interpretation of digit/character codes, refer to the *Computer Interface Installation Manual RPN # 74-05313-000*).

**No**----- Fire messages are sent to the automation output as standard alarms, troubles, and restorals.

### 6500 Mode

FIRE ALARM

FIRE ALARM (Cross Point)

FIRE SUPRVISION

FIRE TROUBLE

FIRE ALM RESTOR

FIRE TBL RESTOR

### ModemIle Fire = Yes

hlrrlssssssaaaaasFspppt

hlrrlssssssaaaaasFspppt

hlrrlssssssaaaaasGspppt

hlrrlssssssaaaaasGspppt

hlrrlssssssaaaaasHspppt

hlrrlssssssaaaaasHspppt

### Modem Ie Fire = No

hlrrlssssssaaaaasAspppt

hlrrlssssssaaaaasAspppt

hlrrlssssssaaaaasTspppt

hlrrlssssssaaaaasTspppt

hlrrlssssssaaaaasRspppt

hlrrlssssssaaaaasRspppt

### SIA Mode

FIRE ALARM

FIRE ALARM (Cross Point)

FIRE SUPRVISION

FIRE TROUBLE

FIRE ALM RESTOR

FIRE TBL RESTOR

<header>[#aaaa|NriaFAppp]

<header>[#aaaa|NFMppp]

<header>[#aaaa|NriaFSppp]

<header>[#aaaa|NriaFTppp]

<header>[#aaaa|NriaFHppp]

<header>[#aaaa|NriaFJppp]

<header>[#aaaa|NriaBAppp]

<header>[#aaaa|NBAppp]

<header>[#aaaa|NriaBTppp]

<header>[#aaaa|NriaBTppp]

<header>[#aaaa|NriaBRppp]

<header>[#aaaa|NriaBRppp]

## SIA Fire Restore

Default: No

Selections: Yes or No

All Radionics control/communicators using the Modem IIe/IIIA2 format differentiate between *Fire Restoral after Alarm* and *Fire Restoral after Trouble/Missing/Supervisory* in the message that is sent to the D6500 Receiver. SIA Automation Output Mode can also differentiate between these two message types, or it can combine them into a common *Fire Restoral* message.

**Note:** If the ModemIle Fire prompt is programmed "No", the programming of the SIA Fire Restore prompt will have no affect on the SIA Automation output format.

Make selections with space bar, then press the white ENTER key to accept the change.

**No**----- The Automation Output will send a common FIRE RESTORAL code if programmed for SIA Output Mode.

**Yes** ----- The Automation output will differentiate between Fire Restoral after Alarm and Fire Restoral after Trouble/Missing/ Supervisory if programmed for SIA Output Mode.

### SIA Mode

FIRE ALM RESTOR

FIRE TBL RESTOR

### SIA Fire Restore = No

<header>[#aaaa|NriaFRppp]

<header>[#aaaa|NriaFRppp]

### SIA Fire Restore = Yes

<header>[#aaaa|NriaFHppp]

<header>[#aaaa|NriaFJppp]

## Comp Config

Default:	7,P,2
Selections:	7,P,2 8,N,1 8,N,2 8,P,1 7,N,2 7,P,1

Computer data structure Configuration.

Enter **7,P,2** for a Radionics computer system. Enter **8,N,1** for ABM automation systems that operate in SIA automation mode.

Make selections with the space bar, then press the white ENTER key to accept the change.

**7,P,2**-----7 data bits, Parity enabled, 2 stop bits

**8,N,1**-----8 data bits, No Parity, 1 stop bit (Item **Comp Parity** ignored by D6500)

**8,N,2**-----8 data bits, No Parity, 2 stop bits (Item **Comp Parity** ignored by D6500)

**8,P,1**-----8 data bits, Parity enabled, 1 stop bit

**7,N,2**-----7 data bits, No Parity, 2 stop bits (Item **Comp Parity** ignored by D6500)

**7,P,1**-----7 data bits, Parity enabled, 1 stop bit

### Comp Parity

DEFAULT:	Odd
SELECTIONS:	Odd 0 Fixed 1 Fixed Even

Set the Parity for the automation format. (The D6500 ignores this program item if **Comp Config** is programmed with no parity. See **Comp Config**.) Enter **Odd** for a Radionics computer system. Enter **0 Fixed** for ABM automation systems that operate in SIA automation mode.

Make selections with the space bar, then press the white ENTER key to accept the change.

### Baud Rate

Default:	1200
Selections:	1200 2400 4800 9600 110 300 600

Enter the communication baud rate for the automation format. Enter **1200** for a Radionics computer system. Enter **9600** for ABM automation systems that operate in SIA automation mode.

Make selections with the space bar, then press the white ENTER key to accept the change.

### Handshake

**Default:** Ack  
**Selections:** Ack or No

Set the Handshake for the automation format. This program item has no affect if **Output Format** is set to **SIA**.

Make selections with the space bar, then press the white ENTER key to accept the change.

**ACK** -----the D6500 requires the ACK be received after sending each message to the automation computer.

**No**-----no software handshake. (Hardware handshake is always enabled.)

### Ack Character

**Default:** 06  
**Selections:** 00 - FF

Set the ACK Character for the automation format (hexadecimal).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

### Nack Character

**Default:** 15  
**Selections:** 00 - FF

Set the NACK Character for the automation format (hexadecimal).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

### Trailer Character

**Default:** 14  
**Selections:** 00 - FF

Set the Trailer Character for the D6500 automation format (Hexadecimal).

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

### Automation Wait

**Default:** 7  
**Selections:** 0 to 60 seconds

Enter the amount of time the D6500 will wait for the Acknowledgment message from the Automation System.

Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

## 6500 Header Char

Default: Blank

Selections: 00 - FF

Set the Header character for the D6500 automation format (hexadecimal). Use the keyboard to enter your selection, then press the white ENTER key to accept the change.

**Blank**-----No header character output.

## Input Commands

Default: No

Selections: Yes or No

Allows Input Commands (Set Time, Set Date, Switch Line Card, and Stop Listen In) to be handled from the Automation System.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----Input Commands are handled from the Automation System.

**No**-----Input Commands from the Automation System are ignored.

## Link Test

Default: No

Selections: Yes or No

A programmable item that initiates (or receives) a test message between the receiver and automation computer at the Central Station to determine if their communication "link" is functional.

Make selections with the space bar, then press the white ENTER key to accept the change.

**Yes** -----Send/Accept the Link Test to/from the Automation System..

**No**-----Do not send the Link Test to the Automation System.

## Packet Sep.(/)

Default: No

Selections: Yes or No

This prompt enables the final packet separator (/) (in SIA output mode) when messages with event modifiers are sent to automation.

**Yes** -----Final packet separator will be sent in SIA automation output message.

**No**-----Final packet separator will not be sent in SIA automation output message.

## Sub Subscriber

Default: No

Selections: Yes or No

This is a programmable, Modem Format only, item that determines whether the specific access control card or token number identifier (sub user) is additionally sent to the SIA automation output.

**Yes** -----Sub subscriber (sub user) data is sent to SIA automation output.

**No**-----Sub subscriber (sub user) data is not sent to SIA automation output.



# Important Information About Your Receiver

Receiver Number: \_\_\_\_\_

## Line Card Phone Numbers

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

Line 3: \_\_\_\_\_

Line 4: \_\_\_\_\_

Line 5: \_\_\_\_\_

Line 6: \_\_\_\_\_

Line 7: \_\_\_\_\_

Line 8: \_\_\_\_\_

## Other Notes

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

Line 3: \_\_\_\_\_

Line 4: \_\_\_\_\_

Line 5: \_\_\_\_\_

Line 6: \_\_\_\_\_

Line 7: \_\_\_\_\_

Line 8: \_\_\_\_\_

# Important Information About Your Receiver

## Emergency Phone Numbers

Phone Line Repair: \_\_\_\_\_

Monitoring Facility Manager: \_\_\_\_\_

## Other Important Information

Location of Spare Cards:

\_\_\_\_\_

Power Transformer Location:

\_\_\_\_\_

Circuit Breaker Location and Number:

\_\_\_\_\_

Location of D5200 Programmer:

\_\_\_\_\_

Location of D5200 Program Record Sheet:

\_\_\_\_\_



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**D6500 Security Receiver  
Program Entry Guide**

## Notice

The material and instructions covered in this manual have been carefully checked for accuracy and are presumed to be reliable. However, Radionics, Inc. assumes no responsibility for inaccuracies and reserves the right to modify and revise this manual without notice.

It is our goal at Radionics to always supply accurate and reliable documentation. If a discrepancy is found in this documentation, please mail a photocopy of the corrected material to:

Radionics, Inc.  
c/o: Technical Writing Department  
1800 Abbott Street  
Salinas, CA 93901

## How To Use This Program Entry Guide

This Program Entry Guide has three main sections: Programming the D6500 Receiver, Line Card, and MPU.

*Programming the D6500 Receiver* explains why programming may be needed, how to prepare the D6500 Receiver for programming, and the steps required to navigate to that program that you want to edit.

*LINE CARD* summarizes how to find the LINE CARD record. It also contains information about each prompt in the LINE CARD record and some useful background information that may assist you in making the proper choices.

*MPU* summarizes how to find the MPU record. It also contains information about each prompt in the MPU record.

In addition to the three sections of the manual, there is a data sheet inside of the back cover called *Important Information About Your Receiver*. Use this data sheet to record your line card phone numbers, emergency phone numbers, and the locations of important components of the receiving equipment. **Use of the data sheet can be beneficial in a crisis.**

Once you are familiar with the content of this manual, use it as a quick reference guide for prompt programming. See *Page iii* for a list of the Categories, the Program Items within them, and the page numbers where you can find each Program Item.

## About the Type Styles that We Use in the Text

We used special type styles to help you identify the objects that we are describing in this guide.

***ITALICIZED*** text with a border represents the prompt that you will see in the D5200 Programmer's display.

**Bold** text usually indicates selections that you may use while programming your receiver. It may also indicate an important fact that you should note.

***Bold Italicized*** text leading into a paragraph indicates special information that you should know.

*Italicized* text references you to another section of the manual, or to a different manual. We also used Italicized text to symbolize names for records that you will create.

`Courier Text` shows you what may be printed on the D6500 Display or internal printer.

## D5200 Key Descriptions

Red arrow keys (up, down, left, and right) indicate how you should navigate within a menu.

The red ENTER GROUP key indicates how you should access a menu Category.

The red EXIT GROUP key indicates how you should leave a menu Category.

The white ENTER key indicates how to accept a change to a Program Item.