
Operator's Manual

for the

DIRECTORTM II

a Learning Infrared Device for use with
LiberatorTM and AlphaTalkerTM

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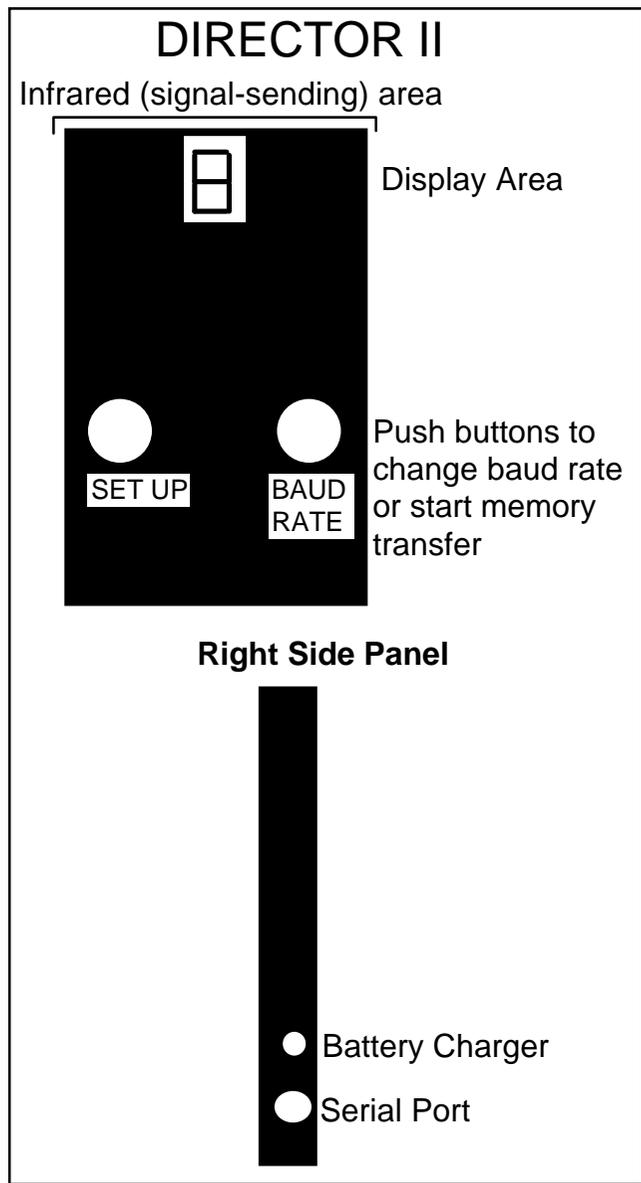
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**General Information
About the DIRECTOR II**



The DIRECTOR II

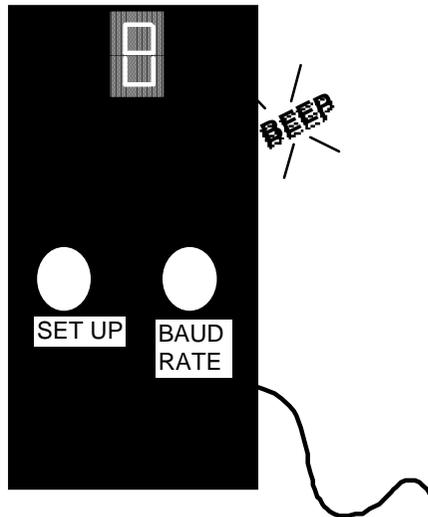
USING THE DIRECTOR II WITH A LIBERATOR

What is the DIRECTOR II?

The DIRECTOR II is a "learning infrared device" which means that it can learn to send all the signals that any remote control you have can send. You can teach the DIRECTOR II to turn your television or radio on and off, to select a CD and play it, to record a favorite program on a VCR and even to answer the EZ Phone. Also, when you use an Infrared Receiver (IRR) with the DIRECTOR II you create a wireless link that can send information to a computer.

The difference between a remote control and the DIRECTOR II is that with the DIRECTOR II you can program all the remote control signals that you want into your Liberator or AlphaTalker under icon sequences. Then you can activate the sequences to tell the DIRECTOR II to control something. You don't have to wait for someone to work the remote control for you.

This manual contains: an introduction with general information about the DIRECTOR II; instructions for using the DIRECTOR II with a Liberator; instructions for using the DIRECTOR II with an AlphaTalker; and a section of Appendixes.



DIRECTOR II FEEDBACK

BEEPS

BEEPS—when first connected to a communication device and the device is turned On

BEEPS—when an error occurs

DISPLAY

"P" (push) and "A" (again) are visible on the display when the Director is learning codes

"O-11" error codes are visible on the display when an error occurs

Feedback

The DIRECTOR II Gives You Audible and Visual Feedback

The DIRECTOR II provides both audible and visual feedback to the user. On the front of the unit there is a display screen which can display single digit numbers or a single letter. The DIRECTOR II also emits a beep after you perform certain actions.

Beeps are heard and/or feedback is displayed on the screen when:

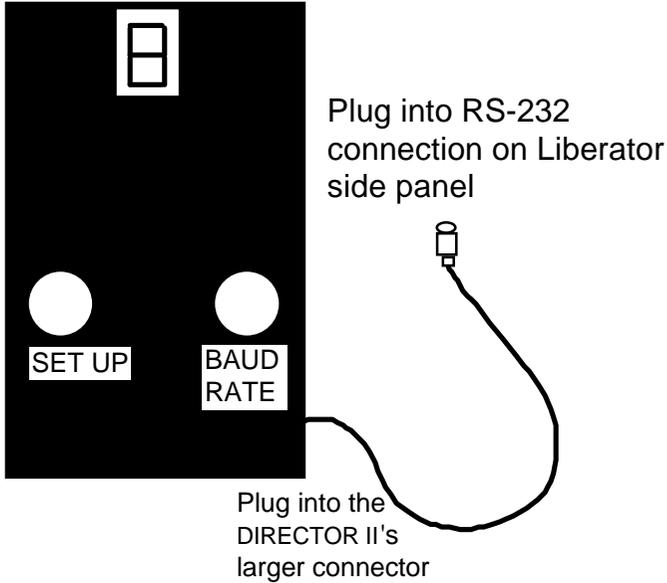
1. the DIRECTOR II is connected to the Liberator and the Liberator is turned **ON**.
2. the DIRECTOR II is learning a new function. Each time you are to press a key on a remote control device you will see the letter "P" (Press) on the Display. Then you will see the letter "A" (Again) when you are to press the remote control key again.
3. an error occurs. You will hear a beep if you make an error. You will see an Error Code number on the display indicating the kind of error that occurred. There is a list of Error Codes in **APPENDIX: A** at the end of this manual.

Theoretically, you can expect to store up to 150 functions into the DIRECTOR II' s memory. However, the chances that you are going to want to run this many things are pretty slim. **Appendix-C** in this manual lists the names and various functions for six of the most frequently controlled devices.

If you are using X-10[®] power modules, the DIRECTOR II is already programmed to control these. For more information about X-10 modules, see the X-10 pages in the section that refers to the communication device you are using.

**Using Your DIRECTOR II
with a Liberator**

Connect the DIRECTOR II to a Liberator



Connecting to a Liberator

Connecting the DIRECTOR II to a Liberator

Take a look at the DIRECTOR II. Notice that there is a small display screen area on the front. There are also two buttons labeled SET UP and BAUD RATE. The display area will display a single digit or a single letter message at various times. There are also two connectors on the right side panel of the unit. You will plug the cable that came with the unit into the larger connector. A battery charger plugs into the smaller connector.

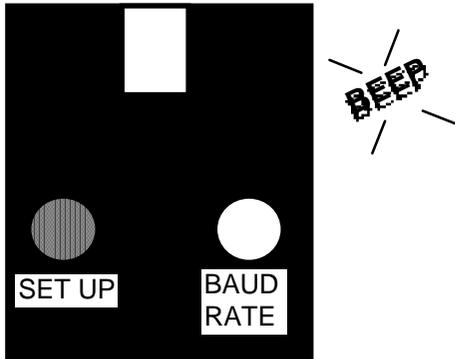
Connecting to a Liberator

Plug the small round end of the cable that came with your DIRECTOR II into the larger connector on the right side panel of the DIRECTOR II. Plug the other end of the cable into the RS-232 connector on the left side panel of the Liberator. When you turn the Liberator ON the DIRECTOR II will also turn ON.

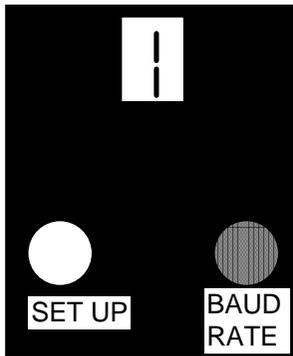
When the DIRECTOR II is connected correctly to the Liberator and the communication aid is turned On, the DIRECTOR II will beep and all the lights in the display area will light for about 3 seconds. When the communication aid powers down (turns Off) so will the DIRECTOR II.

Mounting the DIRECTOR II

For mounting purposes, the DIRECTOR II has Dual-Lock on the back of the case. It should be mounted so that the black "learning window" on top of the case (the infrared area) is pointed at the devices it is going to be controlling. We recommend that you *do not* mount the DIRECTOR II until after you have read this manual and learned to program the device.



Press and **hold** the **SET** button until you hear the BEEP. Then release the button.



Press the **BAUD RATE** button to step through the baud rates. When you step to the rate you want press **SET** button.

Baud Rate Code:

1=1200

3 = 300

The DIRECTOR II and Liberator Baud Rates Must Match

Make the DIRECTOR II and the Liberator Compatible

Once the DIRECTOR II and your Liberator are connected, you must make the two devices compatible so that information can flow between them.

To Make the DIRECTOR II and the Liberator Compatible:

1. Open the Liberator's Toolbox
2. Activate the OUTPUT MENU (F2)
3. From Screen 1 of the Output Menu, activate:
 - #2 Serial Output Mode = OFF (when you are ready to send a command, you must set this to "Immediate")
 - #3 Baud Rate = (this must match whatever you have chosen for the DIRECTOR II, 300 or 1200)

To Set the DIRECTOR II's Baud Rate

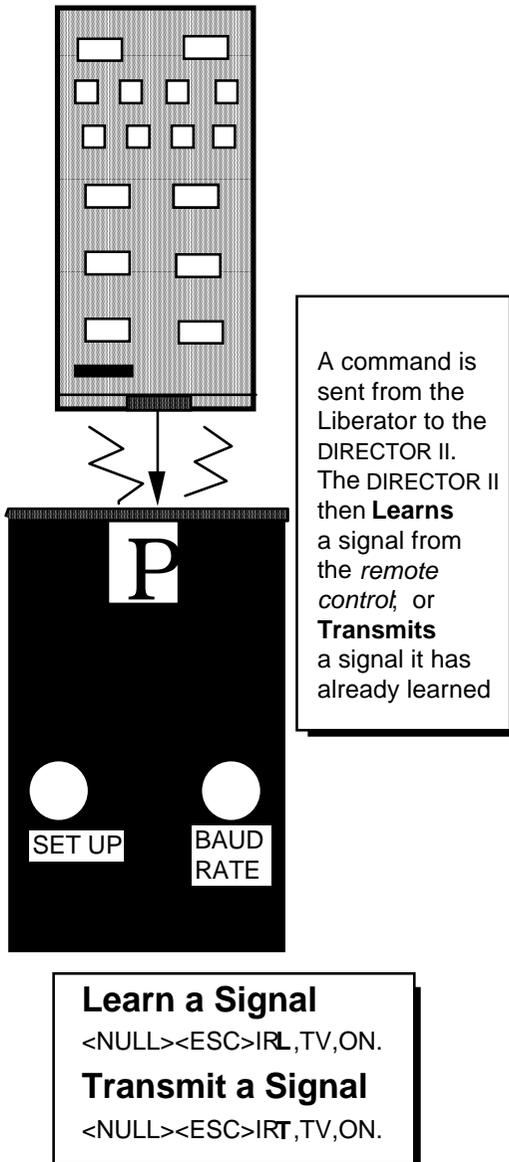
1. Press and **hold** the **SET UP** button (on the front of the DIRECTOR II) until you hear a beep. When you hear the beep, release the SET button.
2. On the display you will see a "1" (for 1200 baud). Press the **BAUD RATE** button (on the front of the DIRECTOR II). Each time you press the BAUD RATE button you will see a different number. Each number stands for a different Baud Rate: 1=1200; 3=300. (The Liberator can be set to either of these baud rates. 1200 is the default.) When you have stepped to the rate you want, press the SET button once. You have now set the baud rate.

▀ Notes:

Versions of MIKE or Direct Action that were purchased before August 1996 may automatically set the Liberator's baud rate to 300.

DIRECTOR II can have two separate baud rates. To receive information from the Liberator, set the baud as described above. It

sends information to an infrared receiver (IRR) at 1200 baud. You can change this using a command stored into the Liberator as described in Appendix E.



Teach the DIRECTOR II to Learn Signals and then to Send Them

Teach the DIRECTOR II What You Want It To Do By Sending It the Correct Command And Then the Correct Signal

The DIRECTOR II has to learn what you want it to do. This means that you must teach it which device and which functions of that device you want it to control. You will use your Liberator to send commands to the DIRECTOR II. The commands will tell it to turn a tape deck On or to change a channel on the TV for example.

In order to learn to control a device, the DIRECTOR II must know the name of the device (such as TV or CD PLAYER) and which function (s) you want it to control (such as POWER ON or NEXT DISK). Then it needs to "see" a signal from the remote control that is used with the TV or CD, etc. You teach the DIRECTOR II these things by sending it a LEARN (L) command from your Liberator. The command is like a code. It contains the appliance name and the function the DIRECTOR II is going to learn. This LEARN command is always the same except for the name of the appliance and the functions. Once the DIRECTOR II knows a particular command, you send it the matching signal from the remote control. The Liberator stores the command and the DIRECTOR II stores the signal.

COMMAND EXAMPLES

LEARN a DEVICE and one FUNCTION

<START KEY>IRL,TV,ON.

TRANSMIT

<START KEY>IRT,TV,ON.

LEARN a DEVICE, FUNCTION and KEY REPs

<START KEY>IRL,TV,UP,4.

TRANSMIT a DEVICE, FUNCTION and KEY REPs

<START KEY>IRT,TV,UP,4.

See Appendixes C-E
for lists of all the commands.

Some Command Examples

Understanding the Different Commands

Using variations on the following commands you can tell the DIRECTOR II to learn (**L**) to operate a device, to transmit (**T**) signals that actually operate the device, to add a new device (**D**) to its repertoire and to add a new function (**F**). You can also delete devices (**X**) and functions. (**Y**).

From your communication aid you can send the following command:

<NULL><ESC><I><R><OPERATION COMMAND LETTER (Learn or Transmit)> <, (comma)><DEVICE NAME>,<FUNCTION NAME>,<# OF KEY REPETITIONS><.(period)>

PAll commas must be included and a period must always end the command. Do not put spaces in the command.

Depending on what you have told the DIRECTOR II to do (i.e., Learn, Transmit, Add a device/function or Delete a device/function) you must also send the name of the device and/or function and any key repetitions.

Creating a START KEY

Since every command *always* starts with

<NULL><ESC>

you are going to store this part of the command under a single key on the Liberator. This key will be the **START KEY**.

PNote:

<NULL><ESC> = **START KEY**

The rest of the command, whether it is a Learn command or a Transmit command, will be stored under an icon sequence on your overlay.

START KEY Example:

For example, if you want the DIRECTOR II to **L**earn to turn on your television, you would activate the START KEY and then activate the icon sequence where you stored the "learn TV On" command

START KEY IRL,TV,ON.

If you want the DIRECTOR II to send a signal that actually turns the TV on you would activate the icon sequence where you stored the "transmit TV ON" command:

START KEY IRT,TV,ON.

In this example you send a **T**ransmit command to the DIRECTOR II. Transmit commands are sent after the DIRECTOR II has **L**earned the correct signals.

If you want the DIRECTOR II to turn up the volume on your TV you would activate the icon sequence where you stored the Volume Up command:

START KEY IRT,TV,VUP,2.

In the example immediately above you have added **key repetitions** to the **T**ransmit command. Key repetitions tell the DIRECTOR II to turn up the volume a specific amount. In this case, the DIRECTOR II automatically increases the volume two times with a one second pause between each repetition.

Note:

The DIRECTOR II ignores <KEY REPETITIONS> in the (**L**)earn command. Key repetitions are accepted and sent only in the (**T**)ransmit command.

Some Notes About Sending Commands



Helpful Hints

1. The DIRECTOR II comes with some device and function names already in its memory. The names and abbreviations of these devices and functions can be found in **APPENDIX: C** in this manual.
Use these abbreviations when programming your Liberator.
2. CAPS LOCK must be ON when storing the <NULL> and <ESC> characters. We recommend that you turn CAPS LOCK ON and leave it on.
3. The alphabet characters (A-Z) can be in upper or lower case; however, see #2 above.
4. **Every command must begin with the START KEY. Every command must end with a period.**
5. Any parameters that are not needed (key repetitions, for example) can be left out of the command.
6. Key repetitions may contain 1 or 2 characters from 1-99. If no repetition is used, the unit defaults to 1.
7. Each Device name and each Function name can contain **up to** 16 characters. If there are more than 16 characters, the DIRECTOR II will emit an error beep.

Store the START KEY

**Open the Toolbox
Go to SPELL mode
Make sure CAPS LOCK is On**

1. Select ASSIGN KEY MENU
2. Select the key on your custom overlay that you want to use for the START KEY
3. Select 1
4. Select FUNCTION INSERT
5. Select FUNCTION INSERT again
6. Select FUNCTION INSERT a third time
7. Type the letters S E
8. Select 7 until you see: SEND-ASCII-CHAR
Then select it
9. Select 0 (zero)
10. Select ENTER
11. Select CTRL
12. Select [(left bracket)
13. Select STORE
14. Select 5

Storing the START KEY
(Liberator)

Store the START KEY Under a Single Key

Select a key on your custom overlay where you want to store the START KEY. Label it START KEY so you can remember it.

Follow the Steps Below to Store the START KEY:

Open the Toolbox.

Make sure CAPS LOCK is ON.

1. Select ASSIGN KEY MENU
2. Select the key you want to use for the START KEY.
3. Select 1
4. Select FUNCTION INSERT
5. Select FUNCTION INSERT again
6. Select FUNCTION INSERT a third time
7. Type the letters S E
8. Select 7 until you see: SEND-ASCII-CHAR
Then select it
9. Select 0 (zero)
10. Select ENTER
11. Select CTRL
12. Select [(left bracket)
13. Select STORE
14. Select 5

You can teach the DIRECTOR II to control any device for which you have a remote control. Decide which appliances and which functions in each appliance you want the DIRECTOR II to control.

Then write down the command for each device and function.

There is a list of devices and functions in **APPENDIX: C**. The *First Steps* workbook has helpful charts you can use to write down all your programming. The next few pages teach you about programming and sending commands.

A Learn Command Example

In order for the DIRECTOR II to do this:

LEARN a **DEVICE** (TV)
and one of its **FUNCTIONS** (ON)

You must send this command
from your communication aid:

<START KEY> IRL,TV,ON.

Store: IRL,TV,ON. under an icon sequence
on your overlay

Use the START KEY and the
Learn Command to Teach the DIRECTOR II
a Device and Function

Using the START KEY with the Learn Command

Now that you have the START KEY (<NULL><ESC>) stored under a key in your Liberator, you can teach the DIRECTOR II the Learn command. By storing a command that contains **IRL**, you are telling the DIRECTOR II that it is going to **Learn** something. Then you must tell it *what* it is going to learn adding the device and function to the command. The **Learn** command is shown below.

<START KEY>IRL,DEVICE NAME,FUNCTION NAME.

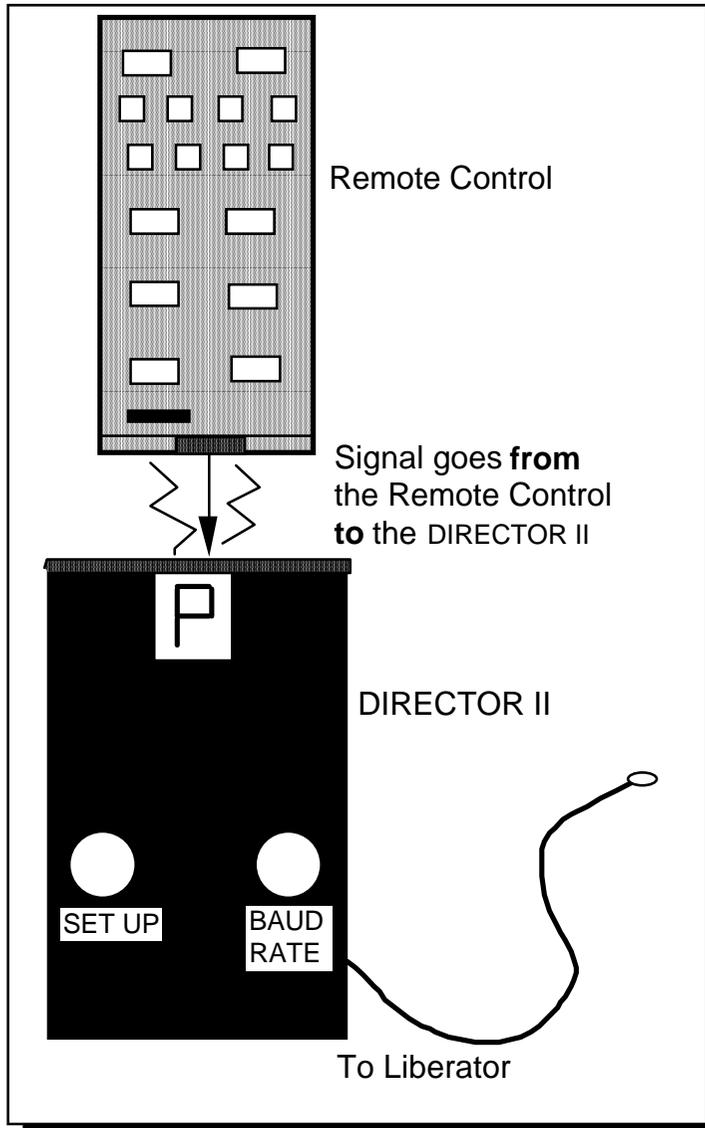
Store all the commands that you want the DIRECTOR II to learn under icon sequences on your overlay.

PNotes:

You must use the spellings for the devices and functions from **APPENDIX C**.

If your remote has one button for POWER, you only need to store one POWER signal.

If your remote has an ON and OFF button, you must store both signals.



The DIRECTOR II and the Remote Control
Must "See" Each Other

To Send a Command: Set Serial Output Mode = Immediate; Make Sure the Remote Control and the DIRECTOR II Can "See" Each Other

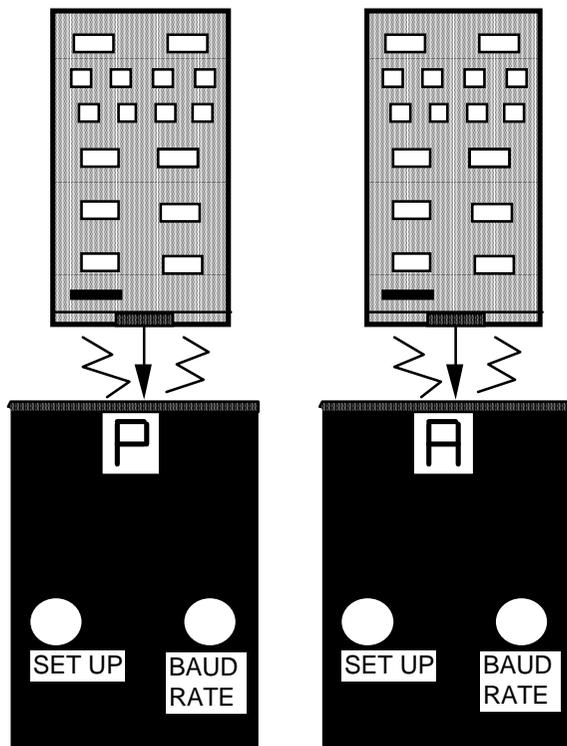
Before you begin to send the Learn commands from the Liberator to the DIRECTOR II, arrange the DIRECTOR II and the remote control you are going to use on a table within easy reach. Place them so that the infrared (dark "learning window") areas of both the DIRECTOR II and the remote control can "see" each other (see the graphic on the facing page). The infrared areas should be pointing towards each other. The areas should be no more than **2-4 inches** away from each other. Also make sure your Liberator and DIRECTOR II are connected correctly and that they are set to the same baud rate.

When everything is set up correctly, go to the Liberator' s Toolbox. Open the OUTPUT MENU and set #2 to **Serial Output Mode = Immediate**.

You are now ready to send the Learn command.

PA Note about the Serial Output

When you are ready to *send* commands from the Liberator to the DIRECTOR II, go to the OUTPUT MENU in the Toolbox and activate #2 Serial Output Mode = IMMEDIATE. When *not* sending, set #2 to OFF.



Teach the DIRECTOR II a Command

1. Store <START KEY>IRL,TV,ON. under an icon sequence.
2. Activate the sequence you just stored.
3. See "P" on the DIRECTOR II's display.
4. Push the correct Remote Control function (e.g., ON or POWER).
5. See "A" on the DIRECTOR II's display.
6. Push the same Remote Control function **again**.

Tap the Function Button on the Remote Control Twice

Activate the Learn Command, then Tap the Correct Function Button on the Remote Control Twice

Let' s say you send a command telling thēDIRECTOR II to Learn how to turn the TV ON:

Activate the sequence where you stored :
<START KEY>IRL,TV,ON.

If everything is entered correctly, you will see a "P" on the DIRECTOR II' s display. ThēDIRECTOR II is telling you to "P"ress the function button (in this case, the ON button) on the **remote control** for the TV. Press the remote control ON button once.

On the DIRECTOR II you will see an "A" for "Again", so press the remote control ON button **one more time**.

When you press the ON button on the remote control, the remote control sends an infrared signal to the DIRECTOR II which tells the DIRECTOR II how to turn the TV ON. This is why the DIRECTOR II and the remote control must be able to "see" each other' s infrared areas.

You send the command you want the DIRECTOR II to learn by activating icon sequence where you stored the command. Then, when the DIRECTOR II prompts you, press the appropriate remote control button **twice** to lock in the correct device/function signal.

PNote:

The DIRECTOR II will time-out after 5 seconds if it does not detect a signal from the remote control once a LEARN command has been sent. You will have to choose the icon sequence to see the "P" on the DIRECTOR II again.

If the same button on the remote control is used to turn an appliance On *and* Off, you only need to teach the command **once**

to the DIRECTOR II. This signal can be used to toggle your TV, CD, etc. to On or Off.

Store a Transmit Code for Each Device

1. In the toolbox select CLEAR DISPLAY.
3. Select STORE.
4. On your overlay select the START key.
In the Toolbox, type T
7. Type , (comma)
8. Type the letter code for the device (e.g., TV)
9. Type , (comma)
10. Type the letter code for the function (e.g., ON)
11. Type , (comma)
12. Type number of key reps (if any)
11. Type . (period)
12. Select STORE
13. On your overlay, select the icon sequence you want.
14. In the Toolbox, select ENTER.

Repeat these steps for each device and its functions that you want to control.

To send the command select the icon sequence that you chose in step #13.



Hints for Icon Selection

First Icon = should represent the Director.

This can be the same icon for all Transmit commands.

Second Icon = should represent the device.

This can be the same for all the commands for one device.

Third Icon = represents the function.

This should be different for each function.

Store the Transmit Commands

Store the TRANSMIT Commands to Test the Signals

You can store the TRANSMIT commands and use them to see if the DIRECTOR II has learned the commands and signals you taught it.

When you test a signal, you send the TRANSMIT command from the Liberator to the DIRECTOR II. When the DIRECTOR II receives the command, it will send the correct signal (which it **L**earned from the remote control) to the appliance it is controlling. The Transmit command uses a **T** instead of an **L**.

<START KEY>IRT,DEVICE NAME,FUNCTION NAME,KEY REPETITIONS.

Store a **Transmit command under an icon sequence** for each device and its function that you want the DIRECTOR II to be able to control. This way you can activate the **L**earn command to teach the DIRECTOR II a signal. Then activate the sequence for the **T**ransmit command to see if the DIRECTOR II learned the signal. (Once you have tested all the signals, you can erase the **L**earn commands if you want to.)

When you are **T**ransmitting commands the DIRECTOR II should be facing toward the appliance you want it to control. Set **Serial Output = Immediate**.

PNote:

Use the spelling from **APPENDIX C** or your commands won' t work

To Test a Command:

1. Activate the sequence for the transmit command to be performed—e.g., turn the TV ON. If the TV goes on, the DIRECTOR II has learned the signal! If it doesn't, send the **L**EARN command again and then re-test. If it still doesn't, make sure you entered all the commands correctly. Re-program if necessary.

ADDING

Add a Device <D>

Name the **DEVICE** you want to add.
Name a **FUNCTION** to go with the device.

EXAMPLE

<START KEY>IRD,LRMVCR,ON.

Add a Function <F>

Name the **DEVICE** associated with
the **FUNCTION**.
Name the **FUNCTION** you want to add.

EXAMPLE

<START KEY>IRF,LRMVCR,MENU.

Adding a Device and/or a Function

Adding Devices and/or Functions

Most of the device names and functions that you will want the DIRECTOR II to control are already in the DIRECTOR II's menu (see APPENDIX C), but you may want to add a device that is not listed. For example, if you have a VCR in the living room and one in the bedroom, you could add, "LRMVCR". You could add a function called MENU where you have the VCR menu programmed.

Adding a Device

If you want to add a **Device**, you must add the **device name and one function for that device in the same command**. Instead of <L> or <T> you will use <D>.

The command for **Adding a Device** is:

<START KEY><IRD>,<DEVICE NAME>,<FUNCTION NAME><.>
{ e.g., TV2} { e.g., ON}

Adding a Function

When you add a **Function**, you can only add *one function at a time* in the command. You must include the <DEVICE NAME> so that the DIRECTOR II knows where to add the new function. You will use <F> instead of <L> or <T>.

The command for **Adding a Function** is:

<START KEY><IRF>,<DEVICE NAME>,<FUNCTION NAME><.>
{ e.g., TV2} { e.g., CUP}

Note:

You may get an Error Code 6 (Out of Memory) when adding a device/function. You will have to delete something before you can add something new.

If the device does not work at all, something is wrong with the DIRECTOR II and you **must** call the PRC Service Dept. at 1-800-262-1990.

DELETING

Delete a Device <X>

Name the **Device** you want to delete.
Name it **again** in the *Key Repetitions*
part of the code.

EXAMPLE

<START KEY>I RX,TUN,,TUN.

Delete a Function <Y>

Name the **Device** associated with
the Function you want to delete.
Name the **Function** to be deleted.
Name it **again** in the *Key Repetitions*
part of the code.

EXAMPLE

<START KEY>IRY,TUN,SCAN,SCAN.

π Note

When you delete a **DEVICE**
all the functions for that device
are also deleted.

There must be **2 devices** and **2 functions**
left in the memory
before the DIRECTOR will delete anything.

Deleting Devices and/or Functions

Deleting Devices and/or Functions

Although you probably won't need to, you can delete any devices and functions in the DIRECTOR II's menu (see APPENDIX- C).

Deleting a Device

You must name the device to be deleted in *both* the <DEVICE NAME> part of the command *and* the <KEY REPs> part of the command. Unless the device is named in both places, the DIRECTOR II will not delete it. You will use <X> instead of <L> or <T>.

The command for **Deleting a device** is:

```
<START KEY><IRX>,<DEVICE NAME>,,<DEVICE NAME><.>
```

Deleting a Specific Function

To delete a specific function, you must name it in the <FUNCTION NAME> part of the command *and* the <KEY REPs> part of the command. If it is not named in both of these places, the DIRECTOR II will not delete it. Remember to include the <DEVICE NAME> to which the particular function you want to delete belongs. You will use <Y> instead of <T> or <L>.

The command for **Deleting a specific function** is:

```
<START KEY><IRY>,<DEVICE NAME>,<FUNCTION NAME>,<FUNCTION NAME><.>
```

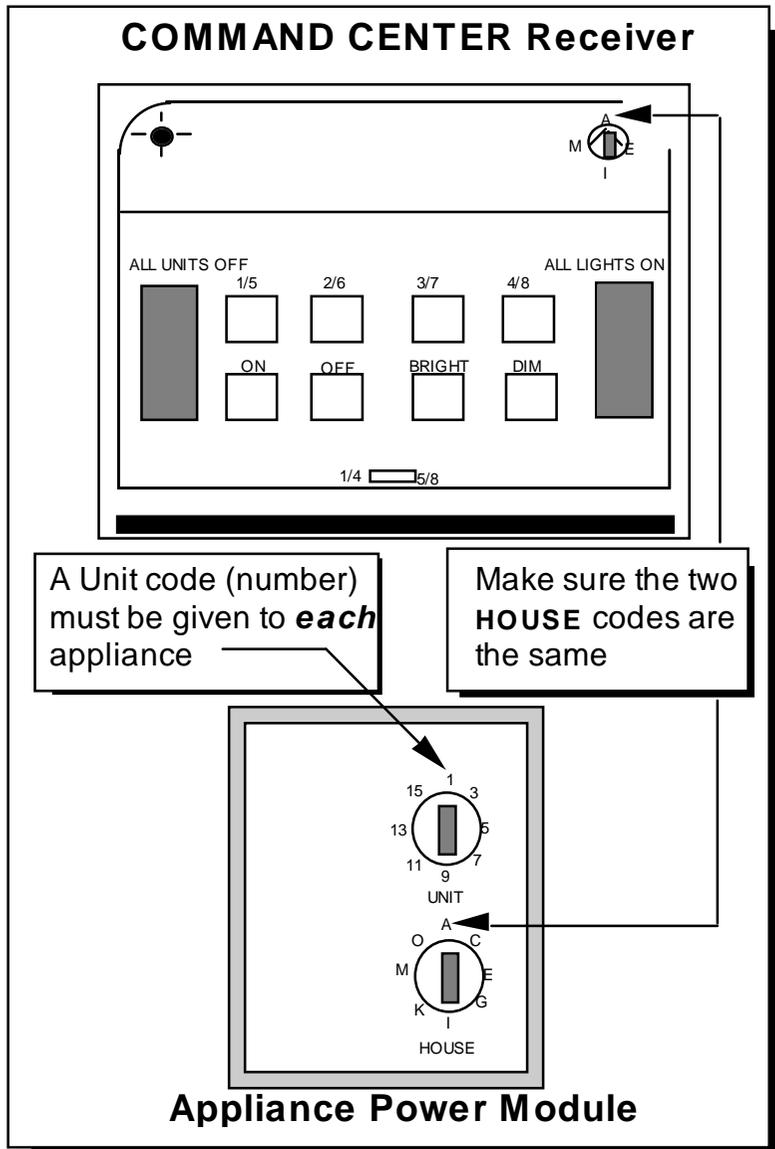


Warning!

In order to DELETE either a Device or a Function you must have **two** devices or **two** functions left in the DIRECTOR II's memory. The DIRECTOR II will not follow through on a "delete" command if there is only one device or function left to delete.

When a *device* is deleted, **all the functions associated with that device are also deleted.**

When a *function* is deleted, **only the specific function is deleted.**



Setting Up the Power Modules and the Receiver

Setting Up an X-10 Receiver and Power Modules

The X-10 power module signals are **already installed** in the DIRECTOR II. This means that the DIRECTOR II does *not* have to LEARN them first. The DIRECTOR II comes pre-stored with Unit Codes 1-16. However, in order for the DIRECTOR II to work with the modules you must have an X-10 receiver to control the power modules. The One-for-All Command Center™ (model No. WCC-1) is an X-10 signal receiver that can be purchased from Prentke Romich Company. (The Command Center receiver indicates that it will handle 8 power modules, but in conjunction with the DIRECTOR II, up to 16 can be controlled.)

Set Up the Command Center Receiver and the Power Modules

On the front of the power module there are two small circles labeled "UNIT" and "HOUSE". When you attach an appliance to a module you must give the appliance a UNIT number and tell the module what that number is. For example, if you attach modules to a lamp and a fan, you might make the lamp "1" and the fan "2". Stick a small screwdriver, knife or dime, etc., into the groove labeled "UNIT" on the power module. For the lamp, turn the groove to "1", for the fan, turn the groove to "2", for the next appliance, use "3", etc.

The second circle on the power module indicates "HOUSE". Select a letter, for example, "A", for HOUSE unless you are in a place where a number of frequencies are used (like an apartment building). In that case, check first about which frequency to use in case "A" is in use. You will use the same HOUSE letter for all your power modules (up to 16). Turn the HOUSE groove to "A". Once you have set the HOUSE letter on each module, take the **receiver** and set the HOUSE dial (in the upper right corner on the top of the receiver) to "A". When the HOUSE letter and UNIT numbers have been set, **make sure that all the appliances are ON**. Then plug

the appliances into the power modules and plug the modules into wall outlets. All the appliances should now be OFF.

Place the Command Center **receiver** in a centrally located place where it can easily receive signals from the DIRECTOR II. (The Command Center is a strong receiver. This means that the transmitter on the DIRECTOR II does not have to be directly in line with the receiver or even very close to it.) To test that a power module is working, press the UNIT button (e.g., "1") and then the ON button. The appliance should go ON. Press OFF to turn it back OFF.

Using the DIRECTOR II with the Command Center and the Power Modules

Position the infrared window on the DIRECTOR II so that it is facing in the direction of the Command Center.

Let' s say you have a lamp controlled by the X-10 on Unit Code 3. To turn the lamp On, you must first select the device you want to control (UC3).

<START KEY>IRT,X10,UC3.

The next step is to send the POWER ON signal:

<START KEY>IRT,X10,ON.

You can see that the X-10 signal is sent in two steps: the first step tells the DIRECTOR II which X-10 Unit Code you want and the second step tells the DIRECTOR II what function (On or Off) you want the X-10 module to perform.

The command to turn an X-10 module **OFF** is:

<START KEY>IRT,X10,OFF.

When you send signals for the power modules, the DIRECTOR II should be pointing in the general vicinity of the command Center.

When the signals from the DIRECTOR II are being received, a red LED on the Command Center will flash.

Using the EZ Phone with the DIRECTOR II

Note:

For complete information about the EZ Phone and using its menus and functions, please see your EZ Phone manual.

The EZ Phone commands **are already installed** in the DIRECTOR II. This means that the DIRECTOR II does not have to learn the commands.

With your DIRECTOR II you can send signals to the EZ Phone to answer and hang up the phone; to dial phone numbers you have stored; to redial the last number you dialed; to adjust the volume of the caller or the ringer; to perform call waiting and to dial digits (e.g., for extension numbers) while you're on a call. You can also send signals from the DIRECTOR II to the EZ Phone that allow you to scan through the EZ Phone's Function Menu. This is helpful if you want to use DIRECTOR II to make changes to phone numbers that you have stored in the EZ Phone Directory.

In order to use the EZ Phone, the DIRECTOR II and the EZ Phone must be positioned so that their infrared windows can see each other. The EZ Phone must be able to receive the signal that the DIRECTOR II sends.

Store the EZ Phone Commands Under Icon Sequences in Your Liberator:

Appendix-C and Appendix-E contain lists of all the EZ Phone commands. The two lists are similar. However, if you store the commands from **Appendix-C**, you store:

<START KEY>IRT,EZ,FUNCTION NAME,KEY REPs(if any).

If you use the commands from **Appendix-E**, you **do not** have to use the **IRT** part of the command. You store:

<START KEY>EZ,FUNCTION NAME,KEY REPs(if any).

The commands in Appendix-E are easier and quicker to store.

Store the commands under icon sequences on your Liberator overlay. For example, to be able to answer and hang up the EZ Phone, you would store:

<START KEY>EZ,ANS/HANG.

To Dial Phone Numbers:

You can store all the phone numbers you want under individual icon sequences. You use the **EZ,DIAL** command.

For example, to be able to dial PRC's phone number you would store the command:

<START KEY>EZ,DIAL,18002621984.

(You can add dashes (-) in your phone number to make it easier to read.)

See the EZ Phone manual for more information on adding the TONE, PULSE, PAUSE, WAIT, * and # commands to phone numbers.

X-10 and EZ Phone Hints and Warnings



Warning!

**We highly recommend that you do not delete
any X-10 or EZ Phone functions!**

X-10 and EZ Phone functions can only be replaced by loading all the **Default** Menus back into the DIRECTOR II. When you do this, you lose everything you have already stored.

Using the Infrared Receiver IRR with the DIRECTOR II

You can store Infrared Receiver commands on your overlay if you want to use the DIRECTOR II and an Infrared Receiver for computer emulation or to run a printer. This allows for wireless computer access with the DIRECTOR II looking at the IRR and sending out computer information.

The commands you will need include SERIAL OFF, SERIAL IMMEDIATE and SERIAL DELAYED as well as the IRR commands. All these commands can be found in Appendix E.

When you activate the sequence that turns SERIAL ON, you can type on the keyboard of your communication device and the text is sent through the DIRECTOR II to the IRR and then to the computer or printer.

Important Note:

The **IRR** must be set at 1200 baud and “Packet” protocol.

The DIRECTOR II can receive information from your Liberator or AlphaTalker at 300 baud or 1200 baud. Set this baud as described on page 15 or page 57 (1200 baud is recommended). The DIRECTOR II sends information to the IRR at 1200 baud. Set this baud rate using the sequence listed in Appendix E, “Set the DIRECTOR II Sending Baud Rate.”

Another Important Note:

If you are going to use a T-TAM, it must be set to 1200 baud. If your T-TAM does not have the 300/1200 baud switch on it, you must have it upgraded. Call PRC’s Service Department at 1-800-262-1990 for more information.

For more IRR information, refer to the instructions that came with your IRR.

Zorro

(Erase the DIRECTOR II's Memory)

ZORRO = <Z>

Use <Z> for the COMMAND LETTER.
Use <99> in the KEY REPETITION part
of the command.

EXAMPLE

<START KEY>IRZ,,,99.

π Note:

When you ZORRO the DIRECTOR,
only the X-10 and EZ Phone signals
will be left in the memory.

"Zorro" the DIRECTOR II to Erase Everything
Except the X-10, EZ Phone
IRR Signals

"Zorro" the DIRECTOR II's Memory

If you have added or deleted a number of devices and/or functions over a period of time, you may become confused about what exactly you have programmed into the DIRECTOR II. Or, maybe you won the lottery and have bought a new TV, VCR, CD, etc. and now you need to program them all into the DIRECTOR II!

There is an easy way to erase all the programming in the DIRECTOR II. When this is done, you can program all new signals if you want to. Erasing the current programming in the DIRECTOR II is called "Zorroing". When you "Zorro" the DIRECTOR II, it returns to the state it was in when you received it from Prentke Romich Company. This means that only the EZ Phone, X-10 and IRR signals will remain in the device.

To ZORRO the DIRECTOR II:

The Zorro command looks like this:

<START KEY><IRZ>,,,<99><.>

You don't need to fill in the <DEVICE> and <FUNCTION> parts of the command, but you **must** send a **key repetition of <99>**—this confirms the Zorro command to the DIRECTOR II. If you forget the "99", you will hear an error beep and see an error code. (Error Codes are explained in **APPENDIX: A.**)

You can also transfer the DIRECTOR II's memory to a computer disk or to another DIRECTOR II. (See the next few pages).

PNote:

If you Zorro the DIRECTOR II, remember to erase the TRANSMIT commands that you are not going to use anymore from your communication aid.

Save the DIRECTOR II Memory with the MTI-IBM for IBM Computers

The Memory Transfer Interface for an IBM computer or clone (MTI-IBM) allows you to save the DIRECTOR II's memory onto a computer disk. You can then re-load the memory from the disk back into the DIRECTOR II at a later time. The MTI is an optional accessory for the DIRECTOR II consisting of a disk which contains the MTI program and a cable which connects the DIRECTOR II to your computer. You must have an MTI with software version 3.0 or higher to make a DIRECTOR II to disk transfer. You can use the same MTI that came with your Liberator.

To Connect the DIRECTOR II to an IBM Computer:

1. Plug one end of the battery charger that came with your *Liberator* into the smaller connector on the right side panel of the DIRECTOR II's case. Plug the other end into a wall outlet.
Memory transfers must be done with the battery charger plugged in.
2. Connect the small end of the MTI cable into the Serial Port (larger connector) on the right side panel of the DIRECTOR II. Plug the other end into Serial Port 1 on your computer. This port should be either a large 25-pin connector or a smaller 9-pin connector.
3. Turn the computer ON and insert the MTI disk into the disk drive of the computer. Switch to the drive that has the disk in it if necessary.
4. Type MTI (space) after the A:> (or B:>) and press RETURN.
5. Type D for DIRECTOR II.
6. **To Save Memory to a Disk**
Go to the DIRECTOR II.
Hold down the BAUD RATE button until you hear a single beep.
Release the button and look at the computer screen.

7. Select a file to save the memory to, or type in the name of a new file then press ENTER. You should not save memory on the MTI disk. Save it onto another disk or file.
8. Press F1 to continue the transfer. If everything has been done correctly, the lights on the DIRECTOR II's display will blink until the transfer is completed. When it is completed, you will hear a beep and there will be a "C" (for 'c ompleted') on the display.
9. **To Load Memory From a Disk**
Go to the DIRECTOR II.
Hold down the BAUD RATE button until you hear two beeps.
Release the button and look at the computer screen.
10. Select the file you want to load (Select F1 on the keyboard to see files on another disk). Press ENTER to select a file.
11. Press F1 to continue the transfer. If everything has been done correctly, the lights on the DIRECTOR II's display will blink until the transfer is completed. When it is completed, you will hear a beep and there will be a "C" (for 'c ompleted') on the display.

If something goes wrong with the transfer, the DIRECTOR II will beep and you will see an "A" for "Abort" on the DIRECTOR II's display screen. Unplug the cable and reconnect the DIRECTOR II to the computer, then restart the program.

Note:

If a transfer fails, any signals that were stored in the DIRECTOR II that is **receiving** new information will be lost and the original (factory) menu will be reloaded. This menu contains only the X-10 and EZ Phone signals.

Save the DIRECTOR II Memory with the MTI-MAC for Macintosh Computers

The Memory Transfer Interface for a Macintosh computer (MTI-MAC) allows you to save the DIRECTOR II's memory onto a computer disk. You can then re-load the memory from the disk back into the DIRECTOR II at a later time. The MTI is an optional accessory for the DIRECTOR II consisting of a disk which contains the MTI program and a cable which connects the DIRECTOR II to your computer. You must have an MTI with software version 3.0 or higher to make a DIRECTOR II to disk transfer. You can use the MTI that came with your Liberator.

Note:

If you have **AppleTalk** on your computer system it must be **inactive** for the MTI to work. See your Mac manual for instructions on how to turn AppleTalk off.

To Connect the DIRECTOR II to a Macintosh Computer:

1. Plug one end of the battery charger that came with your *Liberator* into the smaller connector on the right side panel of the DIRECTOR II's case. Plug the other end into a wall outlet. **Memory transfers must be done with the battery charger plugged in.**
2. Connect one end of the MTI cable (either end) into the larger connector on the right side panel of the DIRECTOR II. Plug the other end into the connector on the back of the Mac that has the picture of a telephone hand set above it.
3. Turn the computer ON and insert the MTI disk into the floppy drive of the computer. Open the MTI file by double-clicking on it.
4. Click on "DIRECTOR II" from the choice on the computer screen.

5. **To Save memory to a Disk:**

Go to the DIRECTOR II.

Hold down the BAUD RATE button until you hear a single beep.

Release the button and look at the computer screen.

6. The Mac won't let you save ortheto the MTI disk so you will need a separate file or disk to save to. Select a file to save the memory to, or type in the name of a new file then click "CONTINUE".

7. If everything has been done correctly, the lights on the DIRECTOR II' display will blink until the transfer is completed. When it is completed, you will hear a beep and there will be a "C" (for ' completed') on the display.

8. **To Load Memory From a Disk:**

Go to the DIRECTOR II

Hold down the BAUD RATE button until you hear two beeps.

Release the button and look at the computer screen.

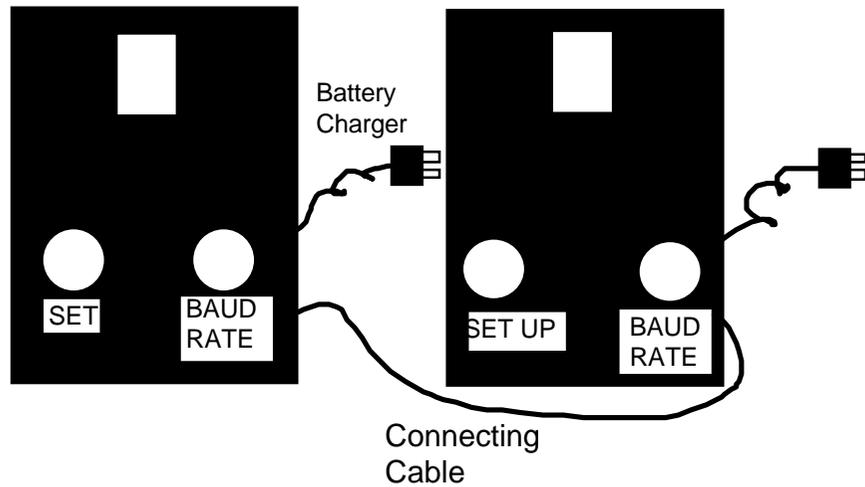
9. Select the file you want to load. Click on "CONTINUE".

10. If everything has been done correctly, the lights on the DIRECTOR II's display will blink until the transfer is completed. When it is completed, you will hear a beep and there will be a "C" (for ' completed') on the display.

If something goes wrong with the transfer, the DIRECTOR II will beep and you will see an "A" for "Abort" on the DIRECTOR II's display screen. Unplug the cable and reconnect the DIRECTOR II to the computer, then restart the program.

P Note:

If a transfer fails, any signals that were stored in the DIRECTOR II that is **receiving** the new information will be lost and the original (factory) menu will be reloaded. This menu contains only the X-10, EZ Phone and IRR signals.



Memory Transfer

DIRECTOR II to DIRECTOR II

1. Make sure Serial is OFF before you start.
2. On the **Sending** DIRECTOR II press and hold the BAUD RATE button until you hear **3** beeps.
3. When you hear 3 beeps, **release** the BAUD RATE button.
4. The transfer takes place automatically.

DIRECTOR II-to-DIRECTOR II Memory Transfer

Transfer the Memory of One DIRECTOR II to Another DIRECTOR II

You can load the memory of one DIRECTOR II into the memory of another DIRECTOR II. To achieve this you must have the battery charger that came with your Liberator and the cable that will connect to the serial port of both DIRECTOR IIs.

PNote:

Before you begin a DIRECTOR II to DIRECTOR II transfer, you must send the SERIAL OFF command. If you have already stored the SERIAL OFF command (<NULL><ESC>IRT,SERIAL OFF.) activate the sequence where you stored the command. If you have not stored it, store it now and then send the command. Once the command has been sent, you can connect the two DIRECTOR II' and set up the transfer.

To Make an Information Transfer:

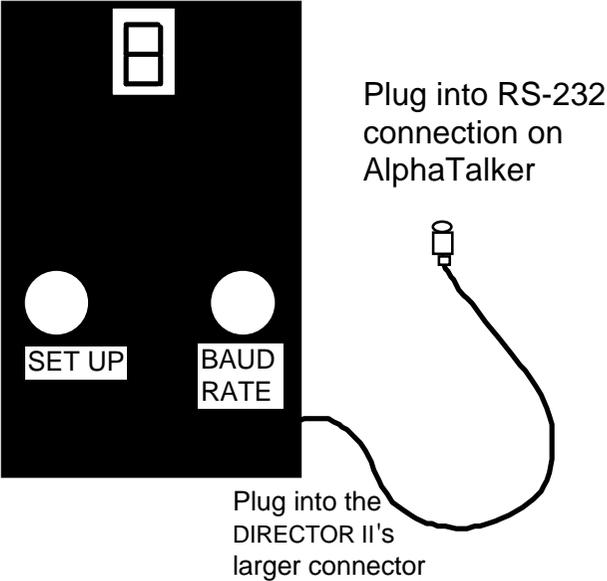
1. Connect a battery charger to each DIRECTOR II. Connect the cable to the serial port on each DIRECTOR II. Make sure the baud rates are the same for each device.
2. On the **sending** DIRECTOR II (the DIRECTOR II that contains the information you want the other DIRECTOR II to receive) **hold down the BAUD RATE button** (on the front of the DIRECTOR II) until you hear 3 beeps. When you hear 3 beeps, release the button. The transfer will start.
3. While the transfer is in progress, both displays will light. When it is completed you will hear a beep and both displays will show a "C" for "Complete". If a problem occurs during the transfer, either of the display screens may show an "A" which stands for "Aborted Transfer". If this happens, start the transfer all over again. Check all connections (battery charger and cable) and make sure the baud rates are the same.

P Note: If a transfer fails, any signals that were stored in the DIRECTOR II that is **receiving** the new information will be lost and

the original (factory) menu will be reloaded. This menu contain only the X-10 and EZ Phone signals.

**Using Your DIRECTOR II
with an AlphaTalker**

Connect the DIRECTOR II to an AlphaTalker



Connect to an AlphaTalker

Connecting the DIRECTOR II to an AlphaTalker

Take a look at the DIRECTOR II. Notice that there is a small display screen area on the front, as well as two buttons labeled SET UP and BAUD RATE. The display area will display a single digit or a single letter message at various times. There are also two connectors on the right side panel of the unit. You will plug the cable that came with the unit into the larger connector. A battery charger plugs into the smaller connector.

Connecting to an AlphaTalker

Plug the small round end of the cable into the larger connector on the right side panel of the DIRECTOR II. Plug the other end of the cable into the RS-232 connector on the back of the AlphaTalker. When you turn the AlphaTalker ON the DIRECTOR II will also turn ON.

When the DIRECTOR II is connected correctly to the AlphaTalker and the communication aid is turned On, the DIRECTOR II will beep and all the lights in the display area will light for about 3 seconds. When the communication aid powers down (turns Off) so will the DIRECTOR II.

Mounting the DIRECTOR II

For mounting purposes, the DIRECTOR II has Dual-Lock on the back of the case. It should be mounted so that the black "learning window" on top of the case (the infrared area) is pointed at the devices it is going to be controlling. We recommend that you *do not* mount the DIRECTOR II until after you have read this manual and learned to program the device.

The Director and the AlphaTalker Must be Compatible

1. Remove the keyguard and overlay.
2. Turn the Toolbox On. (Press OPTION SELECT twice. Then press OPTION ON/OFF once.)
3. In the Toolbox, press:

**SET
BAUD
RATE**

Then press

1200

4. Close the Toolbox

**Baud Rates Must Match Between
the DIRECTOR II and the AlphaTalker**

Make the DIRECTOR II and the AlphaTalker Compatible

Once the DIRECTOR II and your AlphaTalker are connected, you must make the two devices compatible so that information can flow between them.

To Set the AlphaTalker:

1. Open the Control Panel.
2. Turn the AlphaTalker On. Remove the keyguard and overlay.
3. Turn the toolbox On . Press OPTION SELECT to TOOLS.
- 4 Press the OPTION ON/OFF.
5. In the Toolbox, press SET BAUD RATE (D4).
6. Press 1200.
7. Turn the Toolbox Off.

Now the AlphaTalker's baud rate is set to 1200. Set he DIRECTOR II's baud rate to 1200.

To Set a Different Baud Rate

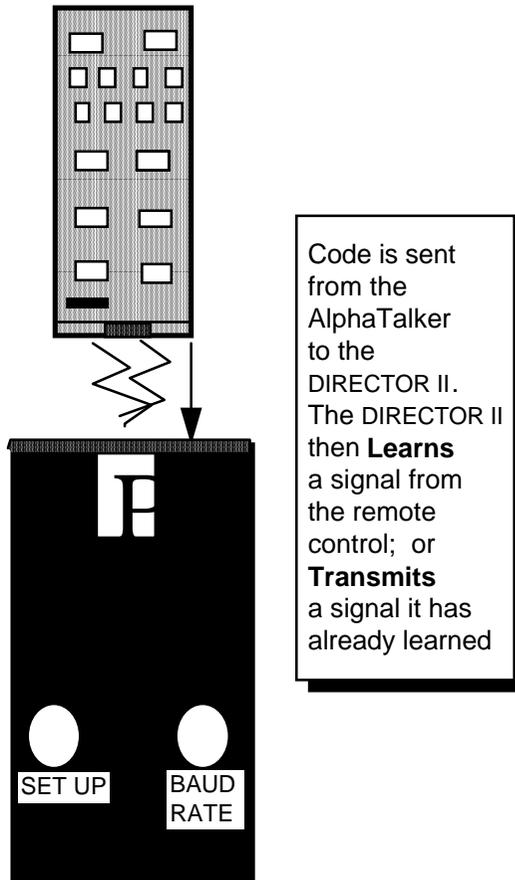
1. On the front of the DIRECTOR II, press and **hold** the **SET** button. When you hear the beep, release the SET button.
2. On the display you will see a "1" (for 1200 baud). Press the **BAUD RATE** button (on the front of the DIRECTOR II). You will see a "3" for 300 baud. Press the SET button once. The baud rate has been set to 300.

Note:

DIRECTOR II can have two separate baud rates. To receive information from the AlphaTalker, set the baud as described above.

It sends information to an infrared receiver (IRR) at 1200 baud. You can change this sending baud rate using a command stored

into the AlphaTalker as described in Appendix E. We recommend that you **do not** change the 1200 sending baud rate.



To Learn "TV ON"
Send this Command from
Your AlphaTalker to the
DIRECTOR II
<NULL><ESC>IRL,TV,ON.

Use the AlphaTalker
and the Remote Control to Teach a
Command to the DIRECTOR II

Teach the DIRECTOR II What You Want It To Do By Sending It the Correct Command And Then the Correct Signal

The DIRECTOR II has to learn what you want it to do. This means that you must teach it which device and which functions of that device you want it to control. You will use your AlphaTalker to send commands to the DIRECTOR II. The commands can tell it to turn a tape deck On or to change a channel on the TV for example.

In order to learn to control a device, the DIRECTOR II must know the name of the device (such as TV or CD PLAYER) and which function (s) you want it to control (such as POWER ON or NEXT DISK). Then it needs to "see" a signal from the remote control that is used with the TV or CD, etc. You teach the DIRECTOR II these things by sending it a LEARN (L) command that contains the name of the device and the function. You will store LEARN commands under keys on your AlphaTalker. Once the DIRECTOR II knows a particular command, you send it the matching signal from the remote control. The AlphaTalker stores the commands and the DIRECTOR II stores the signals. To test that the signal has been learned you store the TRANSMIT (T) command for each device and function under keys, just like you stored LEARN commands.

Once the DIRECTOR II has learned the signal, you activate the TRANSMIT command for that signal. If the appliance works, you know that the DIRECTOR II learned the signal. When you have tested all the signals, you can erase the LEARN commands and just use the TRANSMIT commands to operate the remote controlled appliances.

The next few pages explain how to do all of this.

LEARN (L) Command Examples

This command contains one device and function:

<NULL><ESC>IRL,TV,ON.

This command contains a device, function and key repetitions (volume up 4 times):

<NULL><ESC>IRL,TV,VOLUME UP,4.

TRANSMIT (T) Command Examples

<NULL><ESC>IRT,TV,ON.

<NULL><ESC>IRT,TV,VOLUME UP,4.

See Appendix C for all the device and function names

Some Command Examples Using the
LEARN Key and the TRANSMIT Key

Understanding the Different Commands

Using variations on the following command you can tell the DIRECTOR II to learn (**L**) to operate a device, to transmit (**T**) signals that actually operate the device, to add a new device (**D**) and to add a new function (**F**). You can also delete devices (**X**) and functions (**Y**).

From your AlphaTalker you will be sending the following command:

<NULL><ESC><I><R><OPERATION COMMAND LETTER (Learn or Transmit)> <,(comma)><DEVICE NAME>,<FUNCTION NAME>,<# OF KEY REPETITIONS><.(period)>

Depending on what you have told the DIRECTOR II to do (i.e., Learn, Transmit, Add a device/function or Delete a device/function) you will also have to send the device and function name and key repetitions if any.

PYou must use the commas and you must end each command with a period. All commands begin with <NULL><ESC>.

If you want the DIRECTOR II to Learn to turn on your television, you would send the following command:

<NULL><ESC>IRL,TV,ON.

If you want the DIRECTOR II to transmit the signal that actually turns on the TV you would send:

<NULL><ESC>IRT,TV,ON.

Transmit commands are sent after the DIRECTOR II has Learned a specific signal.

If you want the DIRECTOR II to turn up the volume on your TV you would send:

```
<NULL><ESC>IRT,TV,VOLUME UP,2.
```

In the example above you have added **key repetitions** to the **Transmit** command. These repetitions tell the DIRECTOR II to turn up the volume a specific amount. In this case, the DIRECTOR II will automatically increase the volume two times with a one second pause between each repetition.

PNotes:

The DIRECTOR II ignores <KEY REPETITIONS> in the (L)earn command.

Key repetitions are accepted and sent only in the (T)ransmit command.

When you are entering commands into your communication device, **do not** use the angle brackets (< >) that you see in some of the written examples. They are used to make it easier to read the commands on paper. They are not necessary to the command.

Some Notes About Sending Commands



Helpful Hints

1. The DIRECTOR II comes with device and function names already in its memory. The names of devices and functions can be found in **APPENDIX: C** in this manual.
2. CAPS LOCK must be ON on the computer keyboard when storing the <NULL> and <ESC> characters. We recommend that you turn the CAPS LOCK ON and leave it on.
3. The alphabet characters (A-Z) can be in upper or lower case ; however, see #2, above.
4. Any parameters that are not needed (key repetitions, for example) can be left out of the command.
5. **All commas must be used and each command must begin with <NULL><ESC> and end with a period.**
6. Key repetitions may contain 1 or 2 characters from 1-99. If no repetition is designated, the unit will default to 1.
7. Each Device name and each Function name can contain **up to** 16 characters. If there are more than 16 characters, the DIRECTOR II will emit an error beep.
8. You must use the MTI program and select "Keyboard Emulation" from it to make an AlphaTalker Vocabulary/DIRECTOR II-Commands overlay. To teach and send the commands you must activate the KEYBOARD EMULATION key on your AlphaTalker. See the AlphaTalker manual for Keyboard Emulation instructions.

Before You Begin to Store the Learn and Transmit Commands

In the next few pages you will store a Learn command for each device and function that you want the DIRECTOR II to control. You will also store a Transmit command for each of those same devices and functions. All the commands will be stored under keys on your overlay. You will teach each of the Learn commands to the DIRECTOR II. You will test that the DIRECTOR II learned the correct signal by sending the Transmit command for each device and function. When the correct signals have been learned, you can erase the Learn commands from your overlay.

Before you begin to store the commands, you should take some time to decide which devices and functions you want the DIRECTOR II to be able to control. Decide where on your overlay you want to store the commands. Write down each command and the key you are storing it under. This will make storing the commands go more quickly.

Note:

If your remote has a POWER key, you only have to store one signal. If it has an ON and OFF key, you will have to store two signals.

Store the Learn and Transmit Commands Under Keys On Your Overlay

See your AlphaTalker manual for more information about the MTI and Keyboard Emulation.

1. Save the AlphaTalker's memory using the MTI (see pages 88-91). When you name the file, give it a name that reflects both the AlphaTalker's vocabulary and the DIRECTOR II commands—perhaps "Alpha-D"— so you will remember that the file contains both.
2. When the vocabulary is saved, quit the MTI program. Select "Keyboard Emulation" from the choices.
3. Select the "Alpha-D" file (or whatever you named your file).

Choose the Key Where You Want to Store the Command

4. Choose a key on the computer screen where you want to store the first Learn command (e.g., A4). Single click on that location.

On a Macintosh Computer:

5. Press and *hold down* the <COMMAND(⌘)> key while typing the "@" key. Release keys. Nothing shows on the screen but that's OK.
6. Press and hold the <COMMAND> key while typing the "[" (left bracket) key. Release the keys.

On an IBM or IBM clone:

5. Press and hold down the <Ctrl> and <Shift> keys while typing the "@" key. Release the keys. The cursor moves one space to the right.
6. Press and hold down the <ESC> key while typing the "[" (left bracket) key. Release the keys.

On Macintosh and IBM Computers:

7. Type **IRL** (for the Learn command)

8. Type , (comma)
9. Type in the name of the device. Add a comma (e.g., TV,)

(Storing the Learn and Transmit Commands, cont' d.)

10. Type in the name of the function.

If you want key repetitions, add a comma and then type in the number of key repetitions and add a period.

If you do not want key repetitions, add a period after the function name (e.g., POWER ON.).

11. Repeat Steps #4-10 to store each Learn command. Repeat again to store each Transmit command. In Step #7, type **IRT** for Transmit commands.

12. When you have finished storing all the commands, **click the SAVE button on your computer screen.**

To Send Commands You Must be in Keyboard Emulation

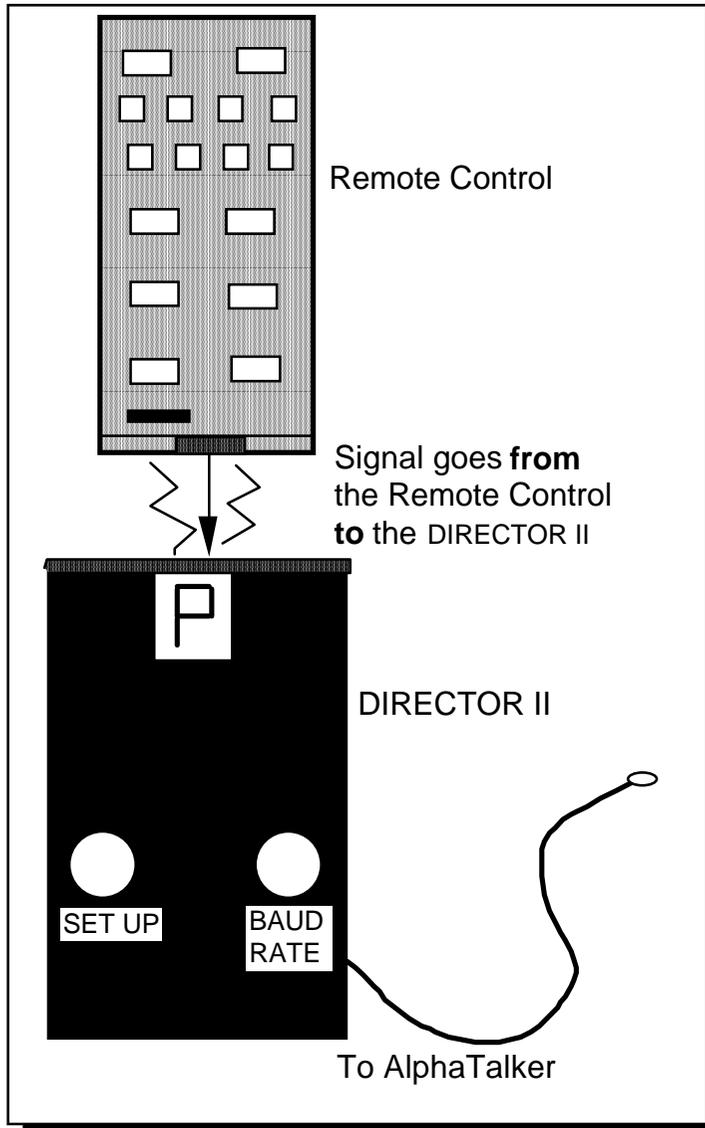
Note:

When you are using keyboard emulation, you cannot use the AlphaTalker to speak.

Now you are going to teach the commands you have stored in your AlphaTalker to the DIRECTOR II. To do this, you have to load your emulation overlay into your AlphaTalker. Then you have to connect the DIRECTOR II to the AlphaTalker and turn On KEYBOARD EMULATION in the AlphaTalker Toolbox.

1. Remove the keyguard and overlay on the AlphaTalker. Turn the Toolbox On.
2. Using the MTI, **load** the AlphaTalker-DIRECTOR II file into your AlphaTalker.
3. Quit the MTI.
4. Disconnect the MTI cable. Plug in the cable that came with your DIRECTOR II. Keep one end plugged into the RS-232 jack on the back of the AlphaTalker. Plug the other end into the larger connector on the side of the DIRECTOR II.
5. Turn the Toolbox On in the Control Panel and then activate the KEYBOARD EMULATION key in the Toolbox. The LED will light.
6. Set the baud rates for the AlphaTalker and the DIRECTOR II to 1200 (see page 57).

Turn the page to learn how to position the DIRECTOR II and the remote control.

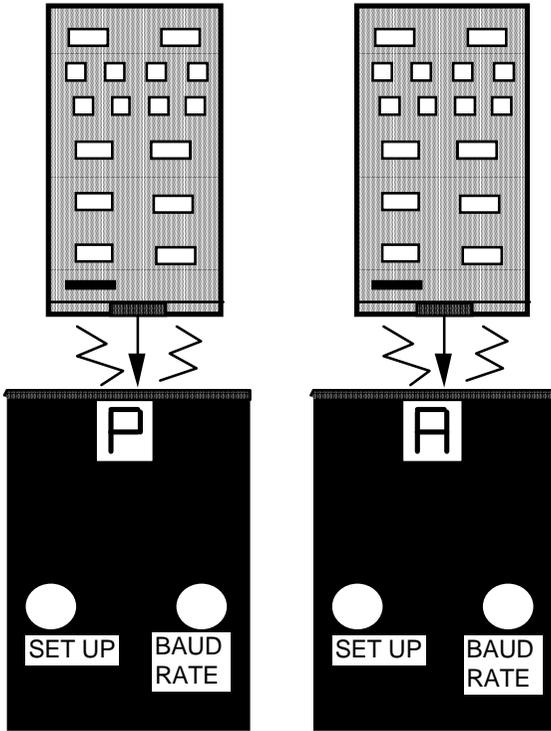


The DIRECTOR II and the Remote Control
Must "See" Each Other

Make Sure the Remote Control and the DIRECTOR II Can "See" Each Other

In order to learn commands, the DIRECTOR II must receive the correct signals from the remote control.

Arrange the DIRECTOR II and the remote control for the appliance who's signal you want to send on a table within easy reach. Place them so that the infrared (dark "learning window") areas of both the DIRECTOR II and the remote control can "see" each other (see the graphic on the facing page). The infrared areas should be pointing *towards* each other. The areas should be no more than **2-4 inches** away from each other. It is important that you arrange the DIRECTOR II and the remote control so that you can easily push the buttons on the remote control.



Teach the DIRECTOR II a Command

1. Activate key where you stored the **Learn** command that you want.
2. See "P" on the DIRECTOR II's display.
3. Push the correct Remote Control function (e.g., ON).
4. See "A" on the DIRECTOR II's display.
5. Push the same Remote Control function again.

Tap the Function Button on the Remote Control Twice

Activate a Learn Command

Let's say you want to send the command that tells the DIRECTOR II to Learn how to turn the TV ON signal:

<NULL><ESC>IRL,TV,ON.

Your overlay should have a key labeled LTV ON (or something similar). Press this key to tell the DIRECTOR II to learn this remote signal.

If everything is entered correctly, you will see a "P" on the DIRECTOR II's display. The DIRECTOR II is telling you to "P"ress the **ON** button on the **remote control** for the TV. Press the ON button once. Next, on the DIRECTOR II you will see an "A" for "Again". Press the remote control **ON** button **one more time**.

When you press the ON button on the remote control, the remote control sends an infrared signal to the DIRECTOR II which tells the DIRECTOR II how to turn the TV ON. This is why the DIRECTOR II and the remote control must be able to "see" each other's infrared areas.

In Summary: To Learn Commands:

Press the key where you stored the Learn command you want the DIRECTOR II to learn.

When the DIRECTOR II prompts you, press the appropriate remote control button **twice** to lock in the correct device/function signal.

PNotes:

Once you send a Learn command and see the "P" on the DIRECTOR II's display, you have **5 seconds** to activate the remote control. If you fail to activate the remote control within those 5 seconds, the DIRECTOR II times out and you must re-enter the entire command.

If you use the same button on your remote control to turn an appliance on *and* off, you only need to teach the command **once** to

the DIRECTOR II. The single signal can be used to toggle your TV, CD, etc. On or Off.

Test the Signal

Test a signal to see if it works by pressing the key on your overlay where you stored the **Transmit** command.

<NULL><ESC>IRT,TVON .

Make sure the DIRECTOR II is pointing toward the device you want it to control.

Use the TRANSMIT Command
to Test the Signal

Use the TRANSMIT Command to See If the DIRECTOR II Learned The Signal

Once the DIRECTOR II has learned a signal, you can test it.

When you test a signal, you **TRANSMIT** the signal **from** the DIRECTOR II **to** the appliance it is to control.

The **TRANSMIT** command is:

<NULL><ESCAPE><I><R><T>,DEVICE NAME, FUNCTION NAME.

You should have already stored your Transmit commands under keys on your overlay..

To test the command, make sure the DIRECTOR II is facing towards the appliance you want it to control.

Note:

You must use the Device and Function name spellings as they appear in **APPENDIX C**.

To Test a Signal:

Activate the key where you stored the Transmit command that you want to test. In this example we are using TV ON. If the TV goes on, the DIRECTOR II has learned the signal!

If the TV does not go on, set up the DIRECTOR II and the remote control again and re-send the Learn command. Then re-test.

If the TV still does not go on, you will have to set up the MTI and Keyboard Emulation programs again. Check that you stored the correct commands. If necessary, re-program the commands.

ADDING

ADD A DEVICE <D>

Name the **Device** you want to add.
Name a **Function** to go with the device.

EXAMPLE

<NULL><ESC>IRD,LRMVCR,ON.

ADD A FUNCTION <F>

Name the **Device** associated with
the function.
Name the **Function** you want to add.

EXAMPLE

<NULL><ESC>IRF,LRMVCR,MENU.

Adding a Device and/or a Function

Adding Devices and/or Functions

Most of the device names and functions that you will want the DIRECTOR II to control are already in the DIRECTOR II's menu (see APPENDIX C), but you may want to add a device/function that is not listed. If you have a VCR in the living room and one in the bedroom, you could add, "VCR2". You could add a function called MENU where you have the VCR menu programmed.

Adding a Device

If you want to add a **Device**, you must add the **device name and one function for that device in the same command**. Instead of L or T you will use **D**.

The command for **Adding a Device** is:

<NULL><ESCAPE>IRD,DEVICE NAME,FUNCTION NAME.
{ e.g., VCR2} { e.g., ON}

Adding a Function

If you want to add a **Function**, you can only add *one function at a time* in the command. You must include the <DEVICE NAME> so that the DIRECTOR II knows where to add the new function. You will use **F** instead of L or T.

The Command for **Adding a Function** is:

<NULL><ESCAPE>IRF,DEVICE NAME,FUNCTION NAME.
{ e.g., VCR2} { e.g., MENU}

Note:

You may get an Error Code 6 (Out of Memory) when adding a device/function. You will have to delete something before you can add something new.

DELETING

DELETE A DEVICE <X>

Name the **Device** you want to delete.
Name it **again** in the *Key Repetitions*
part of the code.

EXAMPLE

<NULL><ESC>IRX,TUN,,TUN.

DELETE A FUNCTION <Y>

Name the **Device** associated with
the Function you want to delete.
Name the **Function** to be deleted.
Name it **again** in the *Key Repetitions*
part of the code.

EXAMPLE

<NULL><ESC>IRY,TUN,SCAN,SCAN.

When you delete a **device**,
all the functions for that device
are also deleted.

There must be **2 devices** and **2 functions**
left in the memory
before the DIRECTOR will delete anything.

Delete Devices and Functions

Deleting Devices and/or Functions

At some point you may need to delete some devices/functions to make room for newer ones.

Deleting a Device

You must name the device to be deleted in *both* the **DEVICE NAME** part of the command *and* the **KEY REPs** part of the command. Unless the device is named at both places, the DIRECTOR II will not delete it. You will also use **X** instead of L or T.

The command for **Deleting a device** is:

```
<NULL><ESC>IRX,DEVICE NAME,,DEVICE NAME.
```

Deleting a Specific Function

To delete a specific function, you must name it in the **FUNCTION NAME** part of the command *and* the **KEY REPs** part of the command. If it is not named in both of these places, the DIRECTOR II will not delete it. Remember to include the **DEVICE NAME** to which the particular function you want to delete belongs. You will also use **Y** instead of T or L.

The command for **Deleting a specific function** is:

```
<NULL><ESC>IRY,DEVICE NAME,FUNCTION NAME,FUNCTION NAME.
```

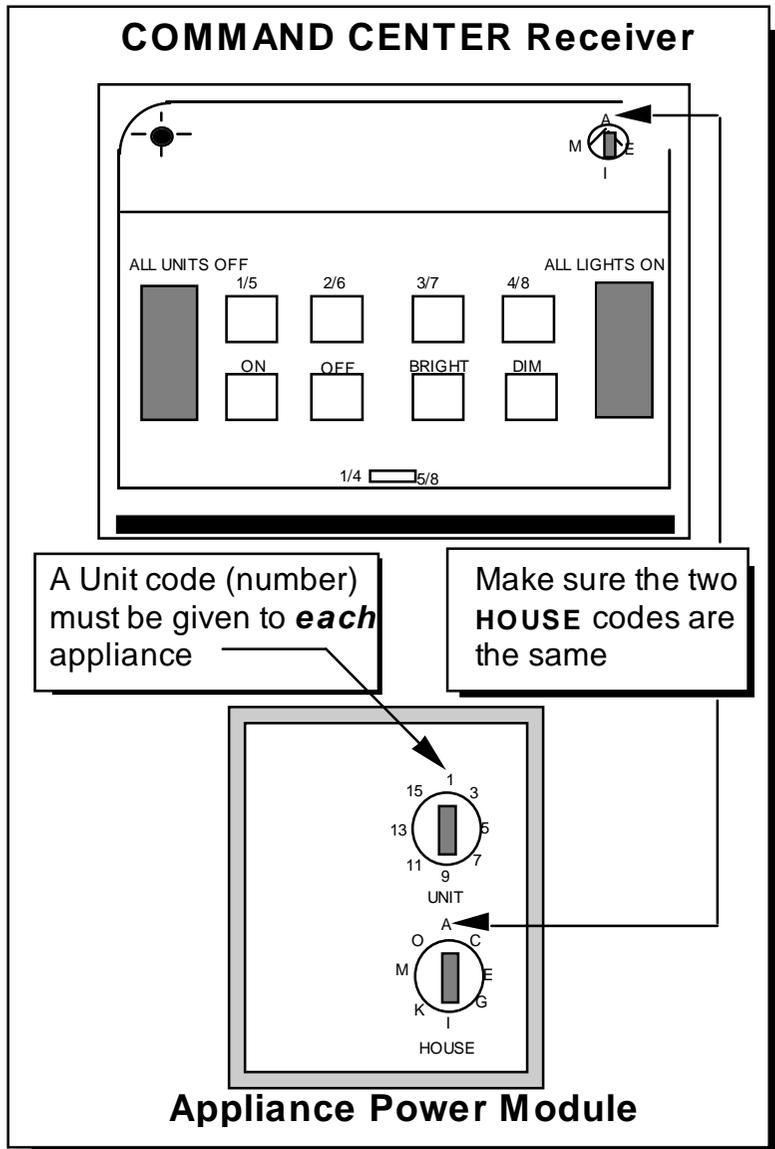


Warning!

In order to DELETE either a Device or a Function you must have **two** devices or **two** functions left in the DIRECTOR II' s memory. The DIRECTOR II will not follow through on a "delete" command if there is only one device or function left to delete.

When a *device* is deleted, **all the functions associated with that device are also deleted.**

When a *function* is deleted, **only the specific function is deleted.**



Setting Up the Power Modules and the Receiver

Setting Up an X-10 Receiver and Power Modules

The X-10 power module commands signals are **already installed** in the DIRECTOR II. This means that the DIRECTOR II does *not* have to LEARN them first. The DIRECTOR II has unit commands 1-16 already stored in it. However, in order for the DIRECTOR II to work with the modules you must have an X-10 receiver to control the power modules. The One-for-All Command Center™ (model No. WCC-1) is an X-10 signal receiver that can be purchased from Prentke Romich Company. (The Command Center receiver indicates that it will handle 8 power modules, but in conjunction with the DIRECTOR II, up to 16 can be used.)

Set Up the Command Center Receiver and the Power Modules

On the front of the power module there are two small circles labeled "UNIT" and "HOUSE". When you attach an appliance to a module you must give the appliance a UNIT number and tell the module what that number is. For example, if you attach modules to a lamp and a fan, you might make the lamp "1" and the fan "2". Stick a small screwdriver, knife or dime ,etc., into the groove labeled "UNIT" on the power module. For the lamp, turn the groove to "1", for the fan, turn the groove to "2", for the next appliance, use "3", etc.

The second circle on the power module indicates "HOUSE". Select a letter, for example, "A", for HOUSE unless you are in a place where a number of frequencies are used (like an apartment building). In that case, check first about which frequency to use in case "A" is in use.) You will use the same HOUSE letter for all your power modules (up to 16). Turn the HOUSE groove to "A". Once you have set HOUSE on each module, take the **receiver** and set HOUSE (in the upper right corner on the top of the receiver) to "A". When the HOUSE letter and UNIT number have been set, **make sure that all the appliances are ON**. Then plug the

appliances into the power modules and plug the modules into wall outlets. All the appliances should now be OFF.

Place the Command Center **receiver** in a centrally located place where it can easily receive signals from the DIRECTOR II. (The Command Center is a strong receiver. This means that the transmitter on the DIRECTOR II does not have to be directly in line with the receiver or even very close to it.) If you want to test that a power module is working, press the Unit Code button (e.g., "1") and then the ON button. The appliance should go ON. Press OFF to turn it back OFF.

Using the DIRECTOR II with the Command Center and the Power Modules

Position the transmitter on the DIRECTOR II so that it is facing in the direction of the Command Center. Let' s say you have a lamp controlled by the X-10 on Unit Code 3. To turn the lamp On, you must first select the device you want to control (UC3).

<NULL><ESC>IRT,X10,UC3.

The next step is to send the POWER ON signal:

<NULL><ESC>IRT,X10,ON.

You can see that the X-10 signal is sent in two steps: the first step tells the DIRECTOR II which X-10 Unit Code you want and the second step tells the DIRECTOR II what function (On or Off) you want the X-10 module to perform.

The command to turn an X-10 module **Off** is:

<NULL><ESC>IRT,X10,OFF.

When transmitting signals for the power modules, the DIRECTOR II and the Command Center should be able to "see" each other.

When the signals from the DIRECTOR II are being received, a red LED on the Command Center will flash.

Store the X-10 commands to various keys, just like you did with Device/Function commands.

Using the EZ Phone with the DIRECTOR II

Note:

For complete information about the EZ Phone and using its menus and functions, please see your EZ Phone manual.

The EZ Phone commands **are already installed** in the DIRECTOR II. This means that the DIRECTOR II does not have to learn the commands.

With your DIRECTOR II you can send signals to the EZ Phone to answer and hang up the phone; to dial phone numbers you have stored; to redial the last number you dialed; to adjust the volume of the caller or the ringer; to perform call waiting and to dial digits (e.g., for extension numbers) while you're on a call. You can also send signals from the DIRECTOR II to the EZ Phone that allow you to scan through the EZ Phone's Function Menu. This is helpful if you want to use DIRECTOR II to make changes to phone numbers that you have stored in the EZ Phone Directory.

In order to use the EZ Phone, the DIRECTOR II and the EZ Phone must be positioned so that their infrared windows can see each other. The EZ Phone must be able to receive the signal that the DIRECTOR II sends.

Store the EZ Phone Commands Under Keys in Your AlphaTalker:

Appendix-C and Appendix-E contain lists of all the EZ Phone commands. The two lists are similar. However, if you store the commands from **Appendix-C**, you store:

<NUL>ESC>IRT,EZ,FUNCTION NAME,KEY REPs(if any).

If you use the commands from **Appendix-E**, you **do not** have to use the **IRT** part of the command. You store:

<NULL><ESC>EZ,FUNCTION NAME,KEY REPs(if any).

The commands in Appendix-E are easier and quicker to store.

Store the commands under keys on your AlphaTalker overlay. For example, the be able to answer and hang up the EZ Phone, you would store:

<NULL><ESC>EZ,ANS/HANG.

To Dial Phone Numbers:

You can store all the phone numbers you want under keys. You use the **EZ,DIAL** command.

For example, to be able to dial PRC's phone number you would store the command:

<NULL><ESC>EZ,DIAL,18002621984.

(You can add dashes to the phone number to make it easier to read.)

See the EZ Phone manual for more information on adding the TONE, PULSE, PAUSE, WAIT, * and # commands to phone numbers.

X-10 and EZ Phone Hints and Warnings



Warning!

**We highly recommend that you do not delete
any X-10 or EZ Phone functions!**

X-10 and EZ Phone functions can only be replaced by loading all the **Default** Menus back into the DIRECTOR II. When you do this, you lose everything you have already stored.

Using the Infrared Receiver (IRR) with the DIRECTOR II

You can store Infrared Receiver (IRR) commands on your overlay if you want to use the DIRECTOR II and an Infrared Receiver for wireless computer emulation or to run a printer.

The commands you will need include SERIAL OFF, SERIAL IMMEDIATE and SERIAL DELAYED as well as the IRR commands. All these commands can be found in Appendix E.

When you activate the sequence that turns SERIAL ON, you can type on the keyboard of your communication device and the text is sent through the DIRECTOR II to the IRR and then to the computer or printer.

Important Note:

The **IRR** must be set at 1200 baud and “Packet” protocol.

The DIRECTOR II can receive information from your Libertor or AlphaTalker at 300 baud or 1200 baud. Set this baud as described on page 15 or page 57 (1200 baud is recommended). The DIRECTOR II sends information to the IRR at 1200 baud. Set this baud rate using the sequence listed in Appendix E, “Set the DIRECTOR II Sending Baud Rate.”

Another Important Note:

If you are going to use a T-TAM, it must be set to 1200 baud. If your T-TAM does not have the 300/1200 baud switch on it, you must have it upgraded. Call PRC’s Service Department at 1-800-262-1990 for more information.

For more IRR information, refer to the instructions that came with your IRR.

ZORRO
(ERASE the DIRECTOR's Memory)

ZORRO = <Z>

Use **Z** for the COMMAND LETTER.
Use **<99>** in the KEY REPETITION part
of the command.

EXAMPLE

<NULL><ESC>IRZ,,,<99>.

When you ZORRO the DIRECTOR II,
only the X-10 and EZ Phone signals
will be left in the memory.

"Zorro" the DIRECTOR II
and Then Start Over

"Zorro" the DIRECTOR II's Memory

If you have added or deleted a number of devices and/or functions over a period of time, you may become confused about what exactly you have programmed into the DIRECTOR II. Or, maybe you won the lottery and have bought a new TV, VCR, CD, etc. and now you need to program them all into the DIRECTOR II!

There is an easy way to erase all the programming in the DIRECTOR II. When this is done, you can program all new signals if you want to. Erasing the current programming in the DIRECTOR II is called "Zorroing". When you "Zorro" the DIRECTOR II, it returns to the state it was in when you received it from the factory.

To ZORRO the DIRECTOR II:

The Zorro command string looks like this:

`<NULL><ESC>IRZ,,99.`

You don't have to fill in the `<DEVICE>` and `<FUNCTION>` parts of the command, but you **must** send a **key repetition of <99>**—this confirms the Zorro command to the DIRECTOR II. If you forget the "99", you will hear an error beep and see an error code. (Error Codes are explained in **APPENDIX: A.**)

You can also transfer the DIRECTOR II' s memory to a computer disk or to another DIRECTOR II. (See the next few pages).

Save the DIRECTOR II's Memory with an MTI-IBM for IBM Computers

The Memory Transfer Interface for an IBM computer or clone (MTI-IBM) allows you to save the DIRECTOR II's memory onto a computer disk. You can then re-load the memory from the disk back into the DIRECTOR II at a later time. The MTI is an optional accessory for the DIRECTOR II consisting of a disk which contains the MTI program and a cable which connects the DIRECTOR II to your computer. You must have an MTI with software version 3.0 or higher to make a DIRECTOR II to disk transfer. You can use the MTI that came with your AlphaTalker.

To Connect the DIRECTOR II to an IBM Computer:

1. Plug one end of the battery charger that came with your AlphaTalker into the smaller connector on the right side panel of the DIRECTOR II's case. Plug the other end into a wall outlet. **All memory transfers must be done with the battery charger plugged in.**
2. Connect the smaller end of the MTI cable into the Serial Port (larger connector) on the right side panel of the DIRECTOR II. Plug the other end into Serial Port 1 on your computer. This port should be either a large 25-pin connector or a smaller 9-pin connector.
3. Turn the computer On and insert the MTI disk into the disk drive of the computer. Switch to the drive that has the disk in it if necessary.
4. Type MTI (space) after the A:> (or B:>) and press RETURN.
5. Type D for DIRECTOR II.
6. **TO Save Memory to Disk:**
 - Go to the DIRECTOR II.
 - Hold down the BAUD RATE button until you hear a **single** beep.
 - Release the button and look at the computer screen.

7. Select a file to save the memory to, or type in the name of a new file then press ENTER. You should not store memory onto the MTI disk. Insert a new disk to save memory to or name a different file.
8. If everything has been done correctly, the computer screen will tell you when the transfer is complete. Also the DIRECTOR II will show a "C" on its display.
9. **To Load Memory From Disk**
Go to the DIRECTOR II.
Hold down the BAUD RATE button until you hear **two** beeps.
Release the button and look at the computer screen.
10. Select the file you want to load from (Select F1 on the keyboard to see files on another disk). Press ENTER to select a file.
11. If everything has been done correctly, the computer screen will tell you when the transfer is complete. Also the DIRECTOR II will show a "C" on its display.

If something goes wrong with the transfer, the DIRECTOR II will beep and you will see an "A" for "Abort" on the DIRECTOR II's display screen. Unplug the cable and reconnect the DIRECTOR II to the computer, then restart the program.

Save the DIRECTOR II's Memory with an MTI-MAC for Macintosh Computers

The Memory Transfer Interface for a Macintosh computer (MTI-MAC) allows you to save the DIRECTOR II's memory onto a computer disk. You can then re-load the memory from the disk back into the DIRECTOR II at a later time. The MTI is an optional accessory for the DIRECTOR II consisting of a disk which contains the MTI program and a cable which connects the DIRECTOR II to your computer. You must have an MTI with software version 3.0 or higher to make a DIRECTOR II to disk transfer. You can use the MTI that came with your AlphaTalker.

Note:

If you have **AppleTalk** on your computer system it must be **inactive** for the MTI to work. See your Mac manual for instructions on how to turn AppleTalk off.

To Connect the DIRECTOR II to a Macintosh Computer:

1. Plug one end of the battery charger that came with your *communication aid* into the smaller connector on the right side panel of the DIRECTOR II's case. Plug the other end into a wall outlet. **All memory transfers must be done with the battery charger plugged in.**
2. Connect one end of the MTI cable (either end) into the larger connector on the right side panel of the DIRECTOR II. Plug the other end into the connector on the back of the Mac that has the picture of a telephone handset above it.
3. Turn the computer ON and insert the MTI disk into the floppy drive of the computer. Open the MTI file by double-clicking on it.
4. Click on "DIRECTOR II" from the choices on the computer screen.

5. **To Save memory to Disk**

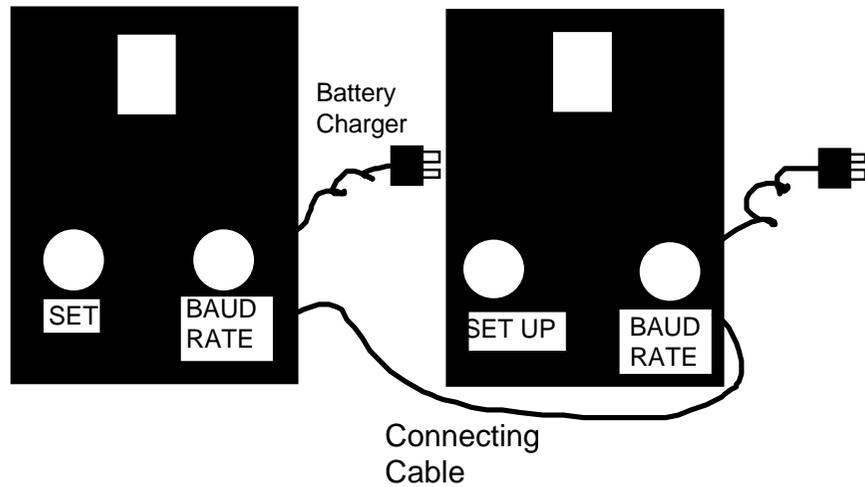
Go to the DIRECTOR II.

Hold down the BAUD RATE button until you hear a **single** beep.

Release the button and look at the computer screen

6. Select a file to save the memory to, or type in the name of a new file then click "CONTINUE". The Mac will not let you save memory onto the MTI. Insert a new disk or name a different file.
7. If everything has been done correctly, the computer screen will tell you when the transfer is complete. Also the DIRECTOR II will show a "C" on its display.
8. **To Load Memory from Disk**
Go to the DIRECTOR II
Hold down the BAUD RATE button until you hear **two** beeps
Release the button and look at the computer screen
9. Select the file you want to load from. Click on "CONTINUE".
10. If everything has been done correctly, the computer screen will tell you when the transfer is complete. Also the DIRECTOR II will show a "C" on its display.

If something goes wrong with the transfer, the DIRECTOR II will beep and you will see an "A" for "Abort" on the DIRECTOR II's display screen. Unplug the cable and reconnect the DIRECTOR II to the computer, then restart the program.



Memory Transfer

DIRECTOR II to DIRECTOR II

1. Make sure Serial is OFF before you start.
2. On the **Sending** DIRECTOR II press and hold the BAUD RATE button until you hear **3** beeps.
3. When you hear 3 beeps, **release** the BAUD RATE button.
4. The transfer takes place automatically.

DIRECTOR II-to-DIRECTOR II Memory Transfer

Transfer the Information in One DIRECTOR II to Another DIRECTOR II

You can load the memory of one DIRECTOR II into the memory of another DIRECTOR II. To achieve this you must have two PRC battery chargers and the cable that will connect to the serial port of both DIRECTOR IIs.

Note:

Before you begin a DIRECTOR II to DIRECTOR II transfer, you must send the SERIAL OFF command. If you have stored the SERIAL OFF command (<NULL><ESC>IRT,SERIAL OFF.) activate the key where you stored the command. If you have not stored it, store it now and then send the command. Once the command has been sent, you can connect the two DIRECTOR II' s and set up the transfer.

To Make an Information Transfer:

1. Plug a battery charger into each DIRECTOR II. Connect the cable to the serial port on each DIRECTOR II. Make sure the baud rates are the same.
2. On the **sending** DIRECTOR II (the DIRECTOR II that contains the information you want the other DIRECTOR II to receive) **hold down the BAUD RATE button** until you hear 3 beeps. When you hear 3 beeps, release the button. The transfer begins.
3. When the transfer is in progress, the display will light. When it is completed you will hear a beep and the display will show a "C". If a problem occurs during the transfer, either of the display screens may show an "A" which stands for "Aborted Transfer". If this happens, start the transfer all over again. Check all connections (battery charger and cables) and make sure the baud rates are the same.

If a transfer fails, any signals that were stored in the DIRECTOR II that is **receiving** the new information will be lost and that

DIRECTOR II will automatically reload its default menu .
Remember, the default menu contains only the X-10 signals.

Appendixes

Appendix A: ERROR CODES

When an error is detected, the DIRECTOR II displays a number on its display screen and emits a beep. For example, if you have left a comma (,) out of a command that you are sending, the number "8" will appear on the display and the DIRECTOR II will beep.

Below is a list of all the errors the DIRECTOR II can detect, their Error Code numbers and their explanations. If you encounter a problem you cannot solve (such as a Memory Error), please call the **PRC Service Department at 1-800-262-1990**.

ERROR CODE NUMBER and EXPLANATION	SOLUTION
1 Device name is too long	Too many characters in name—edit name and resend
OR Device name not found	Add device and teach signal
OR Invalid device name	OR Device name already exists; change the name of the device
OR Only one device left	You will not be able to delete anymore devices
2 Function name is too long	Same as above
OR Function name not found	
OR Invalid Function name	Name already exists; change the name of the Function
OR	

Only one Function left

You will not be able to
delete any more functions

- | | |
|--|--|
| <p>3 Invalid key repetition number
 OR
 Key repeat name too long</p> | <p>You may use one or two characters for the key rep. value (i.e. 1-99-99); if left blank, defaults to 1 rep. Check repetitions and edit.
 OR
 Check number of repetitions (numbers 1-99 are valid)</p> |
| <p>4 Invalid check sum check</p> | <p>Something was written into the sumcheck area. This area of the code (last comma area) should be blank.</p> |
| <p>5 No burst learned;</p> | <p>The DIRECTOR II does not the signal. Teach it using the LEARN command</p> |
| <p>6 Device is out of memory</p> | <p>Must delete a device or function before a new one can be added; SCANNING DIRECTOR II continues to work, however.</p> |
| <p style="text-align: center;">OR</p> <p>Memory Error</p> <p>with
 the
 must call
 Dept.</p> | <p>The DIRECTOR II will not work at all because there is something wrong either the battery or software. You PRC Service</p> |
| <p>7 Time-out Error</p> | <p>There is a missing command in the code because the DIRECTOR II turned OFF while code was being typed in.</p> |

- 8** Missing "," in the command A comma is missing from the code; replace it.

9 Invalid opcode

Operating Code (**L**earning
or **T**ransmitting) is
incorrect—try re-teaching or
re-sending signal

0 Missing "." in command
end
DIRECTOR II
or Transmit.

If there is no period at the
of the code, the
will not Learn
Add a period.

Appendix B: Communication Parameters for Devices Connected to the DIRECTOR II's Serial Port

When a communication aid such as the Liberator or AlphaTalker is connected to the DIRECTOR II through the Serial Port, the two devices must be able to communicate.

The following communication parameters must be set **on the communication aid that is connected to the** DIRECTOR II.

Baud Rate = must match whatever the DIRECTOR II is set at
(usually 1200)
Parity = none
Data Bits = 8
Stop Bits = 1

Appendix C: The DIRECTOR II's DEFAULT MENUS

Store these devices and functions in your communication aid using <NULL><ESC>IRT,DEVICE NAME,FUNCTION NAME,KEY REPS (if any).

	ON
DEVICE MENU	OFF
EZ	
TV	CHANNEL UP
VCR	CHANNEL DOWN
TUNER	DIGIT
TAPE	0
CD	1
X10	2
	3
FUNCTION MENUS	4
	5
EZ	6
ANS/HANG	7
DIAL	8
0	9
1	QUICK VIEW
2	VOLUME UP
3	VOLUME DOWN
4	MUTE
5	
6	VCR
7	ON
8	OFF
9	PLAY
#	REWIND
* (STAR)	FAST FORWARD
REDIAL	PAUSE
MUTE	STOP
FLASH	RECORD
LINE UP	EJECT
LINE DOWN	DIGIT
RING UP	0
RING DOWN	1
MESSAGE	2
RECORD	3
SELECT	4
ON/OFF	5
	6
TV	7

TUNER	
ON	PLAY
OFF	NEXT DISC
SCAN	PREVIOUS DISK
FM	NEXT TRACK
AM	PREVIOUS TRACK
VOLUME UP	RANDOM PLAY
VOLUME DOWN	DIGIT
MUTE	0
DIGIT	1
0	2
1	3
2	4
3	5
4	6
5	7
6	8
7	9
8	X10
9	UC
TUNER	1
CD PLAYER	2
VCR	3
TAPE DECK	4
	5
TAPE	6
ON	7
OFF	8
PLAY	9
REWIND	10
FAST FORWARD	11
PAUSE	12
STOP	13
REVERSE	14
	15
CD	16
ON	OFF
OFF	

Appendix D: Programming At a Glance

GENERAL COMMAND CODE:

<NULL><ESC><I><R><OPERATION COMMAND
LETTER><,(comma)><DEVICE NAME>,<FUNCTION NAME>,<# OF
KEY REPETITIONS><.(period)>

Learn Command

<NULL><ESC>IRL,DEVICE NAME,FUNCTION NAME. *Press remote control; press again.*

Transmit Command

<NULL><ESC>IRT,DEVICE NAME,FUNCTION NAME,# of KEY REP' s,
(if any>.

X-10 Commands

<NULL><ESC>IRT,X10,UNIT CODE.

Add a Device Command

<NULL><ESC>IRD,DEVICE NAME,FUNCTION NAME.

Add a Function Command

<NULL><ESC>IRF,DEVICE NAME,FUNCTION NAME.

Delete a Device Command

<NULL><ESC>IRX,DEVICE NAME,,DEVICE NAME.

All functions for the device are deleted, too.

Delete a Function Command

<NULL><ESC>IRY,DEVICE NAME,FUNCTION NAME,FUNCTION
NAME. *Only the single function is deleted.*

Return to Default Settings (ZORRO the DIRECTOR II)

<NULL><ESC>IRZ,,,99.

Appendix E: DIRECTOR II Commands for the Infrared Receiver (IRR) and the EZ Phone

Below are commands to set the DIRECTOR II for use with the IRR. Store these commands exactly as they appear here.

Turn Serial Mode Off

<NULL><ESC>IRT,SERIAL OFF.

Turn Serial Mode On in Delayed Mode

<NULL><ESC>IRT,SERIAL DELAYED.

or

<NULL><ESC>IRT,SERIAL DELAYED,300 or 1200.

Turn Serial Mode On in Immediate Mode

<NULL><ESC>IRT,SERIAL IMMEDIATE.

or

<NULL><ESC>IRT,SERIAL IMMEDIATE,300 or 1200.

The two commands above that have 300 and 1200 included in the sequence, set the baud rate between the DIRECTOR II and the IRR. This baud rate can be different from the baud rate that you set for the DIRECTOR II and the Liberator or AlphaTalker. You can use either 300 or 1200 baud between the DIRECTOR II and AlphaTalker or Liberator. 1200 baud **must** be used between the DIRECTOR II and the IRR.

PBefore you **send** any of these commands, set “Character Pacing” to Off in the Liberator OUTPUT MENU.

PThe DIRECTOR II will beep when it receives a command.

Change the DIRECTOR II Address to Match the IRR

<NULL><ESC>IRT,IRR1.

<NULL><ESC>IRT, IRR2.

IRR Commands

Store these commands exactly as written

<NULL><ESC>IRR,ON.
<NULL><ESC>IRR,OFF.
<NULL><ESC>IRR,RELAYALL,ON.
<NULL><ESC>IRR,RELAYALL,OFF.
<NULL><ESC>IRR,RELAY1,ON.
<NULL><ESC>IRR,RELAY2,ON.
<NULL><ESC>IRR,RELAY3,ON.
<NULL><ESC>IRR,RELAY3,ON.
<NULL><ESC>IRR,RELAY4,ON.
<NULL><ESC>IRR,RELAY5,ON.
<NULL><ESC>IRR,RELAY1,OFF.
<NULL><ESC>IRR,RELAY2,OFF.
<NULL><ESC>IRR,RELAY3,OFF.
<NULL><ESC>IRR,RELAY4,OFF.
<NULL><ESC>IRR,RELAY5,OFF.

EZ Phone Commands

Store these commands exactly as written

<NULL><ESC>EZ,ANS/HANG.
<NULL><ESC>EZ,REDIAL.
<NULL><ESC>EZ,FLASH.
<NULL><ESC>EZ,LINE UP.
<NULL><ESC>EZ,LINE DOWN.
<NULL><ESC>EZ,RING UP.
<NULL><ESC>EZ,RING DOWN.
<NULL><ESC>EZ,MESSAGE.
<NULL><ESC>EZ,SELECT.
<NULL><ESC>EZ,ON/OFF
<NULL><ESC>EZ,RECORD.
<NULL><ESC>EZ,MUTE.
<NULL><ESC>EZ,DIAL,<PHONE NUMBER (0-9-TONE-PULSE-PAUSE-WAIT-*.#)>.
<NULL><ESC>EZ,UC1 ON.
<NULL><ESC>EZ,UC2 ON.
<NULL><ESC>EZ,UC3 ON
<NULL><ESC>EZ,UC4 ON.
<NULL><ESC>EZ,UC5 ON.
<NULL><ESC>EZ,UC6 ON.
<NULL><ESC>EZ,UC7 ON.
<NULL><ESC>EZ,UC8 ON.

<NULL><ESC>EZ,UC9 ON.
<NULL><ESC>EZ,UC10 ON.
<NULL><ESC>EZ,UC11 ON.
<NULL><ESC>EZ,UC12 ON.
<NULL><ESC>EZ,UC13 ON.
<NULL><ESC>EZ,UC14 ON.
<NULL><ESC>EZ,UC15 ON.
<NULL><ESC>EZ,UC16 ON.
<NULL><ESC>EZ,UC1 OFF.
<NULL><ESC>EZ,UC2 OFF.
<NULL><ESC>EZ,UC3 OFF
<NULL><ESC>EZ,UC4 OFF.
<NULL><ESC>EZ,UC5 OFF.
<NULL><ESC>EZ,UC6 OFF.
<NULL><ESC>EZ,UC7 OFF.
<NULL><ESC>EZ,UC8 OFF.
<NULL><ESC>EZ,UC9 OFF.
<NULL><ESC>EZ,UC10 OFF.
<NULL><ESC>EZ,UC11 OFF.
<NULL><ESC>EZ,UC12 OFF.
<NULL><ESC>EZ,UC13 OFF.
<NULL><ESC>EZ,UC14 OFF.
<NULL><ESC>EZ,UC15 OFF.
<NULL><ESC>EZ,UC16 OFF.

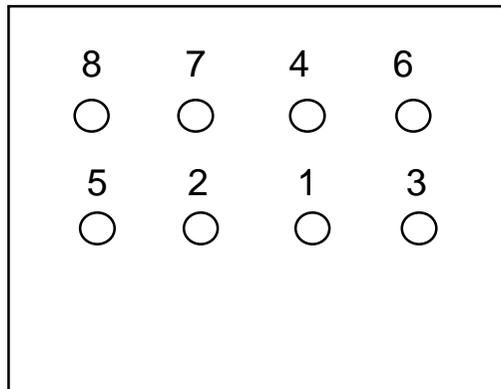
Change EZ Phone Address

<NULL><ESC>IRT,EZ1.
<NULL><ESC>IRT,EZ2.
<NULL><ESC>IRT,EZ3.
<NULL><ESC>IRT,EZ4.

Appendix F: Serial Port Pinout

RS232 Port

8 PIN MINI-DIN PINOUT



TOP VIEW

PIN 1 - REQUEST TO SEND
PIN 2 - CLEAR TO SEND
PIN 3 - TRANSMIT DATA
PIN 4 - GROUND
PIN 5 - RECEIVE DATA
PIN 6 - NO CONNECTION
PIN 7 - BATTERY VOLTAGE
(Voltage **out** with Liberator
and SCANNING DIRECTOR II;
Voltage **in** with DIRECTOR II)
PIN 8 - GROUND

