

## 11.0 IPLinkCtrl (ipctrl) Network Management Software:

Once your AES MultiNet system is up and running, you can use the IPCtrl program to monitor and manage your network. IPCtrl is usually accessed from the workstation PC that is connected using VNC Viewer.

If the program IPCtrl is not running it can be started using the “aesctrl startall” item in the AES Menu, accessed by a right click on the Desktop or by entering the **startALL<Enter>** command.

IPCtrl is the IP-Link and Radio Management program. For those familiar with standalone AES IntelliNet receivers this is the replacement for Net7K or Net7000. Unlike Net7000 programs, which are connected directly to a receiver that is viewing RF signals in real time, IPCtrl displays data packets that are delivered by a 7170 IP-Link transceiver.

Following is an example of the IPCtrl screen.

```
IPCtrl [Jim] IPLink and Radio Management System @ AES Corporation 2003,2004 Version 1.0
Message Control Program DataRadio System Help
Orig(1314), Dest(0001), From(0001), To(0001) (LNR) Host Parm Block Upload
< Route Not Provided>
(Data 019: [LNRT] A7000CB6E10546,
Subscriber 1314:
  Checkin Packet Life = 30 Min   Status Packet Life = 0 Min
  Alarm Packet Life = 0 Min     Trouble Packet Life = 0 Min
  Restoral Packet Life = 0 Min  Intellitap Packet Life = 0 Min
  Special Packet Life = 0 Min)
Mon Feb 2 12:08:45 2004 Pkt# CB, Server(00000001), IPLink(0001)
Orig(1314), Dest(0001), From(1314), To(0001) (LNRT) Vehicle Location System
< Route 0001 <- 1314>
02/02/2004 17:08:34 UTC Sat's = 3, HDOP = 7.6
Latitude Longitude Altitude Velocity Heading
N42°33'20.6" W070°58'44.1" 68.9 Ft 0.0 MPH 342.5°)
Mon Feb 2 12:08:47 2004 Pkt# CC, Server(00000001), IPLink(0001)
Orig(1314), Dest(0001), From(1314), To(0001) (LNRT) Vehicle Location System
< Route 0001 <- 1314>
02/02/2004 17:08:43 UTC Sat's = 3, HDOP = 7.5
Latitude Longitude Altitude Velocity Heading
N42°33'20.6" W070°58'44.1" 68.9 Ft 0.0 MPH 342.5°)
Mon Feb 2 12:08:58 2004 Pkt# 77, Server(00000001), IPLink(0001)
Orig(0001), Dest(2020), From(0001), To(2020) (EXR) Subscriber Requests PBU
< Route Central -> 0001 -> 2020>
(Data 001: [PBH_CHECK] 23)
Mon Feb 2 12:09:01 2004 Pkt# 00, Server(00000001), IPLink(0001)
Orig(1314), Dest(1314), From(1314), To(1314) (LNR) Receiver Not In Service
(Data 000: )
Mon Feb 2 12:09:04 2004 Pkt# CD, Server(00000001), IPLink(0001)
Orig(1314), Dest(0001), From(1314), To(0001) (LNRT) Alarm
< Route 0001 <- 1314>
(Data 010: (New) Type = Alarm ID = 1314 Zone 006 )
Jim 12:09:39
```

Figure 11-1 Sample screen from the IPCtrl program

## 11.1 IPCtrl Function Groups:

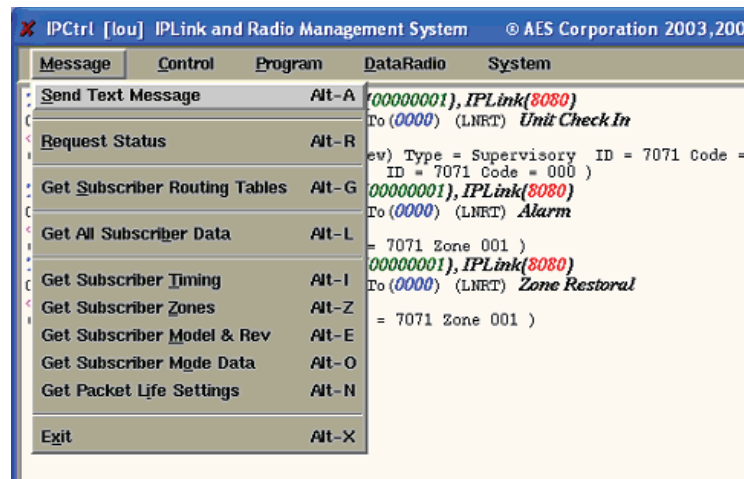
There are five function groups including “Message”, “Control”, “Program”, “DataRadio” and “System”

They are accessed from the menu bar in the upper part of the screen. Each of the menu bar function groups has an underlined letter.

Menu function groups can be selected by holding down the <Alt> key pressing the function group’s underlined letter on your keyboard please see [example on next page](#): or by clicking on the Menu Item with the mouse cursor.



## 11.2 Common data entry/selection menus and pop-ups:



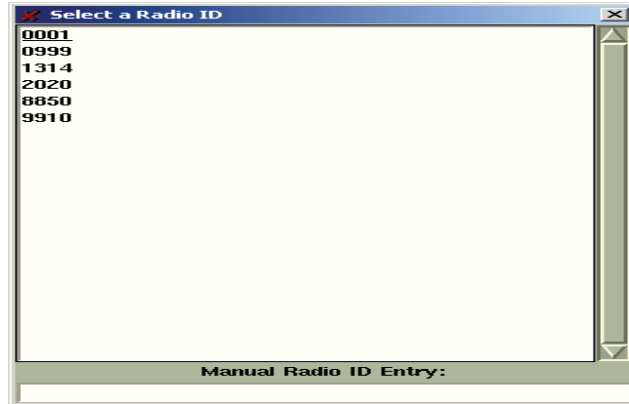
*Figure 11-2 Message Pull down Menu*

- The first of the pull down functions **S**end Text Message in the example above, is highlighted as illustrated when the pull down opens.
- Other functions within the pull downs can be selected using the arrow keys.
- The highlighted function bar also follows the mouse cursor.
- The highlighted pull-down functions will be executed when the user presses <Enter> or clicks on the function bar using the mouse.
- Each listed function has an underlined letter in its name. Pressing the highlighted letter while the pull down is active will execute that function.
- Functions can also be accessed directly by a “hot key”, combination like”<Alt> + <A>. Hot key combinations are listed in the menu to the right of the item. Hot keys will only execute the associated function when the pull downs are closed.
- Activate any other function group by clicking on the function group name in the Menu bar.

### 11.3 Using the pick list pop up to Select a Subscriber ID

When a function is chosen from a function group, a “pick list pop-up” appears.

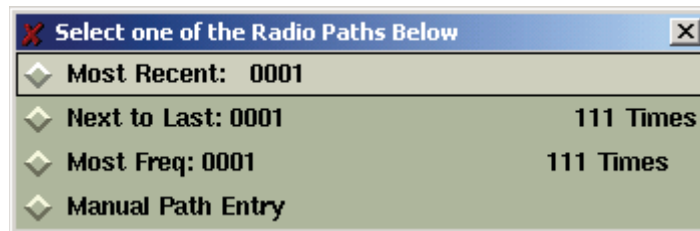
You can type in the ID number of the Subscriber unit you wish to contact. Or use the arrow key to highlight the appropriate ID number and then press <Enter> to select it.



*Figure 11-3 Pick list pop-up*

### 11.4 Selecting a Route for Communication with a Subscriber Unit

Since each subscriber unit in your **AES•IntelliNet** system acts as a radio repeater, there may be many routes for messages to travel from its source to the Linux Server via the IP-Link(s). Each time a message is received from a unit, the software extracts the subscriber unit ID number of the origin, and the ID number of repeaters in the message’s route. That route information is stored in a database and can be used to select an outbound route whenever an operator sends data to a subscriber unit from the Linux Server.

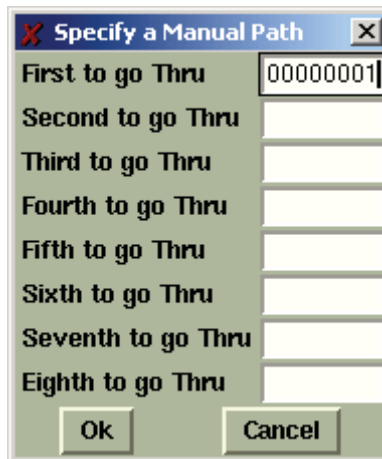


*Figure 11-4 Select a Path*

Once you have selected the subscriber unit number, the basic routing pop-up appears (shown above). You may communicate with the unit through its most recent route, through its next most recent route, through its most frequently used route, or you may manually enter a route.

To choose the most recent route of communication, simply press <Enter> or check the first box. The “last” route, or most recent route, is the default setting on this popup. To select the second most recent route, select the most recent route, and the same for the most frequent route.

To manually enter a route to the subscriber unit, select the Manual Path Entry and fill out the manual routing screen as instructed below. Where the first to go thru is the ID of the IP-Link.



*Figure 11-5 Manual Routing Table*

Once you have entered your communications route, click OK to send the message to your subscriber unit using the route entered.

## 11.5 The Message Function Group:



*Figure 11-6 Message Pull Down Menu*

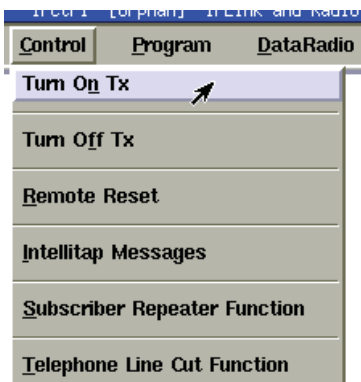
To access the Message function menu group, hold down the <Alt> key and Press <M> or click on Message in the menu bar. The pop-up illustrated above will appear. Use the arrow keys to highlight a message function and press <Enter> to select it. Proceed by selecting your target unit and choosing a route of communication.

## Explanation of the Message Group Functions:

Function	Explanation
<p><b>SEND TEXT MESSAGE</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt;+&lt;A&gt; or &lt;ALT&gt;+&lt;M&gt;, then &lt;S&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> <li>• Type text message</li> <li>• Press &lt;ALT&gt;+&lt;S&gt; to send</li> </ul>	<ul style="list-style-type: none"> <li>• Sends text messages to a remote subscriber unit. To receive the data, the remote unit must have a 7041 Hand Held Programmer attached or be equipped with a terminal. The most common use for this function is to test the communications link by sending data packets.</li> </ul>
<p><b>REQUEST STATUS</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt;+&lt;R&gt; or &lt;ALT&gt;+&lt;M&gt;, then &lt;2&gt;</li> <li>• Select Target Unit</li> <li>• Press &lt;ENTER&gt; for route</li> </ul>	<ul style="list-style-type: none"> <li>• Queries a remote unit for its current status, requiring a "check-in" report back to the central station. The resulting return message provides the current status of the remote unit <i>and</i> sends a status (check-in) message to the alarm automation port. (See the manual section on messages types and interpretations).</li> </ul>
<p><b>GET SUBSCRIBER ROUTE TABLE</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt;+&lt;G&gt; or &lt;ALT&gt;+&lt;M&gt;, then &lt;4&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Queries a remote unit for its current routing table. It prints the routing table for this subscriber, and displays the routing table from top (best) to bottom. For each unit on the list, the following items are displayed: <ul style="list-style-type: none"> <li>• ID #</li> <li>• LINK LAYER # • NETCON</li> </ul> </li> <li>• SIGNAL QUALITY between this unit and queried unit, listed as Good, Fair or Poor</li> </ul>
<p><b>GET ALL SUBSCRIBER DATA</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt;+&lt;M&gt;, then &lt;5&gt; or Press &lt;ALT&gt;+&lt;L&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Queries a remote unit for ALL of its currently programmed parameters. The function automatically performs all the Get functions, retrieving Timing, Zones, Model #/Rev and Mode data for the unit you specify. (See specifics below).</li> </ul>
<p><b>(GET) SUBSCRIBER TIMING DATA</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt;+&lt;M&gt;, then &lt;6&gt; or Press &lt;ALT&gt;+&lt;I&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Queries a remote unit for its current timing parameters. The received data updates the timing parameters database. Timing parameters are part of the Programming Function Group described in the following pages.</li> </ul>
<p><b>(GET) SUBSCRIBER ZONES DATA</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt;+&lt;M&gt;, then &lt;7&gt; or Press &lt;ALT&gt;+&lt;Z&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Queries a remote unit for its current zone configurations. The received data updates the Zone Configuration database. The Zone Configuration is part of the Programming Function Group described in the following pages.</li> </ul>

<p><b>(GET) SUBSCRIBER MODEL &amp; REV</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt;+&lt;M&gt;, then &lt;8&gt; or Press &lt;ALT&gt;+&lt;E&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Queries a remote unit for its model number (e.g. 7750F, 7450, 7050E, etc.) and its firmware revision number. This information is stored in the database.</li> </ul>
<p><b>(GET) SUBSCRIBER MODE DATA</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt;+&lt;M&gt;, then &lt;9&gt; or Press &lt;ALT&gt;+&lt;O&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Queries a remote unit for the current "mode" settings (enable/ disable) for 3 different parameters: <ul style="list-style-type: none"> <li>• IntelliTap Message, default = enabled (works with 7050-E (Ver 2+), 7750-F, 7450, 7440 only)</li> <li>• Subscriber Repeater Function, default = enabled (works with all units except 7440, which do not repeat)</li> <li>• Telephone Line Cut Function, default = disabled (works with 7450, 7440 only)</li> </ul> </li> </ul>
<p><b>(GET) SUBSCRIBER PACKET LIFE SETTINGS</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt;+&lt;M&gt;, then &lt;A&gt; or Press &lt;ALT&gt;+&lt;N&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Queries a remote unit for its Packet Life Settings (aka Time-to- Live or TTL). This function can only be used with Version 2+ subscribers with TTL capability. Other are not supported. This information is stored in the Net software database.</li> </ul> <p>See also - Radio Packet Life Parameters, Programming Menu.</p>

## 11.6 Control Function Group



*Figure 11-7 Control Pull down Menu*

To access the Control function menu group, hold down the <Alt> key and Press <C>. The pop-up illustrated above will appear. Use the arrow keys to highlight a control function and press <Enter> to select it. Proceed by selecting your target unit and choosing a route of communication.

## Explanation of the Control Group Functions:

Function	Explanation
<b>TURN ON TX</b> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;C&gt;</li> <li>• Press &lt;1&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Re-enables transmitting on a remote subscriber unit that has been turned off (see Turn Off TX, next).</li> </ul>
<b>TURN OFF TX</b> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;C&gt;</li> <li>• Press &lt;2&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Disables a remote subscriber unit should the need arise, such as when an alarm system fails and causes the transmitter to activate repeatedly. <b>NOTE:</b> The unit is not literally turned off, but is prevented from transmitting until it receives the "Turn On" signal (above). Also Note that a transceiver in the Off Mode will create route failed message when including in an outbound route.</li> <li>• A reset will clear this mode and return to TX ON.</li> </ul> <p>WARNING: This function disables the subscriber - use it only when absolutely necessary.</p> <ul style="list-style-type: none"> <li>• This function may be used on UL Burglar Alarm and Fire Alarm systems only with strict adherence to the requirements of UL Standard 611, Central Station Burglar Alarm Units and the National Fire Alarm Code, NFPA 72.</li> </ul>
<b>REMOTE RESET</b> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;C&gt;</li> <li>• Press &lt;3&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> </ul>	<ul style="list-style-type: none"> <li>• Resets the remote subscriber unit - the same as physically pushing the reset button on the unit itself. This causes the subscriber unit to re-enroll on the network and build a new routing table. A reset may be used to restart the check-in interval timer. The new interval will commence at the time of reset (see also: subscriber unit manuals).</li> </ul>
<b>INTELLITAP MESSAGES</b> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;C&gt;</li> <li>• Press &lt;4&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> <li>• Enter D to Disable, E to Enable Tap Messages</li> </ul>	<ul style="list-style-type: none"> <li>• Enables / Disables the subscriber unit's ability to send IntelliTap Messages. CAUTION: Once disabled, the subscriber will ignore IntelliTap or FDX data presented to its port.</li> <li>• This function works with 7750-F, 7050-E (Ver 2+), 7450 and 7440 models.</li> <li>• To confirm the function, perform a "Get Subscriber Mode Data" to retrieve the current status of this mode (Message group, # 9) and to update the database.</li> <li>• Refer to subscriber unit and IntelliTap manuals for more information.</li> </ul>

**SUBSCRIBER  
REPEATER FUNCTION**

- Press <ALT> + <C>
- Press <5>
- Select Target Unit
- Select Route
- Enter D to Disable, E to Enable Repeating

- Enables / Disables the subscriber units ability to be a repeater.

- Works with Version 2 or higher subscriber units.

CAUTION: Disabling the repeater capability may cause problems with the network. Disable repeating for testing purposes only, or for mobile units, which are never to be used as repeaters.

- To confirm the function and update the database, perform a "Get Subscriber Mode Data" to retrieve the current status of this mode (Message group, # 9)

- Refer to subscriber unit manuals for more information.

**TELEPHONE LINE  
CUT FUNCTION**

- Press <ALT> + <C>
- Press <6>
- Select Target Unit
- Select Route
- Enter D to Disable, E to Enable Line Cut Monitoring

- Enables / Disables the Phone Line Cut Monitoring function in 7450 or 7440 subscriber units.

- To confirm the function and update the database, perform a "Get Subscriber Mode Data" to retrieve the current status of this mode (Message group, # 9)

- Refer to 7450 or 7440 subscriber unit manuals for more information.



## 11.7 Programming Function Group:



*Figure 11-12 Program Pull Down Menu*

To access the Programming function menu group, hold down the <Alt> key and Press <P>. The pop-up illustrated above will appear. Use the arrow keys to highlight a function and press the <Enter> to select it. Proceed by selecting your target unit, choosing a route of communication and then editing the presented form.

### Explanation of the Program Group Functions:

Function	Explanation
<p><b>SUBSCRIBER TIMING</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;P&gt;</li> <li>• Press &lt;S&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> <li>• Edit form as necessary</li> </ul>	<p>Enter Address            Check-In interval 0..24 Hrs:            Secondary Alarm Delay:            Contact Debounce Time:            Acknowledge Delay:            See below for details on data entry for this function:</p>

### Subscriber Programming – Data Entry Screen:

*Figure 11-13 Timing Parameters Data Entry*

The form illustrated above allows an operator to change the timing parameters of a Subscriber unit using the IPCtrl software. When the programming window appears, the fields will usually be pre-filled with values. If there is a database entry for the selected Subscriber, the values

will be retrieved from there. If no database entry exists, the factory defaults will be used.

**To be sure that the pre-filled values represent the current settings in the Subscriber, it is recommended that you retrieve the current parameters from the Subscriber before you edit and send new values.** See “[Get All Subscriber Data](#)” under the [Message Function Group](#) earlier in [section 11](#).

- **Enter Address:** Freeform field to put location reference information. This is stored in the database and is not sent to the Subscriber.
- **Set Check-In Interval (Automatic Test):** When the Subscriber Programming screen appears, a cursor will be flashing at the check-in interval area. The intervals can be programmed between one minute and 24 hours (the default setting is at 24 hours). To minimize radio air traffic, an interval of 24 hours is recommended except in high security applications. The ability to change this timing feature by remote is a key advantage of the two-way **AES•IntelliNet** system. When you have entered a check-in time interval, press <Tab> to move on to the next field. When done, click [OK] press to send parameters to Subscriber and update the database.
- **Secondary Alarm Delay (Additional Event Report Delay):** This feature allows a subscriber unit to accumulate alarms, after its initial alarm report, for a programmed time period. When an alarm has occurred at a remote subscriber site, the central receiver is notified immediately. The event report delay allows a remote unit to compile subsequent alarms for a period of time, so that a comprehensive packet of alarm data is sent to the **IntelliNet** system all at once, thereby reducing network airtime. This delay also prevents a subscriber from attempting to monopolize the airtime by having it wait between transmissions. The default setting for this feature is 10 seconds. To change the event report delay, enter the new value and press <Tab> to move to the next field.

**A delay of less than 10 seconds is not recommended.**

• **Contact Debounce Time**

(Loop Response) 7050 & 7750/UL only: Programs a debounce delay for the zone inputs of 7050 and 7750/UL subscriber units to prevent input switches or relays from causing nuisance alarms and repeated reports of the same alarm. The default setting is 0.12 seconds. If you choose to change this setting, simply enter the new value and press <Enter> to move to the next field. ***A control unit (panel) output(s) to the 7750 RF subscriber unit shall be programmed to latch in when it triggers a zone input on the 7750.***

*Note: The contact debounce time in the 7050-E, 7440, 7450, 7750-F4x4 and 7750-F8 units are preset at 0.12 seconds and cannot be changed.*

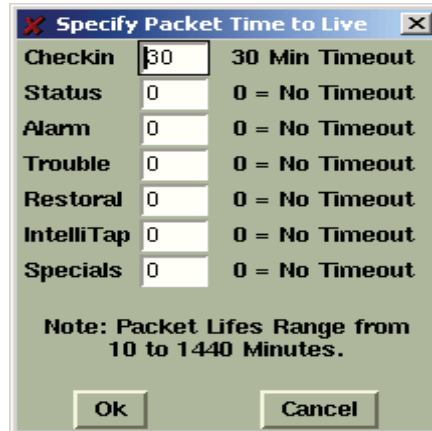
• **Acknowledgment Delay:** If a subscriber unit does not receive an acknowledgment (Packet Acknowledge) within the time parameters set by the Acknowledgment Delay parameter, it activates an output to annunciate the problem locally. The next successful communication to the central station will include an ACK Delay fault code. The default setting for this feature is 90 seconds. If you choose to change the ACKnowledgment DELAY period, simply type in the new value. Click [OK] to complete and send your timing parameter data.

**For 7750/UL, 7750-F4x4 and 7750-F8 Subscriber Units:** A zone of the control panel shall be connected to the relay labeled "ACK DELAY", to monitor the subscriber unit against antenna removal, communication failure and to provide a local and remote annunciation of such a fault condition. (Refer to subscriber manuals.)

**NOTE:** *For all remote program functions, watch to make sure that a data confirmation packet is received from the target subscriber (watch scrolling message screen area).*

Function	Explanation
<b>RADIO PACKET LIFE</b> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;P&gt;</li> <li>• Press &lt;R&gt;</li> <li>• Select Target Unit</li> <li>• Select Route</li> <li>• Edit form as necessary</li> </ul>	See below for details on data entry for this function:

**Radio Packet Life – Data Entry Screen:**



*Figure 11-14*  
Radio Packet Life

Version 2.1 subscribers include the “Time-To-Live” (TTL) function. Like the Internet, **AES•IntelliNet** uses a packet-based technology. The Time-to-Live concept in the Internet is based on the fact that all data has a useful life.

The benefits of TTL are best exhibited when the IP-Link goes off line due to a lightning hit or some other unlikely, catastrophic event. While the IP-Link is off line, messages traveling through the system are stored in the individual subscriber units for later delivery. Under the default TTL settings unimportant test timer message (typically 95+% of the traffic) are deleted from the subscriber unit memory after 30 minutes of being delayed in the network. Thus, the system will not have to handle the message when the IP-Link Receiver comes back on line. All other messages, such as alarm, etc. speed their way to the IP-Link as they normally do.

**UL864 requires a setting of 0 for Alarm, Trouble and Restoral.**

- Note that even when a check-in packet is deleted due to a delay, the objective of that message has already served its purpose: the late or missing signal should have been flagged at the central station (see Automatic Test Supervision section).
- Under the default (factory) settings, only test timer messages are subject to the TTL function. If you want TTL for other message types, YOU must activate it when you program the subscriber unit.
- The TTL time is included in packets generated by TTL capable Subscribers. This feature is available in Subscribers with firmware Version 2.1 and later which was first released in late 2000.

- The timeout function works when a packet is stored for forwarding in any subscriber with TTL capability, which will decrement the TTL time for the packet it is storing. When TTL time has expired, the packet is aborted. This function does not work with non-TTL (pre-Version 2.1) subscribers. The TTL feature works best when the majority of subscribers, or the subscribers that are most heavily used, have the feature in the firmware. Call your AES representative for upgrade information. Default time for Check-In Packets is 00 hours, 30 minutes. DO NOT enter a greater than 24 hrs 00 mins. Entering a time of 00 hours and 00 minutes deactivates the time-to-live function for that packet type. The shortest allowed TTL time is 00 hours, 10 minutes. TTL can also be set for other packet types:

- Zone Alarm Packets
- Status Packets
- Zone Restoral Packets
- AES-IntelliTap Packets
- Trouble / Trouble-Restoral Packets

The default time for the 6 packet types above is 00, i.e. the time-to-live function is deactivated for these packets. Entering anything greater than 00 HRS and 10 MINS will enable the Time-to-Live function. Enter the data for each type, click [OK] to send.

To confirm the data, press <Alt>+<N> to query the subscriber for Packet Life settings. When the TTL parameters packet has been received back, check this screen again.

[See - Get Packet Life Settings, Message Functions Group](#)

**Function**

**Explanation**

**CONTROL RELAY OUTPUT**

- Press <ALT> + <P>
- Press <C>
- Select Target Unit
- Select Route
- Edit form as necessary

See below for details on data entry for this function:

**Control Relay Output – Data Entry Screen:**

This feature controls optional relay outputs (part number 7065) for model 7050 Subscribers units. Using this remote control capability, an operator may open gates, activate cameras or control any devices at a remote location. The basic relay output uses eight relays, but as many as 64 may be controlled.

**Relay Programming Window**



*Figure 11-15 Relay Control Menu*

Choose a number: 0 for Off, 1 for On or 2 for Toggle / Momentary and select [OK] to control Relays in a Subscriber equipped with appropriate module.

**Function**

**Explanation**

**ZONE CONFIGURATION**

- Press <ALT> + <P>
- Press <Z>
- Select Target Unit
- Select Route
- Edit form as necessary

See below for details on data entry for this function:

This function configures alarm zone inputs for a premise unit. It is important to know which type of unit is being programmed. There are separate sub-menus to handle the different subscriber units. The sub-menu that will be presented upon selection of a subscriber ID is based on the database entries. The subscriber model may be selected during setup in the Admin GUI and using the Get All function in the message group will update all fields required to identify the unit.

Subscriber models include:

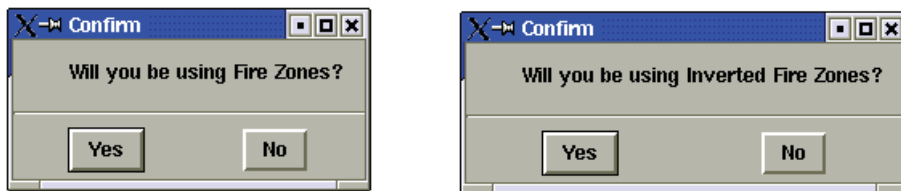
7050/7750-UL (Version 1.8 or older)	7750
7050-E (Version 1.8 or older)	7750F 4X4
7050-E / F8 (Version 2.0 and newer)	

To access the Programming function menu group, hold down the <Alt> key and Press <P>. The Programming window illustrated below will appear. Select zone Configuration then [OK]. Proceed by selecting your target unit and choosing a route of communication.

Sample Zone Configuration windows for the various Subscribers are shown below.

**Fire/Inverted Fire programming notes:**

If the Subscriber type selected supports Fire and Inverted Fire programming, these notes apply to the programming sequence and the following questions will appear before the zone programming selection window.



*Figure 11-16*

The programming sequence first asks if any zones are to be programmed to respond similar to a "Fire circuit". This is not to be confused with the device usage, but rather how changes to the EOL will be reported. Click yes if you wish to have the zone report "Trouble" conditions on an open circuit and alarm on a short. Otherwise click No for alarm message to be reported on a short or open. A raised appearing button indicates the default or current programming, if it is stored in the database from a

previous programming or retrieval.

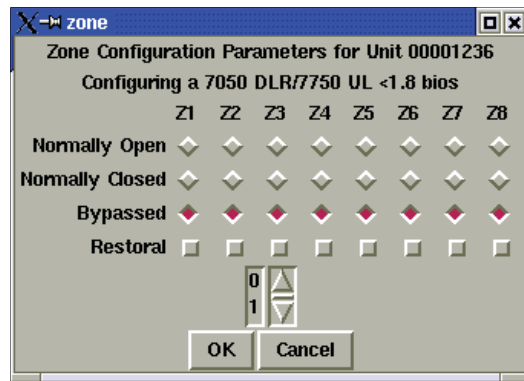
Next you are asked if any zones are to be programmed to respond similar to an "Inverted Fire circuit" or bugler loop. With this option you can select to reverse the logic for the fire input (refer to subscriber manual). This produces an alarm on an open and trouble on a short. If stored in the database, the current programming is displayed.

**IMPORTANT NOTES:**

- The zone programming options are limited. Of the 3 EOL zone types - Supervised, Fire and Inverted Fire, you can choose any 2.
- You can always choose Bypass and Restoral for any zone.
- Normally open and Normally Close are always available if they are an authorized option.

Next appears the zone configuration box, which displays the available options:

**Zone Configuration window for the 7050 DLR/7750 UL Bank 0**



*Figure 11-17*

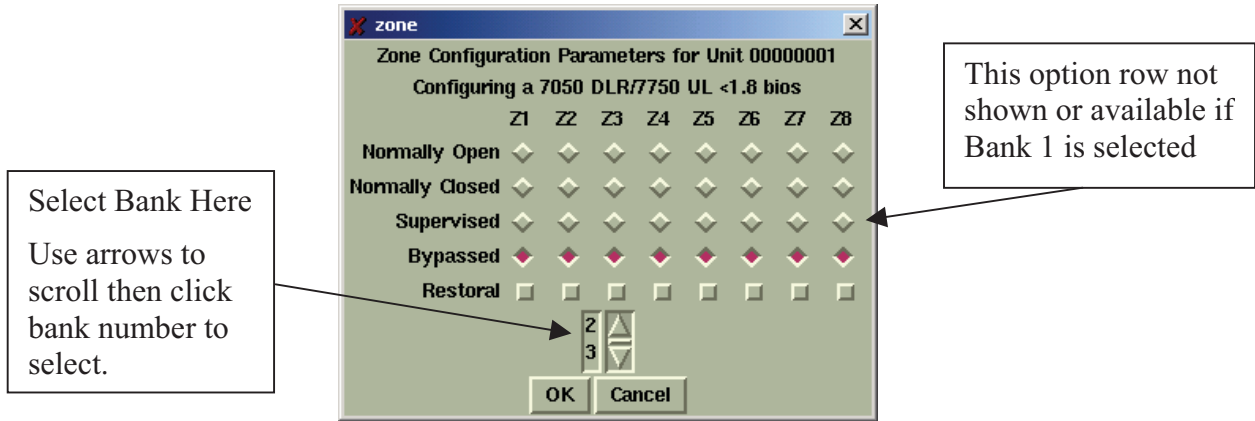
The zone configuration control block for zone 1-8 in Bank 0 offers five options for the programming of each alarm zone. Bank 0 is the 8 zones on the main board. Other banks are available if expansion module(s) are installed. Bank 0 does not support Supervised/EOL wiring or programming. Bank 2-8 shown next.

Normally Open	Normally Open with Restoral
Normally closed	Normally Closed with Restoral
Bypassed	

Use the mouse to select the appropriate boxes for the zone you wish to program. The numbers below the restoral row selects the bank. Scroll through the numbers using the arrows and then click the number to select that bank. The information in the window will change representing those zones.



**Zone Configuration window for the 7050 DLR/7750 UL Bank 1 - 8**



**Figure 11-18**

The zone configuration control block offers seven options for the programming of each alarm zone:

Normally Open	Normally Open with Restoral
Normally closed	Normally Closed with Restoral
Bypassed	Supervised (Not available on Bank 0, Zone 1-8)
Supervised with Restoral.	(Not available on Bank 0, Zone 1-8)

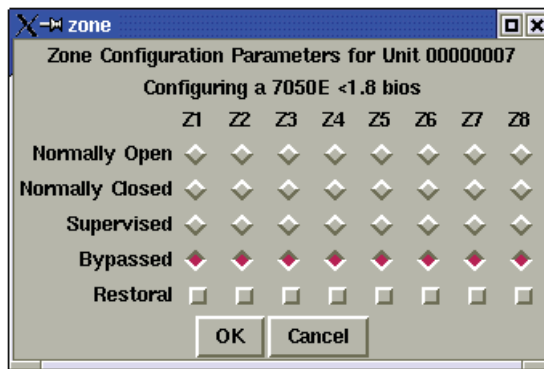
Use the mouse to select the appropriate boxes for the zone you wish to program. Banks 1-8 support Supervised programming and wiring.

UL and COMMERCIAL FIRE INSTALLATION REQUIREMENTS for 7750/UL Subscriber Units:

- **Zones 1-6:** Bypassed
- **Zone 7:** N.O. w/Restoral-Tamper (creates N.C. loop through zone 7 of 7072 module)
- **Zone 8:** N.O. W/Restoral – AC Fail (from 7072 multi-board)

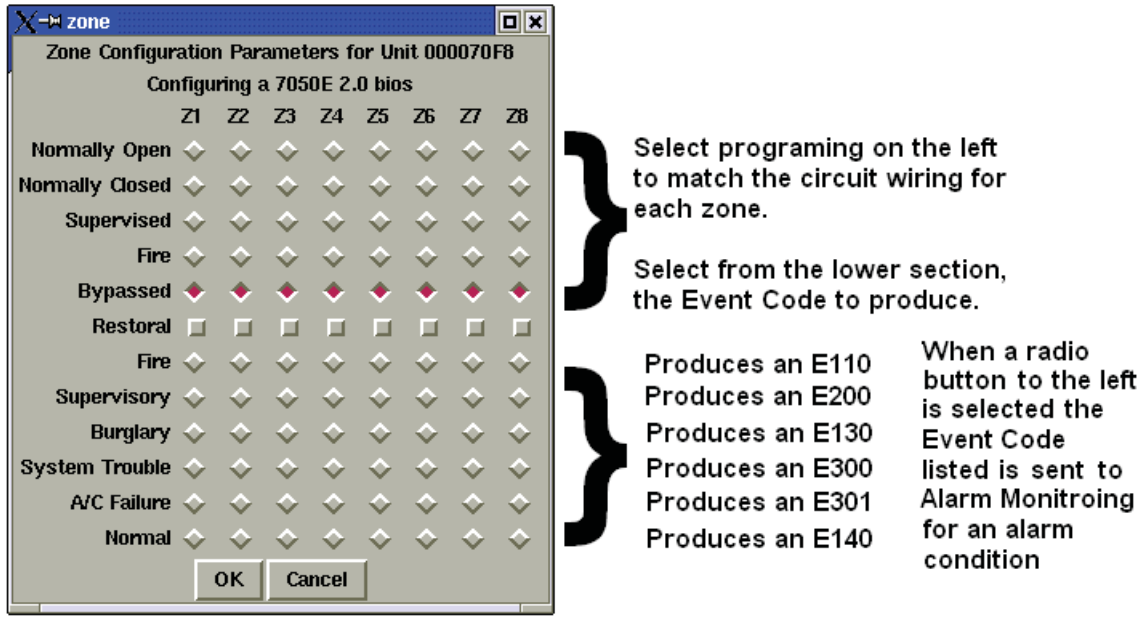
*Refer to Subscriber Unit Manual for details on zone wiring and programming.*

**Zone Configuration window for the 7050E Rev 1.8 and older**



**Figure 11-19**

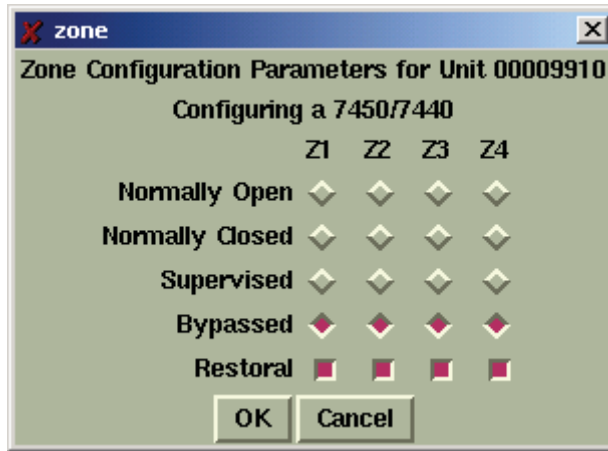
**Zone Configuration window for the 7050E, 7750/F8 and 7788**



*Figure 11-20*

In this Subscriber type, the user has the ability to select an optional Contact ID Event Code to be sent to the Alarm Monitoring System for each of the 8 zones. The former standard produced only an E140, which is typically listed as a General Alarm. Select normal to have an E140 sent to alarm monitoring.

**Zone Configuration window for the 7450/7440**



*Figure 11-21*

### Zone programming window for the 7750-F4x4 and 7744

Refer to the appropriate Subscriber Manual for details on zone writing and programming.

This screen below appears if the unit zone information is in the database.

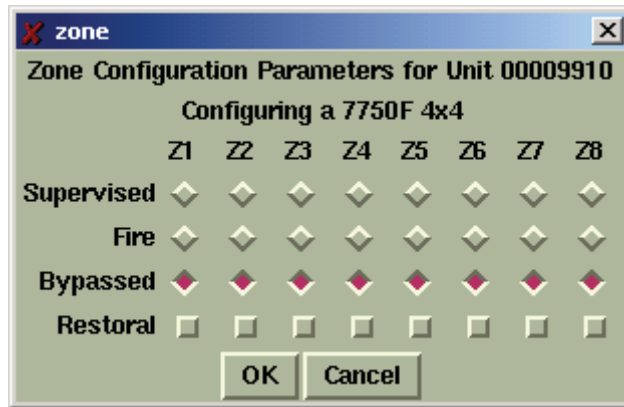


Figure 11-22

The Zone configuration pop-up window offers the following options for the programming of each alarm zone.

Supervised	Fire
Restoral with Supervised or Fire	Bypassed

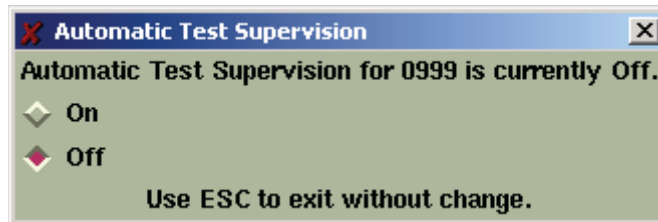
Function	Explanation
<b>AUTOMATIC TEST SUPERVISION</b> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;P&gt;</li> <li>• Press &lt;A&gt;</li> <li>• Select Target Unit</li> <li>• Edit form as necessary</li> </ul>	See below for details on data entry for this function:

**Automatic Test Time Supervision – Data Entry Screen:**

This feature enables the IPCtrl software to monitor automatic test timer check-ins. When enabled, it alerts an operator if a subscriber unit fails to report in within the programmed interval, plus 10% + 2 minutes as programmed in the subscriber’s timing Parameters function.

A missed Check-In is reported to alarm automation if enabled. See [Appendix E](#) for generated messages.

Access this function from the Program pull down menu. Select the Automatic Test Supervision or Press <Alt> +<P>, then **A**. Select the Unit to be supervised and the following window appears.



*Figure 11-23  
Automatic Test  
Supervision*

Select On or Off radio button to configure this function.

Note: Enabling supervision function suppresses Check-In messages from being sent to automation. Only exceptions are reported.

## 11.8 Data Radio Function Group:

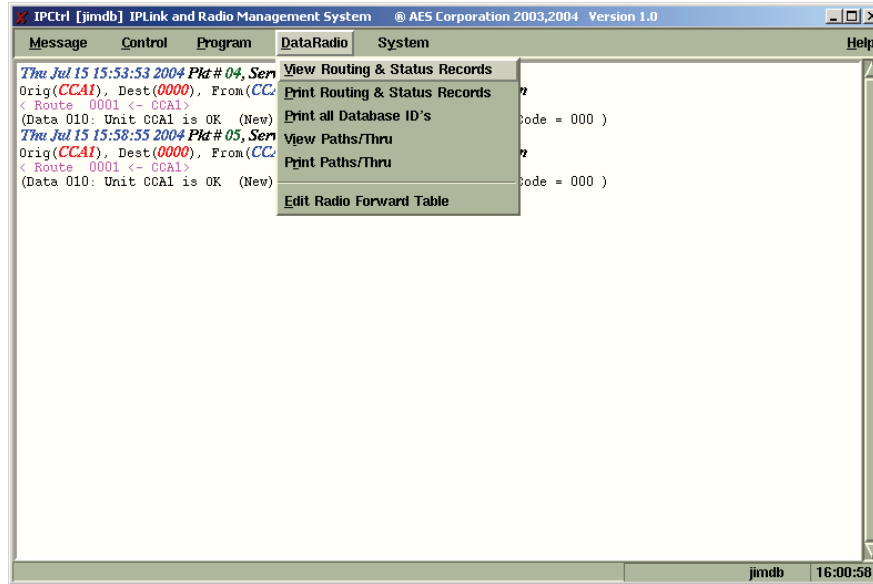


Figure 11-24

To access the DataRadio function group, hold down the <Alt> key and press <D>. The Pop-up screen illustrated at above will appear. Select a function. Proceed by selecting your target unit.

### Explanation of the DataRadio Group Functions:

Function	Explanation
<b>VIEW ROUTING &amp; STATUS RECORDS</b> • Press <ALT> + <P> • Press <V> • Select Target Unit	This function views on the screen the Routing & Status Records of the selected ID.  See below for an example:
<b>PRINT ROUTING &amp; STATUS RECORDS</b> • Press <ALT> + <P> • Press <P> • Select Target Unit	This function prints on the printer, the Routing & Status Records of the selected ID.  Information is similar to example below:

An illustration similar to below will appear for view. Similar information is sent to the printer if Print is selected.



Figure 11-25

It Displays the routing record and current status of the selected Subscriber unit.

All UL Burglar Alarm and Commercial Fire Alarm Systems require a minimum of 2 paths.

Function	Explanation
<p><b>PRINT ALL DATABASE ID's</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;P&gt;</li> <li>• Press &lt;P&gt;</li> <li>• Click function</li> <li>• View available data</li> </ul>	<p>This function sends a listing of all ID's that are in the Database to the printer port.</p>
<p><b>VIEW PATHS/THRU</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;P&gt;</li> <li>• Press &lt;I&gt;</li> <li>• Select Target Unit</li> <li>• View available data</li> </ul>	<p>This function displays a list of Units that are “routed through” the selected unit.</p> <p>This is important for demonstrating that a unit has multiple paths available.</p> <p>It is also important to help determine the effect a Subscriber will have if removed.</p>
<p><b>PRINT PATHS/THRU</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;P&gt;</li> <li>• Press &lt;R&gt;</li> <li>• Select Target Unit</li> <li>• View available data</li> </ul>	<p>Same View as above except that the information is sent to the printer instead of the screen.</p>

**View Paths/Thru window:**



*Figure 11-26*

Function	Explanation
<p><b>EDIT RADIO FORWARD TABLE</b></p> <ul style="list-style-type: none"> <li>• Press &lt;ALT&gt; + &lt;P&gt;</li> <li>• Press &lt;E&gt;</li> </ul> <p>Select / Enter Origin Unit ID</p> <ul style="list-style-type: none"> <li>• Edit form as necessary</li> </ul>	<p>Forwarding is a function that causes the IPCtrl software to transmit a data packet to a remote Subscriber upon the reception of a specific event by the same or another Subscriber.</p> <p>See below for details on data entry for this function:</p>

**Edit Radio Forward Table:**

*Figure 11-27*

The Forwarding table above is used to configure the event and subscriber to forward the data to. The types of outbound data packets include data to be printed on a serial printer attached to the remote subscriber's serial port, alarm automation messages and instructions to control relays on an attached Relay Output module.

Caution! Forwarding increases air traffic on the network, which may lead to slowdowns on a busy system. Use forwarding sparingly and only when required. Only forward essential data.

- There is no guarantee the for-warded data will be received. The remote site that receives the data is not a substitute for a central receiver. There will be no notification or report to any external system if a forwarded packet fails to reach the destination Subscriber.
- IPCtrl software can forward the activity data of a subscriber unit to another subscriber unit. The data received is sent to the RS-232 port of the receiving unit, where a handheld programmer (terminal), a printer or a computer may be connected. This allows a secondary site to monitor alarms, restorals check-ins, etc. at a secondary location. This function is for secondary reporting only - the central receiver is always the primary monitoring site.
- Select or Enter the Origin ID. Then enter the ID of the unit data is to be forwarded to.
- Add a memo (such as name/address) of up to 40 characters. This memo is sent with all forwarded data.

- Select ALARM and/or ZREST plus desired Zones if Forwarding Alarm data is the objective.
- Select as desired any other type of data or feature that you want forwarded. The following options are available: In some cases the only information forwarded is a message indicating that a packet of the selected type was sent and not the data itself,
  - STAT → Subscriber Status**
  - CHKIN → Check-In**
  - DATA**
  - HPBU → Programming Uploads**
  - TEST Data**
  - ZDATA → Zone Data**
  - VLS → Vehicle Location Data**
  - TEXT → Text Message**
- Other Options: The following additional features can be activated for forwarding. These require specific units and capabilities at the Forwarded to site to be accepted and properly handled.
  - **Alarm Automation Message:** Alarm activity can be transmitted to the remote unit in Alarm Automation Format. The RS-232 output of a special "FA" or "FAA" 7050-DLR receiving unit can feed alarm data directly to a computer running automation software. Sending these specially formatted packets to a subscriber that is not intended to receive it will cause the packet to be rejected.
  - **Relay Following:** This special function requires the Forward-To unit to be a 7050-DLR subscriber unit with a 7065 Relay Output board installed. When programmed for forwarding with relay following and a zone in alarm message is received from the origin unit, a relay control command is sent to the receiving unit to activate a relay. Zone 1 in the origin unit trips relay 1 in the forward-to unit, zone 2 trips relay 2, and so on.
    - For 7050 version 2 and later, the relay is momentarily activated for 1 second. Be aware that the relay may activate more than one time but should always return to a Normally Open State
    - r 7050 version prior to 2 the relay is toggled. Be aware that you cannot be sure if the relay will be left open or closed. Only that it will change state at least once.



## 11.9 System Function Group

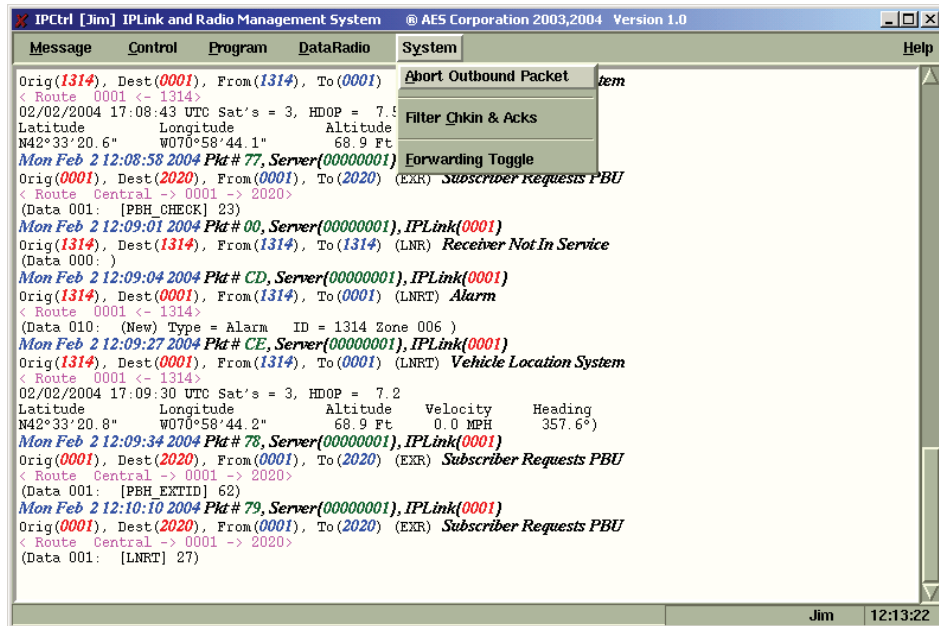


Figure 11-28

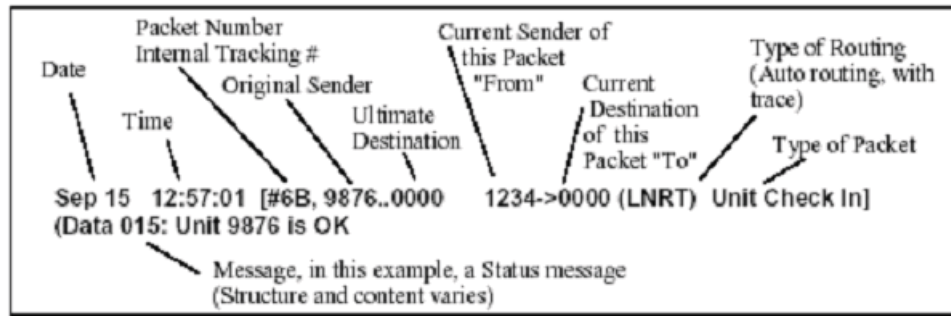
The Systems Function group menu is accessed by holding <Alt> and pressing <Y>. This group contains functions related to the operation on the software.

### Explanation of the System Group Functions:

Function	Explanation
Abort Outbound Packet	<ul style="list-style-type: none"> <li>Quickly cancels an unacknowledged packet sent to a subscriber unit by the receiver. This includes "Get" query functions.</li> </ul>
Filter Check-In & ACKS	<ul style="list-style-type: none"> <li>To filter out screen "clutter", this function prevents non-critical check-in messages from appearing on the screen. This is a "toggle" function.</li> </ul>
Forwarding Toggle	<ul style="list-style-type: none"> <li>This one command allows you to globally enable or disable the forwarding function. It affects only those units that have been programmed for forwarding. (For more information, see the section on Database Group / Edit Radio Forward Table.) A pop up window shows you the current status global forwarding (On or Off). Enter Y/yes or N/no to change the status.</li> </ul>

## 11.10 Interpreting Screen Messages

SAMPLE Check-In Message:



The following information can be extracted from the sample message above:

The message was received on September 15<sup>th</sup> at 12:57:01

The sequential packet number assigned to this packet is 6B

The message originated at subscriber unit #9876, and its destination is Unit #0000 (the head end)

Subscriber #1234 – a “repeater” in the message path, is sending the specific message

This specific message is being sent to Unit #0000 (the designation for the central station receiver)

This is a Unit Check-In / Automatic Test Timer message. It indicates that all is well

The type of routing used:

(LNRT) - Layered Net Routing with Trace, which means automatic routing with trace.

Trace means the path of the packet is being tracked from origin to destination.

This information will be stored in the database

(LNR) - Layered Net Routing without Trace

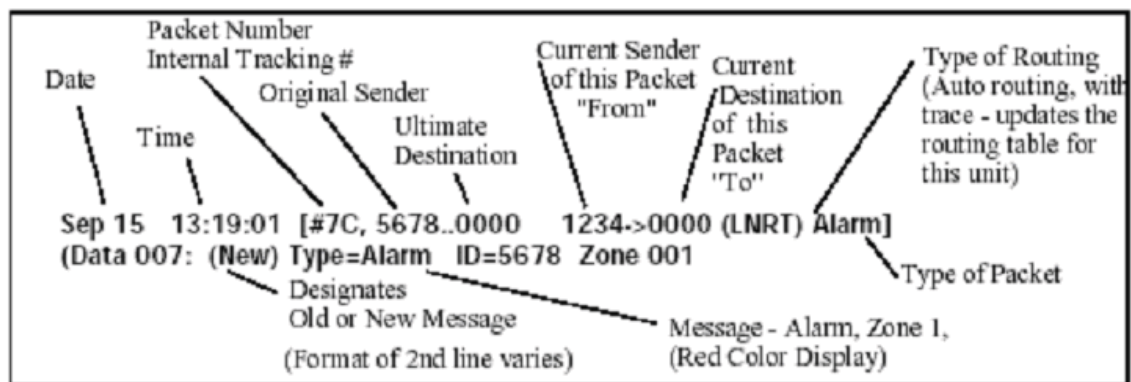
(EXR) - an operator specified or the software selected explicit routing.

“Data” refers to the data attached or included with this communication. The number after the word Data indicates the length in Bytes of data included. After the length the data may or may not be displayed and can be in easily readable or in a raw or Hex computer format if shown at all. In this case, the 15 bytes of data indicate that the unit is OK.

The ID of the unit transmitting this packet is listed before the “->”

The ID of the unit this packet it is being transmitted to is listed after the “->”.

SAMPLE Alarm Message:



The following information can be extracted from the sample message above:

The message was received on September 15<sup>th</sup> at 13:19:01

The sequential packet number assigned to this packet is 7C

The message originated at subscriber unit #5678, and its destination is Unit #0000 (the head end)

Subscriber #1234 – a “repeater” in the message path, is sending the specific message to #0000.

The type of routing used is LNRT

This is an Alarm message. It is displayed in red for easy recognition

The 7 bytes of data indicate new alarm on the Subscriber’s Zone 1