WINLOAD MODEM SETUP

The modem setup is a very important step in the connection process. If the modem setup is not properly completed communication between WinLoad and the control panel is not possible. There are three ways for WinLoad to connect to the control panel. You may connect remotely at 300 baud using only a modem, locally (on-site) at 300 baud using a modem and an ADP-1 adapter or locally (on-site) at 19,200 baud using a 306 Adapter (Digiplex only).

CONNECTING REMOTELY / ON-SITE @ 300 BAUD:
To connect remotely (@ 300 baud) you must have a modem connected to your computer and installed under Windows. To connect on-site (locally) you must have modem and an ADP-1 adapter. To connect the ADP-1 to control panel, follow the instructions on its label. In the main window:

1. Make sure that no client accounts are open.

2. Click on Setup, then click Modem. The Modem Setup window will appear.

3. Under the COM Port heading select the COM port to which your modem is connected. If you do not know which COM port the modem is using, click the Modem button, located in the lower left corner of the Modem Setup window, and select the Diagnostics tab or you can click on Start → Settings → Control Panel. Double click Modems and select the Diagnostics tab.

4. Under the Dialing Condition select either Wait for dial tone (if connecting remotely using only a modem) or Blind dialing (with ADP-1) (if connecting locally using a modem and an ADP-1).

5. Set the Dialing Method to the dialing method used in the alarm control panel.

6. Modem Response (Automatic Optimization): Click in the check box to enable the Automatic Optimization function. WinLoad will automatically adjust the modem response time to the required setting when connecting with the control panel (see Modem Response Setting section on page 6). You will notice that the modem response will start adjusting itself as WinLoad connects to the control panel. Note: If this function is enabled you will not be able to manually adjust the modem response.
time (the modem response setting in the General Info tab will be grayed out). This function must be disabled to manually adjust the modem response time.

7. **Call Waiting:** This function momentarily disables the call waiting feature (if there is one) of a telephone line that is being used by WinLoad (for more information please refer to the Call Waiting section on page 6). *Note: This function applies only when trying to connect remotely using a modem.*

8. Enter the modem that you are using. Under the **Modem Name** section, click on the drop-down list and select the modem that corresponds to your computer’s modem. By selecting the modem, WinLoad will automatically install the proper initialization strings needed for your modem to function properly. You may then proceed to Step 10. If WinLoad does not have the initial strings required for your modem (next to the “Init. String:” heading, **None** is displayed and a warning message appears under the “Init. String:” heading telling you to fine tune your modem) then you will have to “fine tune” the modem and proceed to Step 9.

   If your modem does not appear in the **Modem Name** drop-down list, click the **Modem** button (located in the lower left corner of the **Modem Setup** window), click **Add** and follow the instructions. Another way is to click **Start → Settings → Control Panel**. Then double-click **Modems**, click **Add** and follow the instructions. Then proceed to Step 9 to fine tune your modem.

............................................VERY IMPORTANT...............................................

9. After selecting the modem you must “fine tune” the modem. If the modem is not tuned, it will not connect to the control panel. Click the **Fine Tune** button. The **Fine Tune** dialog box appears. Click the **Init String Default** drop-down list. Select the modem or the modem that comes closest to yours. Then click **OK**. The initial strings that you selected will be displayed under the **Modem Name**.

   *Note: If the initial strings selection that you chose does not work, try another initial string until you find one that works. On the other hand, if a selected initial string works for that modem, you will not have to fine tune that modem again for it will be saved in the database.*

10. Perform the **Modem Test**. This function verifies whether the modem is functioning and whether there is a control panel at the receiving end to connect to. This test does not guarantee that when you try to connect to the control panel WinLoad will go on-line. To perform the **Modem Test**:

   *If using a modem and an ADP-1:* In the **Panel phone number** text box, under the **Modem Test** heading, enter any number. Then click the **Start** button. A test display box will appear showing the communication between the PC and the modem. When you hear the modem begin to dial, you must force the control panel to respond to the incoming call from WinLoad (see below under “**Answering and CanceLLing Communication between WinLoad and the Control Panel**”). Once this is done you should see “Modem connected to the panel” in green. Click **Stop**.
If using a modem only: In the Panel phone number text box under the Modem Test heading, enter the control panel’s phone number. Then click the Start button. A test display will appear showing the communication between the PC and the Modem. Make sure that the control panel’s number of rings and answering machine override options are set (see below under “Number of Rings and Answering Machine Override Options”). Once complete you should see “Modem connected to the panel” (in green). Click Stop.

Note: The current version of the WinLoad software does not support the Modem Test when setting up WinLoad to function with a MD-12 modem. The modem test will register an error even though the modem is functioning.

11. Click OK to exit.
**CONNECTING ON-SITE WITH A 306 ADAPTER @ 19200 BAUD (DIGIPLEX ONLY):**
Connect the 4-pin connector of the 306 Adapter to the connector labeled “SERIAL PORT” on the Digiplex control panel. Connect the 9-pin connector of the 306 Adapter to the desired COM Port on your computer using a **Standard DB-9 cable**. From the **Setup menu**, click **Modem**, and then proceed to the **Direct to COM at 19200 bps** section.
Under **COM Port Selection**, click the **COM port** to which your 306 Adapter is connected. Then click **OK** to exit.

---

**CONNECTING TO DIGIPLEX WITH WINLOAD THROUGH THE 306 ADAPTER AT 19,200 BAUD**

Connect the 306 Adapter’s 4-pin connector cable to the control panel’s **Serial Port connector** and the Standard **DB-9 Cable** (9-pin serial cable) to one of the computer’s COM ports.

---

Standard DB-9 Cable (9-pin serial cable)

To Computer’s COM port.
ANSWERING AND CANCELLING COMMUNICATION BETWEEN WINLOAD AND THE CONTROL PANEL

These are quick function keys which force the control panel to answer or cancel a call coming from WinLoad. These quick function keys must be used when trying to connect WinLoad to the control panel using a modem and an ADP-1. To do so, perform the following:

**IF USING A SPECTRA CONTROL PANEL:**
After clicking the “Press to Connect – Modem” icon, you will hear the modem begin to dial. Then, using the keypad:

**To Force the Control Panel to Answer:**
1. Press [ENTER].
2. Enter the [INSTALLER/MASTER CODE].
3. Press the [FORCE] button. This will force the control panel to respond. Once done, the control panel will hang up after a predetermined amount of time has elapsed.

**To Cancel Communication with the Control Panel:**
1. Press [ENTER].
2. Enter the [INSTALLER/MASTER CODE].
3. Press the [STAY] button. This will hang up the control panel.

*Note: The MD-12 modem will not function when attempting to connect to Spectra control panels with version 1.21 or lower.*

**IF USING A DIGIPLEX CONTROL PANEL:**
After clicking the “Press to Connect – Modem” icon, you will hear the modem begin to dial. Then, using the keypad:

**To Force the Control Panel to Answer:**
1. Press and hold the [0] key.
2. Enter the [INSTALLER/MASTER CODE].
3. Press the [ARM] button. This will force the control panel to respond. Once done, the control panel will hang up after a predetermined amount of time has elapsed. If you wish to hang up before that time has elapsed:

**To Cancel Communication with the Control Panel:**
1. Press and hold the [0] key.
2. Enter the [INSTALLER/MASTER CODE].
3. Press the [DISARM] button. This will hang up the control panel.
NUMBER OF RINGS AND ANSWERING MACHINE OVERRIDE OPTIONS

**IF USING A SPECTRA CONTROL PANEL:**
In order to connect remotely using a modem, the number of rings must be programmed into the control panel. If an answering machine is sharing the same telephone line as the control panel, the answering machine override must be programmed as well (refer to the System Timers chapter in the Spectra Programming Guide).

**IF USING A DIGIPLEX CONTROL PANEL:**
In order to connect remotely using a modem, the number of rings must be programmed into the control panel. If an answering machine is sharing the same telephone line as the control panel, the answering machine override must be programmed as well (refer to the Other Settings chapter in the Digiplex Programming Guide).

**MODEM RESPONSE SETTING**

The modem response is the time delay set between data transfers from the control panel to the modem. To some modems, the data coming from the control panel is coming too fast for the modem to understand. By setting the modem response you can control the time delay between data transfers. The faster the modem response the shorter the time delay between data transfers from the control panel. The slower the modem response the greater the time delay between data transfers from the control panel.

**DISABLING THE CALL WAITING FUNCTION**

**DISABLING CALL WAITING THROUGH WINLOAD:**
This function momentarily disables the call waiting (if there is one) feature of a telephone line that is being used by WinLoad. Example: A computer is monitoring a client (control panel). The modem’s telephone line has call waiting. If WinLoad is online with the control panel and a second call comes on that line, the call waiting feature will emit a beep to notify the user that a second call is coming in. This will then disconnect WinLoad from the client’s control panel. By enabling the Call Waiting disable feature, you momentarily disconnect the call waiting.

**HOW IT WORKS:**
When this function is enabled, WinLoad will transmit a call waiting blocking code before dialing the control panel’s telephone number. The code transmitted depends on the telephone company and/or country. The default blocking code is *70 (this blocking code applies to Canada and the U.S.). Example: By using the default blocking code *70 and enabling the Disable Call Waiting function, WinLoad will first dial *70, pause to give the code time to deactivate the call waiting and then dial the control panel’s telephone number.
To see what call waiting blocking code to use, refer to your regional telephone book and look under Call Waiting. Then enter the blocking code (after clicking the Disable Call Waiting check box) in the text box within the Call Waiting section. Then you must enter a comma after the blocking code. The comma that comes after the blocking code is very important. The comma is what tells the modem to pause (after sending the call waiting blocking code) before dialing the control panel’s telephone number. If there were no comma, then the modem would dial the blocking code and the control panel’s telephone number at the same time thus not allowing time for the call waiting blocking code to take effect. Example: If the call waiting blocking code was *10 then you would enter * 1 0 , . If the time delay between the call waiting blocking code and the control panel’s telephone number is too short, add more than one comma to increase the time delay.
MODEM MINIMUM REQUIREMENTS
For Advanced Users Only

Note: The commands may vary from modem to modem. Some modems may use different commands that do the same thing (depending on the manufacturer). Others may need additional commands, while others might use less. It is highly recommended that you verify the modem’s commands in conjunction with the modem’s manual.

If the modem is not connecting or your modem is not on the Modem Name list, verify that the following commands are entered into the Modem’s Initial Strings:

1. &F0 or &F or Z (Reset to Factory Configuration/Default): This command will reset the modem to factory defaults. This will make programming the modem easier. Some modems use &F instead of &F0. Older modems may use Z instead. Refer to the modem’s manual under Factory Configuration. Refer to Figure 1.

2. &H0 (Disable Transmit Data Flow Control) and &I0 (Disable Receive Data Flow Control): These commands will disable the modem’s hardware (transmit) and software (receive) flow control. If the flow controls are not disabled, it can conflict and confuse the control panel causing it to hang up prematurely or unexpectedly. To test whether the modem’s flow control will interfere with the control panel, enter 1111 as the Panel Id and 1111 as the PC Password. If the control panel hangs up prematurely (caused when the modem transmits modem codes at the same time as the control panel transmits data), then you must disable the modem’s flow control. The command may differ from modem to modem. Refer to the manual to see what the commands for flow control are. Refer to Figure 1.

Note: If using a Hayes Modem, the command to disable the flow control is &K0. Refer to Figure 2.

3. S10=255 (Set the Duration, in tenths of a second, that the modem waits to hang up after loss of carrier) and &C0 (Carrier Detect Override): S10=255 gives the modem 25.5 seconds before hanging up after loss of the carrier. This is considered plenty of time for the modem to wait. Note: With some modems, entering 255 tells the modem to never hang up. This is not good because when the control panel is finished, the modem has to hang up to enter Auto-Answer mode to communicate in the future with the control panel. To avoid this, enter 250 instead. Refer to your modem’s manual for details.

As added security verify that the &C0 command is entered as well. This command tells the modem to assume that a carrier signal is present or simply overrides the carrier detect feature of the modem. You can also set the control panel’s number of rings before answering to 15. This will also give the control panel plenty of time to answer the incoming data from the modem. Refer to Figure 1.
Modulation Scheme Setup (Use only with modems that use a Rockwell IC):

Some modems that use a Rockwell IC have problems connecting with the control panel because they cannot find the proper Modulation Scheme. Paradox control panels use the Bell 103 Modulation Scheme (sometimes known as Industry Standard 103). If your modem (which uses a Rockwell IC) has trouble connecting then the following may need to be entered in the Initial Strings:

+MS=64,0,300,300,0,0

The numbers are defined as such:

<64> - The modem will use the Bell 103 Modulation Scheme. This sets the modem’s modulation scheme at 300 Baud.

<0> - This tells the modem that there is no AutoMode enabled.

<300> - The modem’s minimum connection speed is 300 BPS.

<300> - The modem’s maximum connection speed is 300 BPS.

<0> - Sets the codec type to m-Law.

<0> - Disables Robbed bit signaling generation and detection.

Refer to Figure 3.

Note: When using WinLoad with a modem, it is highly recommended that you do not set up your modem to connect higher than 300 BPS.

;ATA (Auto Answer Mode) or R (Dial Modifier): Verify that the Dial Modifier (Reverse command) is set at ;ATÄ. Using the A command, it places the modem in Auto-Answer mode. When the modem is in auto answer mode, it is set to receive data. Some modems do not use the A command (;ATÄ) but the R dial modifier. Refer to the modem’s manual to see what your modem uses. Refer to Figure 1.

&Q0 (Communicate in Asynchronous mode / Hayes Modems Only): If a Hayes modem is reset to factory defaults it can enter error-control mode. By entering &Q0 the modem will enter Asynchronous mode. This means that there is no pre-set time to wait for a response from the panel. Refer to Figure 2.

Q0 (Display Result Codes): This command tells the modem to communicate result codes. If an action is performed with the modem, the modem will transmit a result code on whether the action was successful or not. Refer to Figure 1.

&K0 (Data Compression Disabled): As a precaution, the Data Compression feature should be disabled. Data Compression may interfere with the flow of data from modem to control panel. Refer to Figure 1.

Note: This does not apply to Hayes Modems. With Hayes modems, the command &K0 disables flow control. For more info, refer to step ②.
X0 (Provide Basic Call Progress Result Codes): This command will tell the modem to report the call progress in either numeric or alphanumeric code. Ex: The result code for OK (0/OK) is enabled. Therefore, whenever an action is performed and it is successful, the modem will transmit the OK result code either numerically (0), or alphanumerically (OK). Refer to your modem’s manual to see what your modem’s Result Codes are. Refer to Figure 1.

If possible, force your modem to connect at 300 BPS only. Some modems require that you enter the necessary information into its S-Registers. Others may only require that you enter a command in the Initial strings. Refer to your modem’s manual to see how to configure your modem to 300 BPS.

Figure 1 - Required Commands

Note: The modem commands may change from modem to modem. Please refer to your modem’s manual.
Note: The modem commands may change from modem to modem. Please refer to your modem’s manual.

Note: The modem commands may change from modem to modem. Please refer to your modem’s manual.
Other Items to Verify:

- Set the Modem Response time (**WinLoad Modem Speed**) to 30. This is WinLoad’s slowest modem speed setting. This will give the data signal time to stabilize as it travels from modem to control panel.

  ![Modem Response Time](image)

  In the **General Info** tab of client account, set the **Modem Response** to 30 (Slow).

- After uploading or downloading data with the control panel, stay on-line for at least another 10 minutes. This should be done to ensure that the data was fully transmitted and that all is working properly.

- Verify that the modem hangs up after the control panel hangs up. This is necessary because if the modem doesn’t hang up, then when the control panel or WinLoad attempts to communicate with the modem it will not respond (it is not in Auto Answer mode). To test if the modem will hang up, enable the control panel’s **Call Back** feature in the **Dialer Options** (refer to the control panel’s Reference and Installation Manual). When you call the control panel, the panel will pickup, then hang up. The control panel will then call you back. If your modem is operating fine, then it will answer the incoming call from the control panel. If it doesn’t answer, then there may be a compatibility problem. One way to solve this is by setting the **S10** register to 250 instead of 255 (refer to step ⑫). If this doesn’t work, then there may be a problem with some of the modem’s command strings. Contact the modem manufacturer’s technical support for more details.