

VNS2200 Amplifier & Controller Installation Guide

VNS2200 Amplifier & Controller Installation

1. Determine the installation location for the VNS2200 device. Consider the following when determining the installation location:
 - Standard VNS2200 device is equipped with AC to DC power adaptor and require a standard 110VAC or 220VAC power outlet. The power adaptor consists of 6' DC power cable and 6' of AC power cord. Consider these cable lengths and the distance between the power outlet and the VNS2200 device.
 - For VNS2200 devices equipped with **VNS2256** option: The solar panel is equipped with 15' feet of power cable. Consider this cable length and the distance between the outdoor solar panel installation location and the VNS2200 device.
 - For VNS2200 devices equipped with , **VNS2268**, **VNS2261** or **VNS2263** option: The intercom wall station is equipped with 25' feet of data cable. Consider this cable length and the distance between the intercom wall station installation location and the VNS2200 device.
 - For VNS2200 devices equipped with **VNS2264** option: The ambient noise level sensor is equipped with 10' feet of data cable. Consider this cable length and the distance between the ambient noise level sensor installation location and the VNS2200 device.
2. Position the VNS2200 device on the mounting surface and confirm that it is vertical to the floor.
Note: When the device is installed properly, the LED should be on the left top corner (front view).
3. Secure the VNS2200 device to the wall using screws appropriate for the mounting surface (use 1.5"-2" long screws).
4. If an external antenna (2.5db or 3db gain) is used, install it on the BNC connector.
5. Connect the output devices to their respective port. Below are the available connector types that may be installed on your device:
 - 2 Pin Female:** Strobe Light or 12VDC Controlled Device (for VNS2282 option, **STROBE LIGHTS** port)
 - 3 Pin Female:** Speaker Audio Output (**SPEAKERS** port)
 - 4 Pin Female:** Dual Output for Two Strobe Lights or 12VDC Controlled Devices (for VNS2282 option, **STROBE LIGHTS** port)
 - 4 Pin Female:** Line Level Audio Output with Dry-Contact Closure (for VNS2284 option, **INTERFACE** port)
 - 5 Pin Female:** Dual Speaker Audio Output for Two Speakers (for VNS2281 option, **SPEAKERS** port)
 - 5 Pin Female:** Alphanumeric Display Output (for VNS2283 option, **LED DISPLAY** port)
 - 8 Pin Male:** Intercom Wall Station or Ambient Noise Level Control (for , VNS2268, VNS2261, VNS2263 & VNS2264 options, **INTERCOM** port)
6. Connect the other end of each cable to the appropriate output device and verify proper connections.
7. Connect the power adaptor male connector to the **POWER** port of the VNS2200 device (for AC powered device only).

Note: The VNS2200 devices should be protected from direct rain and snow, and if possible, from direct sun. These devices are suitable for outdoor installation. Yet, the devices are not watertight and it's highly recommended that outdoor installation locations will include an overhang to protect the VNS2200 device from direct rain, snow and sun.

VNS2267 & VNS2268 (2-Way Intercom) Option

1. Before installation, consider the distance between the VNS2200 device and the VNS2267 or VNS2268 intercom wall station. The VNS2200 device and the intercom wall station will be connected using the provided CAT5 cable (25' long).
2. Follow steps 1-7 of the **VNS2200 Amplifier & Controller Installation** described above.
3. Disconnect the power source connector from the **POWER** port of the VNS2200 device.
4. Run the data cable between the VNS2200 device and the intercom wall station.
5. Connect the RJ45 data cable to the intercom wall station (Image 3).
6. Attach the intercom wall station to a single gang box using supplied 2 machine screws. For surface installation, use the metal/wood screws (Image 2).
Note: When mounting directly to wall surface (without gang box), remove the breakable data cable outlet (Image 3) and pass the cable through the opening at the bottom.
7. Connect the other end of the cable (**8 Pin Female** connector) to the **8 Pin Male** port of the main VNS2200 device marked as **INTERCOM**.
8. Connect the power source connector to the **POWER** port of the VNS2200 device.
9. Document the location and the serial number of the main VNS2200 device.
Note: The serial number of the VNS2200 device is required for system programming.

10. To test communication with the base station, push the **CALL** button on the wall station

Image 2

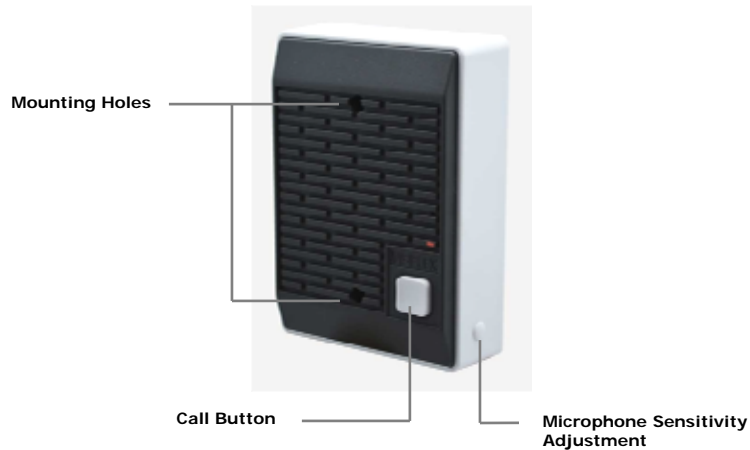
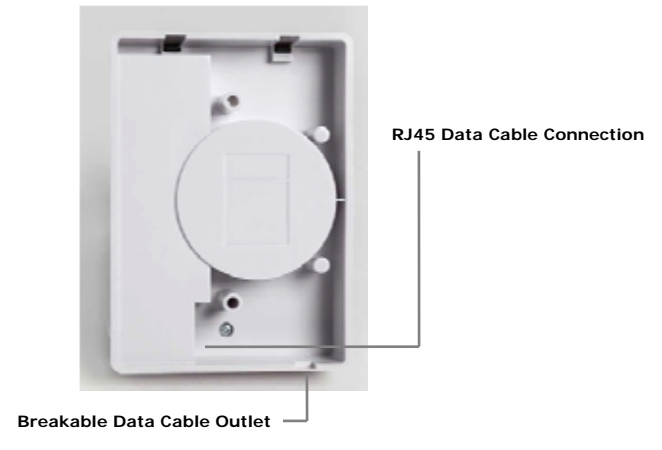


Image 3



Default Pre-Programmed Tones & Alerts

1. Single Tone
2. Dual Siren
3. Voice Message: "Attention! This is a lockdown emergency. Please take refuge immediately. This is not a drill"
4. Voice Message: "Attention! This is an evacuation emergency. Please evacuate the building and follow evacuation procedures"
5. Voice Message: "Attention! The emergency condition has been cleared. Resume to normal condition"
6. Voice Message: "Attention! This is a lockdown drill. Please take refuge in the nearest building and follow lockdown procedures. This is only a drill"
7. Beep Alert
8. School Bell
9. Long Tone

Programming Custom Audio Messages using VisiDB or VPS Software

Note: The VisiDB software utility is compatible only with older versions of the VNS2200. Use VisiDB only with VNS2200 with versions earlier than 3.18.

1. Connect your VNS2200 receiver module to the PC using the special programming power supply. This power supply will have a serial cable attached to the VNS2200 power port.
2. Make sure a microphone is connected to your PC.
3. Record your WAVE files using a sound recorder software utility or **Windows Sound Recorder** (located under Start Menu\Programs\Accessories\Entertainment on Windows XP) or any other audio editing software.
4. Prepare your WAVE files for upload and make sure that they are saved at the correct format:
 - 4.1 Record a wave file or open a pre-recorded file (**File, Open**).
 - 4.2 Go to **File, Save As**.
 - 4.3 Enter a file name for the recorded or modified file.
 - 4.4 Click on **Change** button.
 - 4.5 Set **Format** to **PCM**.
 - 4.6 Set **Attribute** to one of the following: **8.000 kHz, 8 bit, Mono** or **11.025 kHz, 8 bit, Mono** (Note: Versions 3.05 and higher may also support **22.050 kHz, 8 bit, Mono**).
 - 4.7 Click **Save**.
 - 4.8 Repeat for all additional WAVE files.
5. Run the **VPS** or **VisiDB** software.
6. For **VisiDB**:
 - 6.1 VisiDB will be connected to the receiver module once it is open. **Connected to PA Speaker** should be displayed in the lower right hand corner of the screen.
 - 6.2 Click on **Devices** menu, **Device Programmer, Custom Alerts Programmer**. The programmer screen will be displayed.
7. For **VPS** (note: VPS software does not support all versions and models):
 - 7.1 VPS will be connected to the receiver module once it is open. **Connected to VNS2200** should be displayed in the lower right hand corner of the screen.
 - 7.2 Click on **Wireless Devices** menu, **VNS2200 Programmer, Alerts**. The programmer screen will be displayed

8. Click on the **Read Configuration** button. This will tell you how many alerts the receiver module is set to hold.
9. Click on the **Expanded Memory Alerts** Configuration drop down menu and select how many alerts the receiver module needs to hold.
Note: The more alerts a receiver module needs to hold, the shorter the alert needs to be.
10. Click **Update Configuration** to change the amount of alerts the receiver module will hold.
Note: Updating the memory configuration will erase all existing custom alerts previously programmed.
11. Enable the alert numbers that will hold a file by checking the box to the left.
12. Click on the **Browse** button and search for your WAV file.
13. Click on your file then click on the **Open** button to the right.
14. Your WAV file should now be in the **File Name** box. Repeat Steps 12 and 13 for as many files as necessary.
15. Click the **Program** button at the top of the programmer to upload your WAV files to your receiver module.
16. Disconnect the VNS2200 receiver.

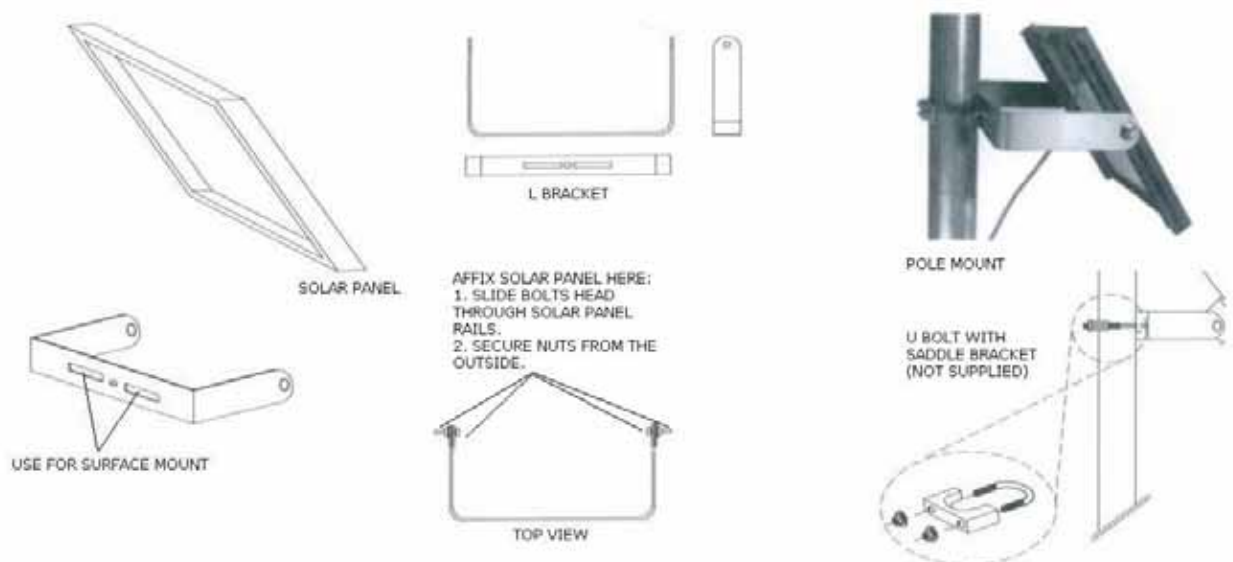
If required, connect additional VNS2200 receivers and program as described above

VNS2256 (Solar Charger with Internal Battery) Option

Note: The instructions below are for general reference only. Always review the instructions enclosed with the solar panel before installation.

1. Follow steps 1-6 of the **VNS2200 Amplifier & Controller Installation** described above.
2. Secure the mounting bracket to a permanent structure facing the southern sky. Use screws or bolts appropriate for the mounting surface.
3. Secure the solar panel to the mounting bracket (Image 3).
4. Adjust the solar panel to an angle between 45 and 60 degree from the horizon.
5. Tighten all screws to lock mounting bracket and solar panel in position.
6. Connect the solar panel male connector to the **POWER** port of the VNS2200 device.
7. Allow 24 hours for battery to recharge.

Image 3



VS2511 - Weekly Tone & Bell Schedule Option

The weekly tone and bell schedule allows the VNS2200 to activate tones, bells or audible alerts stored in its memory according to a pre-programmed weekly schedule. The weekly schedule consists of 48 daily events that can activate a respective tone, bell or audible alert on the wireless receiver. The VNS2200 stores up to four different weekly schedules in its memory with one active schedule.

Follow these steps to program a weekly schedule (see **IMPORTANT NOTES** at the end of this section):

1. Download and install the VPS software. Make sure the VNS2200 is powered on and connected to the serial port on the PC.
2. Click on **Wireless Devices, VNS2200/VNS2210 Programmer**.
3. Click on **Read** to retrieve the VNS2200 setting. Then, click on **Schedule, Weekly Tone & Bell Schedule**.
4. The **Weekly Tone & Bell Schedule** dialog box will be displayed. The last schedule file edited by the user will be retrieved from the disk and displayed. If this file does not exist, a new file will be created by the VPS software. Below are the fields and functions description:

| | |
|--|--|
| Close | Close the Weekly Tone & Bell Schedule dialog box. |
| Edit | Display a dialog box that allows updating the highlighted event on the schedule list (see step 5). |
| Upload | Upload the displayed schedule file in to the VNS2200 memory. This command will overwrite the existing programming of the selected schedule. |
| Download | Download the active schedule from the VNS2200 memory to the PC. |
| Open | Open and display a previously saved schedule file. Note: The schedule is not active until uploaded to the VNS2200. Use the Upload command to program this schedule in to the VNS2200. |
| Save As | Save the displayed schedule to a file on the PC for later use. |
| Displayed Week Day | Display the scheduled events for the selected day of the week. |
| Copy From | Copy the daily events of the Displayed Week Day to the selected Week Day (see step 6). |
| Test Tone | Test the tone or function programmed in to the highlighted event on the list. |
| Slot | Set and display the active weekly schedule. |
| Last Date & Time Read from Device | Last date and time information read from the VNS2200 when the dialog was opened. |
| Set Date & Time Now | Synchronizes the VNS2200 clock to the PC date and time. |
| File Name | Name of schedule file displayed. |
| Work Offline | Allows performing modifications to the schedule file without programming the VNS2200 (usually followed by the Upload command). |

5. If the **Edit** command is selected, the **Weekly Tone & Bell Schedule – Edit** dialog box will be displayed. Below are the fields and functions description:

| | |
|-------------------------|--|
| Save | Update the schedule file and VNS2200 (when Work Offline box is cleared) with changes. Note: If the Work Offline check box is checked, changes made to the schedule programming are only saved to the disk and are not written in to the VNS2200 memory. To program the VNS2200, click on Upload when all changes have been applied. |
| Cancel | Ignore all changes and exit. |
| Time | Time of day when then tone should be generated or an event should be activated. |
| Zone / Device ID | Not applicable to VNS2200. Enter 001. |
| Description | General description for the event. Note: This field is saved on the PC database only and is not programmed in to the VNS2200. |
| Alert Type | Type of tone or alert that will be activated by the VNS2200. Alert 11 and up will activate a customized user-programmed audio alert stored in the VNS2200. Note: Alert Type with number higher than 90 are reserved for special operations. |
| Alert Level | Volume of tone played. |
| Alert Length | Length of tone (in some cases, created by repeating a shorter tone). In some cases, can also used to determine the length of dry-contact closure or opening. Note: Alert length 9 (if supported) will send the selected Alert Type three times with a one second pause between each repeat. |
| Alert Repeats | Number of times to repeat the selected tone sequence (as determined by Type, Level and Length). |
| Alert Delay | Delay between each repeat of the tone sequence. |
| Action | Determines the type of activation command for alerts 10 and 91-99. |
| Duration | Determines time interval for alerts 9-10 and 91-99. |

Active

Determine if an event is active. Non active events are stored but not executed.
Note: An active events must be assigned with Zone / Device ID larger than 0.

6. If the **Copy From** command is selected, the schedule will be copied from the selected displayed day to the selected **Week Day**.

IMPORTANT NOTES

1. When the **Weekly Tone & Bell Schedule** programming screen is opened, it displays the last file that was edited by the user. The displayed schedule may be different than the actual schedule data stored in to the VNS2200 (unless the VNS2200 was previously programmed with that schedule).
2. To ensure the schedule displayed is same as the schedule programmed in to the VNS2200, press **Download** after opening the **Weekly Tone & Bell Schedule** programming screen. This will download and display the active schedule from VNS2200. The schedule is downloaded and saved by default to the **Default.tws** file. Use the **Save As** to save the schedule under a different name.
3. All changes made are applied to the current active slot that represents the current active weekly schedule. Make sure you select the correct slot before using the **Edit**, **Download** and **Upload** commands.
4. Every time the **Slot** is changed, the appropriate schedule is downloaded from the VNS2200 and displayed.
5. Unless the Work Offline check box is cleared, changes made to the schedule **DO NOT** update the schedule stored in the VNS2200 until the **Upload** command is used. Always upload the schedule to the VNS2200 after schedule changes are completed.
6. Use the **Upload** command to program a schedule that was loaded using the **Open** command.
7. It is recommended that each schedule used will be downloaded from the VNS2200 and saved to the disk with a name that will describe it appropriately. If required, saved schedules can be loaded to the VPS using the **Open** command and then programmed in to the VNS2200 using the **Upload** command.
8. The execution of the schedule programmed in to the VNS2200 is dependent on the date and time stored in its internal clock. This internal clock has to be kept accurate by receiving time updates from a PC connected to it via the USB port.

VS2511 - Calendar Tone & Bell Schedule Option

The calendar tone & bell schedule allows the VNS2200 to activate tones, bells or audible alerts stored in its the according to a pre-programmed annual schedule. The schedule calendar consists of 42 daily events that can activate a respective tone, bell or audible alert on the VNS2200. Days with active events are marked with an Orange indicators to the left of the date on the calendar. Unlike the weekly schedule, events have be programmed for each day of the calendar year and there is only one active schedule. When required, events can be copied from one period to other periods for easy programming.

Follow these steps to program a schedule calendar (see **IMPORTANT NOTES** at the end of this section):

1. Download and install the VPS software and USB driver. Make sure the VNS2200 is powered on and connected to the USB port on the PC.
2. **Click on** Wireless Devices, **VNS2200/VNS2210 Programmer**.
3. Click on **Read** to retrieve the VNS2200 setting. Then, click on **Schedule, Calendar Tone & Bell Schedule**.
4. The **Calendar Tone & Bell Schedule** dialog box will be displayed. The last schedule file edited by the user will be retrieved from the disk and displayed. If this file does not exist, a new file will be created by the VPS software.
5. If you prefer to have a schedule that starts with a month other than January, use the **Rotate** command to change the first month of the schedule before creating any daily events. Select Rotate 1 Month Forward on the **Schedule Rotation** drop down list and click on **Rotate** until the desired first month is displayed.

Below are the fields and functions description:

| | |
|--|---|
| Close | Close the Calendar Tone & Bell Schedule dialog box. |
| Edit | Display a dialog box that allows updating the highlighted event on the schedule list (see step 6). |
| Upload | Upload the displayed schedule file in to the VNS2200 memory. This command will overwrite the existing programming of the schedule. |
| Download | Download the schedule from the VNS2200 memory to the PC. |
| Open | Open and display previously saved schedule file. Note: The schedule is not active until uploaded to the VNS2200. Use the Upload command to program this schedule in to the VNS2200. |
| Save As | Save the displayed schedule to a file on the PC for later use. |
| Apply as Default Week | Copy the events programmed in to the days indicated by the Selected Week field to all other weeks of the year. |
| Selected Period | Indicate the range of dates of the currently selected calendar days. This range can also be selected by clicking on the first day of a period, holding the Shift key, and clicking on the last day of a period. |
| Copy | Copy the events of the days in the Selected Period to the period starting at the Copy to Period Starting at date. |
| Schedule Rotation | Rotate the schedule forward or backwards by a day or a month. Use the Rotate command to apply the required changes. When the schedule is rotated by one day forward, all events are moved forward by one day and the events of the last day of the year are copied to the first day of the year. When the schedule is rotated by one month forward, the first month of the calendar is removed and a new month is added at the end of the calendar. The events of the removed month are copied to the added month at the end of the calendar. When the schedule is rotated by one day backwards, all events are moved backwards by one day and the events of the first day of the year are copied to the last day of the year. When the schedule is rotated by one month backwards, the last month of the calendar is removed and a new month is added at the beginning of the calendar. The events of the removed month are copied to the added month at the beginning of the calendar. |
| Apply | Allow activation or deactivation of events on a selected day or month as indicated by the Events drop down list. Note: Only events with Zone / Device ID larger than 0 can be activated. |
| Active Events Count for | Display the number of active events on the selected day. |
| Test Tone | Test the tone or function programmed in to the highlighted event on the list. |
| File Name | Name of schedule file displayed. |
| Last Date & Time Read from Device | Last date and time information read from the supported system when this dialog was opened. |
| Set Date & Time Now | Synchronizes the VNS2200 clock to the PC date and time. |

6. If the **Edit** command is selected, the **Calendar Tone & Bell Schedule – Edit** dialog box will be displayed. Below are the fields and functions description:

| | |
|-------------------------|---|
| Save | Update the schedule file with changes. |
| Cancel | Ignore all changes and exit. |
| Time | Time of day when then tone should be generated or an event should be activated. |
| Zone / Device ID | Not applicable to VNS2200. Enter 001. |
| Description | General description for the updated event. Note: This field is saved on the PC database only and is not programmed in to the VNS2200. |
| Alert Type | Type of tone or alert that will be activated by the VNS2200. Alert 11 and up will activate a customized user-programmed audio alert stored in the VNS2200. Note: Alert Type with number higher than 90 are reserved for special operations. |
| Alert Level | Volume of tone played. |
| Alert Length | Length of tone (in some cases, created by repeating a shorter tone). In some cases, can also used to determine the length of dry-contact closure or opening. Note: Alert length 9 (if supported) will send the selected Alert Type three times with a one second pause between each repeat. |
| Alert Repeats | Number of times to repeat the selected tone sequence (as determined by Type, Level and Length). |
| Alert Delay | Delay between each repeat of the tone sequence. |
| Action | Determines the type of activation command for alerts 91-99. |
| Duration | Determines time interval for alerts 91-99. |
| Active | Determine if an event is active. Non active events are stored but not executed. Note: An active events must be assigned with Zone / Device ID larger than 0. |

7. If the **Copy** command is selected, the schedule will be copied from the **Selected Period** to the period starting at the date indicated by the **Copy to Period Starting at** field.
8. If the **Rotate** command is selected, the schedule will be rotated by one day or one month forward or backwards.

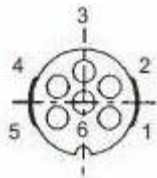
IMPORTANT NOTES

1. When the **Calendar Tone & Bell Schedule** programming screen is opened, it displays the last file that was edited by the user. The displayed schedule may be different than the actual schedule data stored in to the VNS2200 (unless the VNS2200 was previously programmed with that schedule).
2. To ensure the schedule displayed is same as the schedule programmed in to the VNS2200, press **Download** after opening the **Calendar Tone & Bell Schedule** programming screen. This will download and display the schedule from VNS2200. The schedule is downloaded and saved to the **Default.tgc** file. Use the **Save As** to save the schedule under a different name.
3. Changes made to the schedule **DO NOT** update the schedule stored in the VNS2200 until the **Upload** command is used. Always upload the schedule to the VNS2200 after schedule changes are completed.
4. The execution of the schedule programmed in to the VNS2200 is dependent on the date and time stored in its internal clock. This internal clock has to be kept accurate by receiving time updates from a PC connected to it via the USB port.

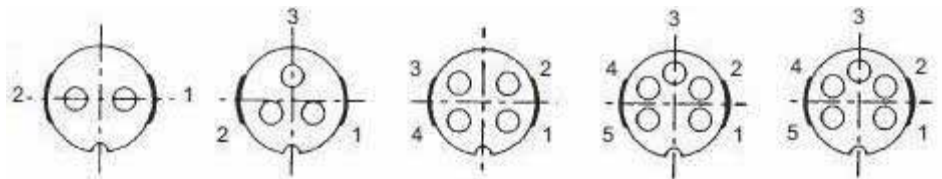
VNS2200 Amplifier & Controller – Connections and Adjustments



Port Pin Out (Front View)



| POWER / Programming |
|---------------------|
| 1 – VDC (IN) |
| 2 – GND |
| 3 – GND (Battery) |
| 4 – RX (RS232) |
| 5 – TX (RS232) |
| 6 – N.C. |



| Controlled Device (12VDC or Dry-Contact) Output | Speaker Audio Output | Dual Controlled Device (12VDC or Dry-Contact) Output | Dual Speaker Audio Output | Alphanumeric Display Output |
|---|----------------------|---|---------------------------|-----------------------------|
| 1 – GND (GRN) | 1 – Wire 1 | 1 – GND (1st, GRN) | 1 – Wire 1 (2nd) | 1 - RX (RS232) |
| 2 – 12V (PUR) | 2 – Wire 2 | 2 - 12V (1st, PUR) | 2 – Wire 2 (2nd) | 2 – GND |
| | 3 – N.C. | 3 - 12V (2nd, PUR) | 3 – N.C. | 3 – N.C. |
| | | 4 – GND (2nd, GRN) | 4 – Wire 1 (1st) | 4 – GND |
| | | | 5 – Wire 2 (1st) | 5 – VDC (OUT) |
| | | Line Level Audio Output with Dry-Contact Closure | | |
| | | 1 – GND (GRN) | | |
| | | 2 - Output (PUR) | | |
| | | 3 – Audio | | |
| | | 4 – GND | | |
| | | | | |
| | | | | |

Notice to User Regarding Radio Frequency Interference

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

RF Radiation Hazard Warning (products with activated transmit option only): To ensure compliance with FCC RF exposure requirements, this product should be positioned no less than 30 cm from your body or nearby persons during continuous use.