QDV-1000 Digitized Voice Module and QDVP-100 Configurator for Digitized Voice

The QDV-1000 Digitized Voice Module provides digitized voice messaging for the QX-5000 Emergency Zone Audio & Firefighters' Telephone System. The QDVP -100 Configurator provides a means of programming voice messages for the QDV-1000 Digitized Voice Module.

The procedure for digitized voice messaging is to first program the QDV-0001 chips with the voice messages required for the installation using the QDVP-100 Configurator. Next mount the QDV-1000 into the Audio Backbox. Then configure the QIF-5000B module and follow with Audio Cabinet Configuration as stated in the QX-5000 manual.

IMPORTANT: Please consult the section on reserved messages on page 4 of this document before programming.

PROGRAMMING THE QDV-0001 INTEGRATED CIRCUIT CHIPS WITH VOICE MESSAGING

The QDV has 4 preprogrammed tones/messages:

1. Beep Beep Beep Beep… **(Channel 2 Message 1) For internal use only; do not use.**
2. Temporal Tone. **(Channel 2 Message 2)**
3. Boston Message- Attention please; the signal tone you have just heard indicated a report of an emergency in this building. If your floor evacuation signal sounds after this message, walk to the nearest stairway and leave the floor. While the report is being verified; occupant on the other floors should await further instructions. **(Channel 2 Message 3)**
4. May I have your attention please; may I have your attention please. There has been an alarm reported in the building, please proceed to the stairways and exit the building. Do not use the elevator. **(Channel 2 Message 4)**

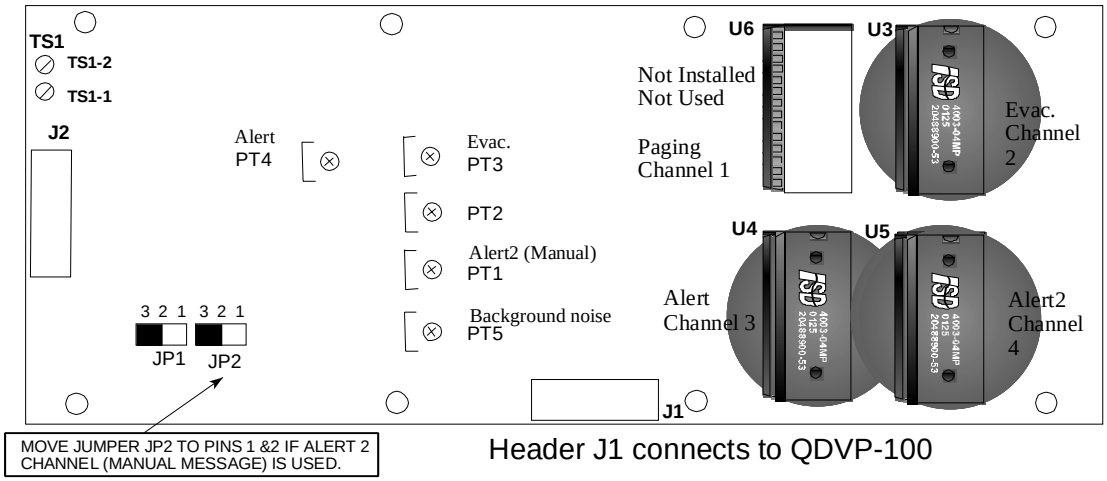
You may skip this step if the chips have been programmed at the factory for you.

To program the QDV-0001 chips, place the chips required into their proper sockets in the QDV-1000 board and then connect this board to a QDVP-100 Configurator. The QDVP-100 is connected to a laptop or personnel computer. The computer is use to download any messages that are to be played at the installation.

Pre-installation inspections:

1. Verify that jumpers **JP1** and **JP2 on the QDV-1000** are over **pins 2 and 3 for both**, that is the jumpers are in the **left-most positions** for both. In case that the 'Manual Message' option is used, move JP2 over to pins 1 and 2, which is the right-most position instead.
2. Locate the **J8 header** on the QIF-5000B module; remove all jumper headers if any.
3. For a single stage system with voice recording to be played on the Evacuation channel 2, install the **QDV-0001 integrated circuit chip into socket U3 (this is the standard operation set up).**
4. For voice recording to be played on the Alert channel 3, install a QDV-0001 integrated circuit chip socket into U4.
5. For voice recording to be played on the Alert2 channel 4, install a QDV-0001 integrated circuit chip into socket U5.

QDV-1000 DIGITIZED VOICE BOARD



Header J1 connects to QDVP-100

QDV-1000 Voice Message Recording Procedure

Equipment Required:

1. Personal Computer with sound card.
2. Audio cable with mini stereo plug at both ends (to plug into the computer and the stereo jack of the QDVP-100.
3. Wire to 24V D.C. power supply such as Filtered smoke detector supply voltage at the Fire Alarm Panel or 24V DC transformer with power cord with 2 pin plug OR 2 wires to be connected to the QVDP-100 Configurator power supply pins (remove terminal block) or terminal block.
4. QDVP-100 Configurator.
5. Small 8 ohm speaker (optional).

Software Required:

1. Any of the following software: Real Player, Windows Media Player or Windows Sound Recorder.
2. The sound clip files to be recorded.
3. Sound clip file SO-195.wav, the 5 seconds of pre-announcement tone.

Procedure:

Setting Up QDVP-100:

1. Plug one end of the audio cable into the audio input of **QDVP-100 Configurator**, refer to diagram.

2. Plug the other end of the audio cable to the audio out or speaker out of the personal computer.

3. Connect the DC 24V power supply to terminals marked +24V DC of the **QDVP-100 Configurator**, see diagram at right.

4. Connect the optional speaker to terminals marked Speaker + and - on the **QDVP-100 Configurator**, see diagram.

5. Verify that the ribbon cable at J2 on the **QDV-1000** module is not connected to QIF-5000B at this time.

6. Plug the ribbon cable from the **QDVP-100** to **J1 of the QDV-1000.**

Setting up the computer for recording:

On the computer, launch one of the wave player software programs and load the message file to be recorded. Play the message and listen to the play back through the speaker. Adjust the volume level if required. The first message to be recorded on any QDV-0001 chip must be SO-195.wav. This is for internal supervision and should not be used as part of the play back message.

Setting up QDV-1000 for recording:

1. Insert the QDV-0001 Integrated Circuit (IC) into the appropriate IC socket.
   - U3: Evacuation.
   - U4: Alert.
   - U5: Alert2 (Manual).
   - **U6 is not used.**

   Turn ON the DC 24V power supply. Wait approximately 20 seconds, the two digit display of **QDVP-100** will turn ON.

2. Press the CHAN button on the **QDVP-100** to select the channel on which the message is to be recorded.
   - Channel 1: Paging. **This channel is not used**.
   - Channel 2: Evacuation. Shown as H2 on the two digit display.
   - Channel 3: Alert. Shown as H3 on the two digit display.
   - Channel 4: Alert2 (Manual channel). Shown as H4 on the two digit display.

   Note: The display will flash between H# and ##, where ## is the number of messages that have been previously recorded.

3. To record a new message, press the NEW button on the **QDVP-100**, the display should show n# and ## alternatively, where # is the channel number and ## the new message number.

4. Press the REC button on the **QDVP-100** to start recording and play the message from the computer. Press the STOP to end the recording.

5. Play back the recorded messages, select the channel by pressing the CHANNEL button, press MESSAGE to select the message and then press the PLAY button. The play will end automatically at the end of the message.

6. To erase a message, select the channel and message and press ERASE. The display will show E#, press the ERASE one more time to confirm the deletion.

7. Once the messages have been recorded, the **QDV-1000** should be disconnected from the **QDVP-100 Configurator** and mounted into the audio Backbox.

IMPORTANT: Pauses in messages:

The QDV-1000 supervises itself during alarm and ensures that voice messages or alarm signals are being reproduced. If a significant (over 3 seconds) pause is needed in a message, a `silent' message clip must be programmed. Use the same procedure as above and record a silent message of the required length (disconnect the audio input cable from QDVP-100 during recording for best results).**PLAY BACK** the silent clip entirely (until H# reappears on display). This important step will allow the QDV-1000 to recognize the clip as a pause. Long pauses may be built of repeated silent clips just as with any other message. Pause clips may be used to build messages with voice and tones separated by silent periods of any length. See Audio Configuration Utility Manual (LT-9028) for details.

IMPORTANT: Reserved message locations:

Some message locations on QDV-1000 are reserved for special features:

1. Message position 1 of each chip is reserved for supervision purposes and should not be used for alarm messages. Special tone file SO-195.wav must be used.

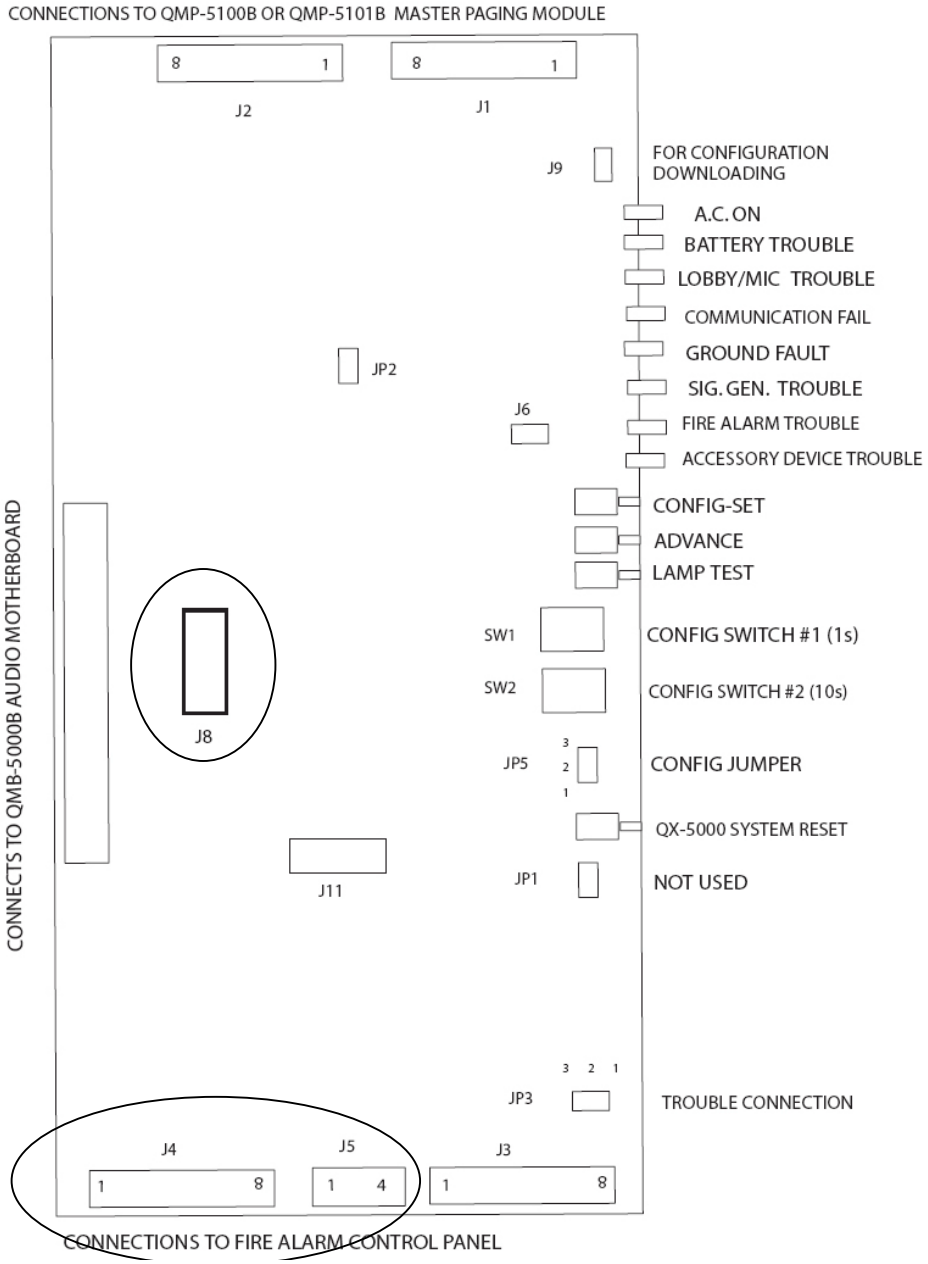
2. If Massachusetts (Boston) code signaling is used, the evacuation tone (SO-181.wav) must be programmed in message position 2 of evacuation channel chip (U3, H2 on display). The general voice message (SO-180.wav) should be programmed in position 3.

3. If Silenceable speakers are used, SO-195.wav must be recorded in message position 2 of manual (Alert2) channel chip (U5 , H4 on display).

QDV-1000 Hardware installation:

1. The QDV-1000 module comes already mounted onto a CH-559 metal plate. The CH-559 mounts onto the QBC-5000 battery charger cover located above the amplifiers in the audio cabinet of the QX-5000 Audio system. The QBC-5000 cover must be removed and the QDV-1000 and its plate is mounted onto the QBC-5000 cover with the four 4-40 ¼" screws provided for the purpose. The whole assembly is then mounted back into the audio cabinet over the battery charger.
2. Locate the J8 header on the QIF-5000B. Align the key on the ribbon cable header from QDV-1000 (J2) with the opening of the J8 and plug the cable into the shrouded header.
3. Connect a wire from terminal TS1-1 on the QDV-1000 TS1 to QIF-5000B J4 terminal 1. Also connect terminal TS1-2 on the QDV-1000 to QIF-5000B J4 terminal 2. **IMPORTANT: This is required for all installations.**
4. For single stage alarm system, place a 22 gauge shorting wire on pins 1 and 2 (of JP5) on the QIF-5000B. For a second stage system add a 3.9K ohm resistor between pins 1 and 2 (of JP5) on the QIF-5000B, refer to the QX-5000 manual.

QIF-5000A or QIF-5000B interface Module



QIF-5000B Configuration Download procedure:

1. Remove the connections J1 and J2 to the paging module (QMP-5100B or QMP-5101B) on the QIF-5000B board.
2. Move the CONFIG jumper, JP5 on the QIF-5000B board to the program enable position between pins 1 and 2. Press the QX-5000 System Reset button on the QIF-5000B, located just below the CONFIG jumper. Wait until the green A.C. ON LED starts flashing.
3. Connect the RS-485 IMA or UIMA to the computer. Connect the ribbon cable end to J9 of the QIF-5000B.
4. Launch application, 'Audio Configuration Utility' from the P.C.
5. Proceed with Audio Cabinet Configuration (zone mapping) according to the QX-5000 installation manual and Audio Configuration Utility Manual (Document # LT-9028).
6. Follow section 'QDV-1000 Configuration' in LT-9028 to configure the QDV-1000 settings.

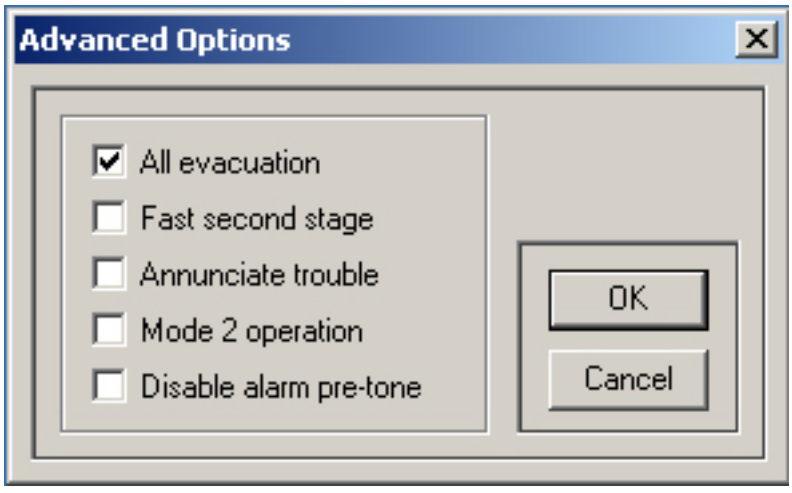
   IMPORTANT:
   - Every installed chip should have a message programmed on its channelX line (X =01 to 04). If channel 04 (ALERT2) is used for manual messages only, one of the message must be selected and programmed on channel 04 line with part1 repeat set at '255' and repeat all set at '255'.
   - Message 1 cannot be used to build the play back message.
   - For Mass Code operation, see below.

7. From the main system window, under the 'System' pane, verified that the option 'QDV Installed: Yes' is present.
8 Once all elements of the audio system have been configured. From the tool bar, hit the 'send' button to send the configuration to the QIF-5000B.
9. Noted that the 'AC On' green LED stop flashing and then turns back on solidly, this indicates that the configuration has been send successfully.
10. Replace jumper JP5 back to its normal position.

Additional note for QX-5000 system with QDV-1000 and Silenceable speaker option:

When Silenciable speakers are used, the QX-5000 audio system has to play the 'Pre-announce Tone' before the alarm signal. This is to re-sound any previously silenced speakers. To enable the QX-5000 system for this feature, the 'Alert 2' I.C. must be installed in U5 socket. The 'Pre-announce' tone is also required to be recorded onto the Alert 2 channel.

In the Audio Configuration Utility, under the 'System Configuration' > 'Advance Options' window, verify that the option box 'Disable alarm pre-tone' is not selected.

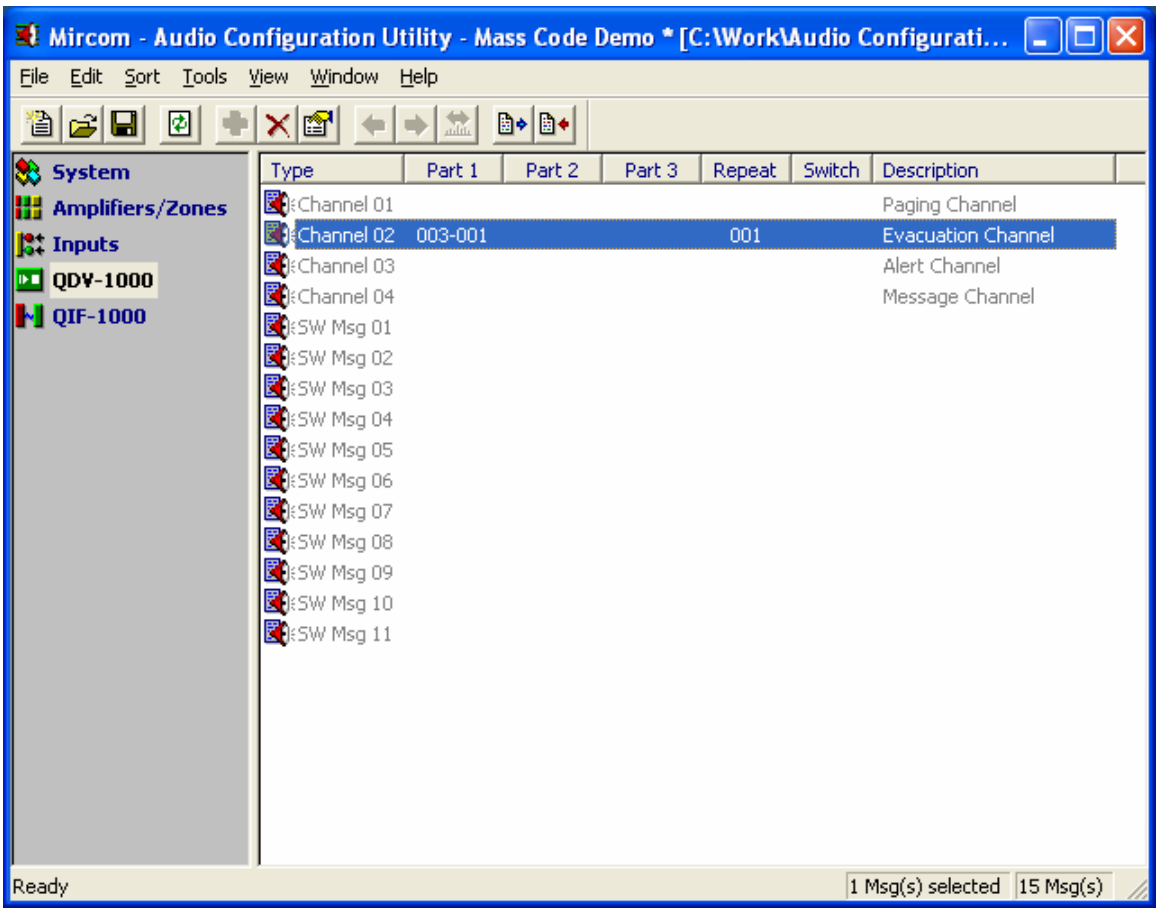


Configure the QDV-1000 Channel 4 as show in the diagram below. Also note that the ‘Message’ of ‘Part 2' is the message number of the Pre-announce tone (SO-195.wav) recorded in Alert2 I.C.

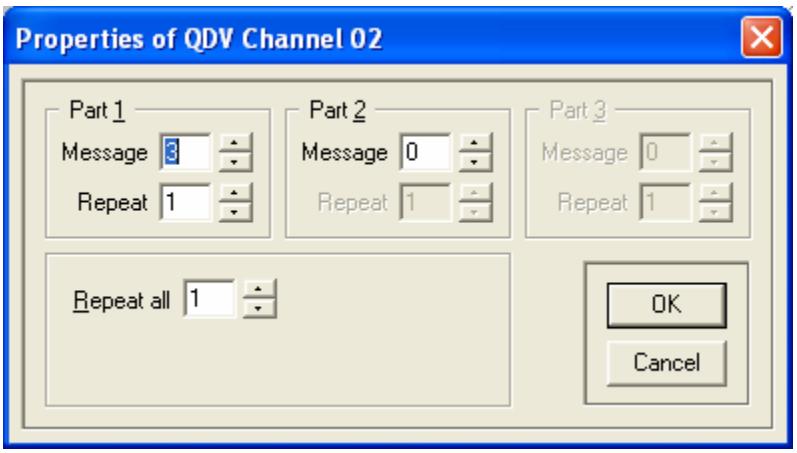
Additional note for Massachusetts (Boston) Code:

To enable Massachusetts (Boston) code, verifies that the firmware version on the QIF-5000B is SO-154V2.0.6 or higher. Once the QDV-1000 is connected to the QIF-5000B and the system is powered-up, do the following:

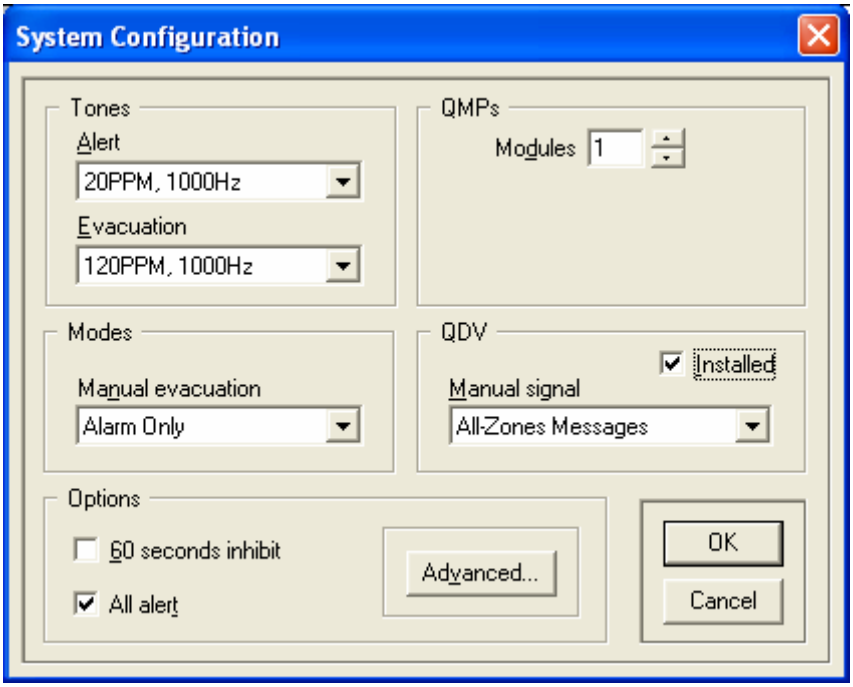
1. Set the rotary switches on the QIF-5000B to '97'
2. Move the jumper JP5 on the QIF-5000B to position 1 and 2.
3. Press on the reset switch on the QIF-5000B.
4. Wait for the green LED to start flashing.
5. From the Audio Configuration Utility, click QDV-1000 tap to open the following window.



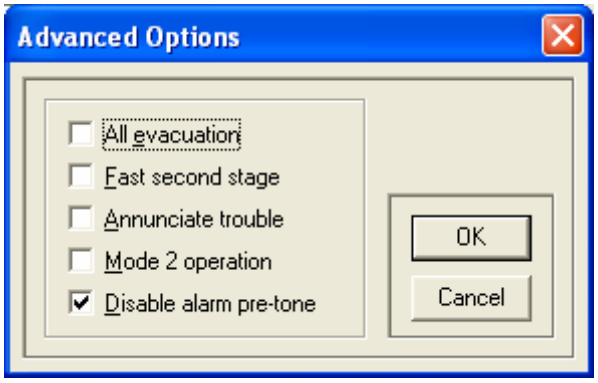
6. Double click 'Channel 2' to bring up the following window and enter the parameters as shown.



7. Make sure QDV option is enabled.



8. Make sure the All Evacuation is not checked and alarm pre-tone is disabled.



9. Carry on configuring the rest of the audio system.

10. Download the configuration data to the QIF-5000B and wait until download completes.

11. Once LED goes back to steady green (may take 30-45 seconds), replace jumper JP5 to position 2 and 3.

During all the above operations, the rotary switches must remain set at ‘97’. To disable Boston code operation, set the switches at any other value than ‘97’ and repeat steps 1 to 5.

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