Qt™ CONFIGURATION iOS APP
USER GUIDE

cambridge SOUND MANAGEMENT

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INTRODUCTION

The Qt Configuration App was developed to help installers set the optimal sound masking level for a space. The app walks the installer through the commissioning process. Measurements are taken in the coverage area before the masking sound is turned on to establish the space's acoustic baseline. The masking sound is then played at a louder than normal volume level to measure the impact of masking on the space. Once the tests are complete, the app will set the optimal masking volume level for the space.

The Installation and Operation Guide, supplied with your control module, provides details on proper installation of the control module and Qt emitters. This app should be run after the module is installed and the system has been tested for normal operation.

The measurements taken by this app are based on the 2 kHz octave band. By isolating this single octave band, measurement accuracy is improved. The value for total noise within the space is then calculated based on this 2 kHz measurement.

See the Installation and Operation Guide included with your control module for details on alternative methods for determining optimal masking levels and making system adjustments.

To use the Qt Configuration App you will need the following:

- A compatible Qt system installed and tested for normal operations
- An iOS device with Bluetooth 4.0 wireless technology (an iPad is recommended)
- A CSM Bluetooth dongle
- An iTestMic

Preparing To Use The App

1) Install the Qt control module and Qt emitters as described in the control module's Installation and Operation guide. Test the emitters for normal operations using the front panel controls.

2) Insert the Bluetooth dongle into the control module's USB port

3) Pair your control module with the iPad. On the iPad, open the settings app and select Bluetooth. Turn on Bluetooth and select the CSM Bluetooth dongle from the list.

4) Go to the App Store and search for "CSM Qt Configuration App" Press the "free" install button to complete the installation process.

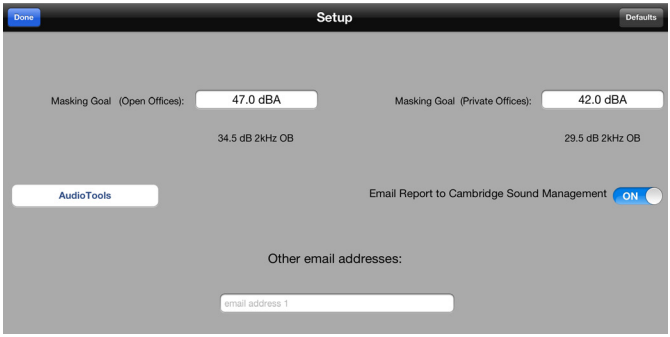
5) Connect the iTestMic. The iTestMic is required to use this app.

6) Launch the Qt Configuration App.

Using The App

The following steps will guide you through the commissioning process of the app.

Step 1: App Setup



The setup menu is accessed from the upper right corner of the main screen. The set up menu allows users to adjust the target masking levels for open floor plan spaces and private offices. The default levels should be used in most cases, however, depending on the space (size, surface types, space usage) there are times the target may need to be altered. See an acoustic expert for more details on the proper target volume levels for uncommon spaces.

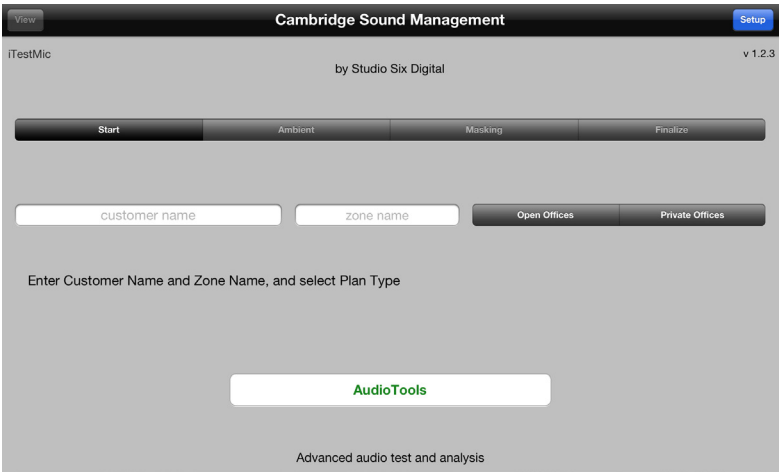
Select the level you'd like to adjust and enter the desired value. The level entered represents the full masking spectrum. The expected 2 kHz octave band measurement is shown below the masking level as reference.

If the mail app on the iPad has been set up, users can have the configuration app email a final settings report once the control module has been configured. These email boxes are only present when the mail app has been set up.

Audio Tools

This is a link to the Studio Six web site where the sound level meter used in the wizard can be purchased separately.

Step 2: Record Customer, Zone, and Plan Information



The customer, zone and plan type information are recorded as part of the final settings report and will be useful if future adjustments or system restores need to be made.

Customer Name: Enter a customer name that identifies the customer and the location of their facility. (i.e. Autodesk - Waltham MA) This will be used to match the data collected to the correct location of the Qt system being commissioned.

Zone Name: It is possible that a single company/facility could deploy more than one Qt control module. The zone field identifies the space within the facility where the control module is providing masking coverage.

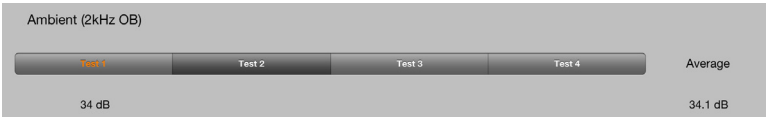
Plan Type: The selection of the plan type (open office or private office) determines the target masking volume.

After setting the customer, zone and plan type information, the module will set the masking volume to mute in preparation for the measuring the abient noise level.

Step 3: Measure Ambient Noise Levels

To begin, check that the space is free of transient noise sources (i.e. construction equipment). If there is excessive noise in the space, consider configuring the control module at a quieter time. Remain silent while measurements are being taken.

The app wizard will walk you through the measurement of ambient noise from 4 locations around the coverage area. Press the run button, located in the upper right corner of the screen, to take the first measurement once you're in the first location. When the measurement is complete, the results of the test will be displayed and the app will prepare for the next measurement.



Orange text indicates a test has been completed. The next test to be run is highlighted in darker grey. If you need to retake a measurement, select the desired test and press the run button. Repeat this process until the four measurements have been completed. Once the ambient noise is determined, press the "proceed to high masking test" button located below the 4 measurements. The app will then set the masking level to 25 and prompt the user to take 4 additional measurements.

Step 4: Measure Masking Sound Levels

The app wizard will walk you through the measurement of the masking sound to calibrate the level needed in the same four locations from the previous step. Press the run button, located in the upper right corner of the screen, to take the first measurement. When the measurement is complete, the results of the test will be displayed and the app will prepare for the next measurement. Orange text indicates a test has been completed. The next test to be run is highlighted in darker grey. If you need to retake a measurement, select the desired test and press the run button. Repeat this process until the four measurements have been completed. Press the "download settings to controller" button to continue.

At the end of this process the app will return one of two results:

1. If the app senses that the ambient was too loud for successful commissioning, it will indicate “failed” and suggest that the user restart the process at a quieter time.

2. If the app determines that the conditions were conducive to determining the optimal masking levels, the app will automatically set the masking level and proceed to the final step.

Step 5: Validating The Results

The app sets the optimal masking sound levels based on the test results. A final measurement is taken to validate that the masking level goals have been achieved. Once the masking sound level is validated, you will be asked if you want to engage two features of the control module:

Auto Ramping

This feature is used for installation in to an existing office area to help the occupants adjust to having sound masking installed. If the feature is enabled, the sound masking will temporarily start at the target level 10dB lower than the appropriate masking level. The level will automatically increase by 1 dB per day for 10 consecutive days to gradually introduce sound masking into the space.

Front Panel Lock

The lock prevents the system from being adjusted through the control module's front panel. Refer to the Installation and Operations Guide that came with your Qt control module for information on manually locking and unlocking the control module's front panel.

The Auxiliary Input setting will continue to be available from the front panel with the lock enabled.

Wrapping Up

View

After the validation is completed, you can select the view button in the upper left corner of the screen to see the level of each octave band of the final masking spectrum.

Final Settings Report

If the mail app of the iPad is set up and you have entered email addresses into the setup menu, a final settings report is sent to each recipient you've entered. **NOTE:** Final Setting Reports and the information gathered during testing are not saved in the app, the report is the only copy of the results.

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