



DYNASOUND[®]



Application Programming Interface *for* Privacy Manager software

API version 1.1

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► soundmasking.com  **DYNASOUND**

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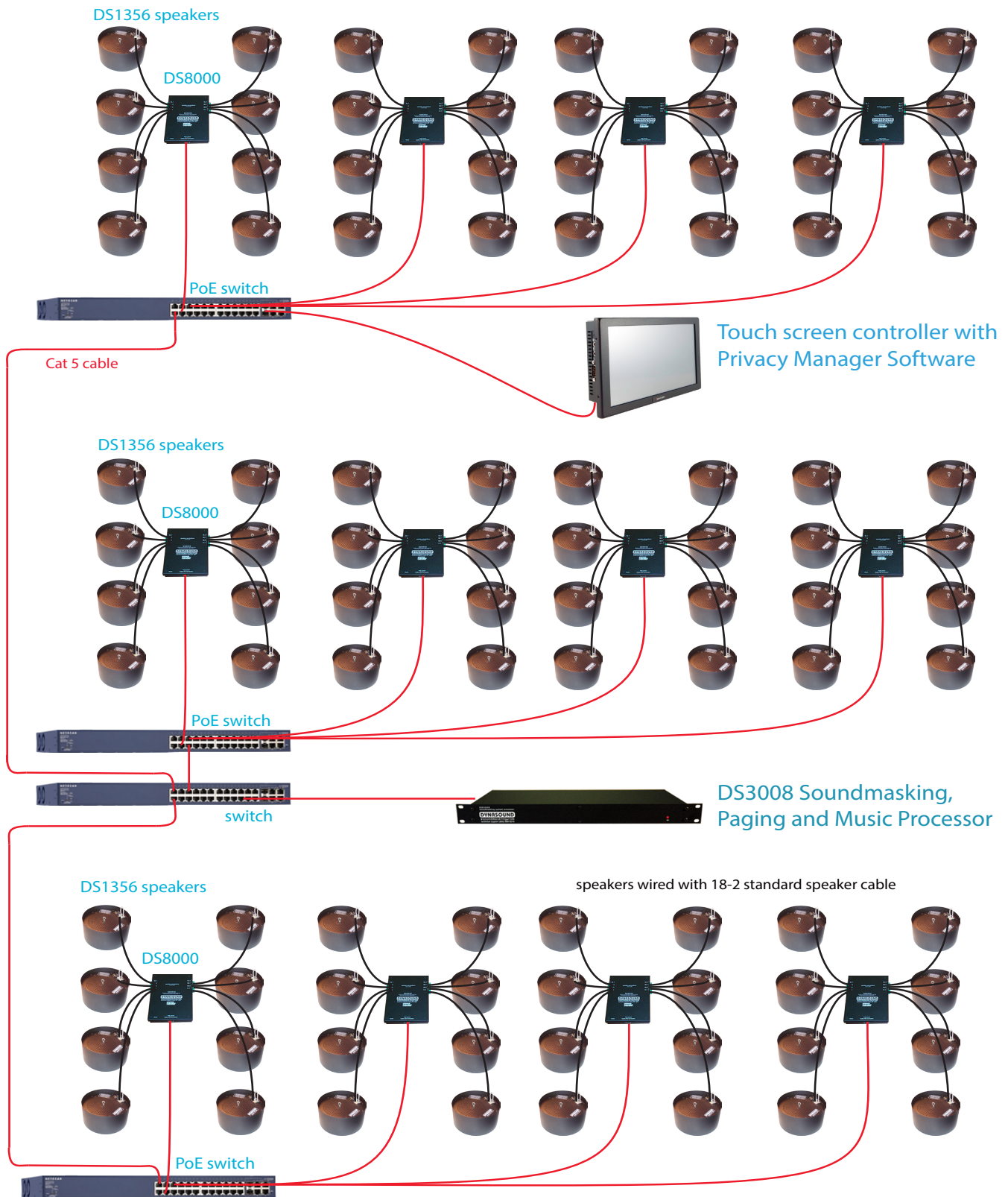
Dynasound’s networked soundmasking system utilizes industry standard 100-BaseT Ethernet networks, CobraNet digital audio transport and SNMP control. A common desire is to integrate the soundmasking network into the company network, however combining audio traffic and corporate data on the same network is bad practice from a cost and security point of view. This API and the sample Privacy Manager Remote application documents the use of the API for custom integration with your Facility Management software systems.

Use of the API, or Privacy Manager Remote application, does not eliminate the need for a local control PC running Privacy Manager software. The API utilizes a SQL database on the local control PC which can be manipulated from a remote network location via a second NIC on the local control PC. This method provides the ability to control Dynasound soundmasking paging and music systems from a remote or even wireless connection.

The API is not intended to provide complete system configuration capabilities such as those found on the full Privacy Manager software. The remote process does however allow the user to select from stored system configurations and adjust soundmasking levels on a system-wide, per zone or per speaker basis. Soundmasking timers, contact closure timers, and other system settings can be controlled as described this manual.

Some familiarity with the networked system components and Privacy Manager software is recommended to better understand the API and it’s uses.

Dynasound networked soundmasking over-view



Privacy Manager

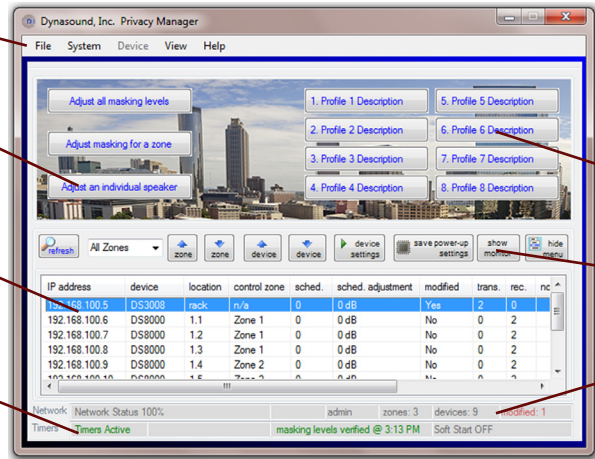
Dynasound's Privacy Manager software is used to control DS3002, DS3008 and DS8000 series soundmasking products.

Menu Bar

Quick Adjustment

Device List

Schedule status



The home screen provides access to system management features and lists the individual network devices.

System Presets

Menu Buttons

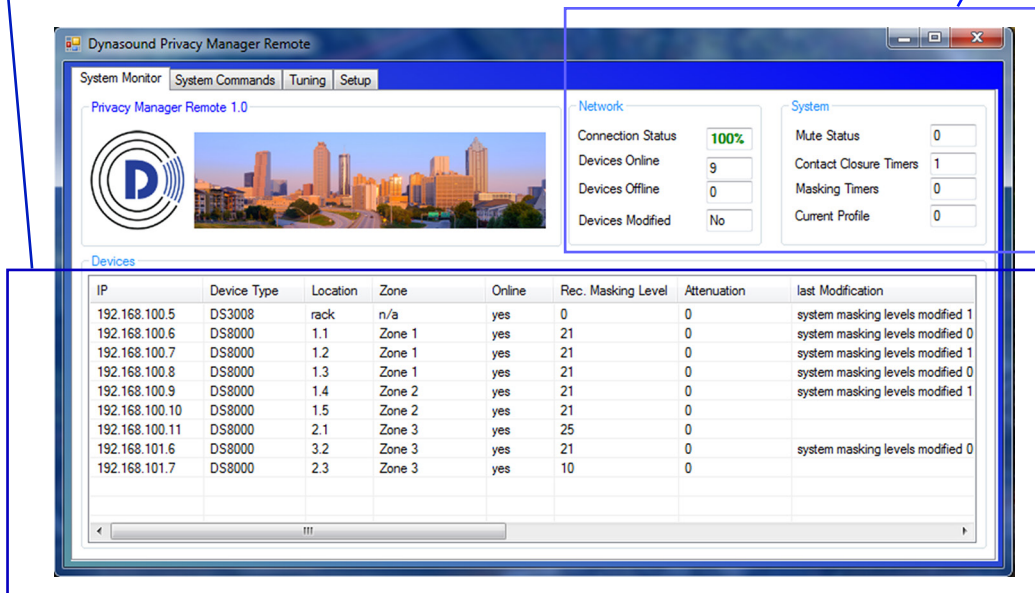
System status

Privacy Manager Remote - Monitor View

Dynasound's Privacy Manager Remote software is a sample application illustrating the use of the API SQL tables for remote control and monitoring of the soundmasking system.

Detailed per-device status including individual speaker output levels from monDevice table

Over-all system status data from monSystem table



Monitor Tables

These tables are used for read only monitoring of the sound masking system. The monDevice table contains a row for each network device. The monSystem table provides a single row containing over-all system status. ***These tables are populated when the IP address range is saved using Privacy Manager Network IP range setup.*** They are updated, by the local PC, on regular intervals.

1) monSystem table

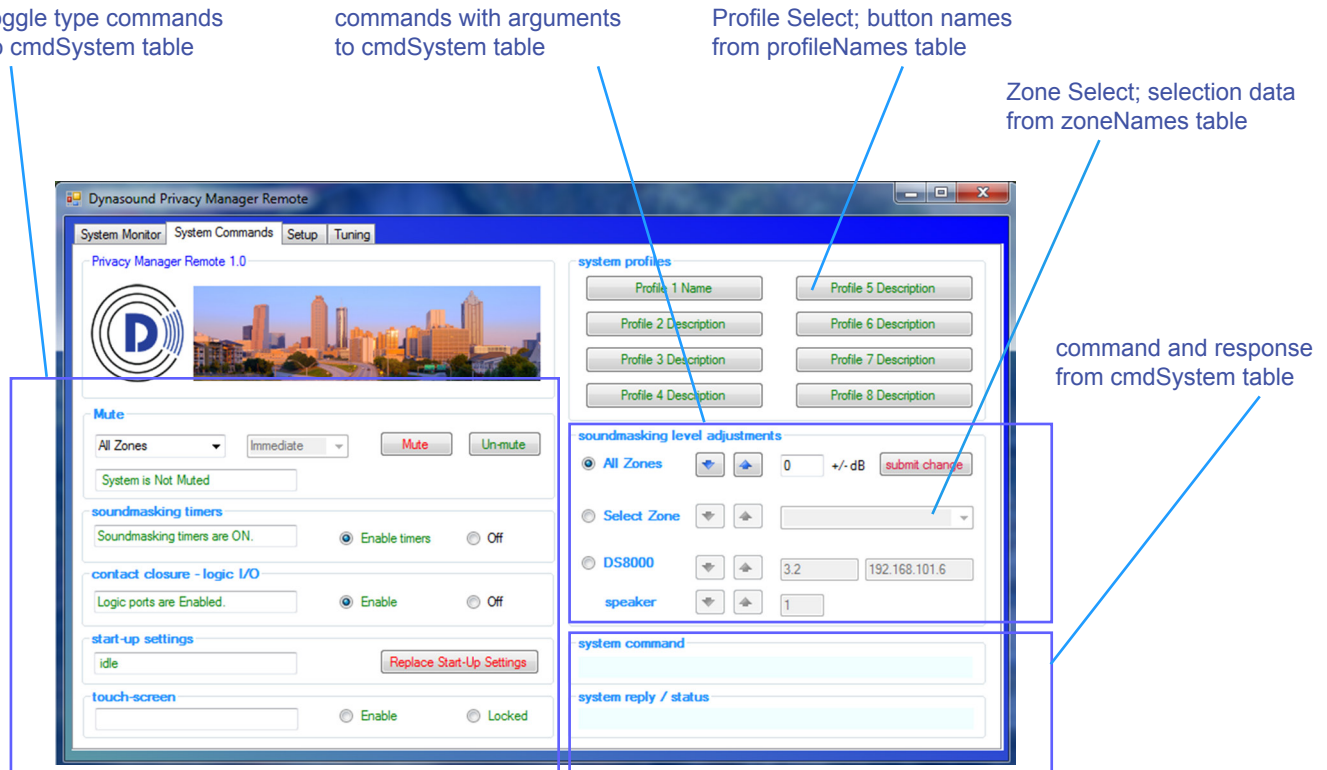
Column Name	Type	Description	Values
sysRowNumber	Integer	Primary Key – always 1	1
sysDeviceAlert	Integer	Single flag indicating system alert	1 or 0
sysDeviceOnlineQty	Integer	Quantity of devices currently on-line	numeric
sysDeviceOfflineQty	Integer	Quantity of devices off-line	numeric
sysMuteStatus	Integer	Status of system mute	1 or 0
sysModified	Integer	Status of system modifications	1 or 0
sysMaskTimerStatus	Integer	Status of masking timer process	1 or 0
sysCCTimerStatus	Integer	Status of digital IO process	1 or 0
sysCurrentProfile	Integer	Shows currently loaded Profile	1- 8
sysUpdate	date/time	shows last update to table	date/time

2) monDevice table

Column Name	Type	Description	Values
devIP	text	Primary Key – device IP	IP
devType	text	Device type (DS3008/DS8000)	device
devLocation	text	drawing/project location code	location
devZone	text	assigned Zone	zone
devOnline	Integer	online status	1 or 0
devMaskedRecLevel	Integer	recieved broadcast percentage input VU	numeric
devLastMod	text	description of last modification	text
devModified	Integer	modified (dirty) status of firmware	1 or 0
devOutput1	Integer	Shows current percentage speaker VU	1- 100
devOutput2	Integer	Shows current percentage speaker VU	1- 100
devOutput3	Integer	Shows current percentage speaker VU	1- 100
devOutput4	Integer	Shows current percentage speaker VU	1- 100
devOutput5	Integer	Shows current percentage speaker VU	1- 100
devOutput6	Integer	Shows current percentage speaker VU	1- 100
devOutput7	Integer	Shows current percentage speaker VU	1- 100
devOutput8	Integer	Shows current percentage speaker VU	1- 100
sysUpdate	date/time	shows last update to table	date/time
genA	integer	generator level	0-100
genB	integer	generator level	0-100
genC	integer	generator level	0-100
genD	integer	generator level	0-100

Privacy Manager Remote - Command View

Using the sysCommand table, the Privacy Manager Remote application provides similar functionality as the home screen of the full Privacy Manager software.



Dynasound's Privacy Manager Remote software is a sample application illustrating the use of the API tables. It can be used to test remote connections, to see command and reply strings displayed for custom programming or be used, as is, for controlling Dynasound networked systems.

See the following for descriptions and uses of the various tables.

Utility Tables

These tables are used to provide Zone and Profile information for use in custom programming interfaces. The profileNames table contains the eight descriptive names for the defined stored system profiles. The zoneNames table provides the user defines zone names. These tables are updated when a user adds edits information on the local touch screen controller.

These tables are updated when the Profile or Zone names are edited on the local Privacy Manager PC.

1) profileNames table

Column Name	Type	Description	Values
ProfileName	text	stored profile name- Primary Key	p.name
ProfileID	Integer	stored profile ID	1 - 8

2) zoneNames table

Column Name	Type	Description	Values
ZoneName	text	Zone name - Primary Key	z.name
ZoneID	integer	zone ID	1-x

Command Table

1) cmdSystem table

This table is used to issue commands to the local touch screen PC from a remote source. Changes to this table will have an immediate effect on the soundmasking system.

Column Name	Type	Description	Values
cmdRowNumber	integer	row number - Primary Key	1
cmdSysMute	integer	toggle for system mute ALL	1-0
cmdSysLockConsole	integer	toggle locks / unlocks local Privacy Mgr.	1-0
cmdSysSaveStartUp	integer	toggle for system firmware save	1-0
cmdSysMaskingTimers	integer	toggle for masking schedule timers	1-0
cmdSysCCtimers	integer	toggle for CC/ digital IO timers	1-0
cmdExecuteWithArgs	integer	toggle execute argumented command	1-0
cmdArguments	text	command arguments for above	text
cmdResponce	text	response from touch-screen to issued command	text

Command Examples - single setting with no arguments

The following processes may be executed by changing a single value in the cmdSystem table:

System Mute:

To mute the entire soundmasking system set **cmdSysMute** to 1. To unmute set to 0. (To mute a specific zone use argumented commands.)

Configuration:

To lock the local Privacy Manager controls set **cmdSysLockConsole** to 1. To unlock set to 0.

To replace the system start-up settings with the current settings set **cmdSysSaveStartUp** to 1. This can be a lengthy process. The local PC will set this value to 2 while the process is running.

To enable or disable soundmasking schedule timers set **cmdSysMaskingTimers** to 1 or 0.

To enable or disable contact closure / digital IO timers set **cmdSysCCtimers** to 1 or 0.

Command Examples - command arguments

The following processes are executed by setting **cmdExecuteWithArgs** column to 1 after setting the **cmdArguments** with one of the following arguments:

Profiles:

To load a stored system profile set **cmdArguments** to PRO1, PRO2, PRO3, PRO4, PRO5, PRO6, PRO7 or PRO8. For example the argument to load profile 2 would be "PRO2". (no quotes)
Then set **cmdExecuteWithArgs** to 1 to execute.

Soundmasking volume adjustments:

To adjust soundmasking levels in all areas set **cmdArguments** to "ALL" followed by a comma and the change amount in dB. For example the command to turn all sound masking levels up 2.5 dB would be: "ALL,2.5". To turn all sound masking levels down 3 dB would be: "ALL,-3". (no quotes)
Then set **cmdExecuteWithArgs** to 1 to execute.

To adjust soundmasking levels in a specific zone set **cmdArguments** to "ZONE" followed by a comma and the zone name followed by a comma and the change amount. For example the command to turn sound masking levels up 2.5 dB in Zone 1 would be: "ZONE,Zone1,2.5". To turn all sound masking levels down 3 dB would be: "ZONE,Zone1,-3". (no quotes)
Then set **cmdExecuteWithArgs** to 1 to execute.

To adjust soundmasking levels in a specific speaker set **cmdArguments** to "DS8000" followed by a comma and the IP address followed by a comma and the speaker number (1-8) followed by a comma and the change amount. For example the command to turn sound masking levels up 2.5 dB for speaker 2 on DS8000 192.168.100.77 would be: "DS8000,192.168.100.77,2, 2.5". To turn all sound masking levels down 3 dB would be: "DS8000,192.168.100.77,2, -3". (no quotes)
Then set **cmdExecuteWithArgs** to 1 to execute.

Change values used for soundmasking level adjustments must be between +12 and -100 with .5 increments.

Zone Mute:

To mute soundmasking levels in a specific zone set **cmdArguments** to "MZONE" followed by a comma and the zone name followed by a comma and a value of -100. For example the command to mute sound masking levels in Zone 1 would be: "MZONE,Zone1,-100". To unmute sound masking levels: "MZONE,Zone1,0". (no quotes)
Then set **cmdExecuteWithArgs** to 1 to execute.

SQL Express set-up

Install SQL Express and Management Studio on the local touch screen PC.

Create and document SA (system administrator) password

Use Windows and SQL Server security/Login modes.

Allow remote connections.

Under Security create Login named admin. Create and document login password. Disable user must change password at login.

Create database named dynasound.

Under dynasound database add User admin and set to membership to db_owner

Using SQL Configuration Manager Enable TCP/IP

Using SQL Configuration Manager set the 2nd NIC to the correct IP and subnet. Set enabled to true.

Under IPAll set TCP Dynamic ports to blank. Set TCP port to 1433.

Using SQL Import/Export utility import access database to dynasound database.

Go to Windows firewall setup and select advanced settings. Add new inbound port rule. Select port,TCP, specific port 1433, allow connection, Domain and Private, named SQL Server Port 1433.

In the local Privacy Manager software setup enable monitor tables and enable remote control tables.

Tech support

For additional support:

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