

SCANNERSTATION

YOU ARE IN CONTROL

Information and screen shots (1.0.1 – April '08)

**This draft document contains information about ScannerStation for the BCD996T/BCT15 and is released for information only.
Not all options shown in this document are available yet and may require an additional software license.**

- 1: General Information
- 2: remoteserver setup (optional)
- 3: ScannerStation software setup parameters
- 4: Using ScannerStation client software
- 5: Quickkey name editor
- 6: Audio Player
- 7: Screenshots
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1: General Information and Introduction:

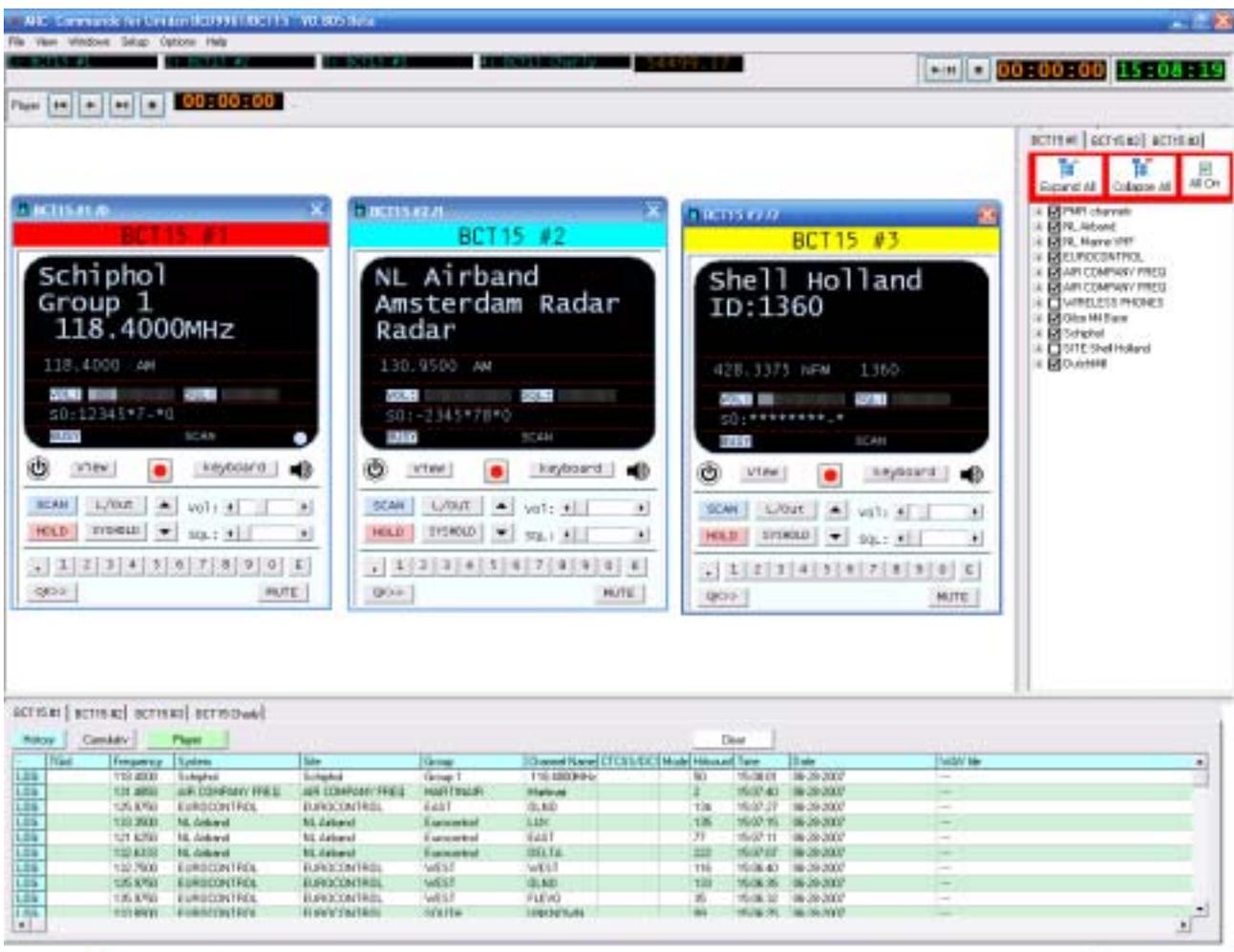
ScannerStation is a new modular software solution for professional users that want to monitor scanner radio communications. ScannerStation can control up to 8 scanners simultaneously.

These scanners can also be remotely located using the optional ScannerStation server software.

Enhanced history logging is available to trace radio communication. Audio can be recorded using the optional recording module. Instant playback is also available.

To overcome the complex operation of the Uniden BCD996T / BCT15 scanners, ScannerStation uses a new revolutionary system where name tags are assigned to the so called quickkeys.

This makes switching systems on and off by the operator very easy. Also tactical scanning options are available. These tactical scanning options are preprogrammed combinations of systems and are enabled by a single mouse click. As events change the tactical scanning options are used to enable and disable systems.



1.1 Important information:

Before you can use the system/group tags in ScannerStation you must follow this procedure:

- Program the groups/systems using ARC15 / ARC996, and make sure that every system and group is assigned a unique system quickkey and group quickkey.
- Systems that are NOT assigned a quickkey can not be switched on/off using the tactical options in ScannerStation
- When programming is finished start the System and Group Quickkey Name editor.
- In the editor select 'read data' this will read the current system quickkey names and related information from the scanner, if you like you can now edit the system and group names and add 'hotlinks' to other applications.
- Save the data in a 'sqn' file
- If you use multiple scanners and each scanner has different systems you must create a sqn file for every scanner, the sqn file is used by ScannerStation as a lookup table for the system names and quickkey assignments

In ScannerStation this system quickkey name file must be linked to the scanner:

- Start ScannerStation and select SETUP _ SCANNER SETTINGS
- Click the Quickkey List tab and per scanner select the SQN file that belongs to that scanner.

Next ScannerStation must read an index list from the scanner. This index list is used to toggle systems/groups on/off. You only need to read this list if systems/groups were added or deleted from the scanner or this is the first time you start using ScannerStation.

- Start ScannerStation
- Select File _ New Session. From the list select the scanner you want to 'sync' and press the 'power' button, the software will now connect to that scanner.
- Use the VIEW button to expand the current view until the button 'Unlock All' is shown.
- Press 'Unlock All' this will unlock all systems/groups and update the reference list in ScannerStation. When this is done the software tactical options are ready for use.

IMPORTANT:

The reference list must be updated when:

- Systems/groups are deleted from the scanner
- Systems/groups are added to the scanner
- When the scanner is assigned a different index position in ScannerStation.

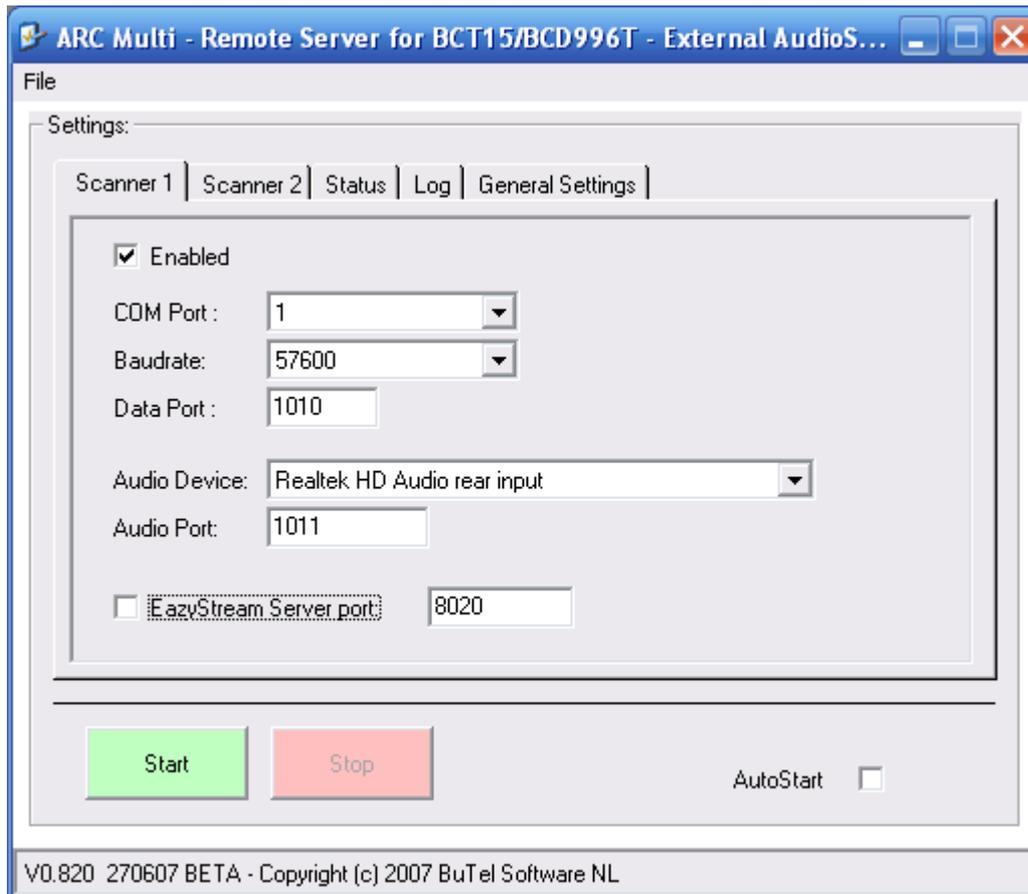
2 Server Setup (For Remote Installations Only):

The server software must be installed at a remote scanner location with a BCT15 or BCD996T scanner.

The setup is straightforward, select comport / baudrate / soundcard and then press start. Also select 2 different portnumbers for data transfer.

IMPORTANT: the client software must use the same port numbers. If there are more scanners connected to the server make sure that all portnumbers are different!

In this version only one client can connect to the server at a time.

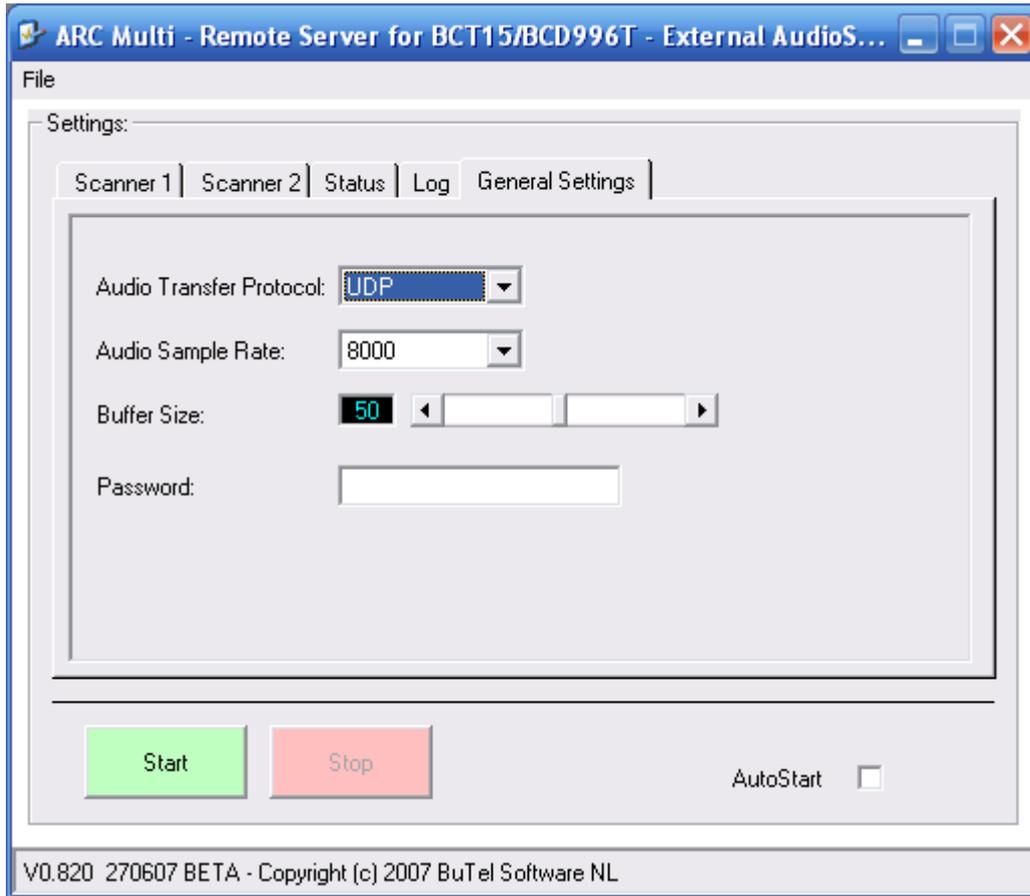


This version of ScannerStation server supports two scanners. Please note that per scanner you will need a soundcard. Inexpensive USB soundcards work well.

The Eazystream server port option is NOT used yet.

IP/DNS information: the PC where the server software is located must have a fixed IP address. If the PC does not have a fixed IP address a free DNS program must be installed and used. This software is available at www.no-ip.com. IP addresses in the 192.168.X.X range can only be used in LOCAL networks. They cannot be used when DSL/Cable etc is used. Consult your network administrator for information how to obtain a fixed IP address.

2.1 Server General Settings:



Audio Transfer protocol must be set to UDP.

Audio Sample Rate is set to 8000.

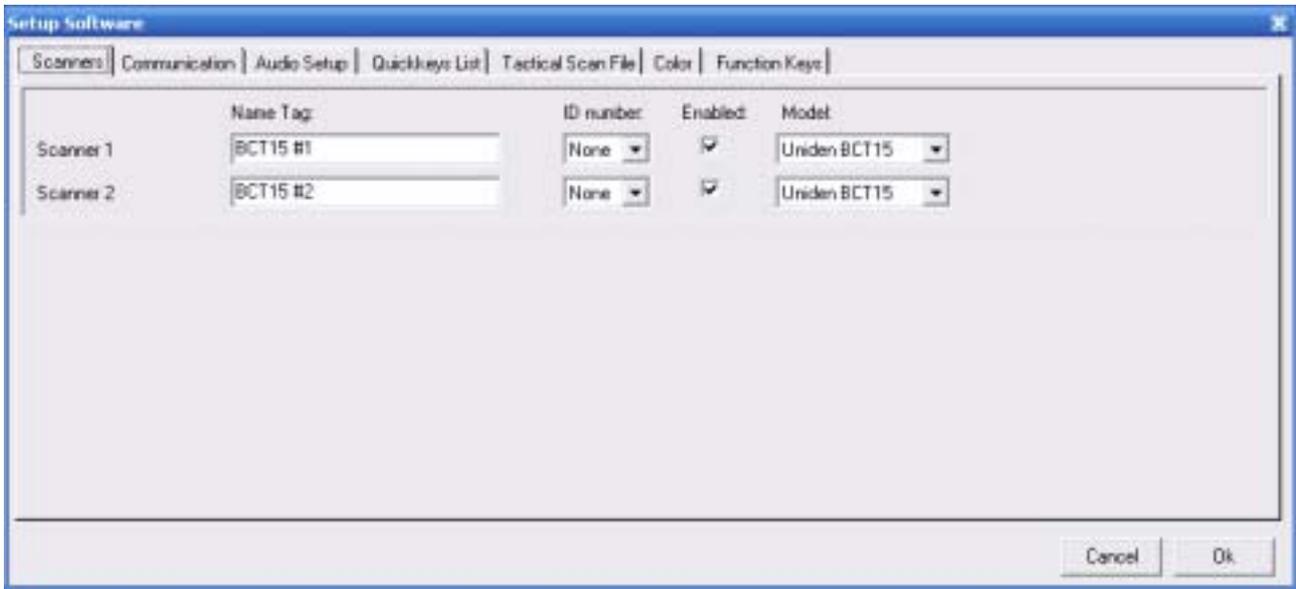
Buffer is set to 50. If the network is very stable and enough bandwidth is available this value can be lowered to decrease audio latency.

Password: not used

3 Client Setup:

The client connects to the server. After installing the client you must setup the client. Start the software and select Setup. Now you can enter the IP/DNS portnumber and other settings for up to four different remote scanners. Also in this section you can select a 'Quickkey name file' (see below). Make sure that you tick the enabled option otherwise the scanner will not show up in the client.

3.1 Client Setup screen 1:



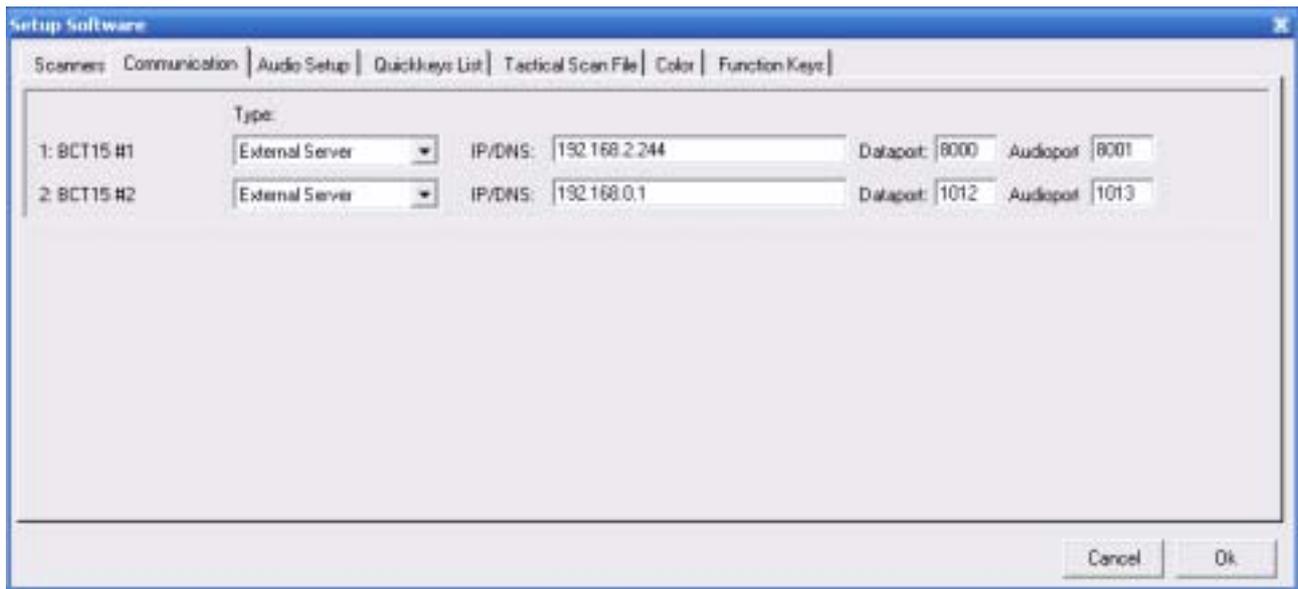
Name Tag: enter a unique name tag, this name is used in the software and is shown in the control and log tabs.

ID number: not used

Enabled: enable/disable scanner

Model: select BCD996T or BCT15, this setting is used to display different keyboard layouts.

3.2 Communication setup:



SCANNER OVER IP:

If the client connects to a remote server set the connection type to 'External Server'

IP/DNS: enter the IP address or DNS from the ScannerOverIP server.

Data/Audioport: enter the port numbers used for network communication. These numbers must match the settings at the server software. Every scanner must use unique port numbers!

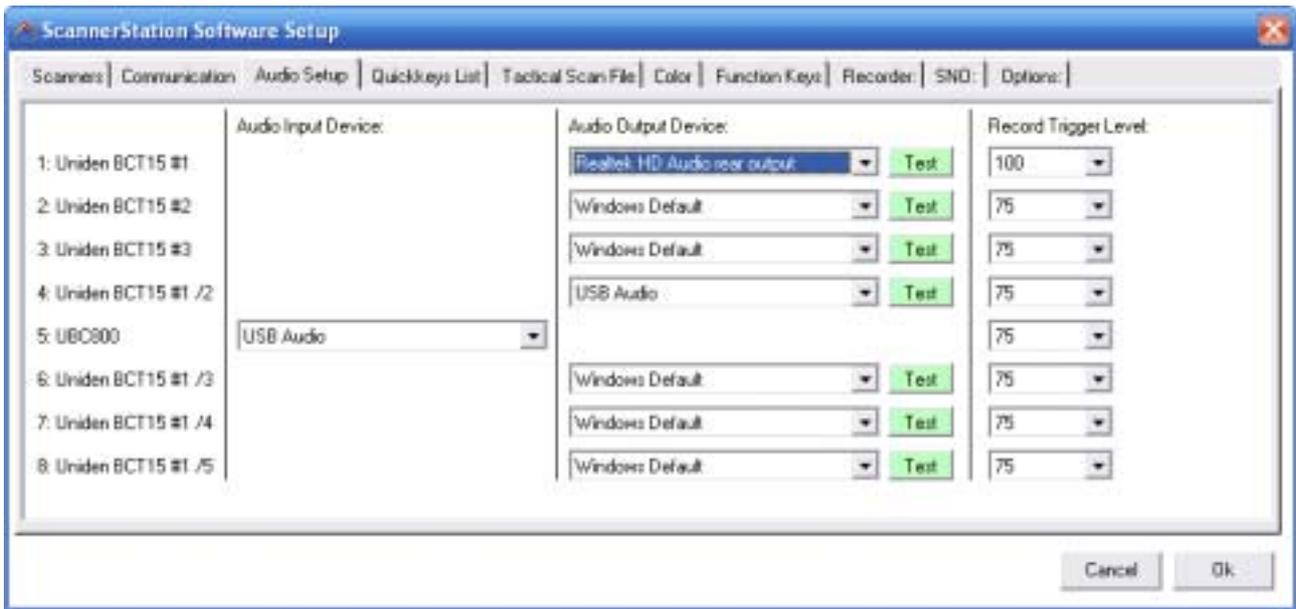
The server software is optional.

LOCAL SCANNER:

To connect to a local scanner using a USB or serial port set type to 'serial/USB port' and select the comport and baudrate.

USB information: The USB driver emulates a serial com port. See the PC device/hardware manager to check the assigned com port number.

3.3 Audio Setup:



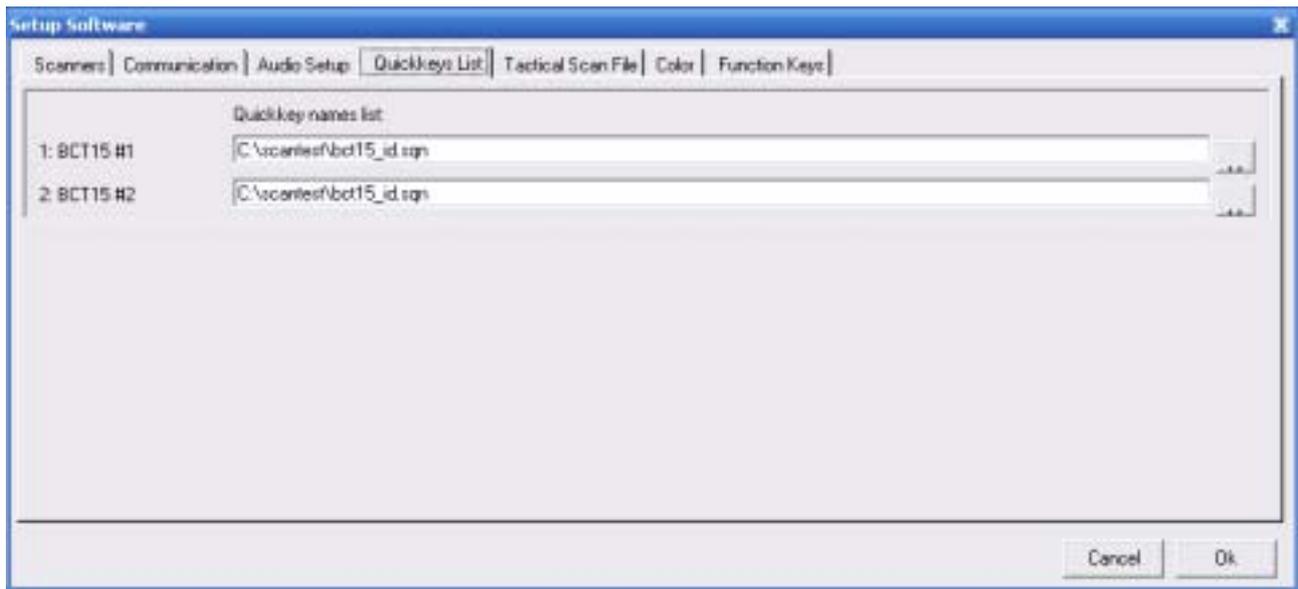
(Recording is optional)

Per local scanner you can define the audio soundcard that is used for audio recording.

Per remote scanner you can define the audio soundcard that is used for audio recording.

Record Trigger: the recorder in ScannerStation is 'VOX' triggered. The trigger level must be adjusted so the recorder starts when there is audio.

3.4 Quickkey lists:



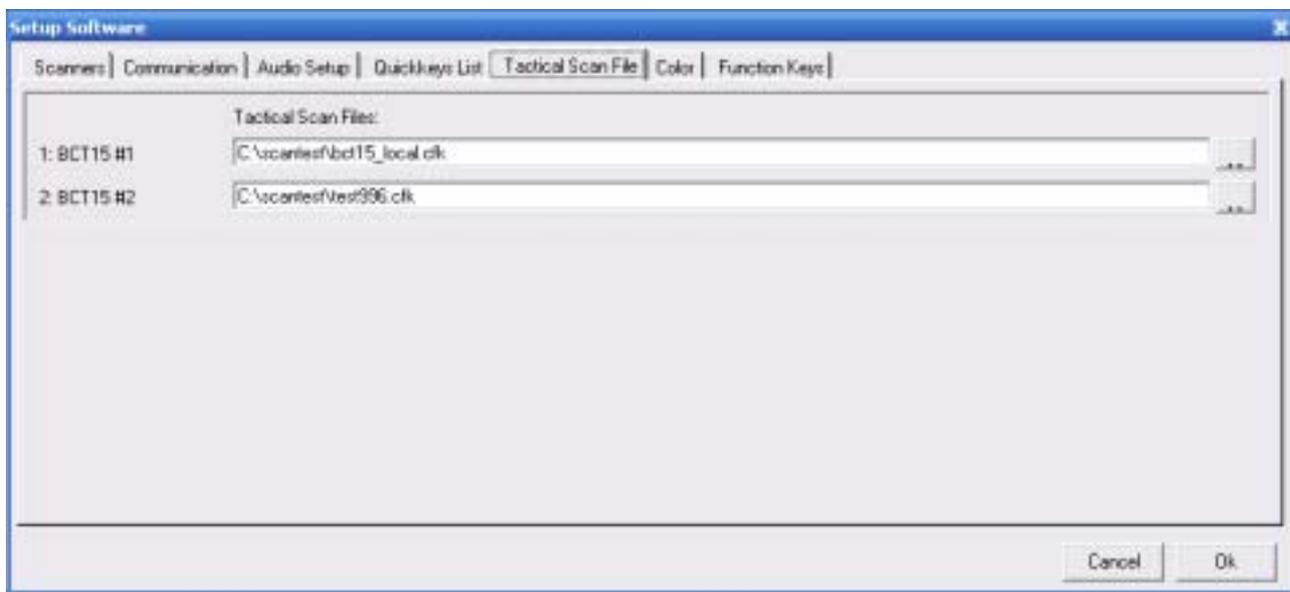
Optional:

The client software needs a reference list to switch groups and systems on/off. Select the Quickkey list name file that was created with the 'System and Group name Editor'.

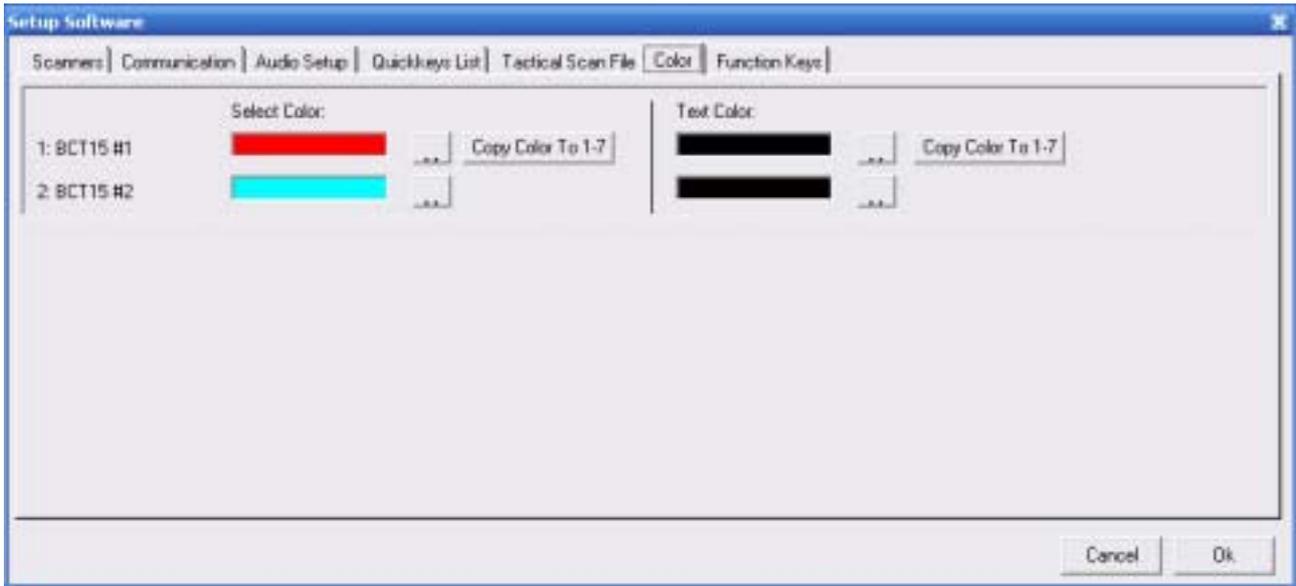
3.5 Soip Server: N/A

3.6 Tactical Scan File:

This option requires an additional software license.



3.7 Color settings:

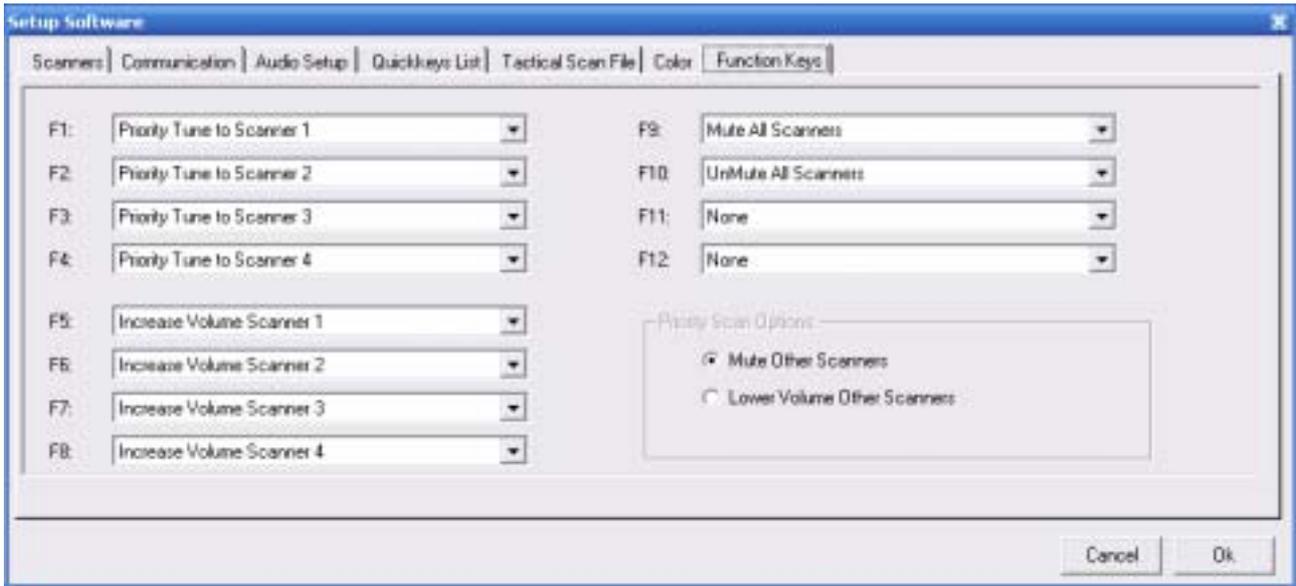


Every scanner can be assigned it's own color. Select per scanner a background and text color.

For example if one scanner is dedicated to fire department communications you select red as background color.

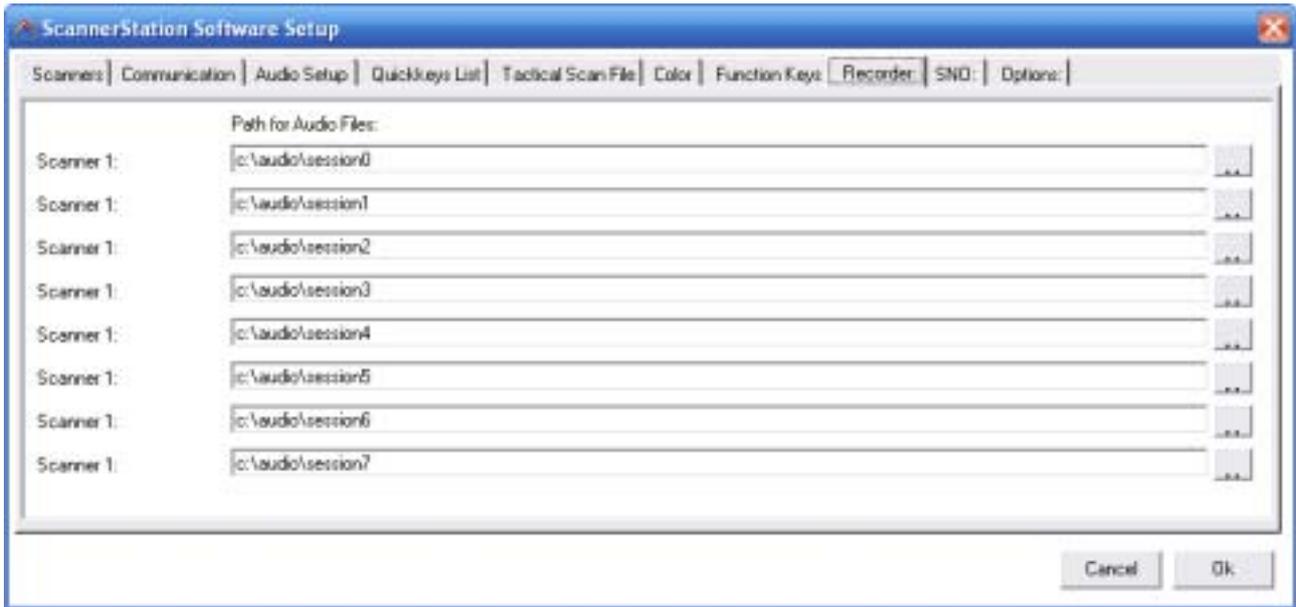
Copy Color will set the same color for all available scanners.

3.8: Function keys:



Special functions can be assigned to F1-F12 function keys.

3.9 recorder:

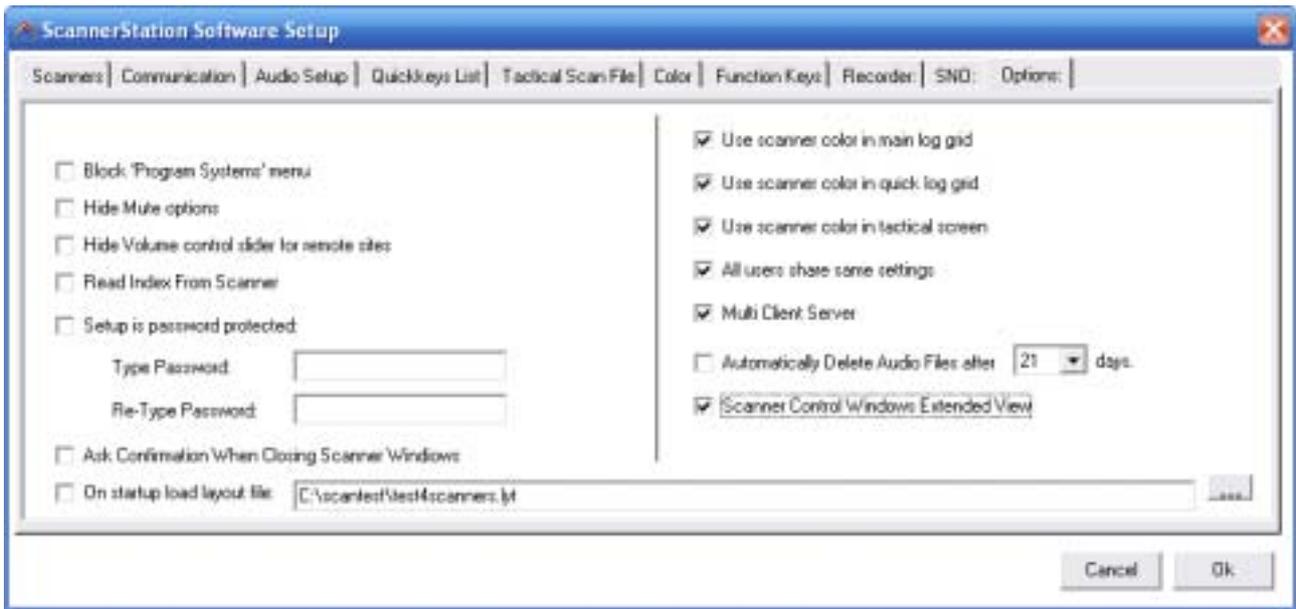


Select the default path where the audio files are stored. The software automatically creates folder per date / hour.

3.10 SNO:

Enter the serial numbers. This setting is stored for information only.

3.11 Options:



Block Program Systems menu: When this option is selected you can not enter the program systems menu and accidentally change system settings in the scanner.

Hide Mute/Volume: if a remote server is used and the scanners Record out is used instead of the speaker output you can select these option to hide the volume and mute buttons since they do not work when the Record output is used.

Tip: To mute the audio of a remote installed scanner press the MENU button on the keyboard.

Read Index: for tactical systems/group switching the software must read index parameters from the scanner. Select this option to automatically read these index parameters when communication starts. If you only use remote scanner you can deselect this option.

Setup Password: you can block access to this setup section by entering a password

Ask Confirmation: when this option is selected you must confirm when you want to close a scanner window.

Multi client server: select this option when Server supports multiple clients

All users share settings: select this option to share the same settings for all users.

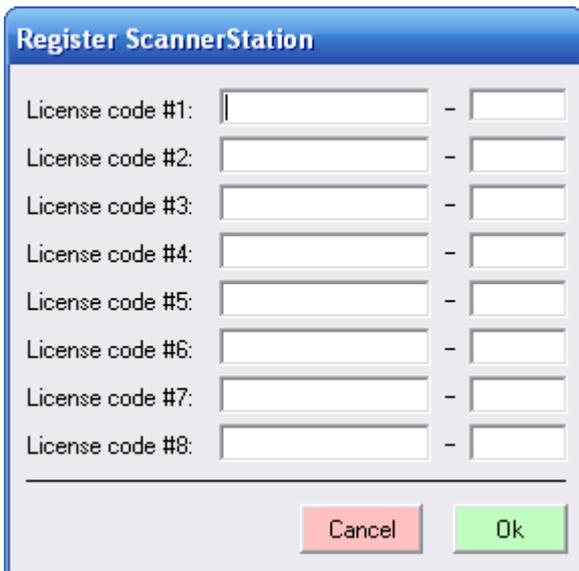
Extended View: select to enable extended view mode of the scanner windows

3.12 License information:

To make full use of the ScannerStation software license codes must be entered in the software. Licenses are *per scanner*, every scanner requires a unique license code based on the scanners serial number.

Without license information the software works in demo mode and scanner(s) can only be controlled for 30 minutes per session.

Also depending on the license options like remoteserver, recording, tactical scanning etc are enabled.



The image shows a dialog box titled "Register ScannerStation". It contains eight rows, each with a label "License code #1:" through "License code #8:" followed by a text input field, a hyphen, and a smaller text input field. At the bottom of the dialog, there are two buttons: "Cancel" (red) and "Ok" (green).

When purchasing a ScannerStation license include the scanners serial number found at the back of the scanner.

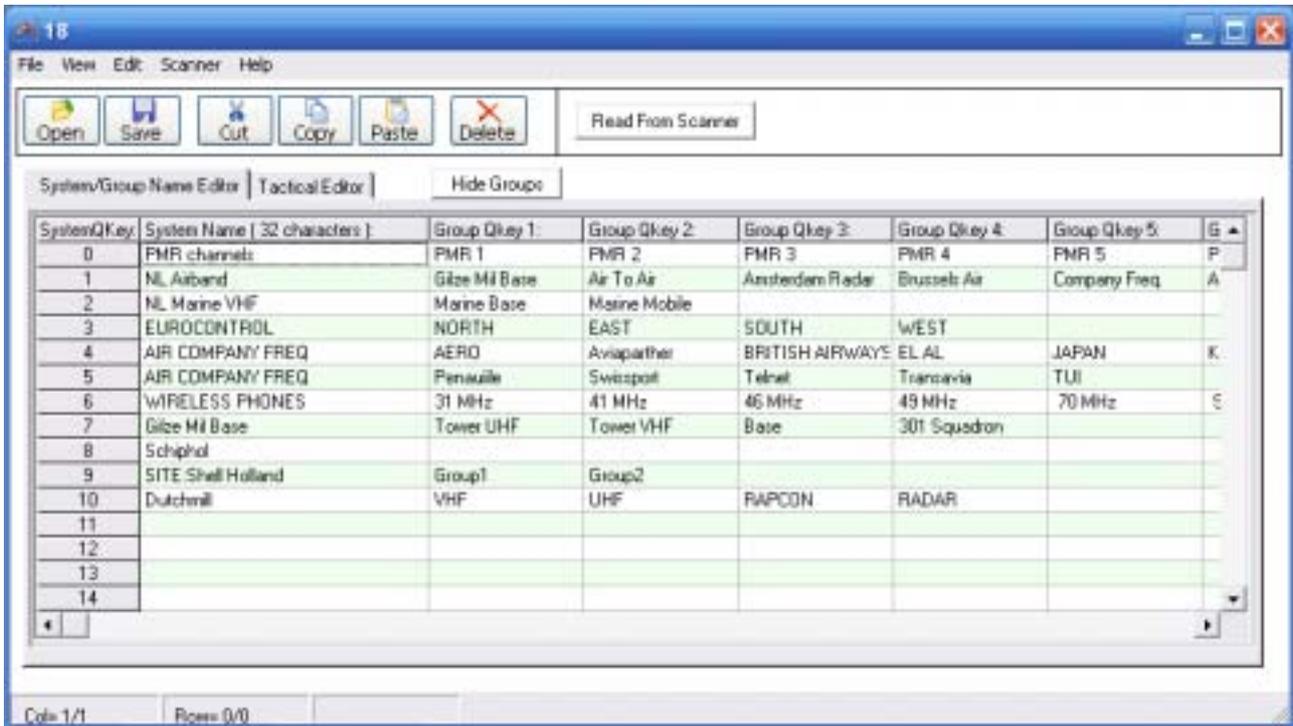
BCT15 serial numbers start with 336Z

BCD996T serial numbers start with 335Z.

4.1 Quickkey name editor:

For 'focus' and or tactical scanning you must create a system quickkey name file. This is basically a lookup list for the ScannerStation client software and the main advantage is that instead of quickkey numbers you see names.

To use this option it is very important that every system in the scanner is assigned to a unique System and group quickkey!



Start the System/Group name editor.

You can now assign names to the different system/group quickkey combinations.

If there is already data programmed in your scanner select 'READ FROM SCANNER', this will read the current configuration.

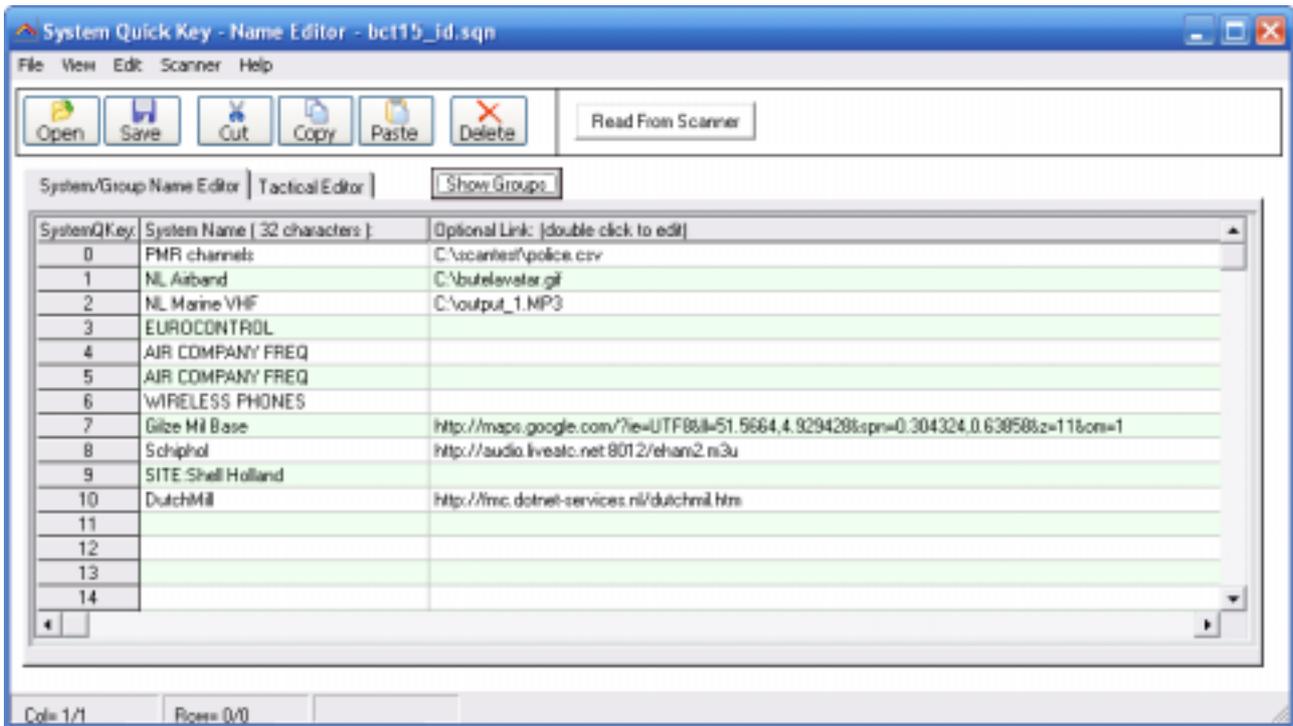
Make sure to save the file!

IMPORTANT: Each system in the BCT15/BCD996 must be assigned a UNIQUE system quickkey number otherwise the client cannot properly switch systems on/off!

In the editor you can use CUT/COPY/PASTE or directly type in data. A double click in a field will toggle the EDIT mode.

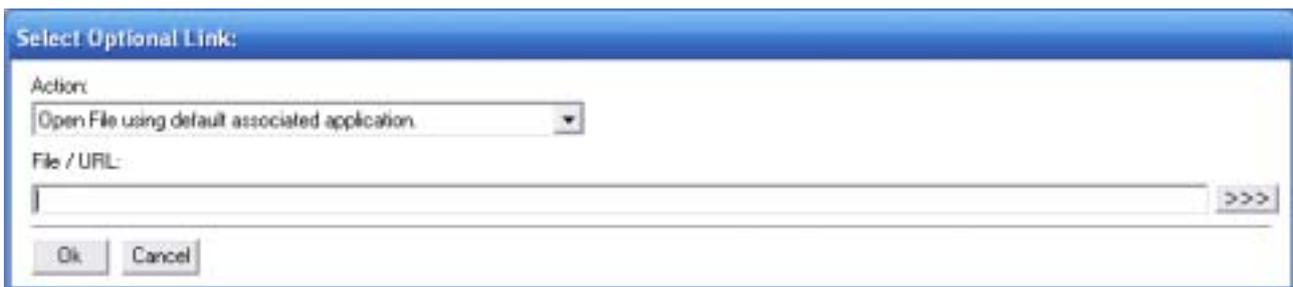
4.2 Link Setup:

A unique option in ScannerStation is the external links. From the client you can open a web page, open pictures, documents, excel spreadsheets or even open a media player stream.



To setup external links:

- Click 'HIDE Groups'. The Optional link column is now visible.
- Double click the link field to start the editor



Set Action to ' Open File Using default associated application'
This will use the Windows predefined list to open files.

In File/URL enter the file/URL to open or click >>> to browse for a file.

4.3 Tactical Scanning Setup:

Tactical scanning is a very powerful option to scan pre defined combinations of systems. Please see the sample below.

IMPORTANT: for tactical scanning every system/group must be assigned to a unique system/group quickkey combination.

Sample:

In this sample we programmed Airport, Highway patrol, FD and PD frequencies plus the common used FRS and GMRS frequencies.

The FD and PD in this region are divided in 4 divisions: North, East, South and West.

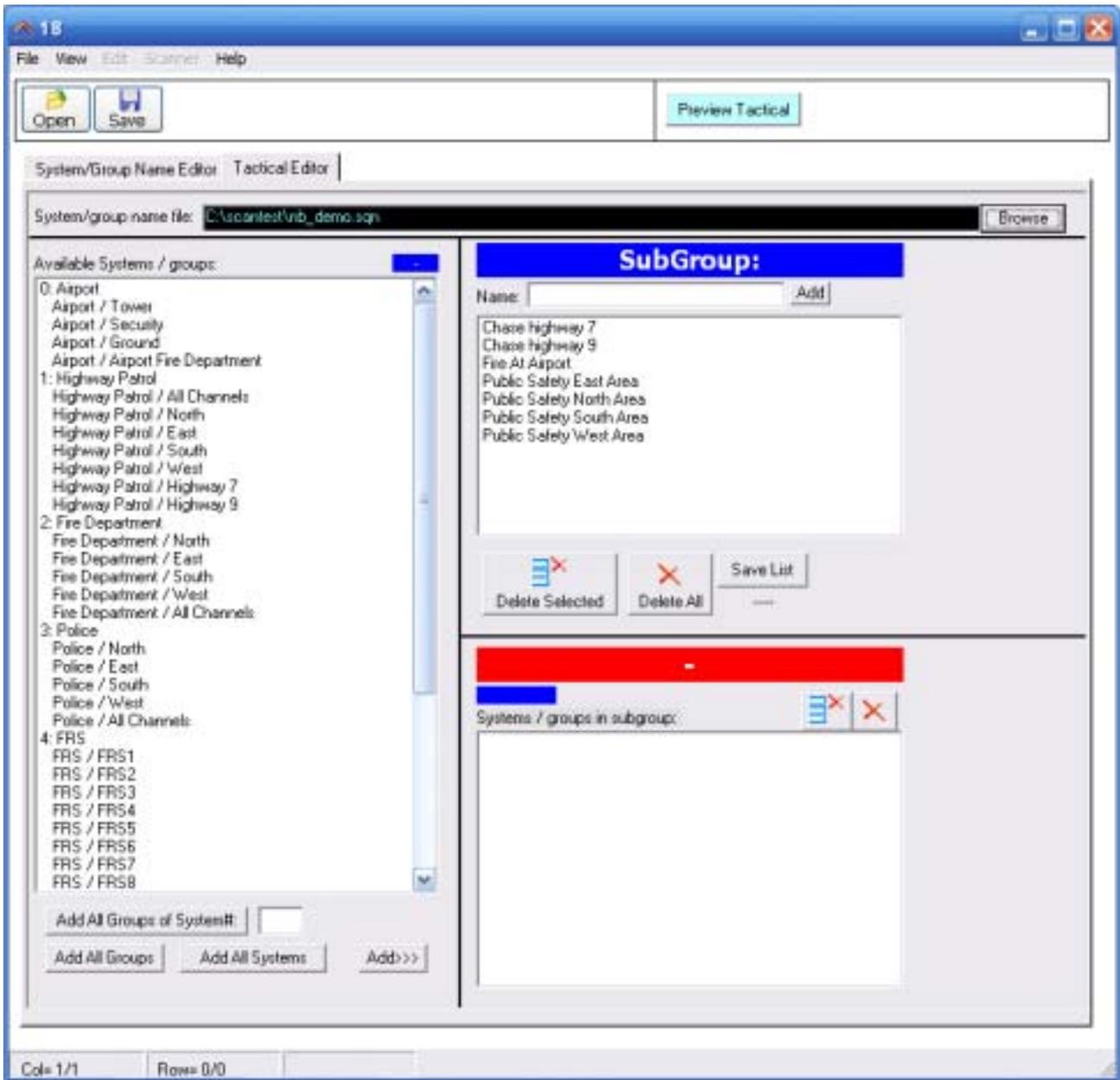
This information is stored in a SQN file.

The screenshot shows a software window titled 'System/Group Name Editor | Tactical Editor'. It contains a table with the following data:

System/Key	System Name (32 characters)	Group Key 1	Group Key 2	Group Key 3	Group Key 4	Group Key 5	Group Key 6	Group Key 7	Group Key 8	Group Key 9	Group Key 10
0	Airport	Local	Security	General	Airport Fire Department						
1	Highway Patrol	All Channels	North	East	South	West	Highway 7	Highway 9			
2	Fire Department	North	East	South	West	All Channels					
3	Police	North	East	South	West	All Channels					
4	FRS	FRS1	FRS2	FRS3	FRS4	FRS5	FRS6	FRS7	FRS8	FRS9	FRS10
5	FRS	FRS11	FRS12	FRS13	FRS14						
6	GMRS	GMRS1	GMRS2	GMRS3	GMRS4	GMRS5	GMRS6	GMRS7	GMRS8		
7											
8											
9											
10											
11											
12											

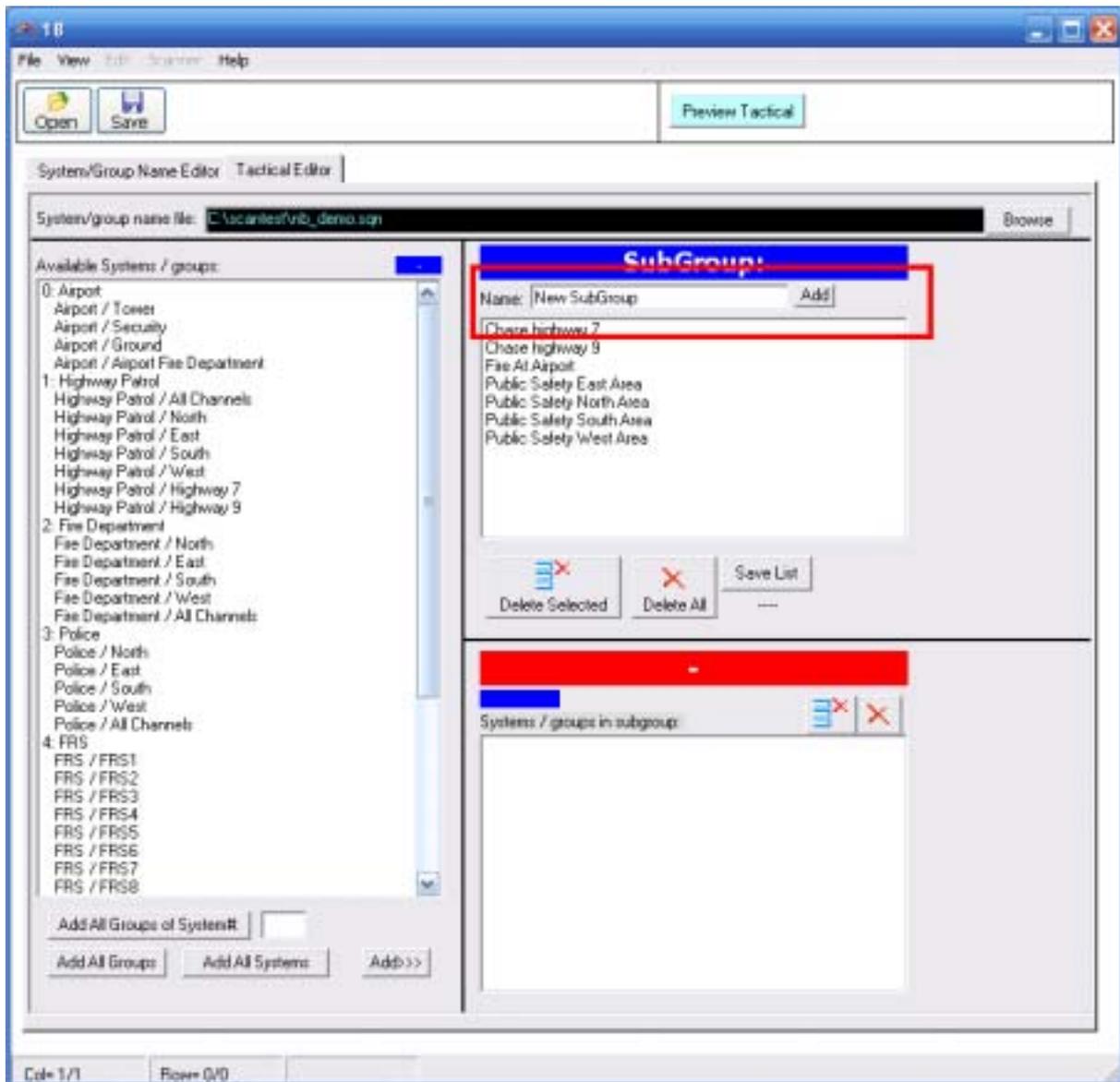
For tactical scanning we are going to combine these systems/groups.

Click the Tactical Editor TAB and click the browse button and then select the SQN file:



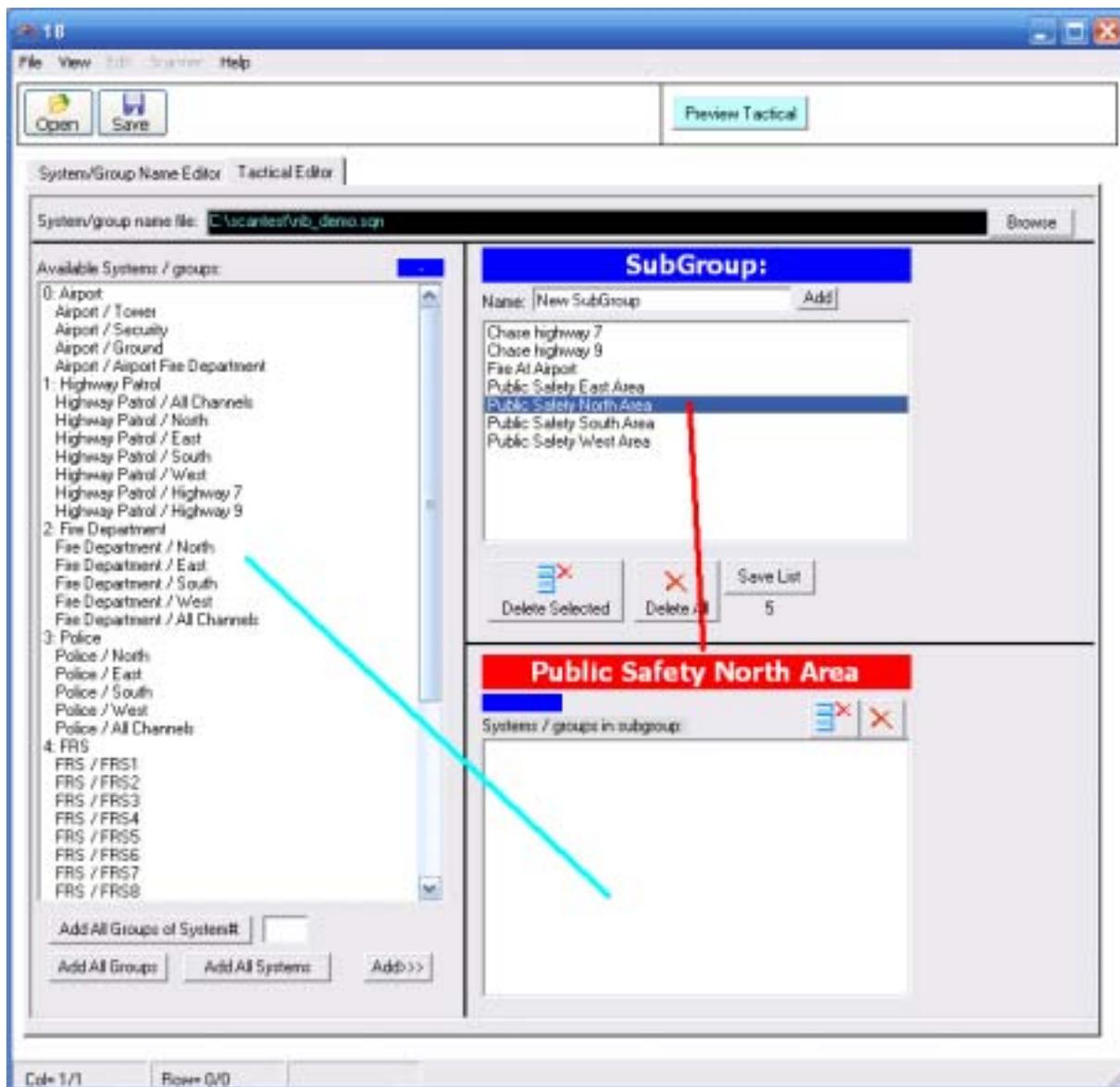
On the left side of the screen you see all the systems and groups that are defined in the SQN file. We can now 'combine' these systems into so called 'SubGroups'.

You can now add 'subgroups' by entering the name of the subgroup and then press ADD or hit enter:



You can always add or remove subgroups. Use the 'delete selected' button to delete subgroups from the list.

Click on a subgroup to add systems/groups to that subgroup, in this sample we clicked 'Public Safety North Area':



You can now add systems/groups:

- use drag and drop
- highlight the systems/groups in the left list then click Add
- double click an item in the left list.

Repeat this process for all the Subgroup. You can 'preview' the tactical window by clicking 'Preview Tactical' button.

When you are finished save the tactical settings (CFK file). In the ScannerStation client you select this file (Software setup, Tactical File TAB).

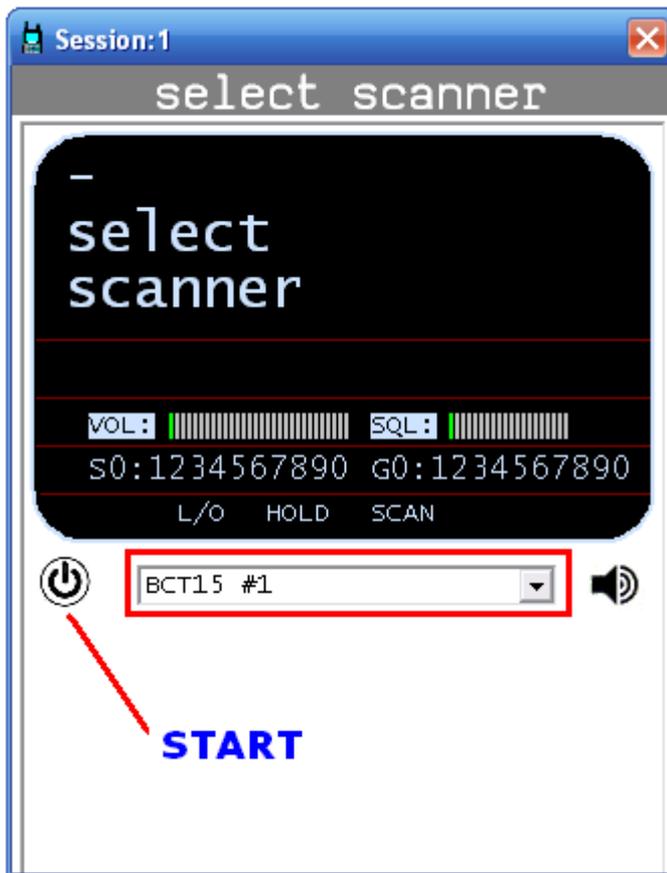
If you want to make changes to existing tactical scan files use File _ Open or the Open icon to load the existing CFK file.

5.1 How to use the ScannerStation client:



Start the ScannerStation client. In the main window you can see the scanner(s) that are defined in the software or double click the scanner label.

To open a scanner select File _ New:



Now select the scanner from the dropdown list and click the power/start button and you should now see data. Within 2-5 seconds you should receive audio.

To see quickkey assignment click the 'VIEW' button. Now you see the quickkeys and names, by double clicking the green/red area you tune the scanner to that system.



This version has 2 keyboard layouts. Double click the keyboard button to toggle.

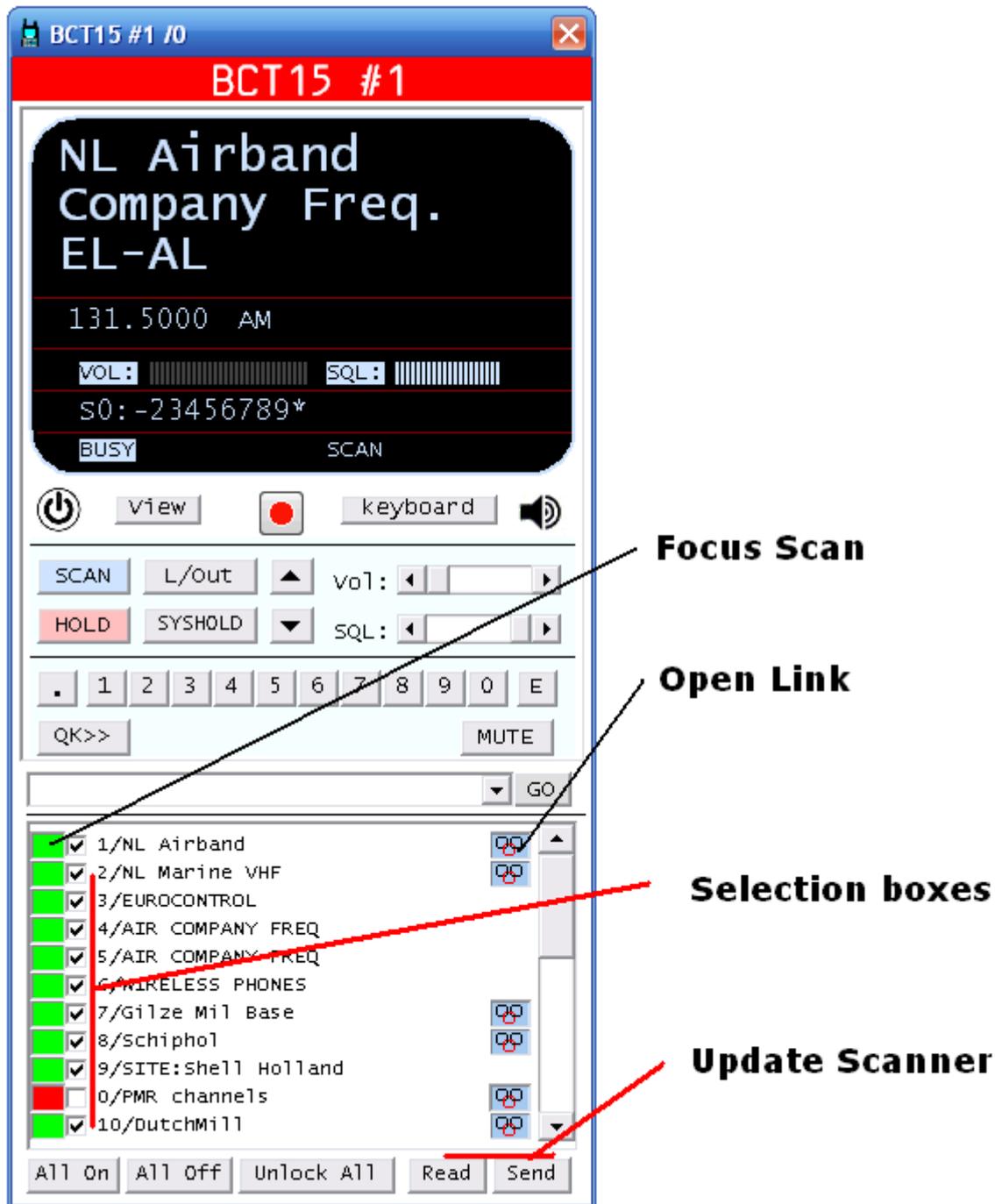


A three line display showing more information than is available on the scanner itself which only provides two lines. The software shows System, Group and Channel name. Additional information such as frequency, transmission mode and sub-audible tone is also shown.

5.2 Switching Systems/groups on and off in ScannerStation:

IMPORTANT: to use these options a 'SQN' must be loaded. SQN files are created using the system and group quickkey editor (see section 4).

There are several ways to switch systems and groups on and off:



ALSO SEE SECTION 1.1 FOR IMPORANT INFORMATION

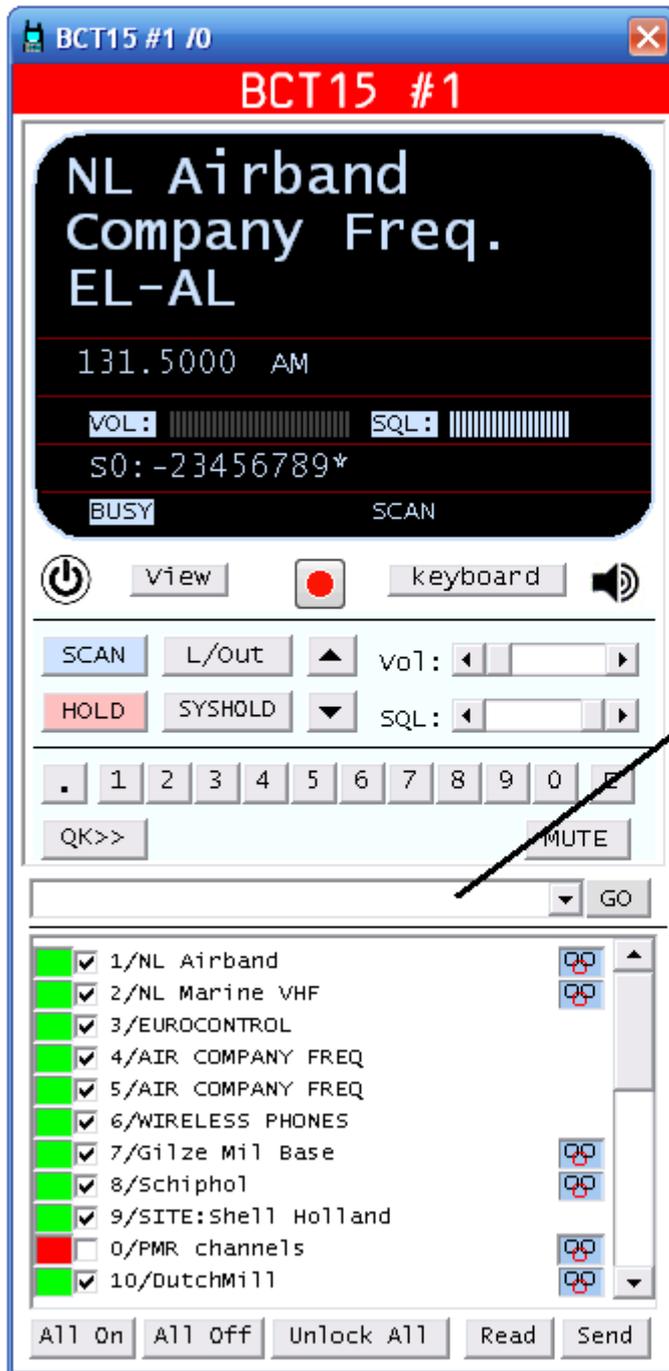
FOCUS SCAN: double click the green/red button to enable the selected system and disable all other systems

SYSTEM selection: use check boxes to select systems you want to monitor and then use 'SEND' to update the scanner

OPEN LINK: In the system name editor you can assign a link to a system. This can be a website, picture, excel sheet, document, etc. If the link icon is shown, double click to open the related link.

5.3 Selecting a single system or group:

All systems and groups are also shown in the drop-down list, select the system or group and press GO. This will focus scanning on one system or group. When you select a system all the groups within that system (that are not locked out) are enabled.



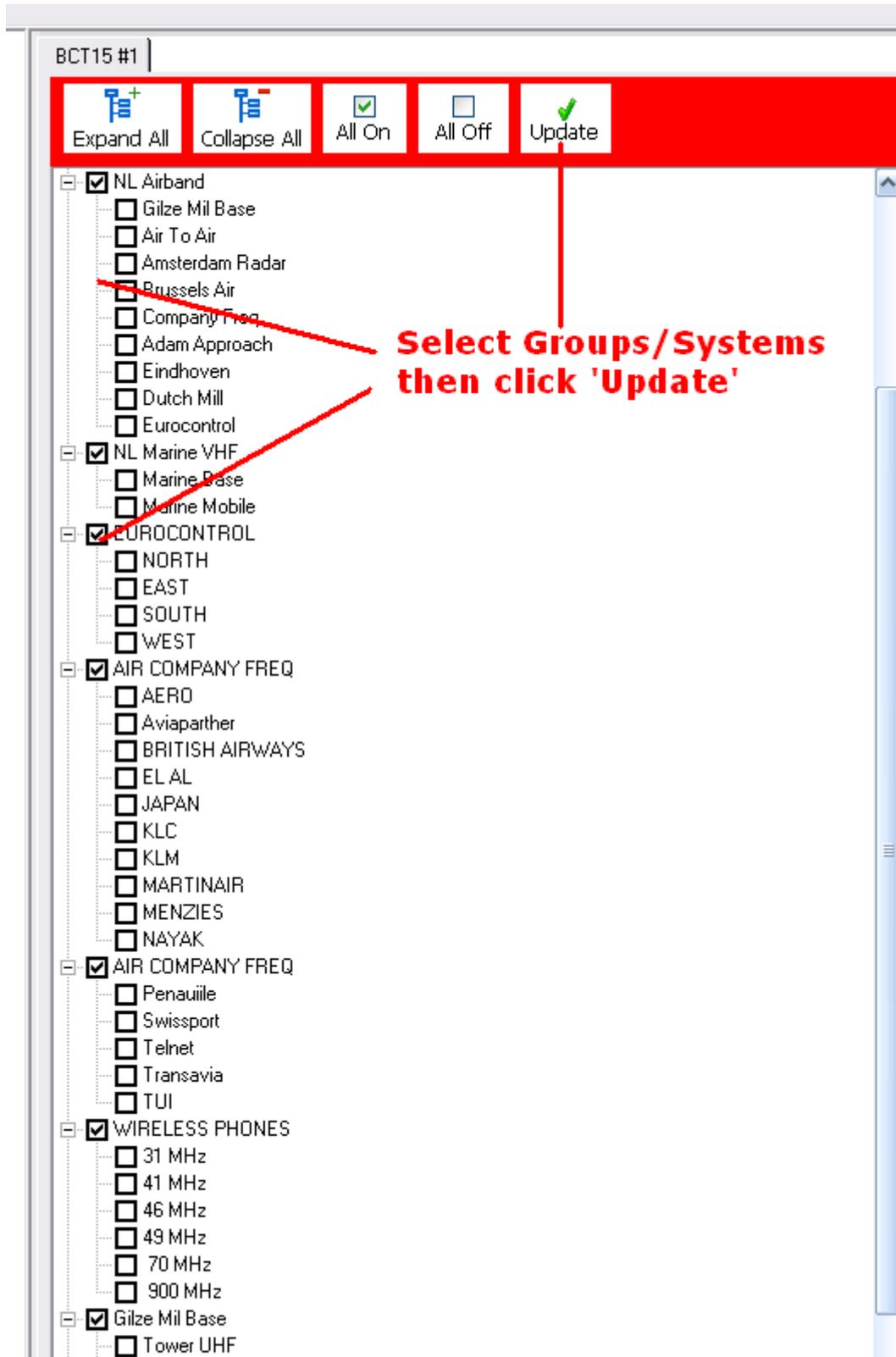
Select single group or systems

ALSO SEE SECTION 1.1 FOR IMPORANT INFORMATION

5.4 Using the treeview:

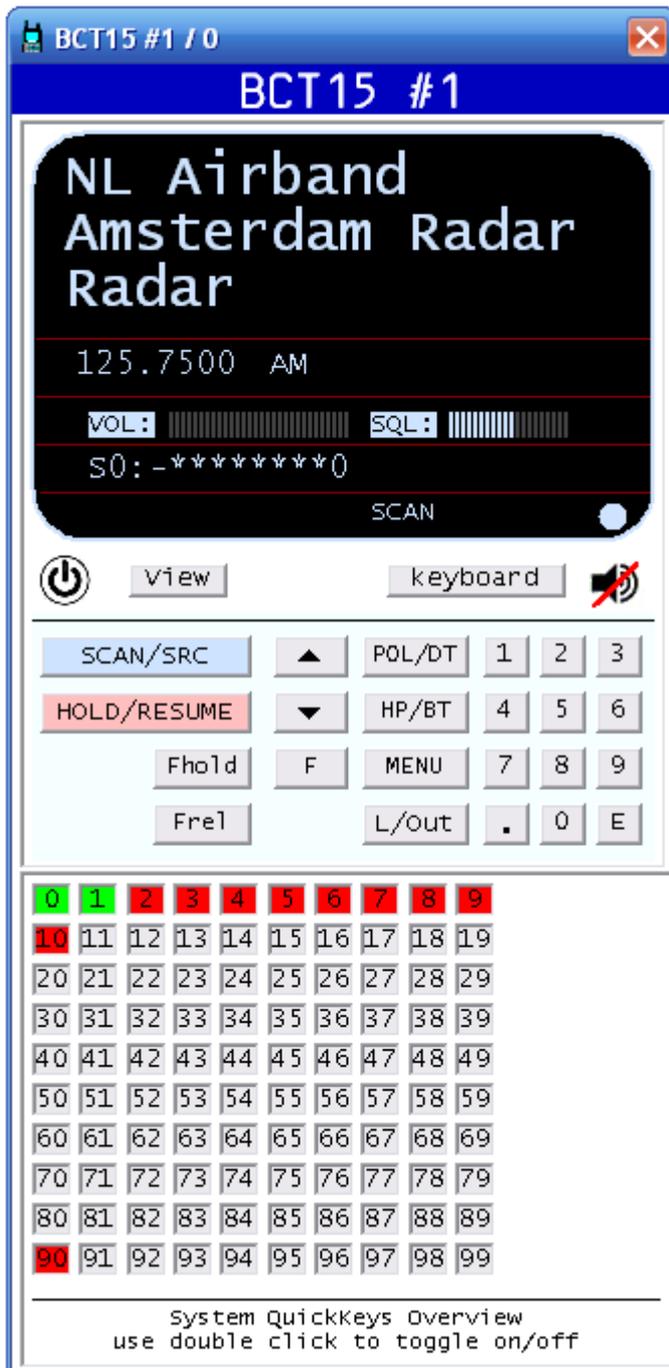
In the main screen select VIEW _ SYSTEM TREEVIEW. This will show, for each scanner, a tab with a treeview of all systems and groups. Use Expand/Collapse buttons to select systems and groups that you want to activate(monitor) or to de-activate. Use UPDATE to send your selections to the scanner:

A DOUBLE CLICK will tune the scanner to the selected system or group.



5.5 Switching System Quickkeys On/Off:

Use the VIEW button until the system quickkey overview is shown:



GREEN: System Quickkey is enabled and active

RED: System quickkey is disabled.

GREY: System quickkey is not assigned to any system

Double click the system quickkey number to toggle quickkey on/off.

READ: press the read button to update the status of the system quickkeys.

5.6 Using FUNCTION buttons:

In ScannerStation special functions can be assigned to the F1-F12 buttons.

The following options are available:

PRIORITY TUNE: This option will increase the volume of the selected scanner while muting or decreasing the volume of all other scanners. Press this multiple times to quickly increase the volume of the selected scanner.

PRIORITY TUNE + HOLD: This option will, for the selected scanner, stop and hold on the active channel or talkgroup and mute or decrease the volume of all other scanners.

MUTE ALL: Mute All scanners

UNMUTE ALL: unmute all scanners. When using PRIORITY TUNE it is advised to assign this option to one of the Function buttons to restore audio.

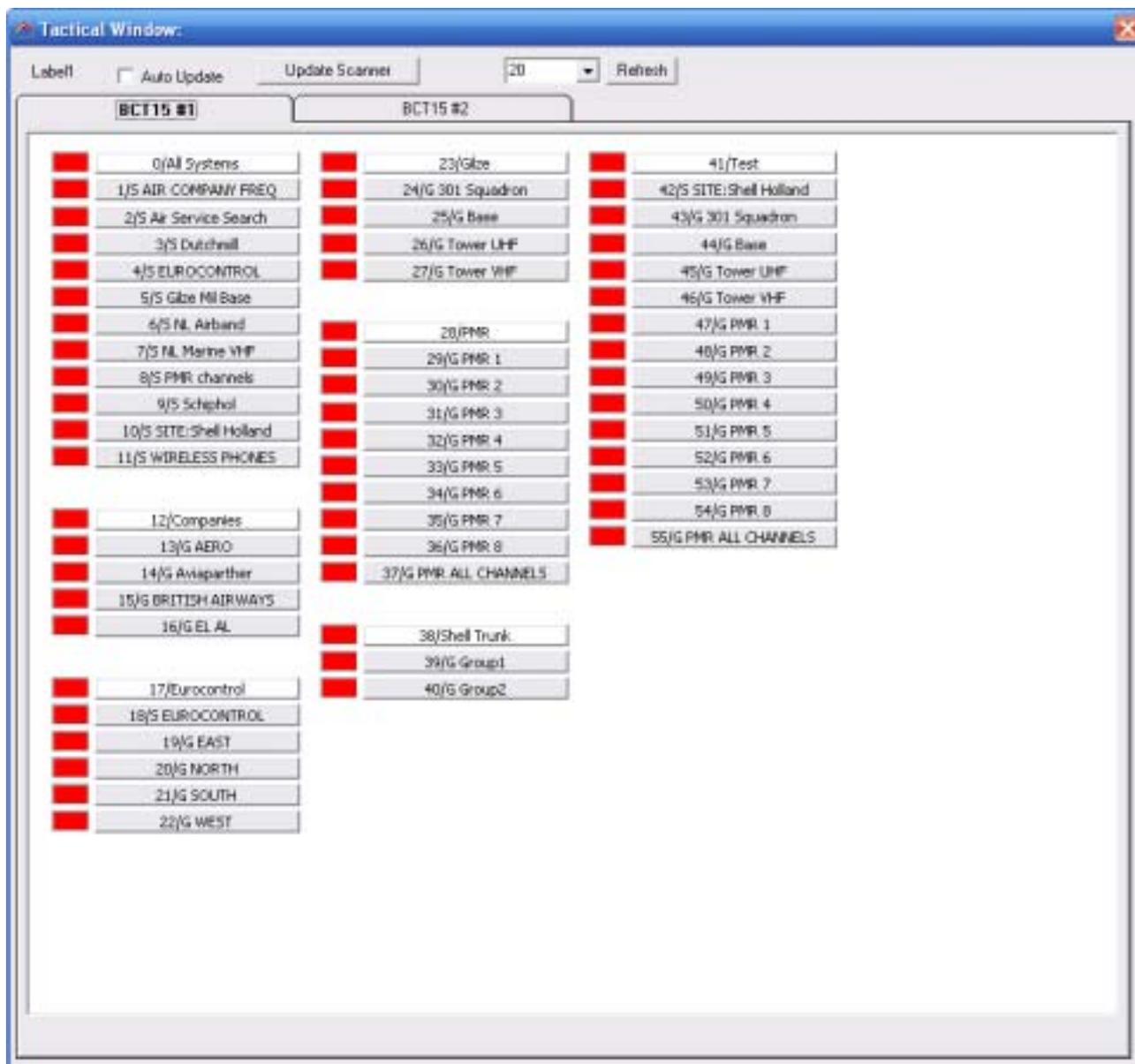
INCREASE VOLUME: quickly increases volume by 5 steps

Open Audio Player

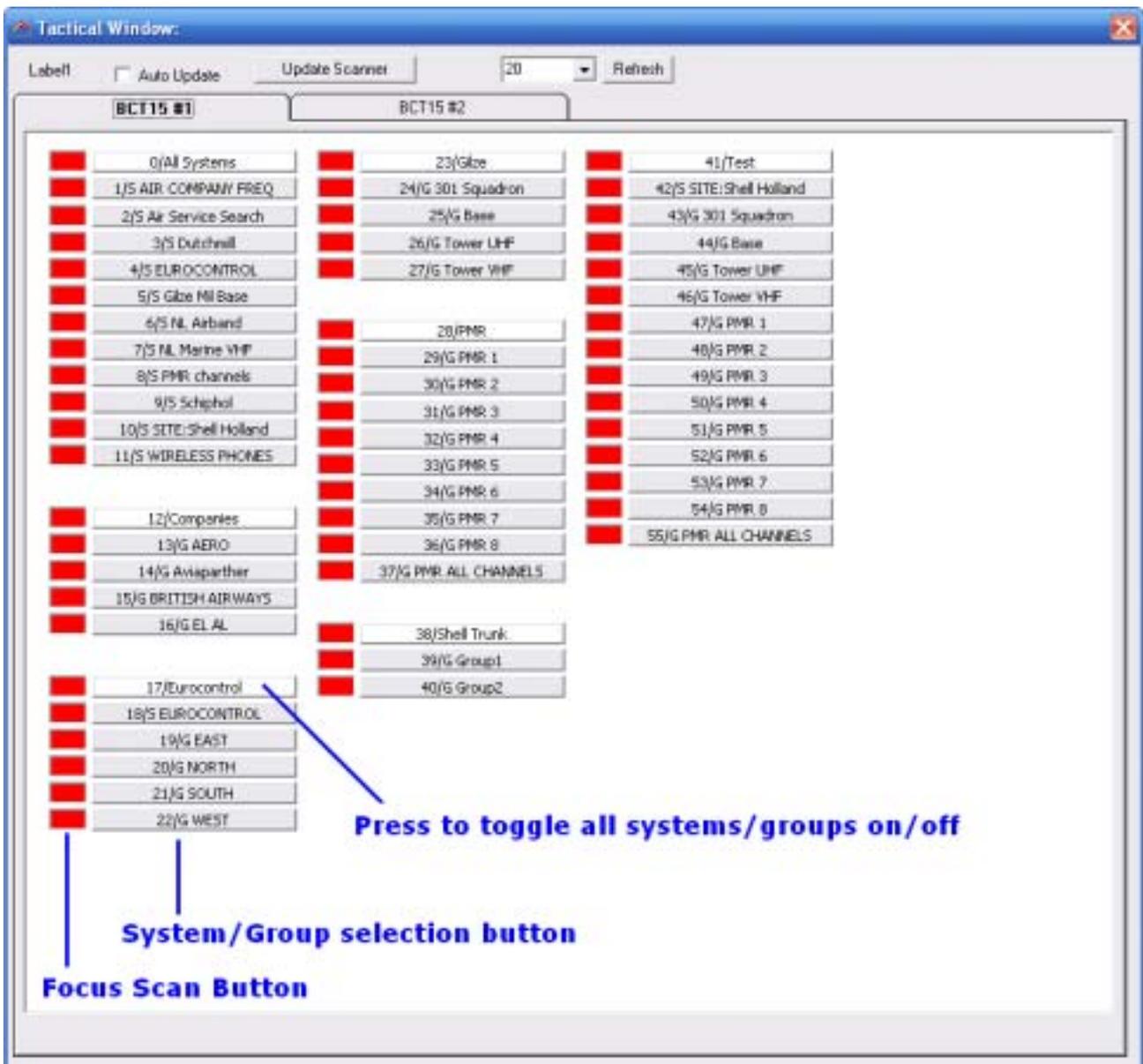
5.7 Using the Tactical window

A unique option in ScannerStation is the option to predefine combination of groups/systems based on events. By pre-determining the combinations, one-click event scanning will be particularly useful during specific natural or man-made incidents, such as an accident at a nearby airport, where you don't have time to build list of frequencies and talkgroups to monitor.

To setup the tactical screen the system quickkey editor is used (see section x.x).



How to use the tactical window?



In the tactical window every system or group is shown as a button. Pressing the button will toggle that system/group on or off. The colored marker in front of the button indicates whether a system or group is selected (red = not selected, green = selected).

The '**white**' button shown at the top of every defined subgroup will toggle all systems/groups in that subgroup on/off.

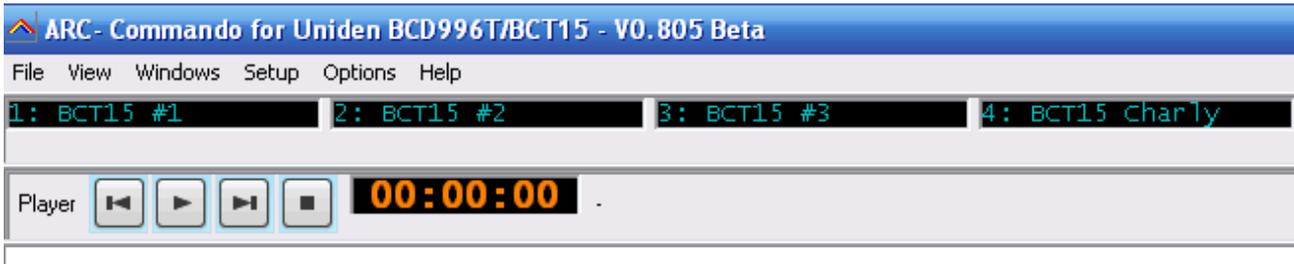
To **focus scanning** on one particular group or systems **double click** the red or green markerbox. This will disable all other systems/groups and enabled only the selected system/group.

Update scanner: after you made a selection of one or more groups press the Update scanner button to send the information to the scanner. Tick the 'Auto Update' option if you want the changes to happen instantly.

5.7 Main Screen options:



Main screens shows local system time and has a stopwatch function



Main window shows all available scanners. In this case 4 scanners are available. You can double click the text to open the selected scanner window.

When the optional recorder is installed a quick player option is available.

6 Using the recorder and playback options (OPTIONAL LICENSE REQUIRED):

If you purchased the recorder option you must setup the recorder following this procedure.

Every scanner requires it's own soundcard for recording. The easiest solution to use a client PC's internal soundcard for the first scanner and then use one or more external USB soundcards, via a USB hub, for additional scanners.

For multi scanner recording we advise the M-Audio Delta 1010LT soundcard. This soundcard can record audio from 4 scanners. For 5-8 scanners you need 2 Delta 1010LT soundcards.

Selecting soundcard:

Start ScannerStation. Select Setup _ Scanner Settings and click the Audio Setup tab:



Now per scanner select the soundcard.

6.1 Adjust recording volume:

The recorder in ScannerStation is VOX triggered. It is important that the recording level is adjusted so that the recorder automatically enables itself when there is voice.

Start ScannerStation and open a scanner. Connect to the scanner by pressing the power button.

Wait a few seconds and then press the recording button (recording is optional!)
Hold on a conventional channel and open the squelch. The REC indicator should come on.
Close the squelch and after one second the REC indicator should be off.

If the recorder indicator does not switch on/off, open the recording volume settings in Windows and double check the line input is selected as input source and adjust the volume slider.

IMPORTANT: You can use either the SPEAKER OUTPUT or the RECORD OUTPUT. When the PC is connected to the RECORD OUTPUT you must verify that the RECORD flag is set to ON for all the systems that you wish to record. As a quick test use the speaker output to check if the recorder works. If that works ok, plug the cable in Record out of the scanner.

6.2 Play back audio:

Playing back recordings:

There are several options to playback recordings:

In ScannerStation select VIEW _ LOG/RECORDING HISTORY

Select the tab of the scanner you want to play audio from.

Click either the BLUE history or GREEN player button, playback is NOT possible from the 'gray' Cumulative tab.

Play a single file:

Double click the row of the event that you want to play back. (BLUE or GREEN tab). The software plays back the file.

IMPORTANT: You cannot playback the file that is being recorded.

In the player toolbar you can use the STOP and PLAY button or double click in the grid to replay a single file.

Playing multiple files:

Playing multiple files is only possible from the green player tab. Click the GREEN Player button.

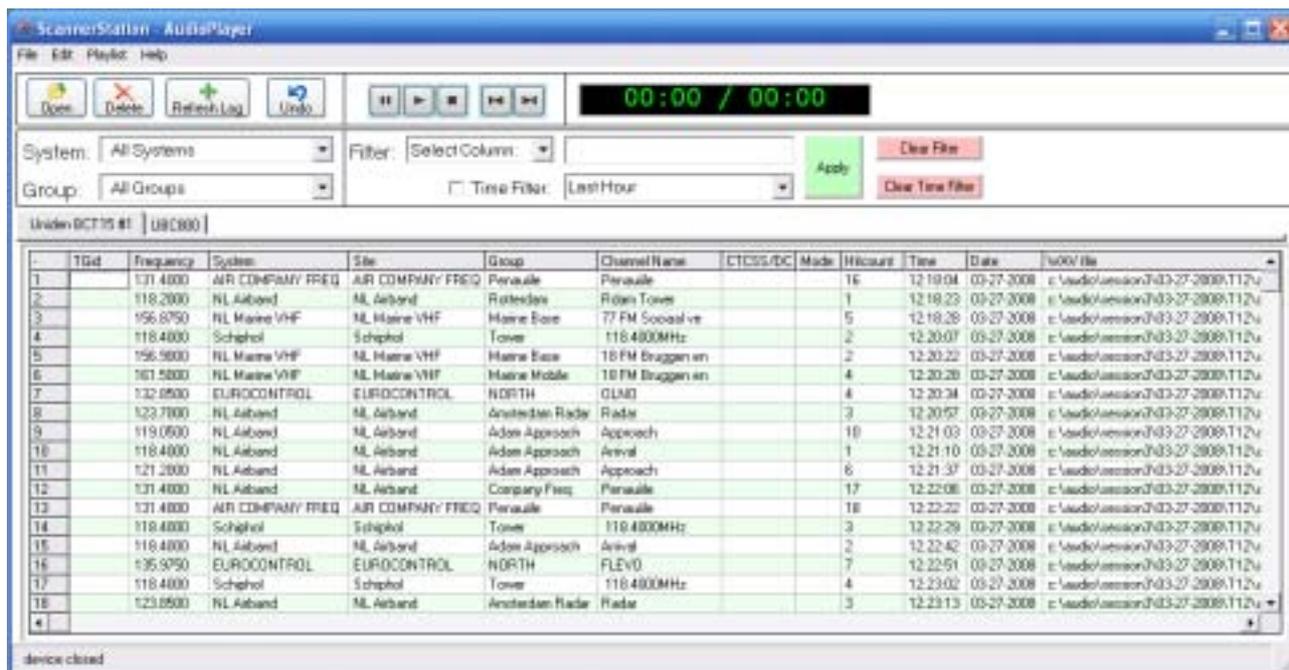
You can now make a selection of files by holding down the mouse button and highlighting rows.

By double clicking the different headers you can easily sort the player grid and select specific frequencies for playback. Or you can sort by time/date or any column.

For example if you want to play back all activity of frequency 121.500, double click the FREQUENCY header, this will sort by frequency, Now highlight all frequencies 121.500 and in the player toolbar hit the PLAY button. Use next/previous to skip to next audio recording.

IMPORTANT: The player tab is NOT updated with new recording. If you want to update the player grid click the blue HISTORY button and then the green player button.

6.3: Audioplayer:



ScannerStation comes with an audioplayer. The audio player always uses the Windows default audio device to play back audio.

Opening the audioplayer:

- In scannerstation select View _ Audioplayer. This will open the audioplayer window and automatically load the history log
- In Windows select Start Programs Butel ScannerStation Tools Audioplayer
- You can also define a function button that opens the audioplayer window

Toolbar buttons:

Open: open a saved log file. Scannerstation automatically saved logfiles of all recordings. These files are organized per date and hour in 'My Documents'.

Delete: delete one or more selected audio files. IMPORTANT: This is a permanent delete, files are NOT moved to the 'recycle bin'.

Refresh Log: while ScannerStation is running use this button to load a copy of the latest log files.

Undo: undo any selections/filters and load the original log file.

Playing back audio:

To playback a single file simply double click the line in the grid.

To playback a selection of files highlight the lines in the grid and press the Play button in the toolbar. The selected area is highlighted in light green.

The software will automatically highlight the line of the file that is currently being played.

Using Filters:

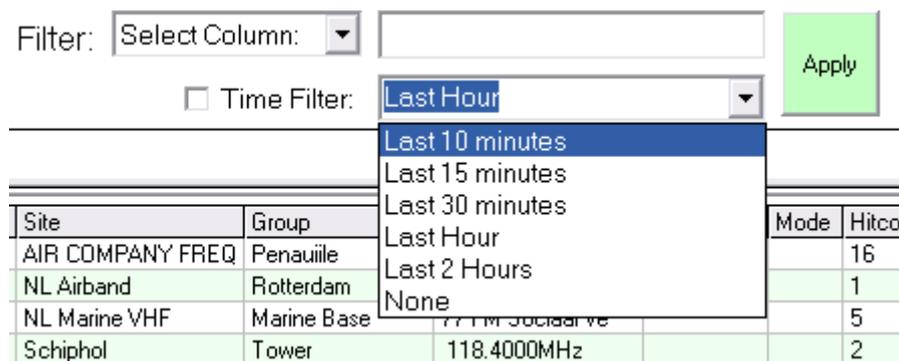
The audioplayer has several filters to make it easier to select files for playback:

System: The software shows all the systems found in the log file. Select a system to show only the audio files stored for the selected system.

Group: The software shows all the groups that belong to the selected system.

Filter: enter text to search lines that only contain a specific string of text. Press 'Clear button' file to clear text field. You can enter multiple text string but they must be separated by a comma for example: "police, fire"

Time Filter: Use time filter to play back files recorded in the selected time interval. The dropdown box has several preprogrammed intervals:



You can also manually enter a time interval for example: 8:45 - 10.30

If you select a time interval from the preprogrammed list that interval is remembered by the software.

AutoRefresh:

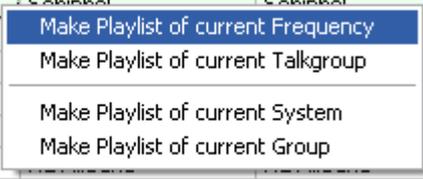
You can automatically refresh the files list. This way the player always shows the most up to date audio files. Select Edit _ Automatically Refresh.

The refresh interval is every minute. If files are being played the refresh is skipped.

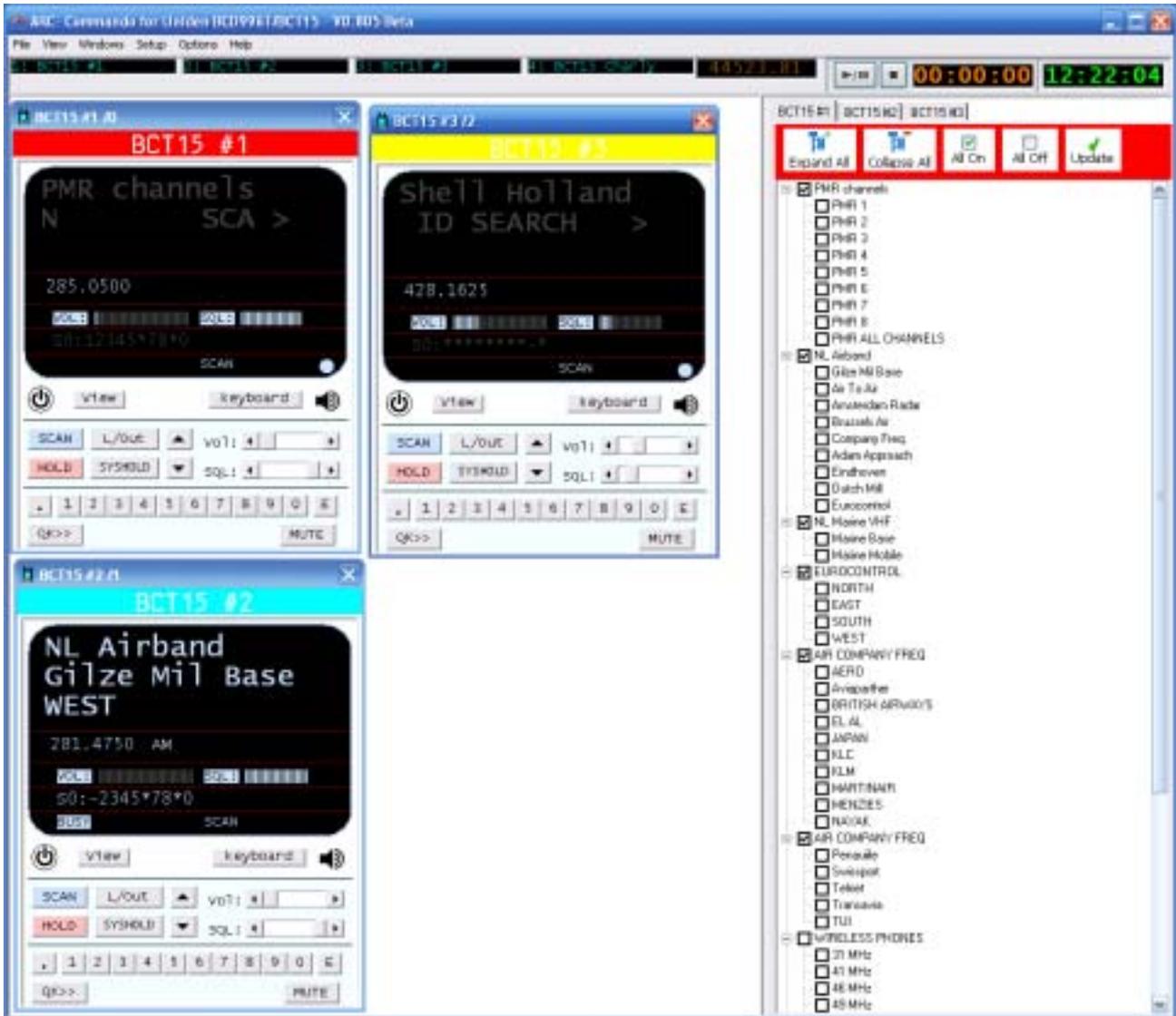
Creating Playlist per frequency / talkgroup / System / group :

You can easily create a playlist for selected frequency, click on a frequency in the grid and then use a right mouse button click to show a menu.

106.0700	NL Mainline VHF	NL Mainline VHF
118.4000	Sabinkel	Sabinkel
156.9000		
161.5000		
132.8500		
123.7000		
119.0500		
118.4000	NL Airband	NL Airband
121.3000	NL Airband	NL Airband



7 Screenshots:



This screenshot shows three scanners, one scanner, BCT15 #2 is active. Each scanner has a tab with a treeview for switching systems/groups on and off.

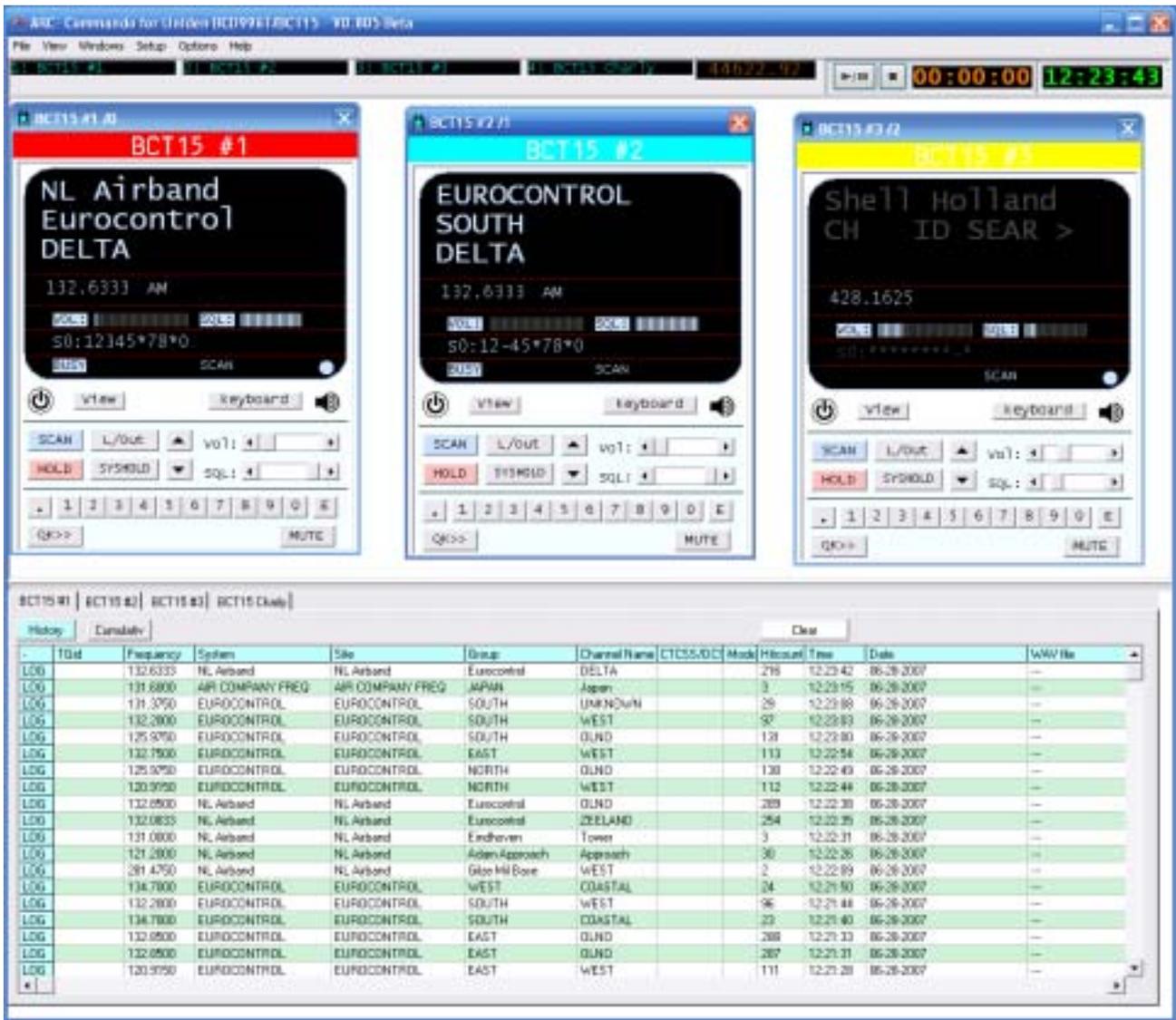


This screenshot shows three scanners, all 3 scanners active. Each scanner has a tab with a treeview for switching systems/groups on and off.



This screenshot shows three scanners and the multilog grid. For easy reference the colors that are assigned to the scanners are also used in the grid.

The display automatically dims when a scanner is not active.



This screenshot shows three scanners, two of which are active. The log grid shows all the latest activity. If the record option is enabled, double click in the grid to instantly play back the audio.



This screenshot shows three scanners, two scanners, BCT15 #1 and BCT15 #2, are 'active'. By using the VIEW button the window can be changed. Scanner #1 now shows the systems and a double click on the red/green button will enable FOCUS scan and disable all other systems.

Also blue link buttons are shown, a double click will open the preprogrammed link.

ARC: Commands for CHIDEN BCT15961/BCT115 YD 805 beta

File View Windows Setup Options Help

BCT15 #1 | BCT15 #2 | BCT15 #3 | BCT15 Group | 44723.00 | 00:00:00 | 12:25:24

BCT15 #1

PMR channels
PMR 3
CHANNEL 3

446.0562 NFM

SCAN [Progress Bar] SCAN

S0: 12345*78*0

VIEW

BCT15 #3

Shell Holland
Group2
tag368

428.3375 NFM 368

SCAN [Progress Bar] SCAN

S0: *****g

VIEW

BCT15 #2

NL Airband
Amsterdam Radar
Radar

128.5750 AM

SCAN [Progress Bar] SCAN

S0: 12345*78*0

VIEW

ID	Scanner	Freq	Channel	System
BCT15 #2		12:25:22	Radar	NL Airband
BCT15 #3		12:25:22	tag368	Shell Holland
BCT15 #3		12:25:11		Shell Holland
BCT15 #1		12:25:00	EAST	EUROCONTROL
BCT15 #2		12:24:50	FLM	AFR COMPANY FRO
BCT15 #2		12:24:51	WEST	EUROCONTROL
BCT15 #1		12:24:44	FLM	NL Airband
BCT15 #2		12:24:43	UNBNDWN	EUROCONTROL
BCT15 #2		12:24:32	WEST	EUROCONTROL
BCT15 #2		12:24:28	EAST	EUROCONTROL
BCT15 #2		12:24:22	OLND	NL Airband
BCT15 #1		12:24:21	OLND	EUROCONTROL
BCT15 #1		12:24:10	OLND	EUROCONTROL
BCT15 #1		12:24:01	DELTA	EUROCONTROL
BCT15 #2		12:23:59	LUX	EUROCONTROL
BCT15 #2		12:23:51	DELTA	EUROCONTROL
BCT15 #1		12:23:50	DELTA	NL Airband
BCT15 #2		12:23:45	DELTA	EUROCONTROL
BCT15 #1		12:23:45	DELTA	NL Airband
BCT15 #1		12:23:42	DELTA	NL Airband
BCT15 #2		12:23:41	DELTA	EUROCONTROL
BCT15 #2		12:23:34	WEST	EUROCONTROL
BCT15 #1		12:23:15	Japan	AFR COMPANY FRO
BCT15 #1		12:23:00	UNBNDWN	EUROCONTROL
BCT15 #2		12:23:00	UNBNDWN	EUROCONTROL
BCT15 #2		12:23:03	WEST	EUROCONTROL
BCT15 #1		12:23:03	WEST	EUROCONTROL
BCT15 #1		12:23:00	OLND	EUROCONTROL
BCT15 #2		12:22:59	OLND	EUROCONTROL
BCT15 #2		12:22:55	WEST	EUROCONTROL
BCT15 #1		12:22:54	WEST	EUROCONTROL
BCT15 #1		12:22:49	OLND	EUROCONTROL
BCT15 #2		12:22:49	OLND	EUROCONTROL
BCT15 #2		12:22:45	WEST	EUROCONTROL
BCT15 #1		12:22:44	WEST	EUROCONTROL
BCT15 #2		12:22:39	OLND	NL Airband
BCT15 #1		12:22:39	OLND	NL Airband
BCT15 #2		12:22:35	ZEELAND	NL Airband
BCT15 #1		12:22:35	ZEELAND	NL Airband
BCT15 #2		12:22:31	Trouse	NL Airband

BCT15 #1 | BCT15 #2 | BCT15 #3 | BCT15 Group

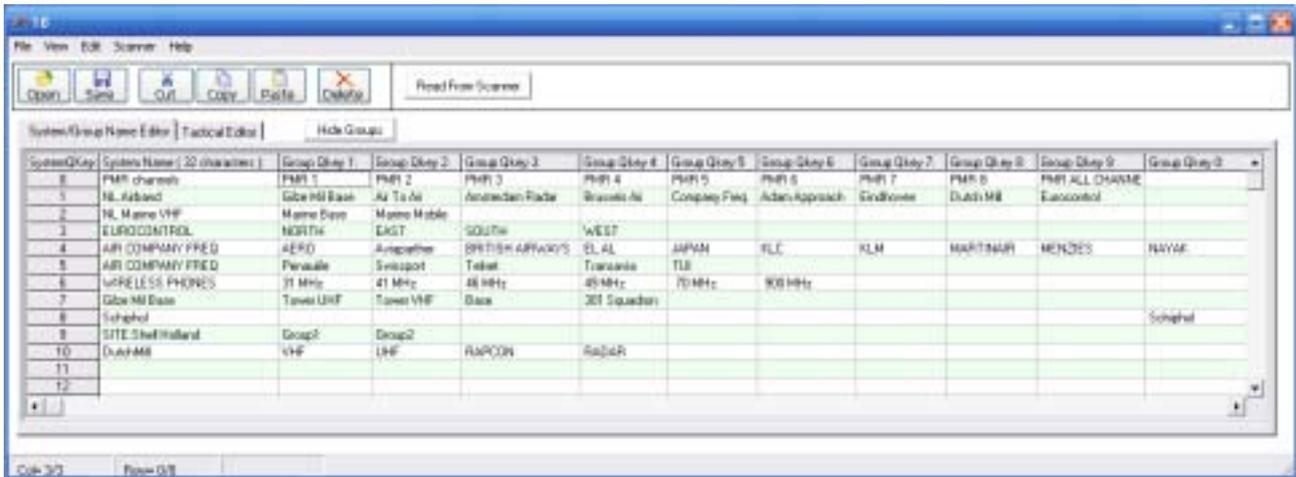
History | Console | Clear

	TGid	Frequency	System	Site	Group	Channel Name	CTCSS/DC	Mode	History	Time	Date	WAV file
LOG		121.6250	EUROCONTROL	EUROCONTROL	WEST	EAST			75	12:25:00	06-26-2007	--
LOG		131.0750	NL Airband	NL Airband	Company Freq	FLM			4	12:24:43	06-26-2007	--
LOG		132.0500	EUROCONTROL	EUROCONTROL	WEST	OLND			291	12:24:21	06-26-2007	--
LOG		132.0500	EUROCONTROL	EUROCONTROL	EAST	OLND			290	12:24:10	06-26-2007	--
LOG		132.6333	EUROCONTROL	EUROCONTROL	NORTH	DELTA			213	12:24:01	06-26-2007	--
LOG		132.6333	NL Airband	NL Airband	Eurocontrol	DELTA			218	12:23:50	06-26-2007	--

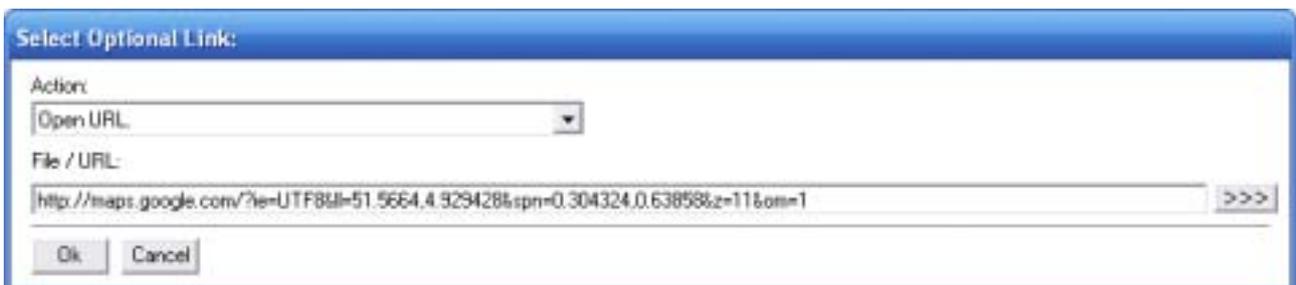
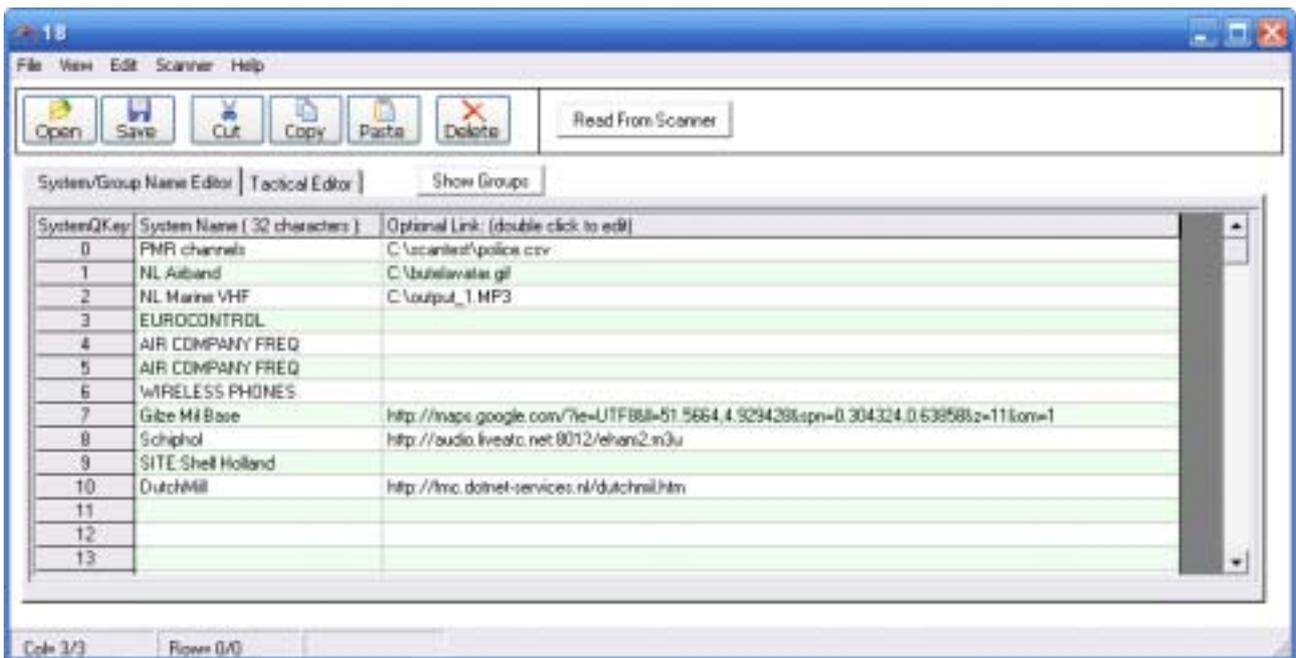
Screenshot showing the multi log grid and history log grid.

SYSTEM QUICKKEY NAME EDITOR:

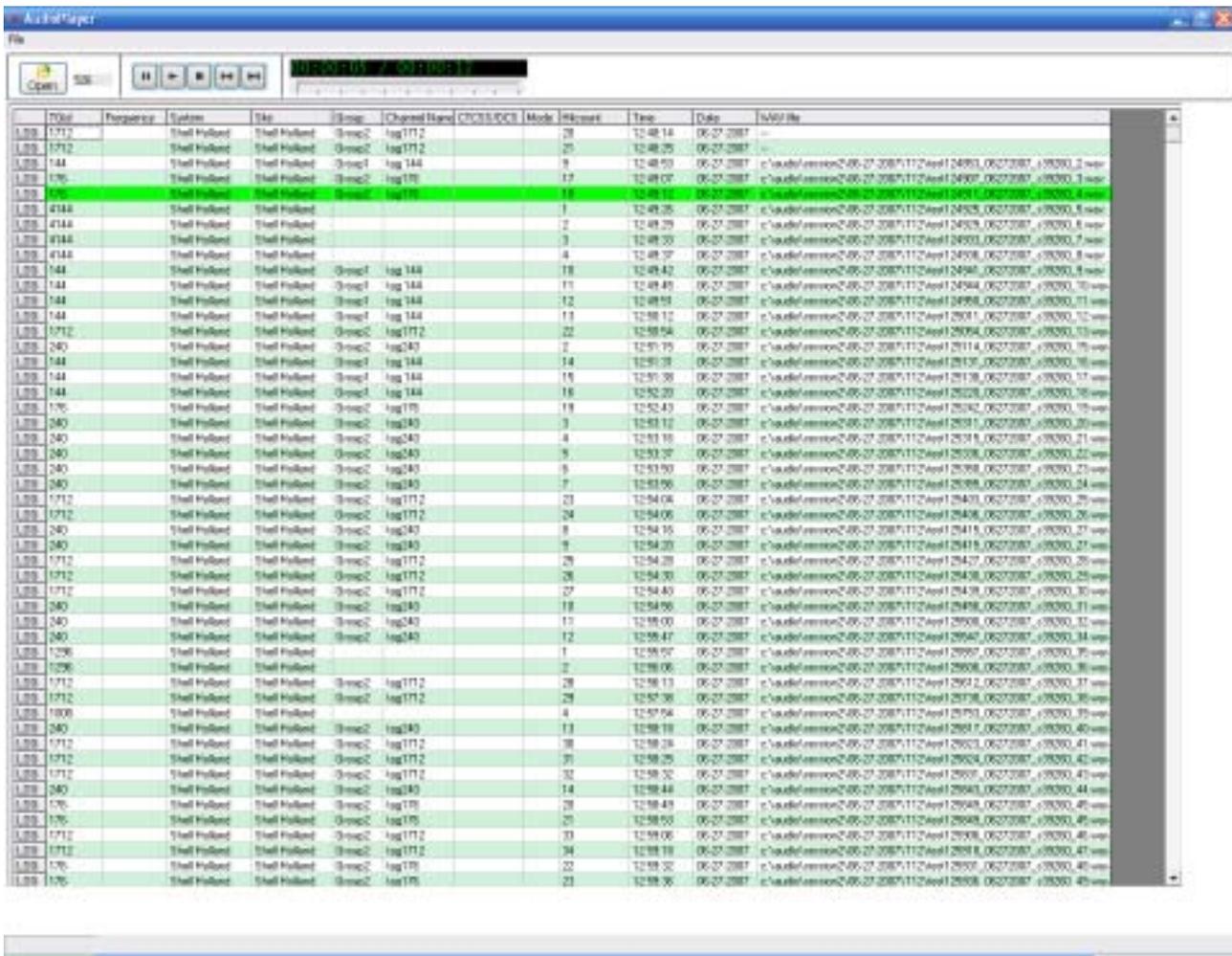
This editor is used to setup the system and group names that are used by the software. They can be the same as in the scanner or modified. Length is 32 characters.



Links can be setup per system to start external applications, open a map, open a website, open a text file, etc:



AUDIO PLAYER:



Audio player is used to playback audio files. Grid can be sorted by frequency / talkgroup / time / date / hitcount.

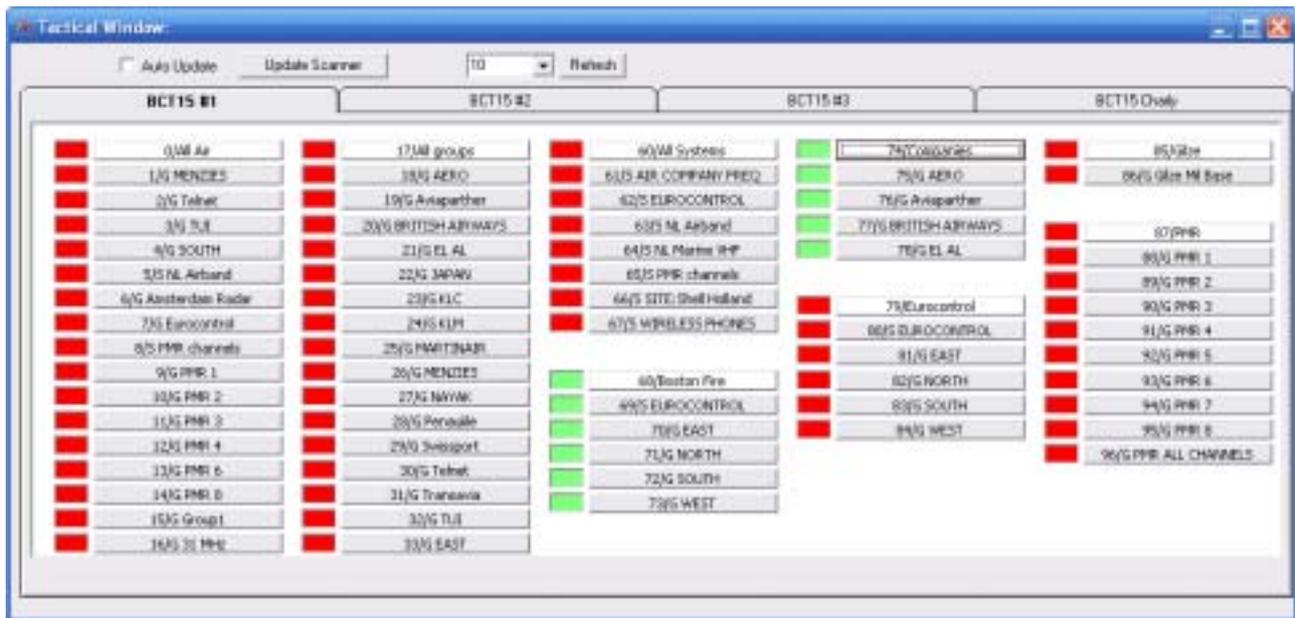
This makes it very easy to playback a specific frequency or talkgroup for a selected time.

To play back multiple files, highlight multiple rows then hit PLAY button.

Highlighted row is file currently being played back.

Files are stored in generic WAV format. (Mono / 8000 kHz sample rate/ 16 bit)

TACTICAL Window:



The tactical window is used to switch groups/systems on/off per event like a fire, a highway chase, problems at the local airport etc.

The user can create combinations of systems and groups and with a single click enable them all. By pre-determining the combinations, one-click event scanning will be particularly useful during specific natural or man-made incidents, such as an accident at a nearby airport, where you don't have time to build list of frequencies and talkgroups to monitor.

8: Soundcard Information:

Depending on the number of local and remote scanners additional soundcards must be installed.

1 scanner: Most PC have a built in soundcard. Connect the scanner to the line input (blue connector)

2 scanners: Use the built in soundcard and one external USB soundcard

3 or 4 scanners: Use the optional M-audio Delta 1010LT audio card.

(website <http://www.m-audio.com/>)

5-8 scanners: Use 2x M-audio Delta 1010LT audio cards.

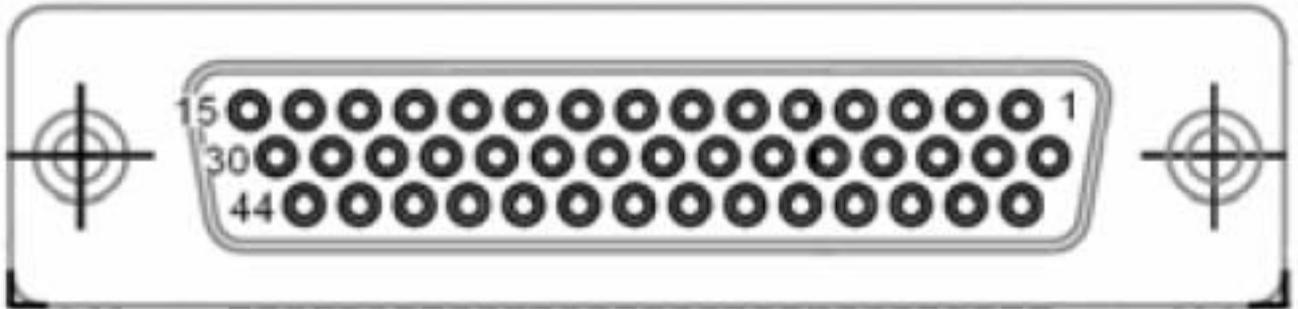
(website <http://www.m-audio.com/>)

Cables: Butel can supply custom cables for connecting the Delta 1010LT soundcards.

We do not recommend using more than 1 USB sound card.

Appendix: M-Audio Delta 1010LT wiring diagrams:

M- audio delta 1010LT SUB 44 pin wiring information:



	Signal	Pin	Signal	Pin	Signal
1	Out 1	16	ground	31	Out 2
2	ground	17	ground	32	Ground
3	In 1 -2	18	In 1 -3	33	In 1 -1
4	ground	19	ground	34	In 2 -x
5	In 2 -x	20	In 2 - x	35	ground
6	ground	21	ground	36	Out 3
7	Out 4	22	ground	37	ground
8	ground	23	In 3	38	In 4
9	ground	24	ground	39	ground
10	Out 5	25	Out 6	40	ground
11	ground	26	ground	41	In 5
12	In 6	27	ground	42	ground
13	ground	28	Out 7	42	Out 8
14	ground	29	ground	44	ground
15	In 7	30	In 8		

In1 and In2 are balanced inputs and must be converted into unbalanced input to use with the scanner.

Only uneven inputs are used because streaming is mono. The software can not 'split' stereo channels so one card is required per 4 scanners.

Outputs:

If 1/8" connectors are used the uneven channels are connected to the 'tip'. Even channels are connected to the 'ring'.

If possible try to avoid 'ground loops' as they can cause noise and humming sounds.