

The Radio Experience

Now Playing/Message Manager 2.0 Configuration and Use Manual



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Table of Contents

Section 1: Introduction to Messagecasting

Section 2: Installation and Configuration

2.1 About Your New Messagecasting Software	2-1
2.1.1 Messagecasting Output Paths	2-1
RDS—Radio Text	2-1
RDS—Dynamic PS	2-1
HD Radio PAD	2-1
Web Text	2-2
2.1.2 Now Playing Core Engine	2-2
2.1.3 TRE Message Manager	2-2
2.2 Installing Your New Software	2-3
2.2.1 Fill Out the Site Details Form	2-4
2.2.2 Install the Software From the BE-Supplied Installation Disc	2-4
2.2.3 Obtain a License File From a BE Data Services Engineer	2-5
2.2.4 Format Basic RDS Artist/Title Output	2-5
Configuring Radio Text Artist/Title Messages	2-5
Configuring DPS Artist/Title Messages	2-7

Section 3: Advanced Messaging Introduction

3.1 PAD, Near-PAD and Non-PAD	3-1
PAD (Program Associated Data)	3-1
Near-PAD and Non-PAD	3-1
3.2 Messagecasting and Promotions	3-2
3.3 Messagecasting and Sales	3-2
3.4 Messagecasting and Programming	3-2
3.5 Configuring Advanced Messaging	3-3

Section 4: Advanced Messaging Configuration **Now Playing Core Engine**

4.1 Event Types	4-1
4.2 Message Types	4-1
4.3 Interleaving	4-1
Linked Messages	4-1
Dayparted Messages	4-1
Non-dayparted Generic Messages	4-1
4.4 Configuring Linked Events for RDS Radio Text, HD Radio and the Web	4-2
4.5 Configuring Linked Events for RDS DPS	4-2
4.6 Configuring Dayparted Generic Messages for RDS Radio Text, HD Radio and the Web	4-3
4.7 Configuring Dayparted Generic Messages for RDS DPS	4-4
4.8 Configuring Generic Messages for RDS Radio Text, HD Radio and the Web	4-6
4.9 Configuring Generic Messages for RDS DPS	4-6
4.10 Configuring Delay Options	4-8

Section 5: Advanced Messaging Configuration **Message Manager 2.0**

5.1 Logging In to the Message Center	5-1
5.2 The Setup Section	5-2
5.2.1 Profile Tab	5-2
5.2.2 File Center Tab	5-2



5.2.3	Users Tab	5-2
5.3	The Status Section	5-3
5.3.1	Recent Logs Tab	5-3
5.3.2	On Air Monitor Tab	5-3
5.4	The Messaging Section	5-4
5.3.3	Notification Tab	5-4
	Linked Messages	5-4
5.4.1	Event Types	5-4
5.4.2	Message Types	5-4
	Commercial Messages (COM)	5-5
	Promotional Messages (PRO)	5-5
	Traffic Placeholders (TFC)	5-5
	Weather Placeholders (WX)	5-5
	Cover Messages	5-5
	Generic Messages	5-5
5.4.3	Special Message Manager 2.0 Features	5-5
	Interleaving	5-5
	Cover Feature	5-5
5.4.4	Event Processing	5-6
5.4.5	Configuring Linked Messages	5-7
5.4.6	Configuring Commercial Messages	5-9
5.4.7	Configuring Promotional, Cover and Generic Messages	5-11
5.4.8	Configuring Traffic and Weather Placeholders	5-13
5.4.9	Scheduling Messages in Clock Blocks	5-15
5.4.10	Activate the Schedule	5-17
5.4.11	View Upload Status	5-17

Section 6: The TRE Configuration Tool

6.1	Station Options	6-1
6.2	As Run Log Options	6-1
6.3	Character Filter	6-2
6.4	Debug Log Options	6-2
6.5	Delay Schedule File Options	6-3
6.6	Event Mapping	6-3
6.7	Generics	6-3
6.8	Interleaving	6-4
6.9	Licensed Features	6-4
6.10	Licensed Features: IBOC HD Radio	6-4
6.11	Licensed Features: Metadata Lookup	6-5
6.12	Licensed Features: NewsFlashPro	6-5
6.13	Licensed Features: Radio Text Plus (RT+)	6-5
	Entering the JumpGate connection details.	6-6
6.14	Licensed Features: RDS Encoder	6-6
6.15	Licensed Features: RDS Encoder: RDS Encoder Initialization	6-6
6.16	Licensed Features: RDS Encoder: Dynamic PS	6-7
6.17	Licensed Features: RDS Encoder: Traffic Announcement Flag	6-7
6.18	Licensed Features: RDS Encoder: Group 5A	6-7
6.19	Licensed Features: Stream The World	6-8
6.20	Licensed Features: UltraNet	6-9
6.21	Licensed Features: Web 2.0: Twitter	6-9



6.22	Licensed Features: Web 2.0: Last.FM	6-9
6.23	Licensed Features: XML Ftp Output	6-10
6.24	Message Center Schedule	6-10
6.25	Multiplex Data	6-11
6.26	Music Board Output	6-11
6.27	NavTech Relay	6-11
6.28	Station Manager	6-12
6.29	Stratos Output	6-12
6.30	Traffic Data: NAVTEQ	6-12
6.31	Traffic Data: Westwood One	6-13
6.32	Automation	6-13

Appendix A: Implementations

A.1	RDS	A-1
A.2	HD Main Messagecasting Using STL with IP Capability	A-2
A.3	HD Radio Main Messagecasting Using STL without IP Capability	A-3
A.4	HD Radio Multicast Messagecasting	A-4
A.5	Web Text-only	A-5
A.6	Web Plus	A-6



Section 1: Introduction to Messagecasting



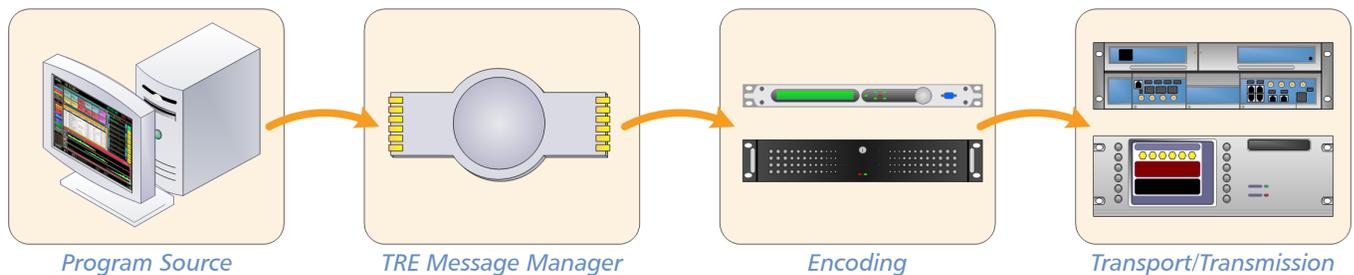
Welcome to The Radio Experience from Broadcast Electronics!

Datacasting is simply the broadcasting of data. All sorts of information can be datacast. Simple Artist and Title information is just the beginning. This is how most stations start datacasting, but The Radio Experience expands the capabilities of datacasting to include so much more!

By including the ability to incorporate promotional messages, sales messages and programming messages, Broadcast Electronics' Messagecasting software from The Radio Experience has transformed "datacasting" from a simple way to send data embedded in automation files into a tool that will add a new dimension to how we do business.

Messagecasting is one of the technologies allowing broadcasters to deliver new compelling content to listeners, enhancing a station's brand and providing additional opportunities to build audience. A key component of this technology is Messagecasting software, which provides an interface between the program source (CD players or a digital automation system) and the rest of the air chain.

Messagecasting software from The Radio Experience reads PAD (Program Associated data) from your program source, integrates supplementary messaging content, formats it for the Web or for your HD Radio or RDS gear, and then injects the formatted data stream into the air chain.



This manual is divided in to two basic parts. It includes step-by-step instructions for engineers who are installing and configuring The Radio Experience Messagecasting software, and it includes a section providing guidelines for users who will be maintaining the messaging content. Two additional sections are included for reference, one with functional descriptions of Messagecasting delivery options, and one describing the Message Manager Configuration Tool.

There are several conventions used throughout this manual to help identify text and special descriptions:

Keys that are to be pressed at the same time appear with a plus sign between them.
(For example, **Alt+F10**)

Dialog box field names and menu choices appear in bold font.
(For example, **User Name** or **Format**)



Tiered menu choices appear in bold, separated by a greater-than sign.

(For example, **Options>Setup** means to choose the **Options** menu, and select the **Setup** sub-menu)

Variables will be identified by greater-than and less-than symbols.

(For example, \\<computername>\<path>\<file>)

This manual uses the following specific terms:

Select

Mark an item by highlighting it and using a normal left-button mouse click. This includes menu selection, workspace elements or text items.

Click

Pick an item that begins an action. Includes any menu command and command buttons in a dialog box. Unless stated otherwise, click means to use a normal left-button mouse click.



Section 2: Installation and Configuration



2.1 About Your New Messagecasting Software

The Radio Experience products provide comprehensive hardware and software solutions for all aspects of Messagecasting. The modular architecture of The Radio Experience allows you to buy only what you need, without sacrificing the ability to expand and grow as your Messagecasting requirements evolve.

The primary software components of The Radio Experience are the **Now Playing Core Engine**, which can either function as a stand-alone Messagecasting product or power the advanced capabilities of **Message Manager**.

The Radio Experience Messagecasting products are designed around a concept of inputs and outputs. Each program channel input has a different potential a data output path. The Main program channel can deliver data by RDS, HD Radio and the Web, while Secondary program channels are restricted to HD Radio and the Web only.

Each instance of Now Playing or Message Manager can accept and process data for a single input, or station. Multiple instances can run on a single PC to accommodate facilities with multiple signals.

t Additional data inputs can be merged with primary data from the audio program channels and are sold as data “plug-ins.” Examples include the News Flash Pro, Tunefly and Jump2Go interfaces, and text weather and traffic plug-ins.

Messages can include Program Associated Data (PAD) received from your automation system (Artist/ Title information) and near- and non-PAD messages configured within the Messagecasting software. PAD and other messages can be sent simultaneously to all available outputs.

2.1.1 Messagecasting Output Paths

RDS—Radio Text

RDS Radio Text is the 64-character scrolling display found on enabled RDS receivers. The Radio Experience is intelligent enough to process PAD so that it makes the optimal use of the 64-character field. If not all characters are used, the message is padded with blank spaces so that it uses the entire 64-character allocation.

RDS—Dynamic PS

PS (Program Service) also has a maximum 64-character message length, but the message is displayed on enabled receivers in eight-character blocks. By refreshing the eight-character blocks every few seconds, the PS field is rendered “dynamic” and gives the illusion of scrolling.

HD Radio PAD

Like all things related to HD Radio, the use of PAD and messaging in this digital format is tightly controlled by iBiquity. Artist and Title information is processed separately by iBiquity components and sent to separate Artist and Title fields on HD Radio receivers. Near- and non-PAD messages delivered



to HD Radio receivers are displayed in the field normally reserved for Title information. There is no set limit on the length of these messages, although there is a practical limit to the amount of information that would be useful to listeners receiving the messages!

Web Text

Artist/Title PAD and other messages can easily be sent to your station Web site. Messaging is written to an XML file that can be integrated by your Webmaster, or used as part of the Flash-enabled **Web Plus** product from The Radio Experience.

2.1.2 Now Playing Core Engine

The **Now Playing Core Engine** is the direct interface with a station's automation system. The primary function of Now Playing is to take the PAD output from the automation system, insert generic messages for non-music events, and send the formatted data to a destination output. Now Playing outputs include RDS, HD main or secondary, or the web.

With Now Playing, you can:

- Accept PAD from compatible automation systems or Broadcast Electronics' LiveCD
- Format and output Artist/Title during music events
- Output simple messages (call letters, slogan) during non-music events
- Send Radio Text and/or DPS information to RDS, HD Main or Secondary, or to the Web

2.1.3 TRE Message Manager

TRE Message Manager provides more than just PAD (Program Associated Data) text management for FM RDS, HD Radio main and secondary channels and station web sites. It also offers a constellation of messaging possibilities, taking advantage of an Internet connection to The Radio Experience Data Center.

TRE Message Manager is capable of accepting multiple data inputs, formatting and managing the data, and outputting it to RDS, HD Radio and the Web. Advanced web scheduling capabilities give you control over the data content, even allowing you to interleave custom messages with Artist/Title information generated by your hard drive automation system.

While TRE Message Manager is enhanced by the TRE Data Center, it is not dependent upon that connection; the local software will continue to function even in the event of an Internet failure. If the connection is lost, only the ability to retrieve data updates is lost, and TRE Message Manager will automatically "catch back up" when the connection is restored.

With TRE Message Manager, you will be able to:

- Accept PAD from compatible automation systems or Broadcast Electronics' LiveCD
- Format and output Artist/Title during music events
- Output simple messages (call letters, slogan) during non-music events
- Send Radio Text and/or DPS information to RDS, HD Main or Secondary, or to the Web
- Schedule messages in blocks during specific dayparts, allowing you to cross-promote and recycle listeners
- Associate messages with audio



- Access Now Playing configuration variables
- Monitor Now Playing activity over the Internet
- Manage multiple stations from a single interface
- Send Radio Text and/or DPS information to RDS, HD Main or Secondary, or to the Web

The modular architecture of TRE Message Manager allows for incredible flexibility and scalability. As your needs and available technology changes, TRE Message Manager can keep up without the headaches sometimes associated with software upgrades. TRE Message Manager is the ultimate tool to power up branding, programming, and promotional efforts.

	Now Playing Core Engine (Does not include Data Center Connection)	Message Manager (Includes Data Center Connection)
Send messages to RDS, HD Radio or the Web	✓	✓
Ability to rotate messages	✓	✓
Ability to schedule message blocks	✓	✓
Send different messages to RDS, HD Radio and the Web		✓
Schedule messages using start and kill dates		✓
Graphic preview of DPS spacing		✓
Ability to modify messages on-line		✓
Easy-to-use graphical interface		✓
As-played message history for affidavits		✓
Instant e-mail error alerts		✓
Ability to manage group installations		✓
Access to sales tools		✓

Summary of Now Playing Core Engine and Message Manager Capabilities

2.2 Installing Your New Software

Whether you have purchased the Now Playing Core Engine or Message Manager, the basic installation steps are identical. There are differences in configuration, but the steps to install your software are:

1. Fill out the Site Details form so we can pre-configure the software.
2. Install the Now Playing Core Engine from the BE-supplied Install Disc.
3. Obtain a license file from a BE Data Services Engineer.
4. Format basic RDS Artist/Title output.

If your Site Details form was incomplete or information has changed, you can use the Configuration Tool to configure your software. (*See Section 6 for details on the Configuration Tool.*) Once your software is installed, you can start setting up your messaging content.



2.2.1 Fill Out the Site Details Form

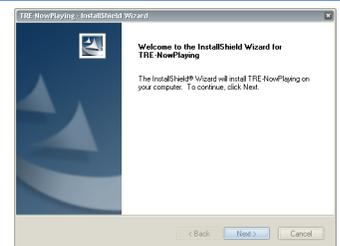
The Site Details form is designed to help you answer pre-installation questions for your own planning purposes and to provide us with information we can use to pre-configure your new Messagecasting software. Both the Now Playing Core Engine and Message Manager software can be configured on site in the field, but providing us with the requested details during the purchase fulfillment process can help expedite installation.

2.2.2 Install the Software From the BE-Supplied Installation Disc

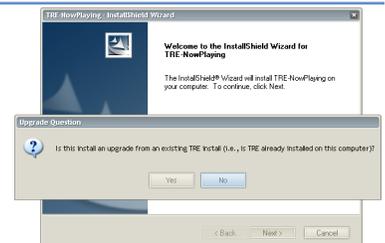
After receiving the TRE installation disc, insert the disc into the CD-ROM drive of the computer that will run the Now Playing/Message Manager application.

t The computer running Now Playing/Message Manager will need to be able to receive unprocessed data from your automation system and send processed data to the intended output device. This may require Internet connectivity or, when connectivity already exists, changes in firewalls or access settings.

1 Launch the Setup program using the Windows Run dialog. When you are ready to proceed, click **Next**.

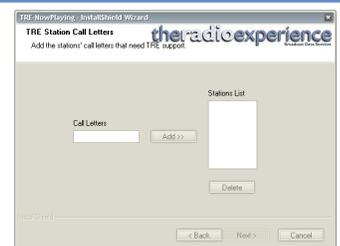


2 The Installation program will ask if this is a new install, or an upgrade from a previous version. Answer **Yes** or **No** to continue with the installation.

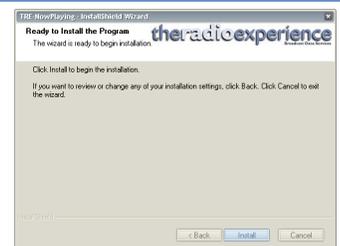


3 Running the installation program once can install multiple instances of the Now Playing Core Engine, each capable of processing data for a single station.

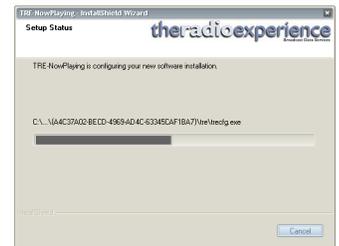
For each station, type the station's call letters and click the **Add** button. When entering call letters for multicast stations, identify the primary call letters and use a number to indicate the multicast channel. For example: WBEI, WBEI2, WBEI3. Once all call letters/stations have been entered, click **Next**.



4 The Installation software will give you an opportunity to go back and adjust any selections made so far. Once you are ready to continue, click **Install**.



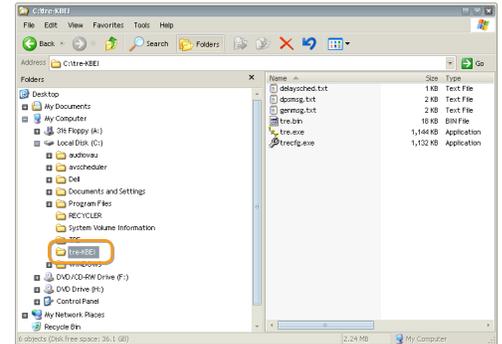
The Installation software will install and register the necessary files, closing automatically once the installation is complete.



2.2.3 Obtain a License File From a BE Data Services Engineer

Each configured station will have its own folder on the TRE computer's primary hard drive, identified by the folder name **tre-<CALLS>**.

Once you receive the **tre.bin** license file from a BE Data Services Engineer, copy it to the appropriate station folder, overwriting the existing file.



2.2.4 Format Basic RDS Artist/Title Output

The Radio Experience software can simultaneously output RDS artist/title information using both the Radio Text and PS fields. Radio Text is the 64-character scrolling display found on enabled RDS receivers. PS (Program Service) also has a maximum 64-character message length, but the message is displayed on enabled receivers in eight-character blocks. By refreshing the eight-character blocks every few seconds, the PS field is rendered "dynamic" and gives the illusion of scrolling.

To properly enable this functionality, format strings must be added to Now Playing/Message Manager configuration files to define the correct string for your RDS encoder and your preferred message formats.

For HD Radio customers, no configuration of artist/title formats is required. Artist and Title information is processed separately by iBiquity components and sent to separate Artist and Title fields on HD Radio receivers.

Configuring Radio Text Artist/Title Messages

Artist/title information can be displayed a number of interesting ways by combining variables and static text in the output format. Working with the variables of %a (Artist), %t (Title), and %d (Album Title for Web Plus customers) you can establish a number of different messages.

For example, when you play "Wonderful Tonight" by Eric Clapton, that Title and Artist information can be sent a number of ways as illustrated on the next page.

Since Radio Text messages are always sent in 64-character blocks, ideally you want to fill those 64 characters so you don't have a lot of blank spaces. Now Playing/Message Manager will evaluate all available options, and choose the one that makes the best use of the 64-character allocation.

Format String	Sent Text
%a %t	Eric Clapton Wonderful Tonight
%t by %a	Wonderful Tonight by Eric Clapton
%t by %a on BEI	Wonderful Tonight by Eric Clapton on BEI
Now Playing %a %t	Now Playing Eric Clapton Wonderful Tonight
Now Playing %t by %a	Now Playing Wonderful Tonight by Eric Clapton
Now Playing %t by %a on BEI	Now Playing Wonderful Tonight by Eric Clapton on BEI

In the example above, “Now Playing Wonderful Tonight by Eric Clapton on BEI” takes the most number of characters (52) so that would be the message sent by TRE. The flexibility and capability of the TRE software make it possible to prepare for a wide number of options.

Event formatting options for Radio Text are specified in the [GENMSG.TXT](#) file in the TRE directory on the computer running the Now Playing Core Engine.



Before making any changes to this or any configuration file, be sure to make a backup.

To modify event formatting options for Radio Text, open [GENMSG.TXT](#) in your favorite text editor. Find the [\[Event Format\]](#) section. Comment lines begin with a semi-colon and should be left alone for future reference.

```

----- Format strings -----
: This section formats the RDS Radio Text output
: %a = Song Artist
: %t = Song Title
: %d = Album Title
: %r = carriage return
: %y = Event Type
: %i = cut ID
: %h = Hours
: %m = Minutes
: %s = Seconds
: Static text can also be inserted.
: TRE evaluates the Formats to see which provides the richest content
: and then displays that format (Based on Max Len in TRECFG.exe).

[Event Format]
: Commands for RD120
XTXT=%a %t%r
XTXT=%t by %a%r
XTXT=%t by %a on BEI%r
XTXT= Now Playing %a %t%r
XTXT= Now Playing %t by %a%r
XTXT=Now Playing %t by %a on BEI%r

```

Active lines in the GENMSG.TXT file are constructed like this:

<RadioTextString> = <message>%r

The Radio Text string is specific to the encoder you’re using, so that needs to be consistent throughout the file. It’s also important that each line end with a **%r**, which indicates the end of the line to the encoder (a carriage return).

To use our previous example and assuming the Radio Text string is XTXT:



[Event Format] Entry	Sent Text
XTXT=%a %t%r	Eric Clapton Wonderful Tonight
XTXT=%t by %a%r	Wonderful Tonight by Eric Clapton
XTXT=%t by %a on BEI%r	Wonderful Tonight by Eric Clapton on BEI
XTXT= Now Playing %a %t%r	Now Playing Eric Clapton Wonderful Tonight
XTXT= Now Playing %t by %a%r	Now Playing Wonderful Tonight by Eric Clapton
XTXT=Now Playing %t by %a on BEI%r	Now Playing Wonderful Tonight by Eric Clapton on BEI

t Once you've made your changes, save the **GENMSG.TXT** file and re-start the Now Playing Core Engine.

Configuring DPS Artist/Title Messages

DPS text messages are also 64-characters long, but are sent in 8-character chunks. Each 8-character segment is displayed on a DPS-enabled receiver for a few seconds, and is then replaced by the next segment.

It's practically impossible to anticipate all possible variations in title and artist length and format the resulting message into 8-character chunks that always make sense. Now Playing/Message Manager defaults to a format of <Artist> <Title>. The software will attempt to package the artist/title information to best use the 8 character restriction of DPS.

Event formatting options for Program Service/DPS are specified in the **DPSMSG.TXT** file in the TRE directory on the computer running the Now Playing Core Engine.

! Before making any changes to this or any configuration file, be sure to make a backup.

It is possible to modify artist/title formatting options for DPS by modifying the **DPSMSG.TXT** in your favorite text editor. Find the **[Event Format]** section. Using the variables of %a (Artist), %t (Title), and %d (Album Title for Web Plus customers) you can establish a number of different messages. Comment lines begin with a semi-colon and should be left alone for future reference.

```

Format Strings -----
: This section formats the RDS dynamic Program service output
: %a = Song Artist
: %t = Song Title
: %d = Album Title
: %r = carriage return
: %y = Event Type
: %i = Cut ID
: %h = Hours
: %m = Minutes
: %s = Seconds
: Static text can also be inserted.
: TRE evaluates the formats to see which provides the richest content
: and then displays that format (Based on Max Len in TRECFG.exe).

[Event Format]
:Commands For Rb120
XPSD=%a%r
XPSD=%a %t%r
XPSD=Now Playing %a %t%r
XPSD=Now playing %t by %a%r

```

Active lines in the DPSMSG.TXT file are constructed like this:

<ProgramServiceString> = <message>%r



The PS (program service) string is specific to the encoder you're using, so that needs to be consistent throughout the file. It's also important that each line end with a `%r`, which indicates the end of the line to the encoder (a carriage return).

To use our previous example and assuming the PS string is XPSD:

[Event Format] Entry	Sent Text
XPSD=%a %t%r	Eric Clapton Wonderful Tonight
XPSD=%t by %a%r	Wonderful Tonight by Eric Clapton
XPSD=%t by %a on BEI%r	Wonderful Tonight by Eric Clapton on BEI
XPSD= Now Playing %a %t%r	Now Playing Eric Clapton Wonderful Tonight
XPSD= Now Playing %t by %a%r	Now Playing Wonderful Tonight by Eric Clapton
XPSD=Now Playing %t by %a on BEI%r	Now Playing Wonderful Tonight by Eric Clapton on BEI

- t** Once you've made your changes, save the `DPSMSG.TXT` file and re-start the Now Playing Core Engine. Also, you should check the **Prefix Count** setting in the **TRE Configuration** tool to make sure it matches your encoder's PS string. (See section 6.15 for details).
- !** Be conservative when formatting your DPS fields. TRE will do its best to break the data into the required 8-character segments, but longer strings can look a little unusual when formatted for DPS.



Section 3: Advanced Messaging Introduction



In our introduction, we defined **datacasting** as the broadcasting of data. Most stations start datacasting by sending simple artist/title information, but The Radio Experience expands the capabilities of datacasting by including the ability to incorporate promotional messages, sales messages and programming messages.

We call this expanded approach **Messagecasting**, and it has the potential to add a new dimension to how we do business. Messagecasting is one of the technologies allowing broadcasters to deliver new compelling content to listeners, enhancing a station’s brand and providing additional opportunities to build audience.

3.1 PAD, Near-PAD and Non-PAD

Most Messagecasting efforts focus on integrating with digital automation systems. Digital automation systems take a lot of the work out of Messagecasting, because so much information can be stored with a digital file. In fact, practically all automation systems store information with each cut of audio.

PAD (Program Associated Data)

Remember carts? Every cart has at least one slightly greasy file-folder label attached to it that describes what’s on the cart, the artist/voice talent, information about start and end dates, and any other information the production department thinks is important. It’s not surprising that this convention of storing data with each cut followed over to the digital automation systems that replaced most of our cart machines.

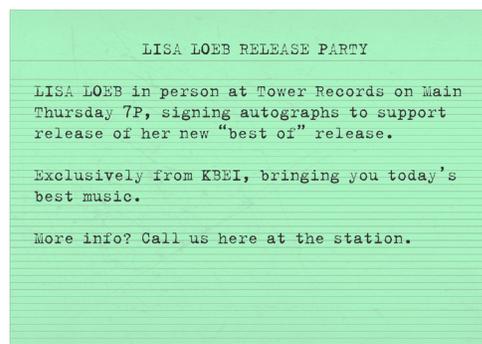


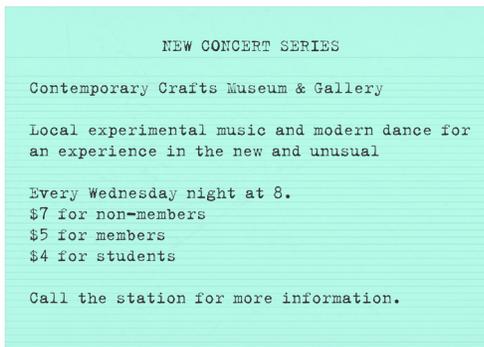
Instead of a file-folder label, each digital cut has a virtual label: information that is stored digitally, but the same information as was stuck on a cart. Since this data is specifically related to the audio on the cart, or the program, this is the data we refer to as Program Associated Data or **PAD**.

Near-PAD and Non-PAD

Other data that can be sent to your listeners are near-PAD. In the studio of most stations are notecards with concert dates, ticket information, facts about a particular band or song, or possibly a contest to win the CD, song download or concert tickets. Messages directly related to the cut on the air are called near-PAD. These messages are usually not stored in the automation system with the cut, but in a separate database managed by your Messagecasting tools.

Even more exciting is non-PAD. Next to the jock notes related to particular songs is another set of liner cards. These cards have messages like sports scores, stock tickers, weather information and traffic updates. More importantly, they can





include station promotional messages like liners and promos. Since the messages are not directly related to programming on the air, we call this non-PAD.

Like near-PAD, these messages are not usually stored in the automation system with the cut, but in a separate database managed by your Messagecasting software.

Of course, near- and non-PAD have commercial applications as well. All the adjacencies, tags and sponsorships we've done for years on the air can be utilized by Messagecasting. We've

managed this data in our analog world for years, storing data on file-folder labels and notecards, and delivering it during segues and coming in and out of breaks. These opportunities to talk about our station and communicate valuable information have been limited to times when the jock can open the microphone. Using Messagecasting tools, we manage the same information digitally, but we have the opportunity to share it with our listeners all the time!

3.2 Messagecasting and Promotions

Probably one of the biggest areas where current technology can be exploited is with station promotions. Artist and Title information is interesting and may have some value to the listener, but displaying simple Artist/Title information for three minutes straight as a song plays isn't the optimal use of the technology. How about rotating Artist/Title PAD with near- and non-PAD messages promoting the station in general, pushing upcoming contests or cross-promoting other dayparts? It's an approach called **interleaving**, and it's something BE's Messagecasting software can do today.

Using Messagecasting software also allows you to schedule the promotional messages you want to send. Scheduling tools allow you to set up blocks of messages and change the messages hour to hour. On-line tools allow instant updates, so you can keep up with current contests and winners.

3.3 Messagecasting and Sales

The ability to tie messages to specific commercials makes an easy sale for existing clients. Today is the day to start training clients to think about data. It's possible now to display short messages as audio commercials run; possibly phone numbers, addresses, or tag lines.

New opportunities are already being developed that take advantage of HD Radio technology. For example, instant traffic updates are being delivered in many large urban areas today. Messagecasting software can bring in all sorts of data and present it in connection with audio, creating sponsorship and revenue opportunities.

Messages can be associated with any audio, not just commercials. Clients can sponsor any programming on the station, from sports to news, from contests to syndicated programming.

3.4 Messagecasting and Programming

How do listeners know we're the best station for them? We tell them. We tell them what we're doing for them, whether that's playing more music and fewer commercials, offering the most entertaining morning show, airing specialty programming, or rewarding them for listening. Messagecasting offers a way to not only provide them with Artist/Title information they expect, but also a way to tell them about the station.



Scrolling call letters and slogans reinforce your brand, which can be handy when they record their listening time in their diaries. Messages can be configured to recycle listeners from one daypart to another, increasing TSL.

3.5 Configuring Advanced Messaging

Now Playing Core Engine and Message Manager handle these two types of messages, PAD and near-or non-PAD, differently.

PAD comes straight from the program source, while messages that will be aired when no PAD is available are stored separately. Now Playing stores these generic messages in text files located on the PC running the Now Playing Core Engine ([see Section 4](#)), while Message Manager generic messages are configured on-line ([see Section 5](#)).



Section 4: Advanced Messaging Configuration
Now Playing Core Engine



! If you have purchased the Message Manager application, skip to Section 5. It is not necessary to open or configure any text files described in this section when using Message Manager.

When an event plays, PAD (program associated data) is sent from the automation system to the Now Playing Core Engine. This data should include the on-air file's **Filename**, **Artist**, **Title** and **Duration** information, and the file's **Category** or **Type**. Based on this information, Now Playing decides what kind of message to send.

To configure Now Playing's messaging features:

1. Properly classify the event types in your automation system.
2. Enable Interleaving if desired.
3. Write the messages using Notepad or other text editor.

4.1 Event Types

Now Playing allows you to configure what type of messages run during different types of events. To distinguish between **Music**, **Commercial** and **Other** events, TRE reads **category** or **type** information in the program associated data sent by the automation system. By specifying these category types on in the Event Mapping section of the TRE Configuration Tool, Now Playing can distinguish between these event types. (See Section 6.6).

All music categories should be listed under **Music**. All commercial categories should be listed under **Commercial**. Categories not listed in either field are classified as **Other**.

4.2 Message Types

There are three basic types of messages available with Now Playing.

Linked Messages

Messages associated with a specific cut ID. Every time the specified cut plays in your automation system Message Manager will air this message. This allows you to create advertiser messages tied to a client's specific audio campaign or concert information tied to tracks by a specific artist, for example.

Dayparted Messages

Messages can be configured to run only in certain dayparts. Multiple messages can be configured for each daypart. Now Playing will choose the message to run at random.

Non-dayparted Generic Messages

If dayparting is not required, messages can be classified as Generic messages. Multiple generic messages can be configured. Now Playing will choose the message to run at random.

4.3 Interleaving

In Section 3 we introduced the concepts of PAD, Near-PAD and Non-PAD. When Now Playing receives PAD from an event classified as Music, the default behavior is to air the artist and title information. Interleaving rotates messages with artist and title information over the duration of a song. The Interleaving function and rotation interval can be configured in the Interleaving section of the TRE Configuration Tool. (See section 6.8).



4.4 Configuring Linked Events for RDS Radio Text, HD Radio and the Web

It may be desired at times to send specific messages when specific events air. For example, if the station is promoting a concert, you may want to send a message encouraging ticket sales when a song by that performer airs. You may want to link specific text pushing a promotion when a promo for the event plays on air, or to send an advertiser's message when their commercial airs. All this is possible with Now Playing's **Linked Events** capability.

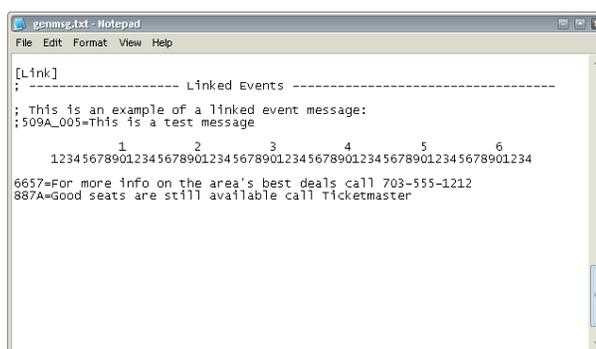
When an event airs, Now Playing looks at the event's filename or cut number, and looks for associated text in a file called **GENMSG.TXT** in the local **tre-<CALLS>** directory.

To modify Linked Events for Radio Text, open GENMSG.TXT in your favorite text editor.

! Before making any changes to this or any configuration file, be sure to make a backup.

Find the section called **[Link]**. Comment lines begin with a semi-colon and should be left alone for future reference.

To add a linked event, simply type the filename, followed by an equals sign, and then your message.



```
[Link]
; ----- Linked Events -----
; This is an example of a linked event message:
; 509A_005=This is a test message
;
; 1 2 3 4 5 6
; 123456789012345678901234567890123456789012345678901234
; 6657=For more info on the area's best deals call 703-555-1212
; 887A=Good seats are still available call Ticketmaster
```

Radio Text messages have a maximum length of 64 characters, and scroll across the Radio Text displays of enabled receivers. Radio Text characters scroll at about a character a second so it's recommended that the length of the message approximate the duration of the message. For example, Radio Text will only be able to display about 15 characters in 15 seconds. Messages linked to songs can take advantage of the full 64 character width, but messages linked to shorter events should be shortened to avoid being cut off mid-message.

t Once you've made your changes, save the **GENMSG.TXT** file and re-start the **Now Playing Core Engine**.

4.5 Configuring Linked Events for RDS DPS

Now Playing's Linked Events capability also applies to RDS DPS output. When an event airs, Now Playing looks at the event's filename or cut number, and looks for associated text in a file called **DPSMSG.TXT** in the local **tre-<CALLS>** directory.

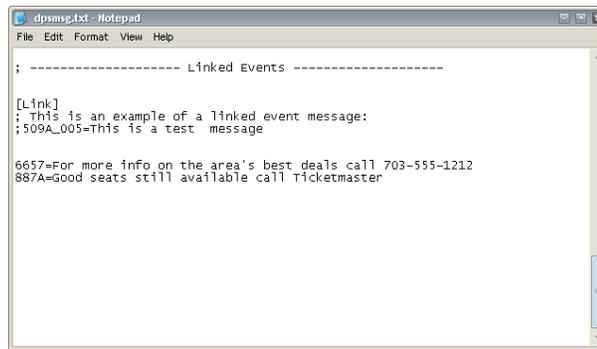
! Before making any changes to this or any configuration file, be sure to make a backup.

To modify Linked Events for DPS Text, open DPSMSG.TXT in your favorite text editor. Find the section



called [\[Link\]](#). Comment lines begin with a semi-colon and should be left alone for future reference.

To add a linked event, simply type the filename followed by an equals sign, and your message.



```
dpsmsg.txt - Notepad
File Edit Format View Help
; ----- Linked Events -----
[Link]
; This is an example of a linked event message:
; 509A_005=This is a test message
6657=For more info on the area's best deals call 703-555-1212
887A=Good seats still available call Ticketmaster
```

Linked, dayparted and generic messages can be manually formatted for DPS delivery, since the text remains static. As you write your message, simply keep in mind the 8-character spacing. For example, this message looks unusual as you read it in the DPSMSG.TXT file:

```
5678=Call nowfor yourtickets!Brought to you by YOUR hometownWBEI
```

It makes more sense when broken into 8-character segments on an RDS receiver:

```
Call now
for your
tickets!
Brought
to you
by YOUR
hometown
WBEI
```

DPS segments change about every 5 seconds, so it's recommended that the length of the message approximate the duration of the linked audio. For example, DPS will only be able to display about five 8-character segments in 30 seconds.

t Once you've made your changes, save the **DPSMSG.TXT** file and re-start the **Now Playing Core Engine**.

4.6 Configuring Dayparted Generic Messages for RDS Radio Text, HD Radio and the Web

It is possible to daypart messages that play during non-music events (commercials, promos, or other events identified as non-music events), giving you the opportunity to focus your messages on information related to a particular daypart, or to cross-promote other dayparts.

Dayparted, or triggered, messages for Radio Text are specified in the **GENMSG.TXT** file in the **tre-<CALLS>** directory on the computer running the Now Playing software.

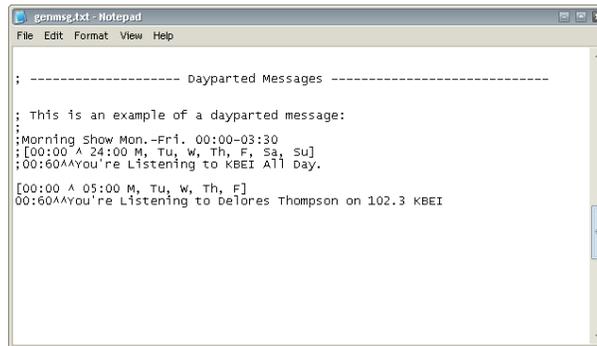
! Before making any changes to this or any configuration file, be sure to make a backup.

To modify dayparted generic messages for Radio Text, open **GENMSG.TXT** in your favorite text editor.



Find the section commented as **Dayparted Messages**. Comment lines begin with a semi-colon and should be left alone for future reference.

Dayparted messages are set up in two parts: the daypart and the text message you want to send.



```
penmsg.txt - Notepad
File Edit Format View Help

; ----- Dayparted Messages -----
;
; This is an example of a dayparted message:
;
; Morning Show Mon.-Fri. 00:00-03:30
; [00:00 ^ 24:00 M, Tu, W, Th, F, Sa, Su]
; 00:60^^You're Listening to KBEI All Day.
;
; [00:00 ^ 05:00 M, Tu, W, Th, F]
; 00:60^^You're Listening to Delores Thompson on 102.3 KBEI
```

Active messages are constructed like this:

**[<BeginHH:MM> ^ <EndHH:MM> <Comma-separated days>
MM:SS ^^<Text>**

For example:

```
[00:00 ^ 05:00 M, Tu, W, Th, F]
00:60^^You're Listening to Delores Thompson on 102.3 KBEI
```

Between midnight and 5:00A every weekday, when a non-music event airs, the Now Playing Core Engine will send "You're Listening to Delores Thompson on 102.3 KBEI" for 60 seconds. If a new event isn't launched within 60 seconds, the system will send another generic message if one is available, or repeat the message if it is the only one set up for that daypart.

For Radio Text, characters scroll at about a character a second so it's recommended that the length of the message approximate the duration of the message. For example, Radio Text will only be able to display about 30 characters in 30 seconds.

Multiple messages can be configured for each daypart. If more than one message is available for a daypart, Now Playing randomly selects the message it sends from the list of available messages. If you want a specific message to be broadcast more often, copying it within the list of available messages will increase the frequency. As the selection is random however, specific rotations cannot be achieved.

t Once you've made your changes, save the **GENMSG.TXT** file and re-start the Now Playing Core Engine.

4.7 Configuring Dayparted Generic Messages for RDS DPS

Now Playing' dayparted messages capability also applies to RDS DPS output. Dayparted, or triggered, messages for DPS text are specified in the **DPSMSG.TXT** in the local **tre-<CALLS>** directory.

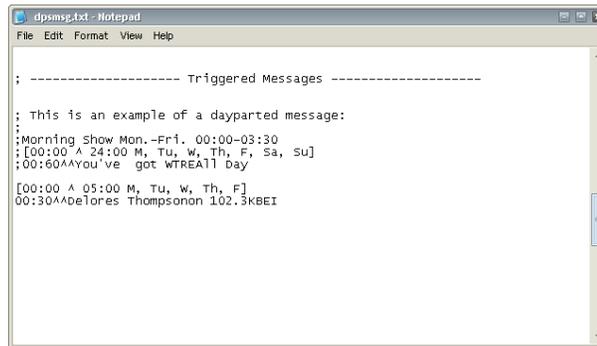
! Before making any changes to this or any configuration file, be sure to make a backup.

To modify dayparted generic messages for DPS Text, open **DPSMSG.TXT** in your favorite text editor.



Find the section commented as **Triggered Messages**.

Comment lines begin with a semi-colon and should be left alone for future reference. Dayparted messages are set up in two parts: the daypart and the message you want to send.



```
dpsmsg.txt - Notepad
File Edit Format View Help

; ----- Triggered Messages -----

; This is an example of a dayparted message:
;
; Morning Show Mon.-Fri. 00:00-03:30
; [00:00 ^ 24:00 M, Tu, W, Th, F, Sa, Su]
; 00:60^^You've got WTREAT11 day
;
; [00:00 ^ 05:00 M, Tu, W, Th, F]
; 00:30^^Delores Thompson on 102.3KBEI
```

Active messages are constructed like this:

**[<BeginHH:MM> ^ <EndHH:MM> <Comma-separated days>]
MM:SS ^^ <Text>**

For example,

```
[00:00 ^ 05:00 M, Tu, W, Th, F]
00:30^^Delores Thompson on 102.3KBEI
```

Between midnight and 5A every day, when a non-music event airs, Now Playing will send “Delores Thompson on 102.3 KBEI” for 30 seconds. If a new event isn’t launched within 15 seconds, the system will send another generic message if one is available, or repeat the message if it is the only one set up for that daypart.

With processing to 8 character segments, a DPS enabled receiver would display...

```
Delores
Thompson
on 102.3
KBEI
```

DPS Text character segments change about every 5 seconds, so it’s recommended that the length of the message approximate the duration of the message. For example, DPS Text will only be able to display about five 8-character segments in 30 seconds.

Now Playing randomly selects the message it sends from the list of available messages. If you want a specific message to be broadcast more often, copying it within the list of available messages will increase the frequency. As the selection is random however, specific rotations cannot be achieved.

t Once you’ve made your changes, save the **DPSMSG.TXT** file and re-start the **Now Playing Core Engine**.

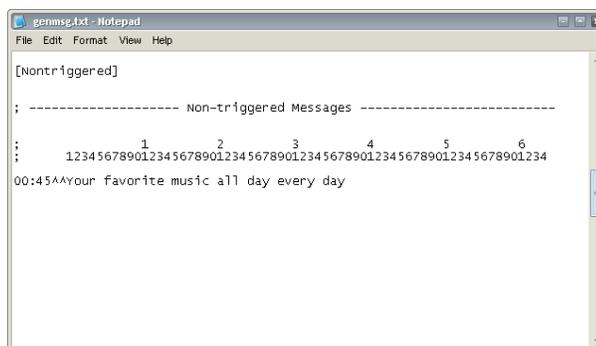


4.8 Configuring Generic Messages for RDS Radio Text, HD Radio and the Web

When a non-music event airs, and no linked or dayparted messages are configured, Now Playing can send out a generic message. Generic messages for Radio Text are specified in the **GENMSG.TXT** file in the **tre-<CALLS>** directory on the computer running the Now Playing software.

! Before making any changes to this or any configuration file, be sure to make a backup.

To create or edit generic messages for Radio Text, open GENMSG.TXT in your favorite text editor. Find the section called [Nontriggered]. Comment lines begin with a semi-colon and should be left alone for future reference.



```
genmsg.txt - Notepad
File Edit Format View Help

[Nontriggered]

; ----- Non-triggered Messages -----
;
;      1      2      3      4      5      6
;      123456789012345678901234567890123456789012345678901234
00:45^^Your favorite music all day every day
```

Active lines are constructed like this:

MM:SS ^^ <Text>

The minutes:seconds part of the line specifies the duration of the message. For example...

00:45^^Your favorite music all day every day

...would send the text "Your favorite music all day every day". If a new event wasn't launched within 45 seconds, the system would send another generic message.

For Radio Text, characters scroll at about a character a second so it's recommended that the length of the message approximate the duration of the message. For example, Radio Text will only be able to display about 30 characters in 30 seconds.

Multiple generic messages can and should be configured. Now Playing randomly selects the message it sends from the list of available messages. If you want a specific message to be broadcast more often, copying it within the list of available messages will increase the frequency. As the selection is random however, specific rotations cannot be achieved.

t Once you've made your changes, save the GENMSG.TXT file and re-start the Now Playing Core Engine.

4.9 Configuring Generic Messages for RDS DPS

When a non-music event airs, and no linked or dayparted messages are configured, Now Playing can send out a generic message. Generic messages for DPS text are specified in the **DPSMSG.TXT** in the local **tre-<CALLS>** directory.





Before making any changes to this or any configuration file, be sure to make a backup.

To modify dayparted generic messages for DPS text, open DPSMSG.TXT in your favorite text editor. Find the section called **[Nontriggered]**. Comment lines begin with a semi-colon and should be left alone for future reference.



Active lines are constructed like this:

MM:SS ^^ <Text>

The minutes:seconds part of the line specifies the duration of the message. For example:

00:45^^Your favoritemusic all day every day

With processing to 8-character segments, for 45 seconds a DPS enabled receiver would display:

Your
favorite
music
all day
every
day

If a new event wasn't launched within 45 seconds, the system would send another generic message.

DPS Text character segments change about every 5 seconds, so it's recommended that the length of the message approximate the duration of the message. For example, DPS Text will only be able to display about five 8-character segments in 30 seconds.

Multiple generic messages can and should be configured. Now Playing randomly selects the message it sends from the list of available messages. If you want a specific message to be broadcast more often, copying it within the list of available messages will increase the frequency. As the selection is random however, specific rotations cannot be achieved.



Once you've made your changes, save the DPSMSG.TXT file and re-start the Now Playing Core Engine.

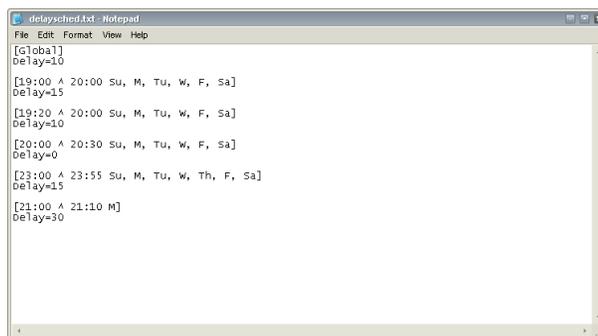


4.10 Configuring Delay Options

The TRE software is capable of using a **delay schedule** to offset the sending of Messagecasting data during audio-delayed dayparts so the audio and messages reach the listener's receiver at the same time. The feature must be enabled using the Configuration Tool (*see section 6.5 for more details*), and the delay schedule file configured to define dayparts and audio delays.

! Before making any changes to this or any configuration file, be sure to make a backup.

To modify the delay schedule, open **DELAYSCHED.TXT** in your favorite text editor.



```
delaysched.txt - Notepad
File Edit Format View Help
[global]
Delay=10
[19:00 ^ 20:00 Su, M, Tu, W, F, Sa]
Delay=15
[19:20 ^ 20:00 Su, M, Tu, W, F, Sa]
Delay=10
[20:00 ^ 20:30 Su, M, Tu, W, F, Sa]
Delay=0
[23:00 ^ 23:55 Su, M, Tu, W, Th, F, Sa]
Delay=15
[21:00 ^ 21:10 M]
Delay=30
```

Delay dayparts are constructed like this:

**[<BeginHH:MM> ^ <EndHH:MM> <Comma-separated days>]
Delay=<SS>**

For example,

```
[19:00 ^ 20:00 M, Tu, W, Th, F]
Delay=15
```

Between 7P and 8P every weekday messages will be delayed for 15 seconds.

t Once you've made your changes, save the DELAYSCHED.TXT file and re-start the Now Playing Core Engine.



Section 5: Advanced Messaging Configuration

Message Manager 2.0



The powerful Message Manager 2.0 offers significantly improved functionality over the basic Now Playing Core Engine. The Core Engine is still used to provide a basic interface to your automation system and to perform basic PAD formatting, but Message Manager allows you to do more with The Radio Experience. Message Manager allows you to:

- Send different messages to RDS, HD Radio and the Web
- Schedule messages using start and kill dates
- See a graphic preview of DPS spacing
- Modify messages on-line
- Download as-played logs for message affidavits
- Receive e-mail error alerts
- Manage group installations

All of these functions are made possible through your account on The Radio Experience Message Center, an easy-to-use web-based graphical interface. This chapter will take you through all three of the Message Center's main sections: **Setup**, **Status** and **Messaging**.

5.1 Logging In to the Message Center

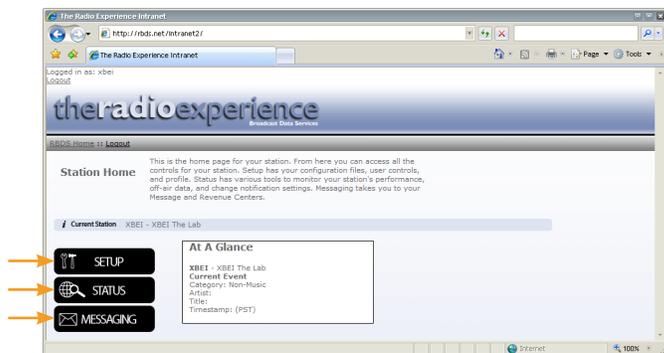
You will receive a username and password from your Broadcast Electronics Data Services Engineer.

The Message Center can be accessed by opening <http://rbds.net> in your Internet browser. Enter your login username and password, and click the **Log In** button.



After logging in, you will be able to see your **Station Home** page.

From here you will be able to view basic information about data being received by the Message Center from your station. You will also have access to the three main sections of the Message Center: **Setup**, **Status** and **Messaging**.

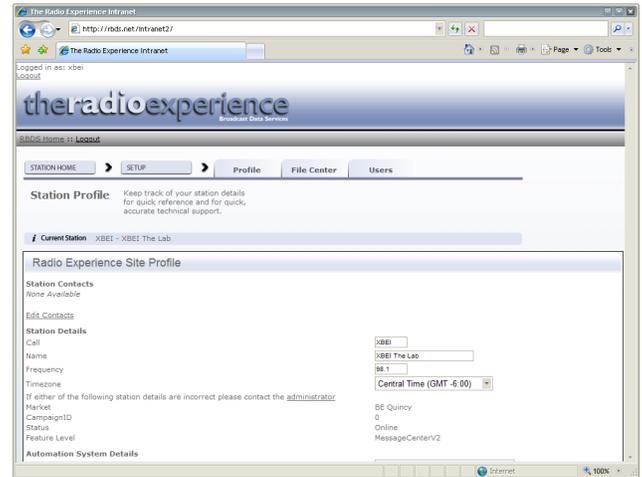


5.2 The Setup Section

The **Setup** section consists of three parts, each accessible by clicking on their respective menu tabs.

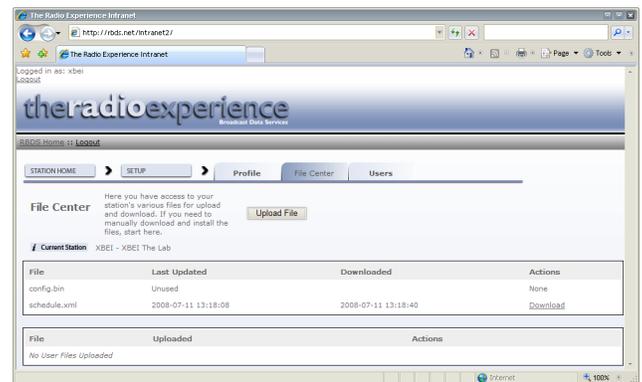
5.2.1 Profile Tab

The Profile section offers a convenient place for you to keep track of your station settings, including connection details and installation notes. **Changing this information does not affect your Message Manager configuration.**



5.2.2 File Center Tab

The File Center tab offers administrators a way to manually upload and download configuration files. **Files should not be manually uploaded or downloaded except when directed by a BE Data Services Engineer.**

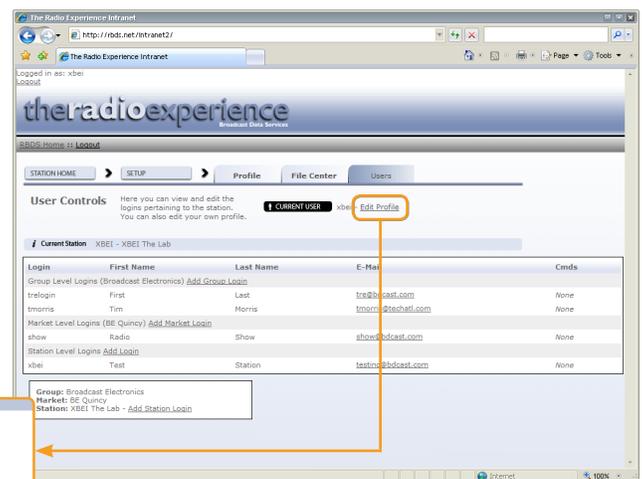


5.2.3 Users Tab

From this tab new users can be created, giving those users access to Message Center functions.

- Group level users can add or edit Market or Station level users.
- Market level users can add or edit Station level users.
- Station level users can only edit their own profile.

When editing a profile users can set their name, e-mail address and opt to receive trouble alerts.



5.3 The Status Section

As the name implies, from here administrators can keep an eye on the status of their station, viewing data coming in to and going out from the Message Center. The **Status Home** page shows the last several events received from your automation system.

From here, you can view **Recent Logs**, data received from an **On Air Monitor**, and set **Notification** options and view notification lists.

Cat.	Duration	Time Diff	EventID	Content	Event Time
Wed 12 Nov 2008					
MUS	01:30	00:00	532A_004	A: Dion, Celine - T: Stand By Your Side [Album	16:12:40
GEN	00:30	00:31	0000	D: Non-music: You Are listening to WBEI	16:12:09
MUS	02:30	00:30	532A_004	A: Dion, Celine - T: Stand By Your Side [Album	16:11:09
GEN	00:30	00:30	0000	D: Non-music: More Music Now	16:11:09
MUS	03:29	00:29	532A_004	A: Celine Dion - T: Stand By Your Side	16:10:40

5.3.1 Recent Logs Tab

This tab shows the information that has recently been processed by the Message Manager software. PAD being sent by the automation system, interleaved messages and other messages are all recorded in the log.

Cat.	Duration	Time Diff	EventID	Content	Event Time
Wed 12 Nov 2008					
GEN	00:30	00:00	0000	D: Non-music: You Are listening to WBEI	16:16:36
MUS	02:18	00:30	9001-02	A: Stewart, Rod - T: The Motown Song [Remix]	16:16:06
GEN	00:30	00:30	0000	D: Non-music: You Are listening to WBEI	16:15:36
MUS	03:18	00:31	9001-02	A: Stewart, Rod - T: The Motown Song [Remix]	16:15:05
GEN	00:30	00:29	0000	D: Non-music: More Music Now	16:14:36
MUS	04:17	00:29	9001-02	A: ROD STEWART - T: The Motown Song	16:14:07
MUS	00:30	00:28	532A_004	A: Dion, Celine - T: Stand By Your Side [Album Version]	16:13:39
GEN	00:30	00:29	0000	D: Non-music: You Are listening to WBEI	16:13:10

5.3.2 On Air Monitor Tab

The On Air Monitor tab shows information received from the optional **RMi 10** on-air monitor. The RMi 10 includes an RDS receiver that is tuned to your broadcast frequency, so you see exactly what is received by your listeners. That information is sent directly to the Message Center using an Internet connection.

Both standard RDS data and Group 5A data is received and logged to this page.

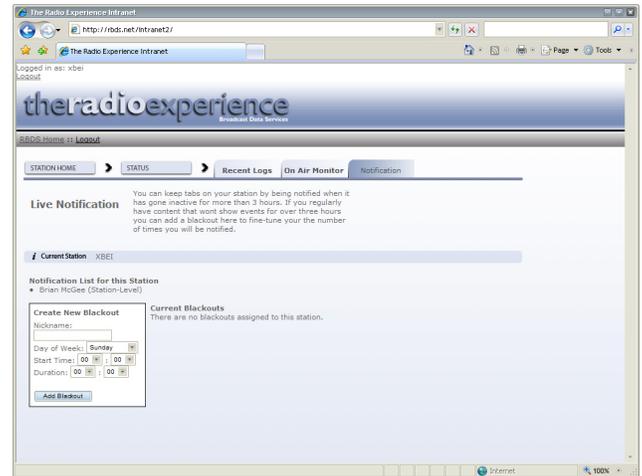
11 | 11 | 2008 | Show Data

Category	Data	Timestamp
No data available		

5.3.3 Notification Tab

One of Message Manager's functions is the ability to send e-mail alerts if data is not received for more than 3 hours. Users who have opted to receive these notifications (*see section 5.2.3*) will pear on the **Notification List**.

If you regularly air content that will not send data for more than three hours (countdown shows, sports programming, etc.) you can create a **blackout** period. During each blackout period Message Manager will know not to expect data and will not send out e-mail alerts.



5.4 The Messaging Section

Message Manager gives you incredible control over your ability to schedule messages. The Message Center interface makes it possible to rotate multiple messages and schedule specific messages for specific times of day. Also, the type of audio event airing on your station and the Message Manager features you have enabled will determine what type of message the software will air.

To configure Message Manager's powerful messaging features:

1. Properly classify the event types in your automation system.
2. Enable desired special Message Manager 2.0 features.
3. Write the messages using the Message Center interface.
4. Create Clock Blocks to schedule your messages
5. Activate the schedule and send the new schedule to Message Manager

5.4.1 Event Types

Message Manager allows you to configure what type of messages run during different types of events. To distinguish between **Music**, **Commercial** and **Other** events, TRE reads **category** or **type** information in the program associated data sent by the automation system. By specifying these category types on in the Event Mapping section of the TRE Configuration Tool, Message Manager can distinguish between these event types. (*See Section 6.6*).

All music categories should be listed under **Music**. All commercial categories should be listed under **Commercial**. Categories not listed in either field are classified as **Other**.

5.4.2 Message Types

There are five basic types of messages available with Message Manager 2.0.

Linked Messages

Messages associated with a specific cut ID. Every time the specified cut plays in your automation system Message Manager will air this message. This allows you to create advertiser messages tied to a client's specific audio campaign or concert information tied to tracks by a specific artist, for example.



Commercial Messages (COM)

Message Manager 2.0 gives you the ability to sell text services just as you sell other airtime. Commercial messages are logged each time they air, allowing you to create as-run performance affidavits, and can be created with detailed flight information including start and end dates and maximum number of runs.

Promotional Messages (PRO)

Promotional messages are similar to commercial messages, but are not logged to an as-run log. These messages can also be created with start and kill dates, but are used for general promotional station messages when there is no need for performance affidavits.

Traffic Placeholders (TFC)

TRE is capable of receiving and formatting traffic data from either NAVTEQ or Westwood One. Stations must have a contract with a provider to receive and use this data. When a TFC event is scheduled, TRE will datacast the most recent data from the traffic data provider.

Weather Placeholders (WX)

TRE is capable of receiving and formatting weather data. When a WX event is scheduled, TRE will datacast the most recent data from the weather data provider.

Cover Messages

When the Cover feature of Message Manager 2.0 is enabled, cover messages run when station is playing audio classified as a commercial. This feature was designed to prevent station imaging from being associated with audio commercials and to prevent text commercial messages from running during audio commercials, preventing possible advertiser conflicts.

Generic Messages

If a valid promotional or commercial message is not available (all messages are out of date, for example), Message Manager can run a generic message.

5.4.3 Special Message Manager 2.0 Features

In Section 3 we introduced the concepts of PAD, Near-PAD and Non-PAD. When Message Manager receives PAD from an event classified as Music, the default behavior is to air the artist and title information. When Message Manager receives PAD from an event classified as Commercial or Other, the default behavior is to air a commercial message, a promotional message, or a generic message if no other valid messages are available.

Two Message Manager features improve on the basic default behavior of the software: the Interleaving and Cover features.

Interleaving

Rotating messages with artist and title information over the duration of a song by enabling Interleaving maximizes your Messagecasting efforts. The Interleaving function and rotation interval can be configured in the Interleaving section of the TRE Configuration Tool. ([See section 6.8](#)).

Cover Feature

The Cover feature prevents station imaging and text commercial messages from running during audio commercials, preventing possible conflicts. Instead, dedicated cover messages run when station is playing audio classified as a commercial. The Cover feature can be enabled in the Message Center Schedule section of the TRE Configuration Tool. ([See section 6.23](#)).



5.4.4 Event Processing

Enabling one or both of these features changes the way Message Manager processes events.

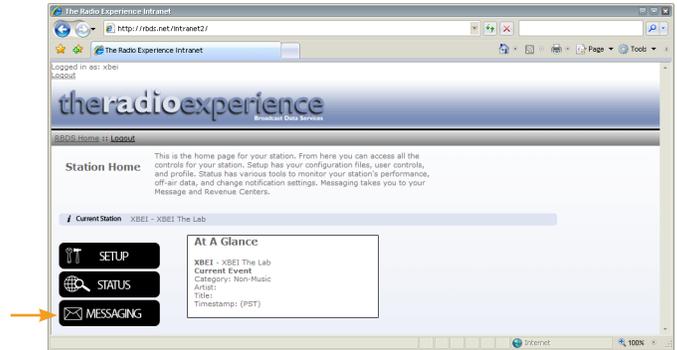
1. If neither Interleaving nor the cover feature are enabled:
 - When **music** is playing, TRE sends only PAD.
 - When audio **commercials** are playing, TRE sends a message as configured in the Clock Blocks (COM, PRO, TFC or WX). If no valid Linked, COM or PRO messages are available, TRE sends a Generic message.
 - When **other** audio is playing, TRE sends a message as configured in the Clock Blocks (COM, PRO, TFC or WX). If no valid Linked, COM, PRO, TFC or WX messages are available, TRE sends a Generic message.
2. If Interleaving is enabled but the cover feature is not:
 - When **music** is playing, TRE sends PAD rotated with messages configured in the Clock Blocks (COM, PRO, TFC or WX). If no valid Linked, COM, PRO, TFC or WX messages are available, TRE sends a Generic message.
 - When audio **commercials** are playing, TRE sends a message as configured in the Clock Blocks (COM, PRO, TFC or WX). If no valid Linked, COM, PRO, TFC or WX messages are available, TRE sends a Generic message.
 - When **other** audio is playing, TRE sends a message as configured in the Clock Blocks (COM, PRO, TFC or WX). If no valid Linked, COM, PRO, TFC or WX messages are available, TRE sends a Generic message.
3. If Interleaving is not enabled, but the cover feature is:
 - When **music** is playing, TRE sends only PAD.
 - When audio **commercials** are playing, TRE sends a Cover message. If no valid Cover messages are available, TRE sends a Generic message.
 - When **other** audio is playing, TRE sends a message as configured in the Clock Blocks (COM, PRO, TFC or WX). If no valid Linked, COM, PRO, TFC or WX messages are available, TRE sends a Generic message.
4. If Interleaving and the cover feature are both enabled:
 - When **music** is playing, TRE sends PAD rotated with messages as configured in the Clock Blocks (COM, PRO, TFC or WX). If no valid Linked, COM, PRO, TFC or WX messages are available, TRE sends a Generic message.
 - When audio **commercials** are playing, TRE sends a Cover message. If no valid Cover messages are available, TRE sends a Generic message.
 - When **other** audio is playing, TRE sends a message as configured in the Clock Blocks (COM, PRO, TFC or WX). If no valid Linked, COM, PRO, TFC or WX messages are available, TRE sends a Generic message.



5.4.5 Configuring Linked Messages

- 1 After logging in, you will be able to see your **Station Home** page.

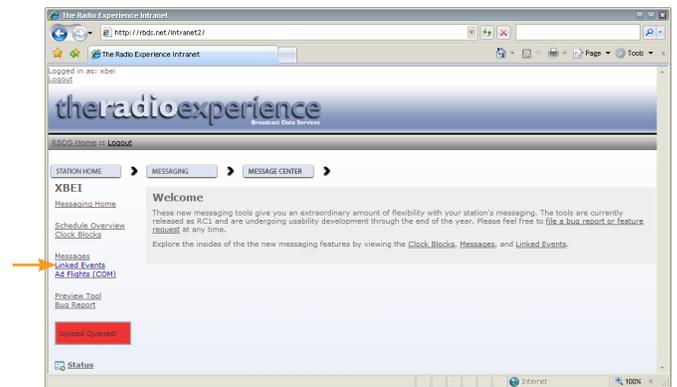
From here click **Messaging** to move on to the Message Center where you can begin configuring messages.



- 2 Click the **MessageCenter2** tab to continue.



- 3 Message configuration choices are accessed from the left-hand menu. Click **Linked Events** to configure linked event messages.

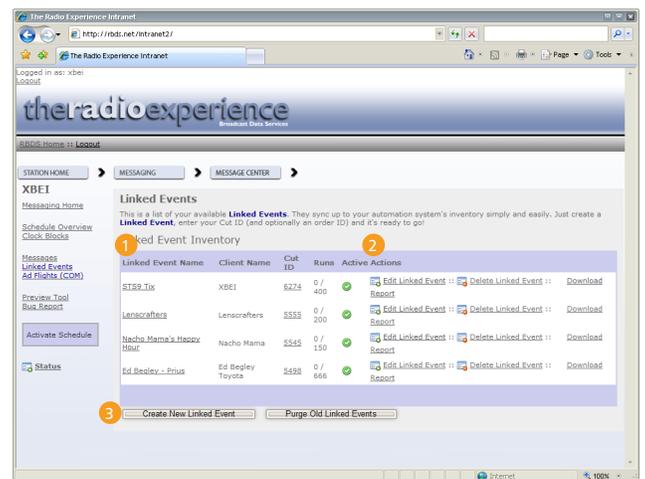


- 4 From the Linked Events home page, you can quickly see details about linked event messages already in your system, and perform basic housekeeping tasks.

- 1 Here you can see a list of all the linked event messages in the system.

- 2 Action options include **editing** existing messages, **deleting** existing messages and **downloading** a comma-separated as-run log showing when each message ran.

- 3 Click the **Create New Linked Event** button to create a new message.



To create a linked message (or edit an existing message), enter the appropriate information. Once editing is complete, click the **Save** button to save the message and return to the Linked Events home page.

Linked Event Name: This is a general text field for your reference. Enter a descriptive title for this message.

Client Name: If the message is associated with a specific client, that information can be entered here.

Alternate ID: This optional field is used to reference a campaign ID that may be tracked in your traffic and billing system.

Linked Event ID: In this field enter the event ID of the automation system event associated with this message. Whenever this event plays in your automation system, Message Manager will run this linked event message.

RDS Text: Enter the message to be displayed on Radio Text-enabled RDS receivers. **This message has a maximum length of 64 characters.**

HD Radio Text: Enter the message to be displayed on HD Radio receivers.

Dynamic PS Text - Box Input: Enter the message to be displayed on PS-enabled RDS receivers. Using the box input, you can easily break up the message into 8-character chunks. The animated receiver display to the right will give you an idea as to how listeners will see your message. **This message has a maximum length of 64 characters and is sent in 8-character chunks.**

Dynamic PS Text - Single Input: Enter the message to be displayed on PS-enabled RDS receivers. Using the single input, can enter the message on a single line. The animated receiver display to the right will give you an idea as to how listeners will see your message. **This message has a maximum length of 64 characters and is sent in 8-character chunks.**

Web Graphic: Reserved for future development use.

Web URL: Reserved for future development use.

Mobile: Reserved for future development use.

Maximum Runs: The maximum number of times this message will air can be specified. Once the maximum number has been reached, the message will automatically be flagged as inactive.

Currently Active: Messages can be in the system yet flagged as inactive. By unchecking this box, administrators can deactivate a message permanently or simply suspend a message temporarily.

Deactivated Reason: Administrators can optionally enter a brief explanation as to why the message has been deactivated.

Start Date: The date the message should begin running.

End Date: The date the message should stop running.

The screenshot shows the 'Edit Linked Event' form in the 'The Radio Experience Intranet'. The form is titled 'Edit Linked Event' and contains the following fields and values:

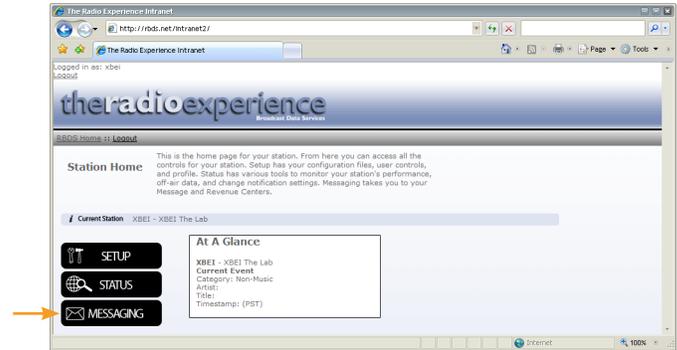
- Field** | **Value**
- Linked Event Name: STS9 Tex
- Client Name: XBEI
- Alternate ID (i.e., MarketID):
- Linked Event ID: 6374
- RDS Text: Listen To Win Great STS9 Seats
- HD Radio Text: XBEI Is Giving Away Great STS9 Seats Today
- Dynamic PS Text**
- Box Input**: Listen | To Win | STS9 | Tickets
- Single Input**
- Other**
- Web Graphic:
- Web URL:
- Mobile:
- Maximum Runs: 400
- Currently Active?
- Deactivated Reason:
- Linked Event Campaign Dates**
- Start Date: 2008-11-11 (yyyy-mm-dd)
- End Date: 2008-11-21 (yyyy-mm-dd)

A 'Save Linked Event' button is located at the bottom right of the form. To the right of the form, there is a preview of the RDS display showing 'STS9' and a radio icon.

5.4.6 Configuring Commercial Messages

- 1 After logging in, you will be able to see your **Station Home** page.

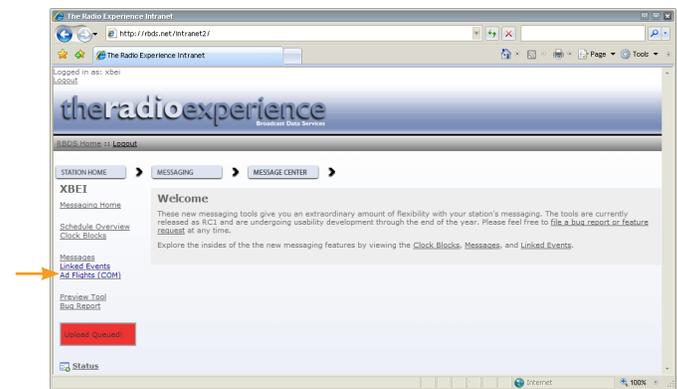
From here click **Messaging** to move on to the Message Center where you can begin configuring messages.



- 2 Click the **MessageCenter2** tab to continue.

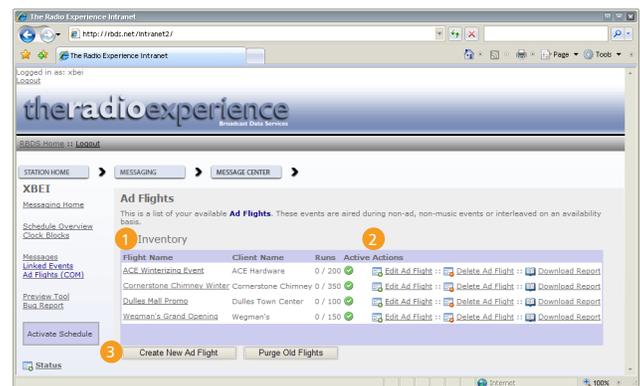


- 3 Message configuration choices are accessed from the left-hand menu. Click **Ad Flights (COM)** to configure commercial messages.



- 4 From the Ad Flights home page, you can quickly see details about commercial messages already in your system, and perform basic housekeeping tasks.

- 1 Here you can see a list of all the commercial messages in the system.
- 2 Action options include **editing** existing messages, **deleting** existing messages and **downloading** a comma-separated as-run log showing when each message ran.
- 3 Click the **Create New Ad Flight** button to create a new message.



To create a commercial message (or edit an existing message), enter the appropriate information. Once editing is complete, click the **Save** button to save the message and return to the **Ad Flights (COM)** home page.

Ad Flight Name: This is a general text field for your reference. Enter a descriptive title for this message.

Client Name: If the message is associated with a specific client, that information can be entered here.

Alternate ID: This optional field is used to reference a campaign ID that may be tracked in your traffic and billing system.

RDS Text: Enter the message to be displayed on Radio Text-enabled RDS receivers. **This message has a maximum length of 64 characters.**

HD Radio Text: Enter the message to be displayed on HD Radio receivers.

Dynamic PS Text - Box Input: Enter the message to be displayed on PS-enabled RDS receivers. Using the box input, you can easily break up the message into 8-character chunks. The animated receiver display to the right will give you an idea as to how listeners will see your message. **This message has a maximum length of 64 characters and is sent in 8-character chunks.**

Dynamic PS Text - Single Input: Enter the message to be displayed on PS-enabled RDS receivers. Using the single input, you can enter the message on a single line. The animated receiver display to the right will give you an idea as to how listeners will see your message. **This message has a maximum length of 64 characters and is sent in 8-character chunks.**

Web Graphic: Reserved for future development use.

Web URL: Reserved for future development use.

Mobile: Reserved for future development use.

Maximum Runs: The maximum number of times this message will air can be specified. Once the maximum number has been reached, the message will automatically be flagged as inactive.

Currently Active: Messages can be in the system yet flagged as inactive. By unchecking this box, administrators can deactivate a message permanently or simply suspend a message temporarily.

Deactivated Reason: Administrators can optionally enter a brief explanation as to why the message has been deactivated.

Flight Campaign Dates

Start Date: The date the message should begin running.

End Date: The date the message should stop running.

Days to Run: Each flight can be configured to run only on certain days. When a day is checked, this message will be valid to run on that day.

Start Time: Basic dayparting is supported. Enter the time of day to begin running this message.

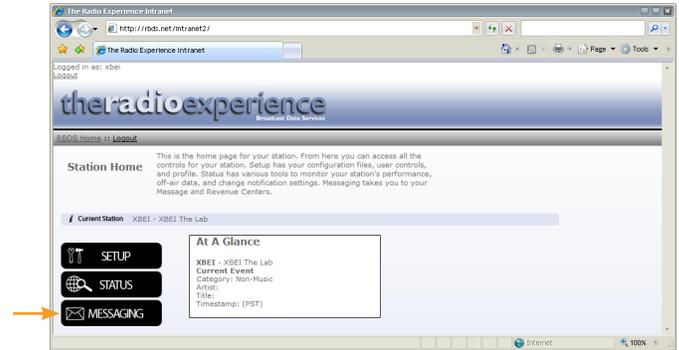
End Time: Basic dayparting is supported. Enter the time of day to stop running this message.

Use All Times: If special dayparting is not required, click this link to run this message every day, 24 hours a day.

5.4.7 Configuring Promotional, Cover and Generic Messages

- 1 After logging in, you will be able to see your **Station Home** page.

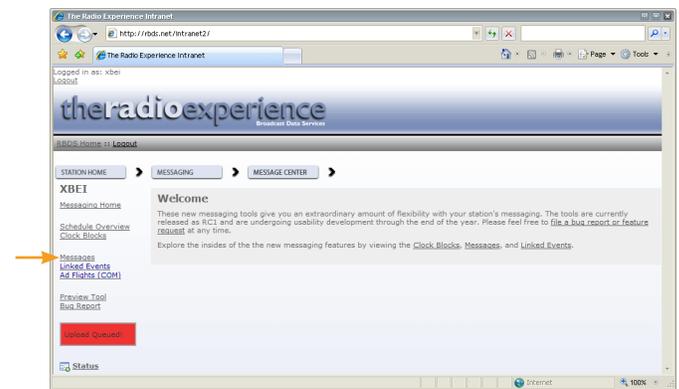
From here click **Messaging** to move on to the Message Center where you can begin configuring messages.



- 2 Click the **MessageCenter2** tab to continue.

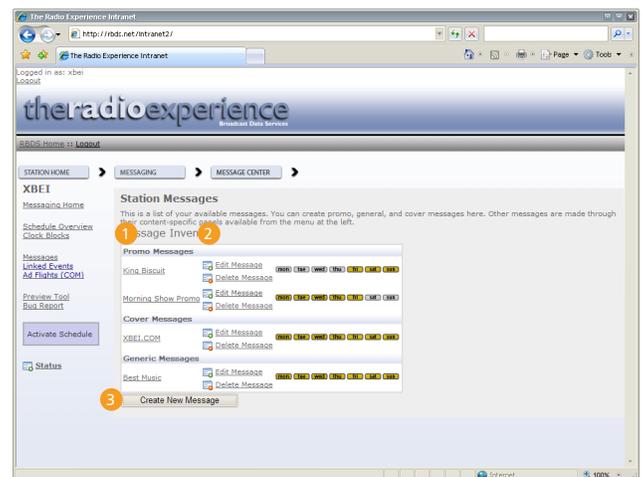


- 3 Message configuration choices are accessed from the left-hand menu. Click **Messages** to configure promotional messages.



- 4 From the Station Messages Intranet home page, you can quickly see details about messages already in your system, and perform basic housekeeping tasks.

- 1 Here you can see a list of all the messages in the system.
- 2 Action options include **editing** and **deleting** existing messages.
- 3 Click the **Create New Message** button to create a new message.



To create a promotional message (or edit an existing message), enter the appropriate information. Once editing is complete, click the **Save** button to save the message and return to the **Station Messages** home page.

Ad Flight Name: This is a general text field for your reference. Enter a descriptive title for this message.

Message Type: Use the drop-down box to define this message as either a **Promo**, **Cover** or **Generic** message.

Duration: If new event PAD isn't received from the automation system within this duration (set in seconds), the system will send another promotional or commercial message. DPS segments change about every 5 seconds, while Radio Text characters scroll at about one character every second so it's recommended that the length of the message approximate the duration of the message.

RDS Text: Enter the message to be displayed on Radio Text-enabled RDS receivers. **This message has a maximum length of 64 characters.**

HD Radio Text: Enter the message to be displayed on HD Radio receivers.

Web Text: Enter the message to be sent to your station web site.

Dynamic PS Text - Box Input: Enter the message to be displayed on PS-enabled RDS receivers. Using the box input, you can easily break up the message into 8-character chunks. The animated receiver display to the right will give you an idea as to how listeners will see your message. **This message has a maximum length of 64 characters and is sent in 8-character chunks.**

Dynamic PS Text - Single Input: Enter the message to be displayed on PS-enabled RDS receivers. Using the single input, can enter the message on a single line. The animated receiver display to the right will give you an idea as to how listeners will see your message. **This message has a maximum length of 64 characters and is sent in 8-character chunks.**

Days to Run: Each flight can be configured to run only on certain days. When a day is checked, this message will be valid to run on that day.

Start Time: Basic dayparting is supported. Enter the time of day to begin running this message.

End Time: Basic dayparting is supported. Enter the time of day to stop running this message.

Use All Times: If special dayparting is not required, click this link to run this message every day, 24 hours a day.

Start Date: The date the message should begin running.

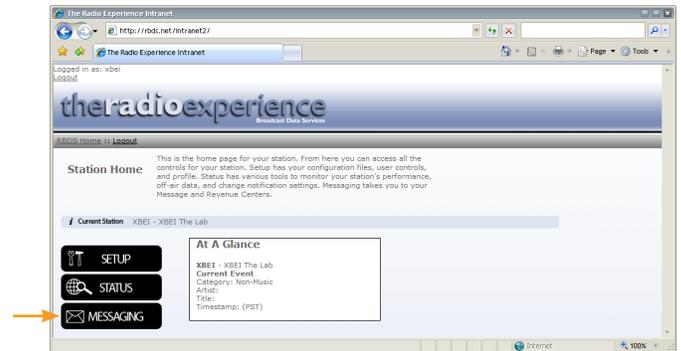
End Date: The date the message should stop running.

5.4.8 Configuring Traffic and Weather Placeholders

TRE is capable of receiving, formatting and inserting live traffic and weather data gathered from third-party data sources. Since this data is constantly changing, all that is necessary is a message “placeholder” inserted into a clock block. These placeholders share only a few properties with commercial and promotional messages since the message content is dynamic.

- 1 After logging in, you will be able to see your **Station Home** page.

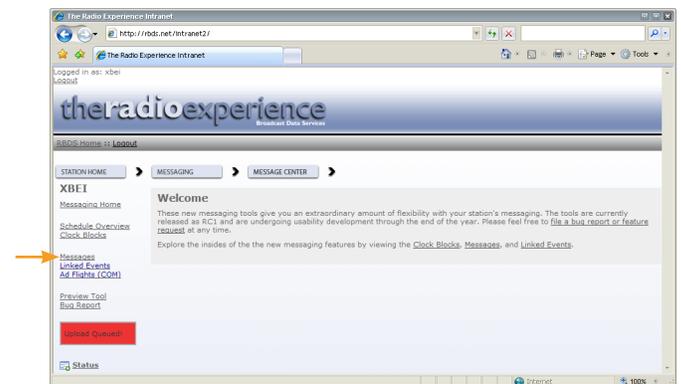
From here click **Messaging** to move on to the Message Center where you can begin configuring messages.



- 2 Click the **MessageCenter2** tab to continue.

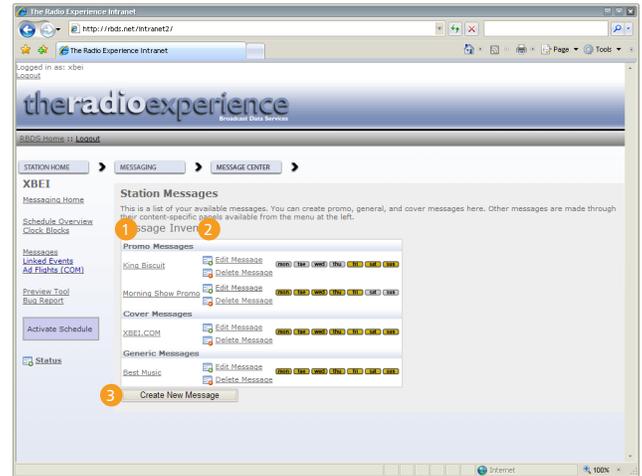


- 3 Message configuration choices are accessed from the left-hand menu. Click **Messages** to configure promotional messages.



4 From the Station Messages home page, you can quickly see details about messages already in your system, and perform basic housekeeping tasks.

- 1 Here you can see a list of all the messages in the system.
- 2 Action options include **editing** and **deleting** existing messages.
- 3 Click the **Create New Message** button to create a new message.



5 To create a traffic or weather placeholder (or edit an existing placeholder), enter the appropriate information. Once editing is complete, click the **Save** button to save the message and return to the **Station Messages** home page.

Message Name: This is a general text field for your reference. Enter a descriptive title for this message.

Message Type: Use the drop-down box to define this message as either a **Traffic** or **Weather** message.

Duration: If new event PAD isn't received from the automation system within this duration (set in seconds), the system will send another promotional or commercial message. DPS segments change about every 5 seconds, while Radio Text characters scroll at about one character every second so it's recommended that the duration of the message approximate the length of the message.

Days to Run: Each flight can be configured to run only on certain days. When a day is checked, this message will be valid to run on that day.

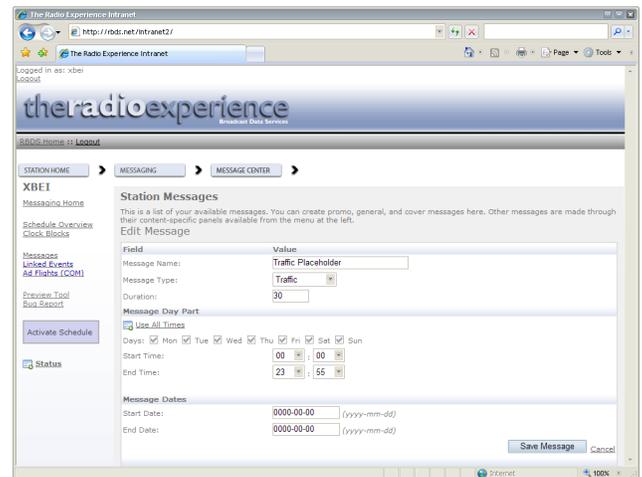
Start Time: Basic dayparting is supported. Enter the time of day to begin running this message.

End Time: Basic dayparting is supported. Enter the time of day to stop running this message.

Use All Times: If special dayparting is not required, click this link to run this message every day, 24 hours a day.

Start Date: The date the message should begin running.

End Date: The date the message should stop running.



5.4.9 Scheduling Messages in Clock Blocks

Once your promotional and commercial messages are created, you must tell the software when and how often to use each message type throughout the day. This is accomplished by setting up **Clock Blocks**.

Clock blocks allow you to establish message rotations. For example, you can tell Message Manager to rotate promotional and commercial messages during the morning show on weekdays, but only to run promotional messages during the overnight hours.

Example 1



When this clock block is active, commercial and promotional messages will rotate. If Interleaving is enabled, during a music event Message Manager would send this text to a listener's receiver, switching between elements every 30 seconds:

Music PAD (Artist/Title Information)
Commercial Message
Music PAD (Artist/Title Information)
Promotional Message
Music PAD (Artist/Title Information)
Commercial Message

Similarly, commercial and promotional messages will rotate during non-music events.

Example 2



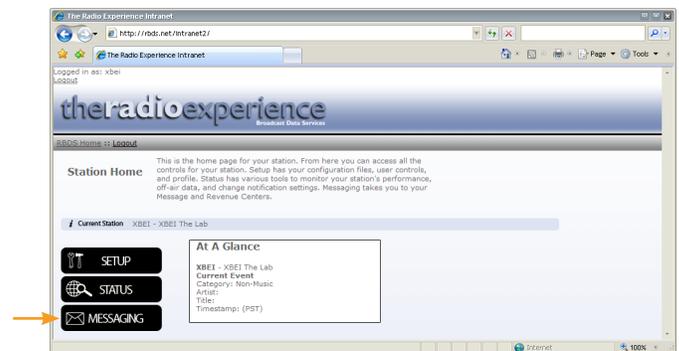
When this clock block is active, only promotional messages are available. If Interleaving is enabled, during a music event Message Manager would send this text to a listener's receiver, switching between elements every 30 seconds:

Music PAD (Artist/Title Information)
Promotional Message
Music PAD (Artist/Title Information)

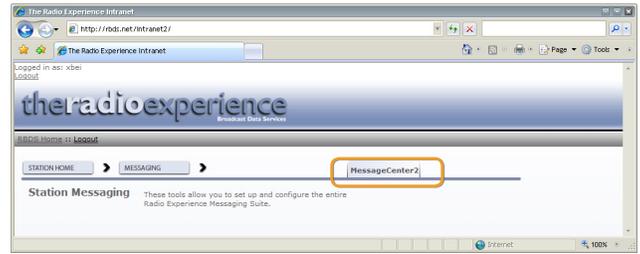
When this clock block is active, only promotional messages will run during non-music events.

1 After logging in, you will be able to see your **Station Home** page.

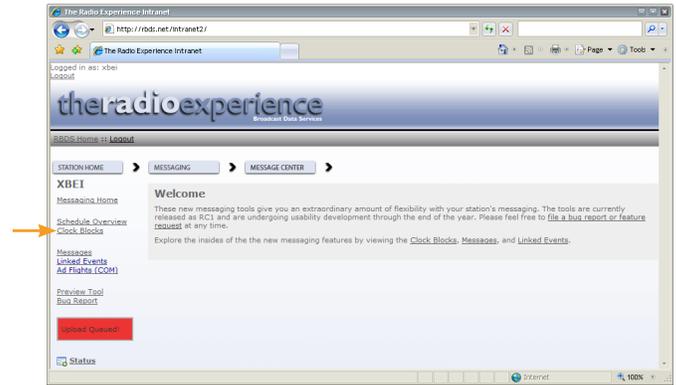
From here click **Messaging** to move on to the Message Center where you can begin configuring messages.



2 Click the **MessageCenter2** tab to continue.

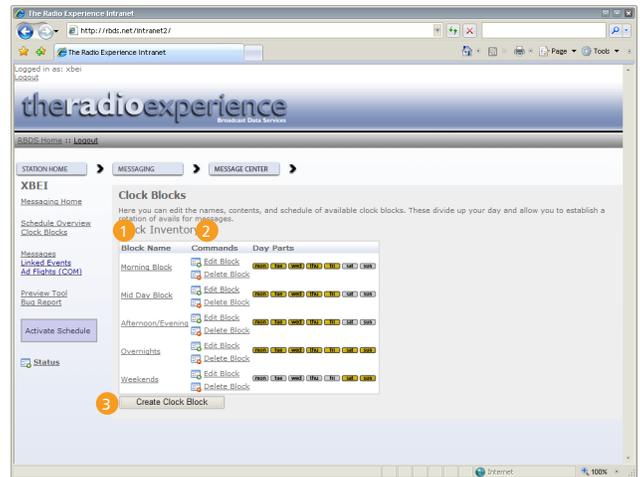


3 All configuration choices are accessed from the left-hand menu. Click **Clock Blocks** to configure clock blocks.



4 From the Clock Blocks home page, you can quickly see details about clock blocks already in your system, and perform basic housekeeping tasks.

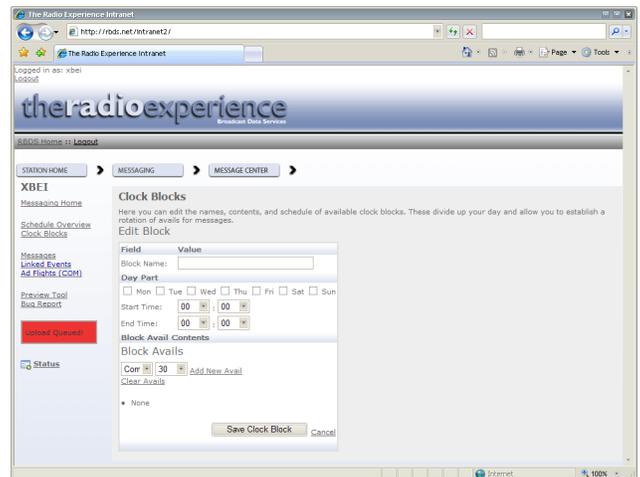
- 1 Here you can see a list of all the clock blocks in the system.
- 2 Action options include **editing** and **deleting** existing clock blocks.
- 3 Click the **Create Clock Block** button to create a new clock block.



5 To create a clock block (or edit an existing clock block), enter the appropriate information. Once editing is complete, click the **Save** button to save the clock block and return to the **Clock Blocks** home page.

Block Name: This is a general text field for your reference. Enter a descriptive title for this clock block.

Days to Run: Each clock block can be configured to be active only on certain days. When a day is checked, this clock block will be valid on that day.



Creating Clock Blocks Cont.

Start Time: Basic dayparting is supported. Enter the time of day to begin using this clock block.

End Time: Basic dayparting is supported. Enter the time of day to stop using this clock block.

Block Avail Contents

Here is where you specify the desired elements in your rotation and the rotation duration.

Event Type Drop-down: Select the message type (either COM, PRO TFC or WX)

Duration Drop-down: Select the rotation duration.

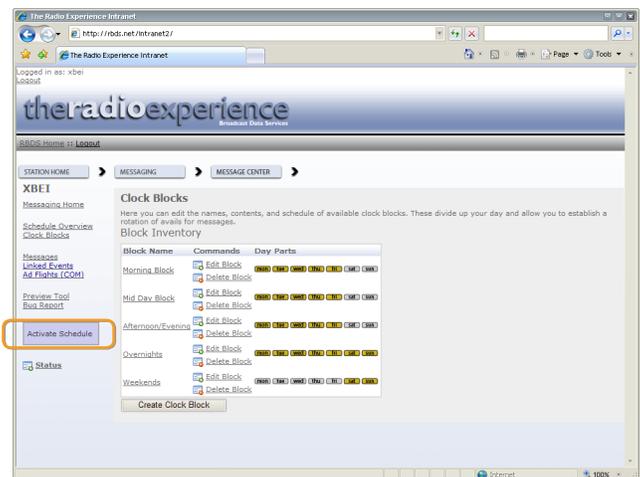
Add New Avail: Once you have selected the message type and rotation duration, click this link to add the avail to the clock block.

Clear Avails: Click this link to clear all avails for this clock block.

5.4.10 Activate the Schedule

After all changes have been made, the schedule must be activated.

To activate the schedule, click the **Activate Schedule** button visible on most Message Center pages. It will change to a red button with the label **Upload Queued!** TRE checks for a new schedule every time it rotates a message



5.4.11 View Upload Status

Clicking the **Status** link below the **Upload Queued!** button will provide details concerning the status of the schedule upload.

Latest Schedule: Time the queued schedule was last modified.

Activated Since D/L: Indicates the number of times you have clicked the Active Schedule or Upload Queued! button since the last download to TRE.

Last TRE Download: Time last schedule was uploaded to Message Manager.

Last TRE Event: Time last event data was received from the automation system.



Section 6: The TRE Configuration Tool



If your Site Details form was incomplete or information has changed since its submission, you can use the Configuration Tool to configure your Messagecasting software.

t When you open the Configuration Tool, be sure to load the **tre.bin** file from your station's TRE data directory. Click **File>Open**, browse to your station data directory (**tre-<CALLS>**) and select **tre.bin**.

6.1 Station Options

Call Sign: This allows you to view the primary call letters of this TRE installation. These call letters are directly tied to your license file.

This field cannot be modified.

Legal ID: Legal ID text for RDS, both Radio Text and DPS.

Legal ID HD: Legal ID text for HD Radio.

Frequency: As part of the RDS standard, the frequency of the station is required

City: For identification purposes, the standard also requires the city of license

Band: Check AM or FM

Group: Enter group information here

Channel: For this instance of TRE, is the primary output intended for the **Main** (FM RDS and Primary HD Radio), **HD-1** (Primary HD Radio only), or **HD-2** (HD Radio multicast) channel?

Now Playing Flash: Enable this check box if you are using the Web Plus Flash component on your website

URL: If you are using the Web Plus Flash component on your website, what is the destination URL for the now playing information?



The screenshot shows a 'Station Info' configuration window. It contains several input fields: 'Call sign', 'Legal ID', 'Legal ID HD', 'Station', 'Frequency', 'City', 'Band' (with radio buttons for AM and FM), 'Group', 'Channel' (with a dropdown menu), and 'URL'. There is also a checkbox labeled 'Enable Legal ID' which is checked, and another checkbox labeled 'Enable Now Playing Flash URL' which is unchecked.

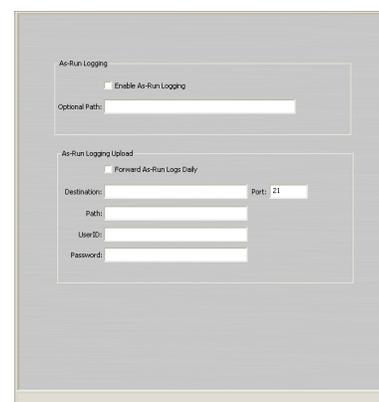
t The **Group**, **Channel** and **URL** settings are used to feed data to Station Manager. If you are not using Station Manager, you may leave those settings blank.

6.2 As Run Log Options

These options include configuration details for creating a tab-delimited as-run event log. Logging must be enabled by the system administrator and logs must be manually deleted as part of administrative housecleaning tasks.

Enable As-Run Logging: This box must be checked to enable as-run logging. As-run logs are saved to the **tre-<CALLS>** folder by default.

Optional Path: Logs can be saved to an alternate path, which can be specified here. Only the path can be modified. The filename is automatically generated by the TRE software.



The screenshot shows an 'As-Run Logging' configuration window. It has a checkbox for 'Enable As-Run Logging' which is checked. Below it is an 'Optional Path' input field. There is a section for 'As-Run Logging Method' with a checkbox for 'Forward As-Run Logs Daily' which is checked. Under this section are input fields for 'Destination', 'Path', 'UserID', and 'Password'. The 'Destination' field has a 'Port' dropdown menu set to '21'.

As Run Log Options Cont.

Forward As-Run Logs Daily: Once logging is enabled, TRE can push the as-run log to an FTP location at the end of each day.

Destination: Enter the destination FTP address for log uploads.

Port: Port 21 is standard for FTP. If an alternate port is required, it can be specified here.

Path: Enter the path on the FTP location for log uploads.

UserID: Enter the user logon information for the FTP location.

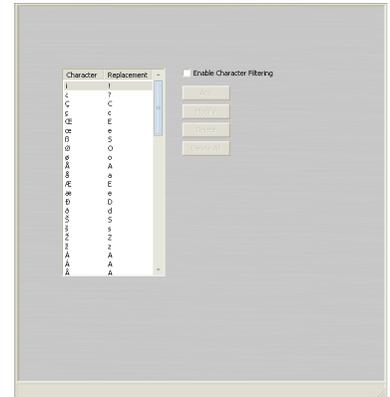
Password: Enter the password information for the FTP location.

6.3 Character Filter

The character filter can be used to replace accented and other non-standard characters when listeners are likely to have receivers that may not support these characters. The filter can also be used to replace ASCII characters such as punctuation or symbols.

Enable Character Filtering: A system administrator must check this box to enable the character filtering functionality. Once the function is enabled, characters are placed one-to-one based on the filtering table.

Add-Modify-Delete Buttons: These buttons are used to make changes to the replacement table. To **add** or **modify** a replacement entry, click the appropriate button and enter the original and replacement characters. To delete an entry, highlight the entry in the replacement table and click the **delete** button.



6.4 Debug Log Options

The TRE software is capable of writing a debug log which can be very useful when troubleshooting connectivity and other operational issues. From this screen, the option can be enabled, and options can be set related to file location and size.

Enable Debug Logging: A system administrator must check this box to enable debug logging. Debug logs are saved to the **tre-<CALLS>** folder by default.

Optional Path: Logs can be saved to an alternate path, which can be specified here. Only the path can be modified. The filename is automatically generated by the TRE software.

Days to keep: This value specifies the number of days of debug information maintained by the software.

Forward Debug Logs Daily: Once logging is enabled, TRE can push the debug log to an FTP location at the end of each day.

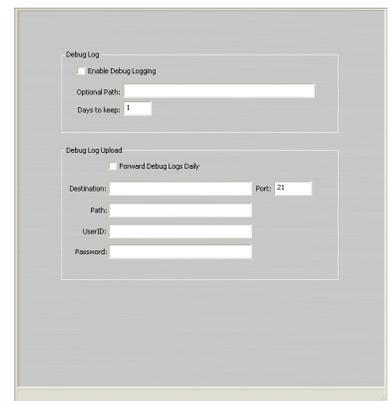
Destination: Enter the destination FTP address for log uploads.

Port: Port 21 is standard for FTP. If an alternate port is required, it can be specified here.

Path: Enter the path on the FTP location for log uploads.

UserID: Enter the user logon information for the FTP location.

Password: Enter the password information for the FTP location.

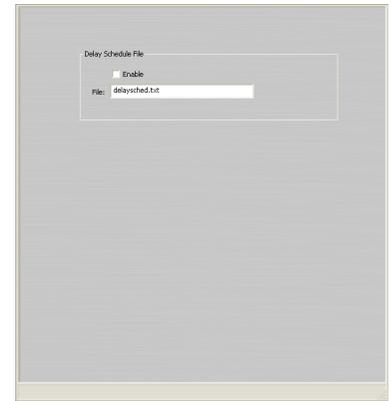


6.5 Delay Schedule File Options

The TRE software is capable of using a delay schedule to delay the sending of Messagecasting data during dayparts using audio delays so the audio and messages reach the listener's receiver at the same time. From this screen, the option can be enabled, and the delay schedule file location and filename specified.

Enable: A system administrator must check this box to enable the delay schedule feature.

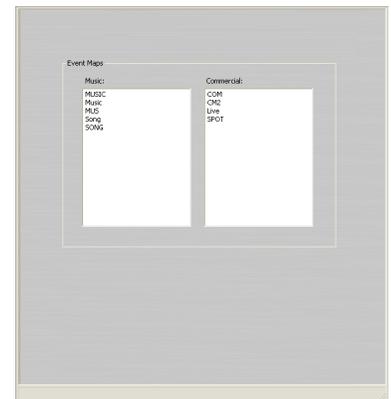
File: This specifies the filename for the delay schedule. If no path is specified, **tre-<CALLS>** is assumed.



6.6 Event Mapping

TRE handles different types of events differently. To distinguish between music, commercial and "other" events, TRE reads category or type information in the program associated data sent by the automation system. By specifying these category types on this screen, TRE can distinguish between event types.

All music categories should be listed under **Music**. All commercial categories should be listed under **Commercial**. Categories not listed in either field are assumed to be "other".



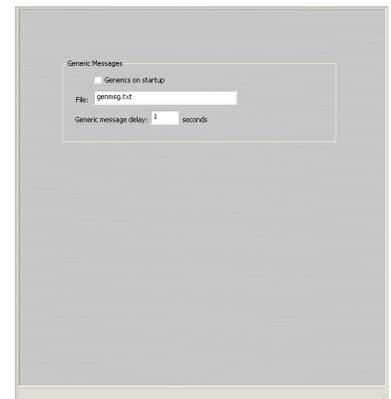
6.7 Generics

These fields allow administrators to set general options related to generic messages.

Generics on startup: Checking this box will cause TRE to send out a generic message on startup.

File: Specifies the path and filename of the text file containing generic messages. If no path is specified, the software will assume the file is in the default **tre-<CALLS>** directory.

Generic message delay: Sets a global delay for sending generic messages. This setting is useful if your station frequently airs very short sweepers. This essentially causes TRE to ignore any audio event under this duration.



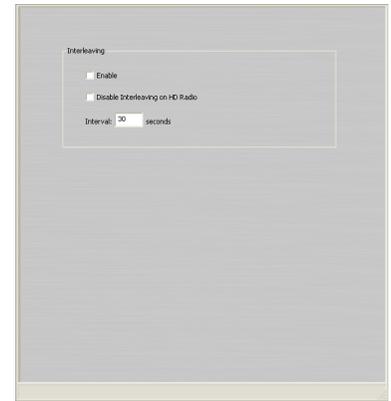
6.8 Interleaving

Now Playing/Message Manager has the ability to rotate messages with conventional PAD at a specified interval.

Enable: This checkbox enables the Interleaving function

Disable Interleaving on HD Radio: This checkbox disables Interleaving on HD Radio only and should be checked when using expanded HD Radio features such as iTunes Tagging.

Interval: This field sets the interleaving rotation interval in seconds

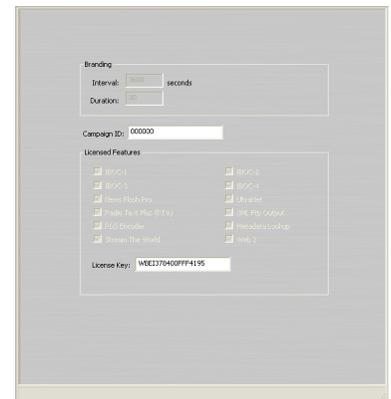


6.9 Licensed Features

This screen can be used to view purchased features for this instance of TRE. Only two fields can be modified by the user.

Campaign ID: This is your Spun.com Campaign ID used by Web Plus to enable e-commerce click-throughs. This Campaign ID will be provided by BE when the Web Plus function is purchased.

License Key: If you are upgrading from a trial version to a full version, you can enter license information in this field.



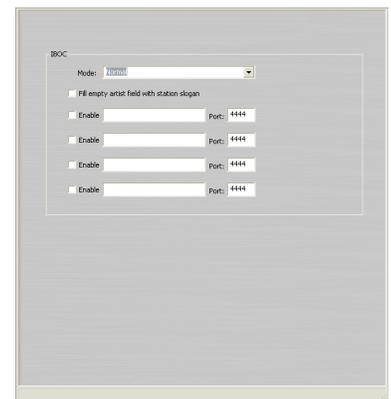
6.10 Licensed Features: IBOC HD Radio

Configuration settings for output to HD Radio.

Mode: Options include **Normal** (MPS or SPS with version 2.x of the Importer software), **Legacy HD Primary**, or **Legacy HD Secondary** (MPS or SPS with version 1.x of the Importer software).

Fill empty artist field with station slogan: Checking this box will cause TRE to pass the station slogan in the artist field during generic messages. Some HD Radio receivers “hang on” to the previous artist if the field is not updated.

Exporter/Importer Address Fields: Up to four HD Radio Exporters or Importers can be specified. Once enabled, enter the IP address of the destination device. An alternate port can also be specified for each device.



6.11 Licensed Features: Metadata Lookup

Configuration of metadata lookup details. For use with the Web Plus plug-in.

Enable Metadata lookup: This box must be checked to enable the feature.

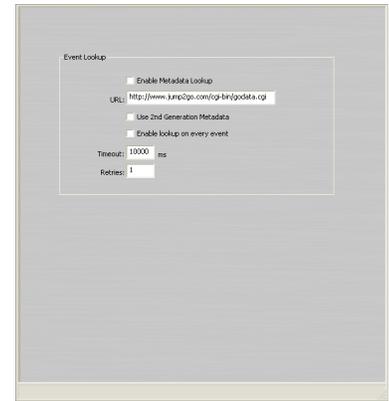
URL: The URL for the metadata lookup service.

Use 2nd Generation Metadata: This box should be checked if you are using Message Manager 2.0 or iTunes tagging.

Enable lookup on every event: Enable/disable event lookup.

Timeout: Duration in milliseconds before reconnect after a timeout.

Retries: Number of retry attempts if a connection to can not be established.



The screenshot shows the 'Event Lookup' configuration window. It contains the following settings:

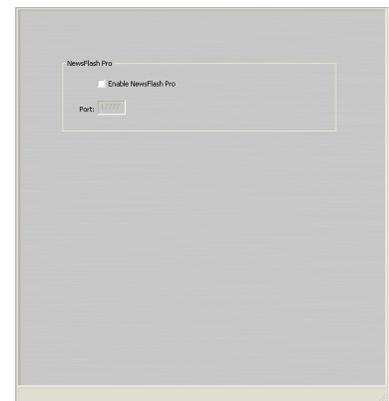
- Enable Metadata Lookup
- URL:
- Use 2nd Generation Metadata
- Enable lookup on every event
- Timeout: ms
- Retries:

6.12 Licensed Features: NewsFlashPro

Configuration information for the NewsFlashPro plug in.

Enable NewsFlashPro: Enable/disable this feature.

Port: The port number where News Flash Pro will be sending data. This should match the port number in the NewsFlashPro configuration. Default is port 17777.



The screenshot shows the 'NewsFlash Pro' configuration window. It contains the following settings:

- Enable NewsFlash Pro
- Port:

6.13 Licensed Features: Radio Text Plus (RT+)

Configuration of Radio Text Plus information. For use with RT+ hardware.

Enable: Enable/disable the transmission of Radio Text Plus data.

Direct/Multiplex Connection: Identify the connection type between TRE and the RDS encoder. For single station data delivery method, select Direct Connection, for multiple station data delivery method, select Multiplex Connection.

Type: Connection type to RT+ hardware. Options are Serial, TCP and UDP (default).

Address: IP address of the RT+ hardware.

Port: Port number on the RT+ encoder.

Channel: Assigned channel number of the data stream.

Send Extended Data: Enable/disable the transmission of external data.

Send Ratio Text: Enable/disable the transmission of radio text.

Send Time Update: Enable/disable the transmission of a time update.



The screenshot shows the 'RadioText PLUS' configuration window. It contains the following settings:

- Enable
- Direct Connection Multiplex Connection
- Type:
- Address:
- Port:
- Channel:
- Send Extended Data
- Send Radio Text
- Send Time Update

6.14 Licensed Features: RDS Encoder

Configuration settings for output to RDS. TRE supports multiple RDS encoders, but only as long as they are all using the same command set.

Enable RDS Encoder output: Enable/disable transmission of RDS data.

Ports: Definitions for connections to RDS encoders. Add a connection by clicking **Add**, selecting whether the connection is UDP or serial, and setting the connection parameters.

Max Len: The maximum length of the Radio Text string including your encoder command. You may also want to include carriage returns as certain RDS encoders will count them as characters.

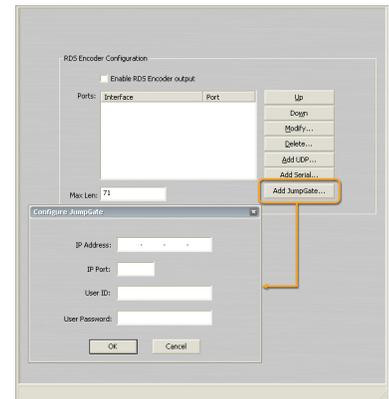
To enable the use of the JumpGate encoder, click the **Add JumpGate** button and enter the JumpGate connection details.

IP Address: IP address of JumpGate encoder.

Port: Default JumpGate port is port 21, although an alternate port can be specified.

User ID: Logon username

User Password: Logon password.



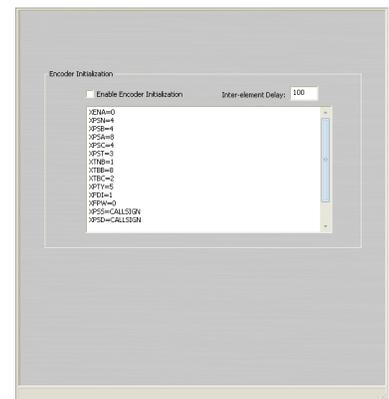
6.15 Licensed Features: RDS Encoder: RDS Encoder Initialization

Configuration of RDS encoder initialization settings, the commands sent to the RDS encoder when the TRE software is first launched.

Enable Encoder Initialization: Enable/disable encoder initialization.

Inter-element Delay: Delay in milliseconds between the sending of each command.

Command string list: Each of these commands will be sent to the RDS encoder upon starting TRE. **Default command set is for the Broadcast Electronics RDi 20. To use this feature with other encoders, contact your encoder's manufacturer.**



6.16 Licensed Features: RDS Encoder: Dynamic PS

Configuration options for DPS functionality. This feature is only used with RDS encoders that support DPS. Additionally, not all receiver support DPS.

Enable: Enable/disable the sending of DPS data.

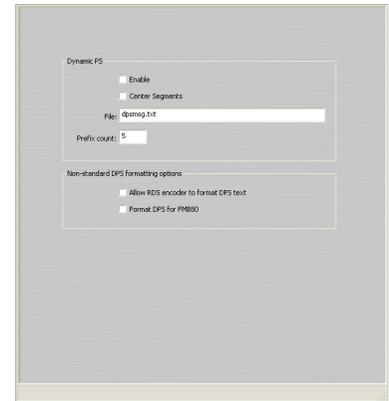
Center Segments: Centers segments with less than 8 characters in the DPS field.

File: Path and file name of to the **DPSMSG.TXT** file. No path is needed if the file is in the default **tre-<CALLS>** directory.

Prefix Count: This number of characters in your RDS encoder command for DPS. For example, **XPSD=** would be 5.

Allow RDS encoder to format DPS text: Checking this will cause TRE to send unformatted text to the RDS encoder with the expectation that the encoder will format it for DPS display.

Format DPS for FMB80: Check this if you are using an FMB80 RDS encoder and wish to allow TRE to format DPS. The FMB80 has unique requirements on how DPS text is pre-formatted. This enables that formatting.



6.17 Licensed Features: RDS Encoder: Traffic Announcement Flag

Configuration options for the TA flag for RDS. TRE allows you to associate a TA flag with specific files in your automation system. When those files play, TRE sends a TA flag through the RDS encoder to alert listeners that you are delivering a traffic announcement.

Enable Traffic Announcement (TA) Flag: System administrators must check this box to enable the TA flag feature.

Command to invoke TA flag: Enter the TA flag for your specific RDS encoder.

Command to cancel TA flag: Enter the TA flag for your specific RDS encoder.

Cut IDs that invoke the TA flag: List each cut in your automation system associated with traffic information.



6.18 Licensed Features: RDS Encoder: Group 5A

Configuration options for ancillary Group 5A data. Used for sending data to billboards and other devices.

General

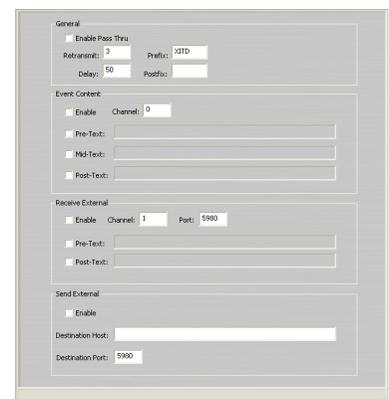
Enable Pass Thru: System administrators must check this box to enable Group 5A output.

Retransmit: Number of times to retransmit same data string.

Delay: Delay between data transmissions.

Prefix: Prefix for data string. This is usually a command that is understood by a billboard that dictates how the text will display.

Postfix: Postfix for data string.



Licensed Features: RDS Encoder: Group 5A Cont.

Event Content

Enable: System administrators must check this box to enable Group 5A event content.

Channel: Channel number.

Pre-Text: Text that is always sent before the PAD data. The checkbox must be checked and text entered for the pre-text function to work correctly.

Mid-Text: Text that is always sent with the PAD data. The checkbox must be checked and text entered for the mid-text function to work correctly.

Post-Text: Text that is always sent after the PAD data. The checkbox must be checked and text entered for the post-text function to work correctly.

Receive External

Enable: System administrators must check this box to enable incoming external data features.

Channel: Channel number for the data.

Port: IP port receiving the data.

Pre-Text: Text that is always sent before the external data. The checkbox must be checked and text entered for the pre-text function to work correctly.

Post-Text: Text that is always sent after the external data. The checkbox must be checked and text entered for the post-text function to work correctly.

Send External

Enable: System administrators must check this box to enable outgoing external data features.

Destination Host: Destination IP address for external data.

Destination Port: Destination IP port for external data.

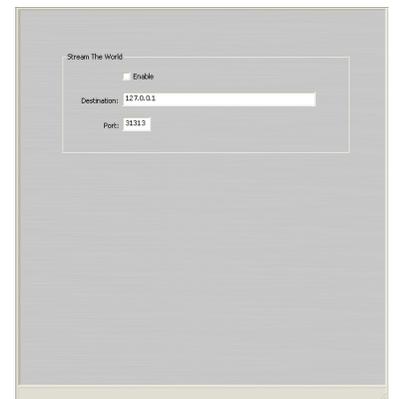
6.19 Licensed Features: Stream The World

Configuration settings for STREAMTHEWORLD streaming provider.

Enable: System administrators must check this box to enable **Stream the World** output.

Destination: IP address of the Stream the World Server.

Port: IP port of the Stream the World Server..



The screenshot shows a configuration window titled "Stream The World". It contains three fields: an "Enable" checkbox which is checked, a "Destination:" text box containing the IP address "127.0.0.1", and a "Port:" text box containing the number "31313".

6.20 Licensed Features: UltraNet

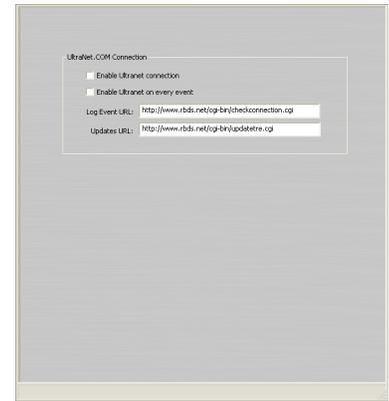
Configuration of Ultra Net information. For use with Message Manager and RBDS.net.

Enable UltraNet connection: System administrators must check this box to enable the **UltraNet** connection.

Enable UltraNet on every event: Enable/disable UltraNet connection on every event. Checking this will upload data from non-music events to the TRE Datacenter as well as music events.

Log Event URL: Log event URL.

Updates URL: Updates URL.



6.21 Licensed Features: Web 2.0: Twitter

Configuration settings sending tweets to Twitter.com.



Twitter has specific rules and requirements for how data should be formatted and how often it can be sent. Under normal operation TRE will follow these guidelines. However it is your responsibility to be familiar with these guidelines. Failure to follow them could result in Twitter suspending your account.

Enable Twitter: System administrators must check this box to enable Twitter output.

Twitter URL: URL for Twitter. Should be twitter.com.

Twitter Target: Target for Twitter.com. Should be [/statuses/update.xml](https://twitter.com/statuses/update.xml).

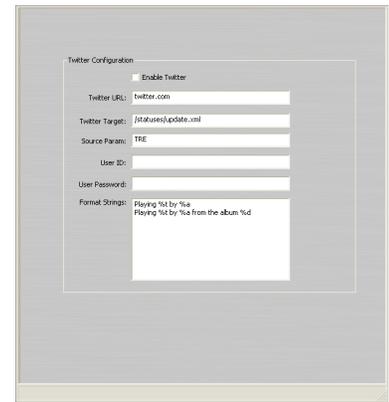
Source Param: Source Parameter registered with Twitter. **TRE** is default. To register your own source parameter contact Twitter.com.

Changing this to anything other than TRE or your valid source parameter will cause your events to not be accepted by Twitter.

User ID: Twitter User ID.

User Password: Twitter User Password.

Format Strings: Strings for formatting data sent to Twitter.com. This uses the same wildcards as used elsewhere in TRE: **%t** for title, **%a** for artist, **%d** for album title.



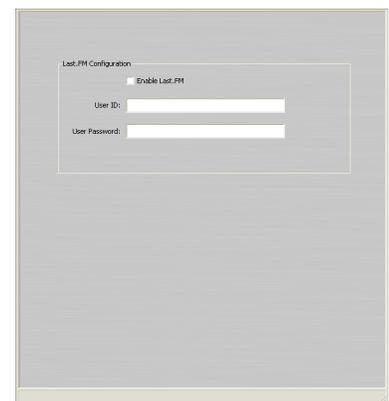
6.22 Licensed Features: Web 2.0: Last.FM

Configuration settings for sending current song data to Last.fm.

Enable Last.FM: System administrators must check this box to enable Last.fm output.

User ID: Last.fm user id.

User Password: Last.fm user password.



6.23 Licensed Features: XML Ftp Output

Configuration settings for sending TRE data to an FTP site using XML.

Enable XML Output: System administrators must check this box to enable XML output.

Convert all events to type: MUSIC: If checked all events will be defined as "music" in the XML. Usually this is unchecked.

Primary

Enable: System administrators must check this box to enable primary XML upload.

Destination: Destination FTP address, usually provided by your web site hosting company.

Path: Path where the XML file is uploaded on the FTP site.

File: File name of XML file.

UserID: FTP site logon user id.

Password: FTP site logon user password.

Port: IP port for the FTP upload. This is almost always port 21.

Secondary

Enable: System administrators must check this box to enable secondary XML upload.

Destination: Destination FTP address, usually provided by your web site hosting company.

Path: Path where the XML file is uploaded on the FTP site.

File: File name of XML file.

UserID: FTP site logon user id.

Password: FTP site logon user password.

Port: IP port for the FTP upload. This is almost always port 21.

Enable XML Ftp Output
Convert all events to type: MUSIC

Primary Enable
Destination: _____
Path: _____
File: _____
Userid: _____
Password: _____
Port: 21

Secondary Enable
Destination: _____
Path: _____
File: _____
Userid: _____
Password: _____
Port: 21

6.24 Message Center Schedule

Message Center configuration for use with Message Manager.

Enable: This check box must be checked to allow the Now Playing Core Engine to take advantage of the advanced message scheduling capabilities of the Message Center.

File: Path and file name of to the [schedule.xml](#) file. No path is needed if the file is in the `tre-<CALLS>` default directory.

Cover commercial events: Check this box only if you are using Message Manager 2.0 and wish to prevent advertiser text from running during audio commercials. Requires correct configuration of Event Mapping section.

Message Center Schedule

Enable
File: schedule.xml
 Cover commercial events

6.25 Multiplex Data

Configuration settings for multiplexing data to the transmitter site. Use of this feature requires the Remote Data Host software from Broadcast Electronics.

Enable: System administrators must check this box to enable multiplex functionality.

Address: IP address of Remote Data host. Usually 127.0.0.1

Port: Port address of Remote Data host. This should match the port setting in the [remotedatahost.ini](#) file.

Channel: The channel number for this instance of TRE.

Extended: System administrators must check this box to enable extended data.

Radio: System administrators must check this box to enable radio data.

Time: System administrators must check this box to enable time data.

The screenshot shows the 'Multiplex Output' configuration window. It features an 'Enable' checkbox at the top. Below it are four input fields: 'Address' (set to 127.0.0.1), 'Port' (set to 16550), 'Channel' (set to 0), and 'Extended' (checkbox). To the right of these fields are three more checkboxes: 'Radio' and 'Time'.

6.26 Music Board Output

Configuration settings for Music Board Output. This output creates an RCS-type text file that can be read by other processes including another TRE.

Enable: System administrators must check this box to enable Music Board output features.

File: Path and file name of to the Music Board text file. No path is needed if the file is in the default [tre-<CALLS>](#) directory.

The screenshot shows the 'MusicBoard Output' configuration window. It features an 'Enable' checkbox at the top. Below it is a text input field labeled 'File:'.

6.27 NavTech Relay

This method of handling NAVTEQ data is obsolete, contact NAVTEQ for more information.

The screenshot shows the 'NavTech Relay' configuration window. It features an 'Enable NavTech Relay' checkbox at the top. Below it are four input fields: 'Source Port' (set to 7000), 'Retry Count' (set to 50), 'Capture Count' (set to 0), and 'Capture File' (set to NavTech.bin). Below these are two sections: 'UDP Output' with an 'Enable' checkbox, 'Address' (set to 127.0.0.1), and 'Port' (set to 5000); and 'Serial Output' with an 'Enable' checkbox, 'Address' (set to COM1), and 'Baud' (set to 9600).

6.28 Station Manager

Configuration settings of TRE's communications with Station Manager.

Enable Station Manager: System administrators must check this box to enable Station Manager features.

Local Interface

Address: The IP address of this PC. This must be the actual IP address and cannot be set to `localhost` or `127.0.0.1`.

Port: The port number you which this instance of TRE to use for communications with Station Manager. This must be unique to each instance of TRE on this PC.

Multicast Interface

Changing these settings from the default is not recommended.

Interval: Interval in seconds that TRE sends connection packets to be received by Station Manager.

Address: Internal IP address used by TRE.

Port: Internal port setting used by TRE.

Router Hops: Max number of router hops for TRE to make while discovering Station Manager.

The screenshot shows a configuration window for Station Manager. It has a checkbox labeled "Enable Station Manager" which is checked. Below it are two sections: "Local Interface" and "Multicast Interface". The "Local Interface" section has a dropdown menu for "Address" set to "127.0.0.1" and a text input for "Port" set to "5960". The "Multicast Interface" section has a text input for "Interval" set to "17", a text input for "Address" set to "205.117.3.10", a text input for "Port" set to "8765", and a text input for "Router Hops" set to "9".

6.29 Stratos Output

Configuration settings for output to Stratos.

Enable Stratos Output: System administrators must check this box to enable Stratos output features.

Host: IP address where TRE will send the Stratos data.

Port: Port that will receive the Stratos data.

The screenshot shows a configuration window for Stratos Output. It has a checkbox labeled "Enable Stratos Output" which is checked. Below it are two fields: "Host" with a dropdown menu set to "127.0.0.1" and "Port" with a text input set to "5001".

6.30 Traffic Data: NAVTEQ

Configuration settings for traffic data from NAVTEQ.

Enable NAVTEQ Traffic: System administrators must check this box to enable NAVTEQ traffic data features.

NAVTEQ Configuration

Refresh: Number of minutes between refreshes of the XML feed.

URL: URL of the NAVTEQ XML file, which must include credentials and path. For example: <http://USER:PASS@cityfeed.traffic.com/res/metro00/maps/city.xml>. **This will be provided to you by NAVTEQ or a NAVTEQ data provider.**

The screenshot shows a configuration window for NAVTEQ Traffic. It has a checkbox labeled "Enable NAVTEQ Traffic" which is checked. Below it is a section for "NAVTEQ Configuration" with a "Refresh" field set to "10" minutes, a "URL" field, and a "Join Factor" field set to "5.0". At the bottom, there is a table with columns "Route ID" and "Description", and buttons for "Add", "Modify", "Delete", and "Delete All".

Traffic Data: NAVTEQ Cont.

Jam Factor: Jam factor is a threshold for the severity of traffic messages you will pass. If you are getting too many reports you can increase this number in increments ranging from 1.0 to 5.0.

Route IDs: Route IDs are provided by NAVTEQ while descriptions are user-created. TRE will only report traffic speeds for Route IDs that are defined on this page.

6.31 Traffic Data: Westwood One

Configuration settings for traffic data from Westwood One.

Enable Westwood One Traffic: System administrators must check this box to enable Westwood One traffic data features.

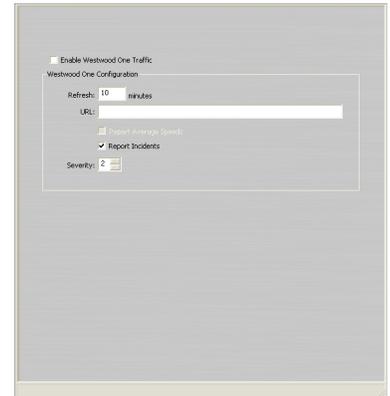
Westwood One Configuration

Refresh: Number of minutes between refreshes of the XML feed.

URL: URL of the Westwood One XML file, which must include credentials and path. For example: <http://USER:PASS@www.smartraveler.com/~XXXX/city.xml>. **This will be provided to you by Westwood One or a Westwood One data provider.**

Report Incidents: Enable incident reporting from Westwood One.

Severity: Threshold for the severity of traffic messages you will display. A lower severity level means fewer incidents will be displayed.

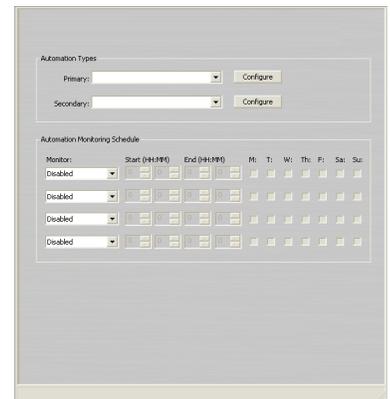


6.32 Automation

Allows you to specify your primary and secondary automation systems from the drop-down boxes. This page also allows you to set up an **automation monitoring schedule**.

Automation Type (Primary): Select the automation system from the drop-down box. Clicking the **Configure** button will allow you to set options that will vary depending on the system selected. Follow the tips available in the TRE software to correctly set your options. **This is the same property page that opens when you select Automation: Primary from the tree menu.**

Automation Type (Secondary): Select the automation system from the drop-down box. Clicking the **Configure** button will allow you to set options that will vary depending on the system selected. Follow the tips available in the TRE software to correctly set your options. **This is the same property page that opens when you select Automation: Secondary from the tree menu.**



Automation Cont.

Automation Monitoring Schedule: This schedule allows TRE to monitor one of multiple automation systems based on time-of-day. This can be especially useful for stations that switch between automation systems in a showcase studio and a standard studio or that switch in and out of satellite programming. For each daypart you would like to configure, select one of the following options:

Disabled: Disables the schedule. The result is TRE will monitor both sources all the time.

None: Do not monitor either source during the specified daypart.

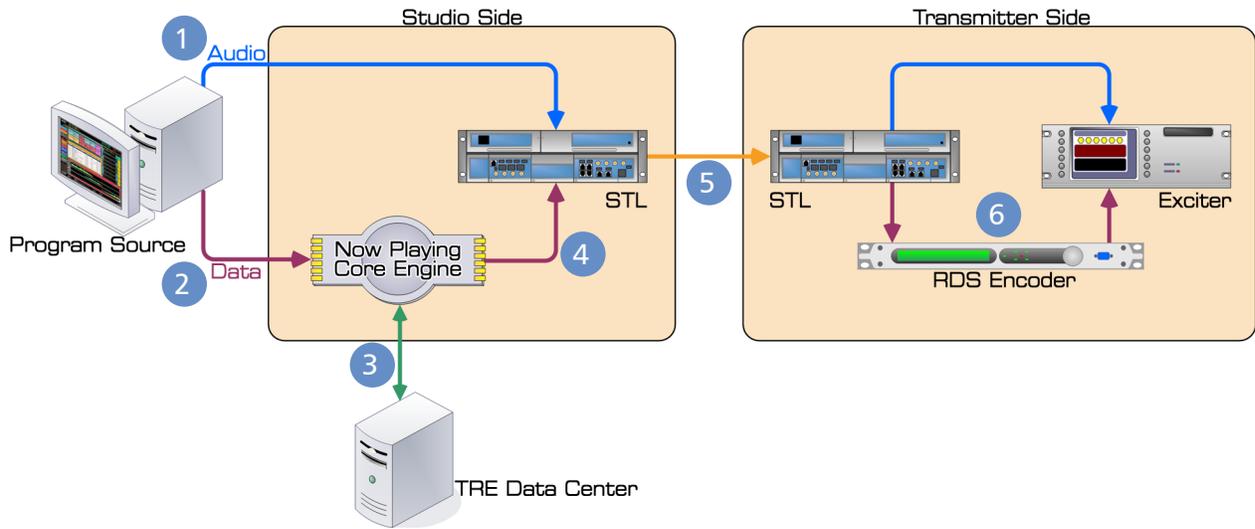
Secondary: Monitor only the Secondary source during the specified daypart.

Both: Monitor both sources during the specified daypart.



Appendix A: Implementations

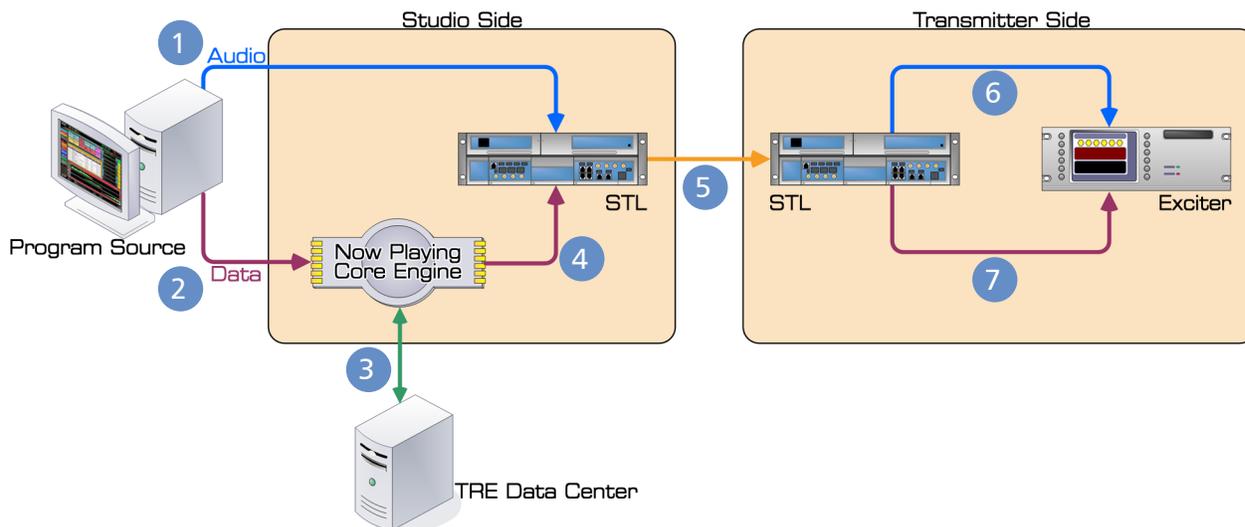




1. The audio transmission path is unaltered. Source audio is routed to the STL.
2. PAD is exported from the automation system by means of an IP connection, serial port, or text file. This data stream is picked up by TRE Message Manager.
3. TRE Message Manager works with the TRE Data Center to format Title/Artist information for music events and interleave promotional and branding announcements.
4. The formatted data is sent to a data-enabled STL by means of either an IP connection or serial port.
5. Audio and formatted data are transported from the studio site to the transmitter site.
6. At the transmitter site, the received data stream is sent from the STL to the input of an RDS encoder like Broadcast Electronics' RD_i 20. The RDS encoder inserts RDS specific information and sends the finalized data stream to the exciter by means of a BNC connection.

A.2 HD Main Messagecasting Using STL with IP Capability

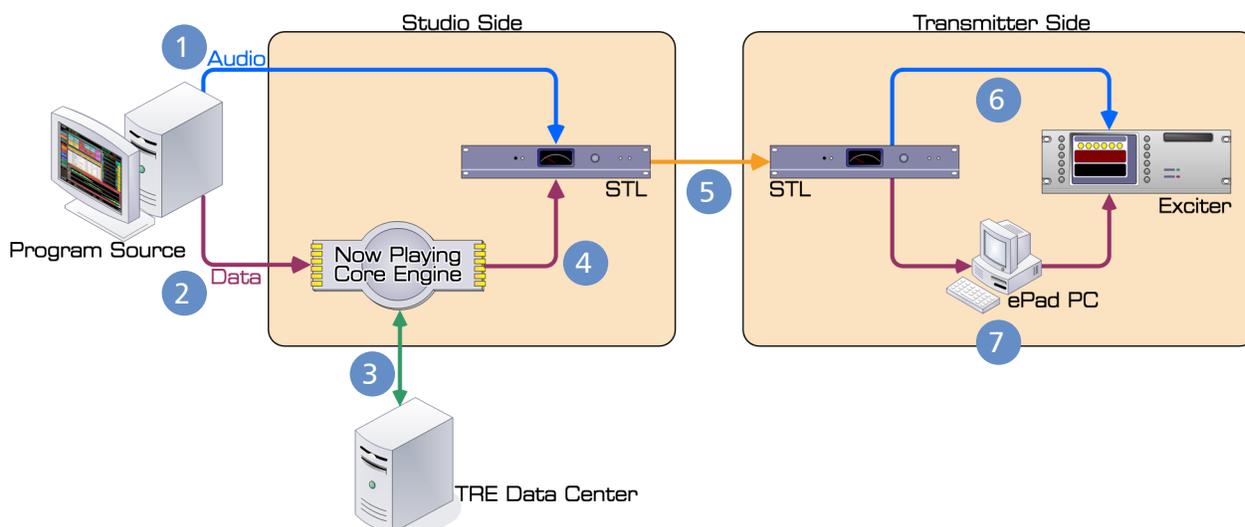
Digital HD Radio broadcasters can easily use Messagecasting software to not only send Title/Artist information, but to interleave station promotional and branding messages.



1. The audio transmission path is unaltered. Source audio is routed to the STL.
2. PAD is exported from the automation system by means of an IP connection, serial port, or text file. This data stream is picked up by TRE Message Manager/Now Playing.
3. TRE Message Manager works with the TRE Data Center to format Title/Artist information for music events and interleave promotional and branding announcements.
4. The formatted data stream is processed using iBiquity software components and sent to a data-enabled STL by means of an IP connection.
5. Main program audio and main program data are delivered to the transmitter site.
6. Main program audio is sent to the exciter by means of a BNC connection.
7. Main program data is sent to the exciter by means of an Ethernet/IP connection.

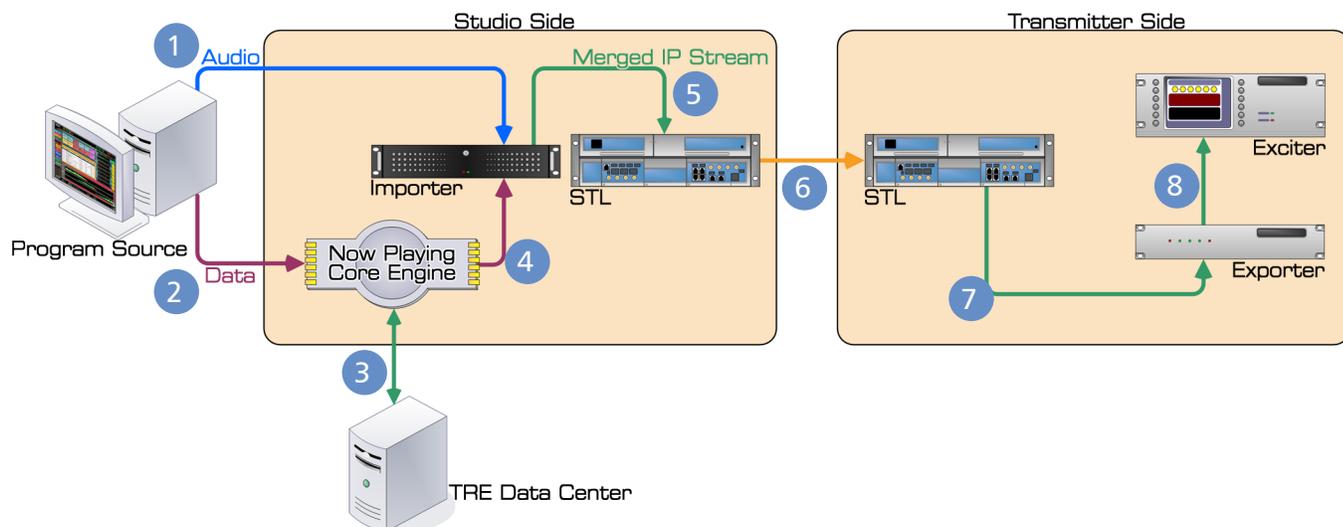
A.3 HD Radio Main Messagecasting Using STL without IP Capability

HD Radio main program data can ONLY be delivered to the exciter using an IP connection. For stations lacking this STL capability, it is possible to process serial data at the transmitter site using a PC and a network card in that PC to send the encoded data to the exciter.



1. The audio transmission path is unaltered. Source audio is routed to the STL.
2. PAD is exported from the automation system by means of an IP connection, serial port, or text file. This data stream is picked up by TRE Message Manager/Now Playing.
3. TRE Message Manager works with the TRE Data Center to format Title/Artist information for music events and interleave promotional and branding announcements.
4. The formatted data is sent to a data-enabled STL by means of a serial connection.
5. Main program audio and serial data are delivered to the transmitter site.
6. Main program audio is sent to the exciter by means of a BNC connection.
7. Serial data is sent to a PC running the ePad software, where it is encoded using iBiquity components and then delivered to the exciter using an Ethernet/IP connection.

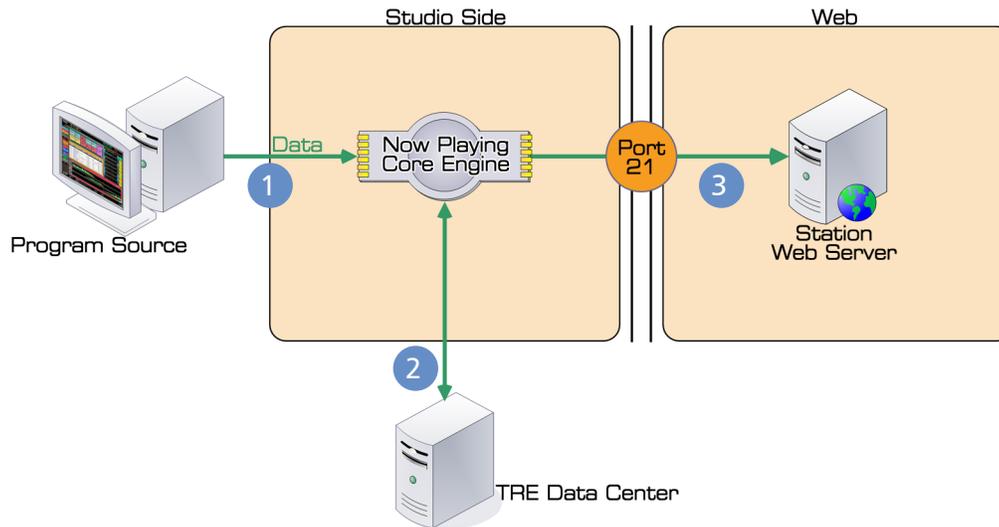
A.4 HD Radio Multicast Messagecasting



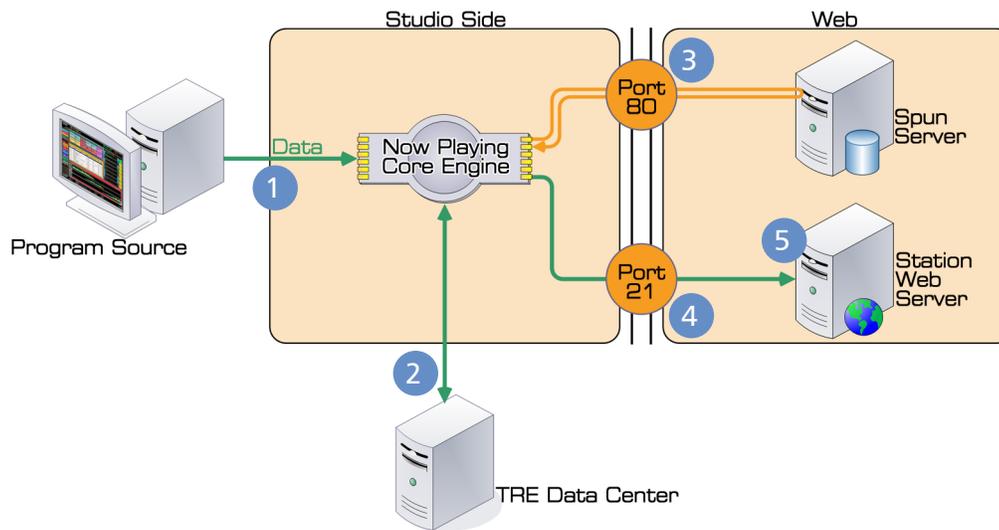
1. Secondary program source audio is routed to the input of a sound card installed in a HD Radio Importer, like the IDi 20 from Broadcast Electronics.
2. Data is sent from the automation system by means of an IP connection, serial port, or text file. This data stream is picked up by TRE Message Manager/Now Playing.
3. TRE Message Manager works with the TRE Data Center to format Title/Artist information for music events and interleave promotional and branding announcements.
4. The HD Radio formatted data is sent from the Message Manager software by means of an IP connection to the HD Radio Importer.
5. The Importer merges all secondary audio and data streams, combining them into a single IP stream.
6. The secondary stream(s) are delivered to the transmitter site via an IP-enabled STL like Big Pipe from Broadcast Electronics.
7. The secondary stream(s) are delivered to the HD Radio Exporter via an IP connection.
8. The secondary stream(s) are delivered to the HD Radio exciter via a BNC connection.

A.5 Web Text-only

The data displayed on the web can be associated with any program channel.



1. PAD from the automation system is sent to TRE Message Manager by means of a serial, IP, or text/billboard connection.
2. TRE Message Manager works with the TRE Data Center to format Title/Artist information for music events and interleave promotional and branding announcements.
3. Formatted data is sent using FTP to your station web server for integration over port 21. The resulting file is incorporated into the station web site by the station's web designer/administrator.



1. PAD from the automation system is sent to TRE Message Manager by means of a serial, IP, or text/billboard connection.
2. TRE Message Manager works with the TRE Data Center to format Title/Artist information for music events and interleave promotional and branding announcements.
3. TRE Message Manager formats the data stream and sends it to the SPUN.COM server over an always-on Internet connection on Port 80. SPUN.COM compares the incoming metadata with its database, "cleans up" the information so that artist and title information is correct and consistent, and assigns album art. This content is sent back to the Now Playing software over an always-on Internet connection on Port 80.
4. TRE Message Manager validates the returned data and sends it using FTP to the station web server for integration over port 21.
5. A customized Flash movie picks up the now playing information, displaying it on your web site. Other features include a user-searchable database and revenue-sharing e-commerce capability.