

**Installation • Operation • Maintenance
Instructions**

NX8R[®]
DIGITAL MESSAGE PLAYER



Information Station Specialists

NX8R Digital Message Player Instruction Manual

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NX8R DIGITAL MESSAGE PLAYER CONTROL CONCEPT

Priority	Playlist Name	Action	Keys
Highest Priority Playlists			
0	LIVE Broadcast from any Telephone <i>(local or remote)</i>		* 9 9 #
1	"Priority 1 Playlist" <i>(Messages 1-19 Pre-Assigned, Blank)</i>	Select	* 9 2 # 1 # 2 #
		Release	* 9 2 # 1 # 3 #
Scenario Playlists			
2	"Scenario Playlist" <i>(Messages 20-29 Pre-Assigned)</i>	Select	* 9 2 # 2 # 2 #
		Release	* 9 2 # 2 # 3 #
3	"Scenario Playlist" <i>(Messages 30-39 Pre-Assigned)</i>	Select	* 9 2 # 3 # 2 #
		Release	* 9 2 # 3 # 3 #
4	"Scenario Playlist" <i>(Messages 40-49 Pre-Assigned)</i>	Select	* 9 2 # 4 # 2 #
		Release	* 9 2 # 4 # 3 #
5	"Scenario Playlist" <i>(Messages 50-59 Pre-Assigned)</i>	Select	* 9 2 # 5 # 2 #
		Release	* 9 2 # 5 # 3 #
Externally Activated Playlists			
6	"NOAA/All-Hazard Playlist" <i>(Messages 60-69 Pre-Assigned & Live NOAA Feed)</i>	Selected for 20 Minutes via Specific-Area Message Encoding for Pre-Determined Counties & Hazards	
Day-to-Day Playlists			
7 *	"Special Event Playlist" <i>(Custom Message Assignments)</i>	Select	* 9 2 # 7 # 2 #
		Release	* 9 2 # 7 # 3 #
8 *	"Daily Playlist" <i>(Custom Message Assignments)</i>	Default Selection	
Message 1000	Station Identification	Plays Every Half-Hour	

External contacts are available for all except Playlists 0 and 8.

* Playlists 7 and 8 include . . .

- Recordable Messages 70-999.
- Pre-Recorded "Factory" Messages 1-7.
- Playlists 9-49.
- NOAA/All-Hazard & Radio Feed (Aux 1).
- Workstation Audio Control/SignalcastIP or Other Locally Produced Feed (Aux 2).
- Turn ON/OFF Relays.

Priority and Playlist Assignments

If you program your NX8R's playlists in the manner shown below you will have a seamless, professional sounding broadcast. Your emergency playlists will be automatically inserted into the broadcast without interruption, contain event-specific information and according to their level of urgency, all with minimal intervention. This format will also make the general daily playlist easy to keep current, so listeners are encouraged to tune in frequently.

Priority LIVE – Live Broadcast

Activating Priority Live will open a live channel to the local control phone or remote telephone enabling your station operator to broadcast live messages concerning an emergency event. This feature should only be used when recording a message for incorporation into a playlist is not feasible due to the nature of the emergency. Selecting this function causes all other programming functions to cease, until the user hangs up.

Activating Priority Live

1. Press ***99#** to broadcast live.

Priority 1 – Emergency Playlist

Priority/Playlist 1 is reserved for unanticipated emergencies and is programmed to include Messages 1 – 19. These messages should remain un-recorded until the nature of the emergency is understood. At that time the user may quickly record what is necessary and then activate the playlist remotely from an office telephone, cell phone, or by using the on-site control phone and using the "Set a Virtual Control Input" command. When the Priority 1 Playlist is activated, all lower priority inputs are locked out and only those messages within Playlist 1 will broadcast, until deactivated. Only the Live Priority will take precedence over Priority 1.

Playlist 1 should contain the following messages:

- Messages 1 through 19 – Emergency Messages.

Programming Playlist 1

To program Playlist 1, use the following command sequence. In our example, we program Playlist 1 and include Messages 1 and 2.

1. Press ***41#** to gain access to the "Create a Playlist" command. Listen for instructions. The voice prompeter will ask you to number the playlist you would like to create.
2. Press **1#** to program Playlist 1.
3. Press **1#** to add a message to the playlist.
4. Press **1# 2#** to insert Messages 1 and 2 into the playlist.

Activating Priority 1

In the following example, we activate and then deactivate Priority/Playlist 1

To ACTIVATE Priority/Playlist 1 use the following command sequence.

1. Press ***92#** to start the “Set a Virtual Control Input” command.
2. Press **1#** to select Control Input 1.
3. Press **2#** to activate.
4. To DEACTIVATE Priority/Playlist 1 use the following command sequence.
 - a. Press ***92#** to start the “Set a Virtual Control Input” command.
 - b. Press **1#** to select Control Input 1.
 - c. Press **3#** to deactivate.

Priorities 2, 3, 4 and 5 – Scenario Playlists

Scenario Priority/Playlists 2, 3, 4, and 5 is intended to be programmed to contain messages recorded ahead of time for anticipated high importance events such as, detour routes used during regular main street flooding, mud/rock slides, school closures and so forth.

These playlists may be activated for broadcast by external devices such as a siren system equipped with a dry relay contact or using the “Set a Virtual Control” Input command. If an external device is used, the playlist it controls should contain messages directly associated with events that activate the warning device(s). For example, if Control Input 5 is controlled by a siren system activated during tornado warnings, the messages you record for Playlist 5 should pertain to shelter information, important telephone numbers (*i.e.*, local power company) and where to seek medical attention. You may also include phantom messages in the playlist in case you need to record and broadcast new information immediately.

See the section entitled Activating Playlists with External Devices to learn how to incorporate a warning system for activating these emergency playlists.

Playlists 2, 3, 4 and 5 should contain the following messages:

- Messages 20 through 59 – Event-Specific Messages.

Programming Playlists 2, 3, 4, or 5

To program Playlists 2, 3, 4, or 5, use the following command sequence. In the following example, we program Playlist 5 and include Messages 50 and 51.

1. Press ***41#** to gain access to the “Create a Playlist” command.
2. Press **5#** to select Playlist 5.
3. Press **1#** to add a message to the playlist.
4. Press **50# 51#** to insert Messages 50 and 51 into the playlist.

Activating Playlists 2, 3, 4, or 5

In the following example, we activate and then deactivate Playlist 5.

To ACTIVATE Priority 5/Playlist 5 use the following command sequence.

1. Press ***92#** to start the “Set a Virtual Control Input” command.
2. Press **5#** to select Control Input 5.
3. Press **2#** to activate.

To DEACTIVATE Priority 5/Playlist 5 use the following command sequence.

1. Press ***92#** to start the “Set a Virtual Control Input” command.
2. Press **5#** to select Control Input 5.
3. Press **3#** to deactivate.

Priority 6 – NOAA All-Hazards Playlist

The NOAA All-Hazards Playlist warns listeners of impending weather-related dangers, child-abductions and other emergencies broadcast by your local NOAA/National Weather Service Office. Activation of the playlist is automatically controlled by the NOAA All-Hazards Receiver within your system. When an alert is issued by the NWS, your normal broadcast will stop and the NX8R will route the NWS audio thru to your transmitter for rebroadcast, for 20 minutes. If another alert is issued during that 20 minute period, the rebroadcast will be extended for an additional 20 minutes, from the point in time the second alert was issued. ISS has preprogrammed this receiver based on the counties you serve (which you identified), to rebroadcast messages relevant only to them. Audio from the receiver is routed to the Aux 1 port on the NX8R.

Playlist 6 should contain the following:

- Factory Message 3 – All-Hazards Intro Message.
- All-Hazards Radio Audio.
- Factory Message 2 – All-Hazards Radio Outro Message.

Programming Playlist 6

To program the NOAA All-Hazards Alert Playlist, use the following command sequence.

1. Press ***41#** to gain access to the “Create a Playlist” command.
2. Press **6#** to create Playlist 6.
3. Press **6#** to add a factory recorded message.
4. Press **3#** to select the factory-recorded NOAA All-Hazards Radio Intro message.
5. Press **11#** to “Set the Play-Thru Source.”
6. Press **1#** to select Aux 1.
7. Press **8#** to select the “Wait to Continue” command.

8. Press **2** **#** to select “Wait for an Open.”
9. Press **6** **#** to add a factory-recorded message.
10. Press **2** **#** to select the factory-recorded All-Hazards Radio Outro message.

Priority 7 – Weekend or Special Event Playlist

Priority/Playlist 7 is a special purpose playlist which may be used for weekend messages or special event messages. Priority 7 may be activated automatically by using the ‘Schedule a Playlist’ function, remotely via a telephone, or by using the on-site control phone using the ‘Set a Virtual Control Input’ command. Its contents will be broadcast continuously so long as another higher priority control input is not activated. To learn how to program this priority/playlist to activate automatically, see “Automatically Activate a Weekend Message” in the “Special Function Commands” section of this manual.

Playlist 7 may contain any of the following messages:

- Factory Message 3 – All-Hazards Radio Introduction Message.
- All-Hazards Radio Audio.
- Factory Message 2 – All-Hazards Radio Outro Message.
- Factory Message 4 – Mission Statement.
- Messages 70 thru 79 - Weekend or Special Event Messages.

Programming Playlist 7

To program Playlist 7, use the following command sequence. In the following example, we include Messages 71, 72 and 73.

1. Press ***** **4** **1** **#** to gain access to the “Create a Playlist” command.
2. Press **7** **#** to select Playlist 7.
3. Press **1** **#** to add a message to the playlist.
4. Press **7** **1** **#** **7** **2** **#** **7** **3** **#** to insert Messages 71, 72, and Message 73 into the playlist.

Activating Playlist 7

In the following example, we activate and then deactivate Playlist 7.

To ACTIVATE Priority 5 / Playlist 5 use the following command sequence.

1. Press ***** **9** **2** **#** to start the “Set a Virtual Control Input” command.
2. Press **7** **#** to select Control Input 7.
3. Press **2** **#** to activate.

To DEACTIVATE Priority 5 / Playlist 5 use the following command sequence.

1. Press ***** **9** **2** **#** to start the “Set a Virtual Control Input” command.

2. Press **7** **#** to select Control Input 7.
3. Press **3** **#** to deactivate.

Priority 8 – General Playlist

The General Playlist is the default playlist. Its contents will be broadcast continuously so long as another higher priority control input is not activated. Playlist 8 should be used for general information such as upcoming city events, construction, points of interest, and traffic information. This is the only playlist that does not require activation as it is hard-wired to be active.

In addition to Playlist 8, The General Playlist may also contain Playlists 9 to 49. This is useful for creating a program weeks in advance.

Playlists 8 to 49 may contain any of the following messages:

- General Information Messages.
- Mission Statement.
- Department Hand-offs.
- Important Advisories.
- Factory Messages
- NOAA All-Hazards audio.

Programming Playlist 8

To create and program the General Playlist, use the following command sequence. In our example, we include Messages 80, 81, 82, and 83.

1. Press ***** **4** **1** **#** to gain access to the “Create a Playlist” command. Listen for instructions. The voice prompter will ask you to number the playlist you would like to create.
2. Press **8** **#** to program Playlist 8.
3. Press **1** **#** to add a message to the playlist.
4. Press **8** **0** **#** **8** **1** **#** **8** **2** **#** **8** **3** **#** to insert Messages 80, 81, 82 and 83 into the playlist.

Using Phantom Messages in a Playlist

Using phantom messages in a playlist is an efficient way of getting new or urgent messages onto the air quickly without the necessity of first having to modify the playlist message sequence.

A phantom message is simply a message number inserted into a playlist that does not correspond to a message presently recorded – that is, it is a blank message. If you record using the “phantom” message number, it will automatically be inserted into the broadcast in the position you designate in playlist sequences. You will see this technique used in the creation and operation of the various ALERT AM formats below.

When other departments or parties independently contribute to the broadcast, using the phantom message technique is especially useful. By calling the radio station and recording on their designated “phantom” message numbers, these parties may manage their own messages (recording and erasing them). There is no need for them know or have access to playlist construction commands. You maintain control of where and how often their messages are broadcast.

Activating Playlists with External Devices

Playlists 1-5 may be activated to broadcast via any warning system equipped with a pair of normally open, dry-relay contacts that create a closure when activated. Examples of devices capable of activating playlists include siren systems, fire alarm systems and civil defense systems.

A simple Single-Pole-Single-Throw (SPST) toggle switch may be used in the event an automatic warning system is not present on site.

To incorporate a switch or warning device to a control input on the NX8R, simply wire the two together such that the switch or warning device relay will create a closure, when activated, between the desired control input and its associated "C" input on the terminal block at the rear of the NX8R. Consult the chart in the ALERT AM Broadcast Planning Guide for assistance in determining the control inputs to which to tie your systems. Before tying any device to the NX8R, carefully consider it to ensure that those messages with a higher level of priority cannot be overridden by lower-level playlists.

Suggested Message Types

In the following section you will find examples of recommended messages and sample text for each type of message.

- ➔ **Note: You should keep a careful list of your playlists, messages therein, their topics and their lengths. Have the list at hand each time you begin a recording session for easy message selection. It will prove useful should you need to review content, time available or if you need to free recording time. A sample list format is included at the end of this manual.**

Message 99 – Station Identification

Message 99 is reserved for your station's FCC assigned callsign. Keep in mind: the callsign must broadcast at least once every half hour and, therefore, should be included in all of your playlists. This message is also played to the user after successfully entering the security code during a remote programming session as a method of identifying which station it is that has been accessed. If your callsign was granted before your system was shipped, this message is already recorded and programmed to broadcast at the top and the bottom of the hour. If your callsign was not granted at that point in time, a more general message has been recorded announcing your city and frequency.

Example

"This is KSDH566, the city of Riverton's emergency advisory radio station, broadcasting at 1610 kilohertz AM."

Anticipated Emergency Messages

These messages should be recorded during system setup. Their content should be relative to anticipated emergency situations, such as tornadoes, thunderstorms, *et cetera*. Place the messages in Playlists 2, 3, 4 and 5. Be sure their content is relevant to the activating device (if present) tied to each playlist's control inputs.

Important Advisory Messages

These messages should be used to provide the public with important advisories that are not emergencies, such as a water main breaks or other major incidents. It should be left unrecorded (except during those types of incidents) and be programmed into Playlists 2, 3, 4, 5, 6, 7, and 8 as a phantom messages; this ensures it is included in the broadcast immediately after being recorded – no matter which playlist is active. Erasing the message, when conditions warrant, remove it from the broadcast.

Mission Statement

This message should be used to inform listeners what agency is responsible for the broadcast, what information is to be broadcast on a regular basis and whom they may contact concerning the broadcast.

Example

"This is ___(name of official)__. This emergency advisory radio station, provided to you by ___(agency)__, broadcasts 24 hours a day on the AM frequency ___kHz, as licensed by the Federal Communications Commission. In the event of an emergency, tune to this radio frequency for public safety information, instructions, advisories and announcements, this may affect life, property, communication and travel. (List contact addresses, telephone numbers, email or websites available to the public.)

Department Hand-Offs

You may give to participating departments and agencies specific messages for their independent use on a case-by-case basis.

General Information and Safety Messages

Commonly, these messages air in Playlist 8, the General Playlist. You might have these messages take the form of general safety messages, advisories about road construction and detours, calendars of events, historical or noncommercial visitor information.

PLAYER PROGRAMMING

This section explains how to create, organize and control messages for broadcasts with a quick-list of commands at the end for easy reference.

Player Access

Calling the Station

Programming the NX8R Digital Message Player can be done locally at the ALERT AM site using the control phone, or you can call to the station remotely using your office telephone or a cell phone. To program the NX8R on site, simply pick up the handset on the SP.55 control telephone. You can begin programming immediately. If you choose to program the NX8R from a remote location, use the following procedure.

1. Call the telephone number assigned to the station. When the NX8R picks up the line, it will prompt you to enter the remote access security code by saying, "Enter the security code followed by the pound sign."
2. Key in the default security code .
3. After your access code is accepted, you may start your programming session.

Terminating a Remote Programming Session

Whether you are programming the NX8R on site with the control phone or via telephone line remotely, use the following procedure to terminate the session. This procedure will also restart the NX8R and cause your new programming to take effect immediately.

1. Press ***129#** to terminate the programming session.
2. Press **1#** to confirm termination and restart.
3. Hang up.

Changing the Remote Access Code (Optional)

The programming commands used are the same whether done locally at the site with the control phone in the equipment enclosure or remotely. The only exception is the remote access security code is required to gain access when operating remotely. Programmed with the default settings, upon receiving a call, the NX8R will answer the line and the caller will have 5 attempts and/or 30 seconds to enter the correct code before the unit times out and drops the call.

The default security code is ***98304#**

The access code, number of retries and the number of seconds before time-out may be changed. The access code may be from 1 to 9 digits long (0 to 999,999,999 preceded by the ***** symbol and followed by the **#** symbol) and will respond differently to the caller, based on the numerical value of the access code chosen.

- If you program the security code to be "0," no access code will be required to gain access to the programming functions. The NX8R will answer the incoming call and immediately prompt the caller to enter his/her first programming function.
- If the code is set within the range of 1 to 999999, the NX8R will answer and prompt the caller to enter the access code. If the code is entered properly, the NX8R will allow the caller to use the programming functions.
- If the code is set within the range of 1000000 to 999,999,999, the NX8R will answer the line but remain silent. The caller will not be prompted to enter the remote access code. Until the correct code is entered the NX8R will remain silent. After the code is entered properly, the NX8R will prompt the caller and allow access to the programming functions.

To change the remote access code, use the following procedure. In our example, we use Security Code Number 336888.

1. Press ***71#** to enter the "Set Remote Access Code" function. The NX8R will respond with the current security code, number of retries and the time-out duration.
2. Press **1#**
3. Press **336888#**.
4. For verification the NX8R will ask you to enter your new code again. Press **336888#**
5. To verify the new code, press ***71#** again, the NX8R will respond with the new code.

To change the number of retries, use the following procedure. In our example, we set it for 3 retries.

1. Press ***71#** to enter the "Set Remote Access Code" function. The NX8R will respond with the current security code, number of retries and the time-out period.
2. Press **2#** to change the number of retries.
3. Press **3#** for 3 retries.
4. To verify the new setting, press ***71#** again.

To change the time-out duration, use the following procedure In our example, we set the time out to 1 minute.

1. Press ***71#** to enter the “Set Remote Access Code” function. The NX8R will respond with the current security code, number of retries and the time-out period.
2. Press **3#** to change the time-out duration.
3. Press **60#** for 1 minute.
4. To verify the new code, press ***71#** again.

Your Remote Access Code number: _____

➔ **IMPORTANT: Because the security code may be verified using the *71# command, you might wish to have this command sequence known to supervisory personnel only.**

Player Status and Recording Time

Player Status

When this command is entered, the NX8R will respond with a status report.

1. Press ***14#** to access to the “Status” command.

The NX8R will respond with its serial number . . .

1. Which control inputs are active.
2. Which relays are active.
3. Which virtual contacts are active.
4. Which playlist is currently running.
5. If AC power is present.
6. The duration the NX8R has been running without power interruption.

Available Recording Time

When this command is entered, the NX8R will perform a memory cleanup and report the amount of recording time that remains.

1. Press ***15#** to start the “Recording time” command.

The NX8R will respond with:

1. Memory cleanup complete.
2. The amount of recording time available of the maximum.

➔ **Note:** If messages are changed frequently, it is recommended you use this command regularly.

Command List

To become more acquainted with the NX8R after reading the instruction manual, call the NX8R from your office or by taking the control telephone off the hook on site and enter the command ***0#** on the telephone keypad. The voice prompter will respond with the various general function commands available. This feature is also useful should you be required to operate the system without a manual.

Message Creation and Editing

Recording Messages

Each message you create must be assigned a unique number (1 to 1000) for easy reference and incorporation into playlists. Please refer to the ALERT AM Format Guide for proper number assignment. The message lengths may be as long as you desire, so long as the total length of all of your messages combined does not exceed the total recording time available. Each message can be recorded, monitored or erased independently.

To record a message, use the following command sequence. In our example we record Message 2.

1. Press ***1#** to enter the record command. The NX8R will tell you which recording source is selected and give you recording instructions.
2. Press **2#** to assign the number 2 to your message and to initiate the recording process.
3. Read your script aloud into the control phone handset.
4. Press **#** to stop recording.
5. Wait for the NX8R to acknowledge the message has been saved.
6. If you are unhappy with the recording and would like to rerecord it, repeat Steps 2 to 5. The original message will be instantly eliminated, and your new recording will take its place with the same message number.

➔ **Note:** After you have entered the record command ***1#**, you may record as many messages as you like, repeating Steps 2 to 4, without pressing the record command again.

➔ **Note:** If you hang up the telephone while recording a message, the new message will be rejected.

➔ **Note:** The NX8R requires a small amount of time to store a new message into its memory, equal to approximately 25% of the total message length, *i.e.*, a 60-second message takes 15 seconds to process.

Monitoring Messages

If you would like to listen to your recorded messages, use the following command sequence. In our example we monitor Message 2.

1. Press ***2#** to enter the monitoring command.
2. Press **2#** to hear Message Number 2.

You will hear the message played to you in its entirety thru the telephone handset. To hear another message, repeat Step 2. If a blank message is selected, the NX8R will respond with a beep.

You may also monitor all of the recorded messages in their entirety, or the first 5 seconds of each one. Use the following sequence:

1. Press ***2#** to enter the monitoring command.
2. Press **0#** to monitor all messages.
3. Choose one of the following:
 - a. Press **1#** to hear all of your recorded messages in their entirety in numerical order.
 - b. Press **2#** to hear the first 5 seconds of all your recorded messages in numerical order.

Erasing Messages

If a message is no longer relevant, it should be erased to free message memory for future recordings. Use the following procedure to erase a message. In our example we erase Message 2.

1. Press ***3#** to gain access to the "Erase" command.
2. Press **2#** to erase Message 2.

The message will be erased, and the memory and message number will be available for immediate use.

Playlist Creation and Editing

The term "playlist" is used to denote a specific sequence of messages. You can make these playlists event specific and store them on the NX8R and then bring them up to be broadcast at a moment's notice.

Fifty playlists are available for programming, and most will consist of just a few messages. Each playlist you create will be assigned a unique number (1 to 50) for easy reference. Playlists 1 to 8 are to be used as your primary playlists, which will be broadcast in concurrence with particular events. Playlists 9 to 49 should be used as "drag and drop" message groups that can be inserted into one of the eight primary playlists when needed. Please refer to the Broadcast Planning Guide to learn how playlists are activated for broadcast and how to program them to correspond to particular events.

Messages contained in a playlist will be broadcast in the sequence in which they are programmed. If you program in Message 5, then 10 and finally message 20, they will broadcast in order. You may also program a message to play more than once in a playlist. If you key Message 5, then 10, 10 again and finally Message 20, Message 5 will broadcast once, Message 10 will be broadcast twice, then Message 20 will broadcast once.

Individual messages may reside in multiple playlists simultaneously, which helps conserve memory for other recordings.

One of the most important messages is your station's call-sign message. Federal Communications Commission rules require that your callsign be broadcast every 30 minutes; so as a matter of routine, you might want to create each playlist with the callsign message being the first in the message series, or using the scheduler, force Playlist 50 the dedicated callsign playlist to run, thus ensuring its broadcast every 30 minutes. Instructions for using the scheduler are found under "Scheduling Hourly Playlists" of the "Special Function Commands" section in this manual.

➔ **Note:** The combined total of messages programmed into playlists may not exceed 1000.

➔ **Note:** If you create a playlist number but do NOT assign it a sequence of messages, it will simply be a blank playlist; and nothing will broadcast if its associated control input (physical or virtual) is activated.

Create a Playlist

To create a playlist, use the following command sequence. In our example we will create Playlist 8 and to insert Messages 80, 81 82 and 83.

1. Press ***41#** to gain access to the “Create a Playlist” command. Listen for instructions. The voice prompter will ask you to number the playlist you would like to create.
2. Press **8#** to program Playlist 8.
3. Press **1#** to add a message to the playlist.
4. Press **80# 81# 82# 83#** to insert Messages 80, 81 82 and 83 into the playlist.

Append to a Playlist

With the NX8R you are able to add a message or event to the end of a playlist. All previous entries in the playlist will remain intact. In our example we will add message number 84 to playlist 8 which already contains, and is playing messages 80, 81 82 and 83.

1. Press ***45#** to gain access to the “Append to a Playlist” command.
2. Press **8#** to select Playlist 8.
3. Press **1#** to add a message to the playlist.
4. Press **84#** to add messages 84.

The NX8R will now play messages 80, 81 82, 83, and 84 in that order.

Add a Factory Recorded Message to a Playlist

Your NX8R comes with several messages and “splash tones” already recorded and ready for use. These include messages relating to NOAA weather broadcasts, general programming information and a mission statement. These messages and tones may be previewed by pressing ***17#**. The full list of messages is at the rear of Broadcast Programming section of this manual. In our example we will program Playlist 8 to contain Message 81 and the factory recorded mission statement message.

1. Press ***41#** to gain access to the “Create a Playlist” command.
2. Press **8#** to select Playlist 8.
3. Press **1#** to add a message to the playlist.
4. Press **81#** to add Message 81.

5. Press **0#** to return to the root of the “Create a Playlist” command.
6. Press **6#** to add a factory recorded message.
7. Press **4#** to select the Factory Recorded mission statement message.
8. As a result, the NX8R will now play Message 81 followed by Factory Message 6.

Add NOAA Weather Radio Audio or Workstation Audio into a Playlist

The NX8R can use playlist entries to pull in an alternate audio source from Aux1, Aux2, Aux3 or the local microphone for broadcast using the “Set the Play-thru Source” command to select either NOAA Weather Radio audio feed or the Workstation Audio Control audio feed, if purchased. By default, Aux1 is the NOAA Weather Radio audio input and Aux 2 is the Workstation Audio Control audio input. Aux 3 and the local microphone are available but are not typically used.

The “Set the Play-thru Source” command must be used in conjunction with the “One-Time Spacing” command. The “One-Time Spacing” command will allow the aux source to play thru, for the amount of time you specify, in tenths of a second. A one time spacing can be any amount of time from 10 seconds to 1 hour (36,000 tenths of a second). In the programming sequence it is important that you first select which Aux source you would like to feed from using the “Play-Thru” command, and then use the “One-Time Spacing” command to tell the NX8R how long play the Aux source, in that order.

Add NOAA Weather Radio Audio to a Playlist

In the following example we will program Playlist 8 to play Message 81, set Aux 1 as the play-thru source and then create a one-time spacing of 3 minutes.

1. Press ***41#** to gain access to the “Create a Playlist” command.
2. Press **8#** to select Playlist 8.
3. Press **1#** to add a message to the playlist.
4. Press **81#** to add Message 81.
5. Press **0#** to return to the root of the “Create a Playlist” command.
6. Press **11#** to set the play-thru source.
7. Press **1#** to select Aux 1.
8. Press **7#** to set the one-time spacing.
9. Press **1800#** for 3 minutes of play-thru.

As a result, the NX8R will play Message 81 followed by 3 minutes of NOAA All-Hazards Radio audio.

Add Workstation Audio to a Playlist

In the following example we will program playlist 8 to play Message 81, set Aux 2 as the play-thru source and then create a one-time spacing of 30 minutes.

1. Press ***41#** to gain access to the “Create a Playlist” command.
2. Press **8#** to select Playlist 8.

3. Press **1** **#** to add a message to the playlist.
4. Press **8** **1** **#** to add Message 81.
5. Press **0** **#** to return to the root of the “Create a Playlist” command.
6. Press **1** **1** **#** to set the play-thru source.
7. Press **2** **#** to select Aux 2.
8. Press **7** **#** to set the one-time spacing.
9. Press **1** **8** **0** **0** **0** **0** **#** for 30 minutes of play-thru.

As a result, the NX8R will play Message 1 followed by 30 minutes of Workstation Audio Control audio.

➔ **Note: Audio from the external source will only be present on Audio Output Channel 1.**

➔ **Note: If a longer delay duration is required, two one-time spacing commands may be used in series.**

Insert a Playlist into another Playlist

Inserting a programmed playlist into the message sequence of another playlist is a useful way to quickly add a group of messages to your broadcast. For example, if you have created a group of messages that pertain to a particular public event and would like them to be broadcast along with your regular programming, simply program that group of messages into a new playlist and insert it into an existing playlist.

The primary playlist will play its messages and any inserted playlists to run one time each time the primary playlist loops thru its program sequence. In our example we will program playlist 8 to play message 81 and the contents of playlist 9.

1. Press ***** **4** **1** **#** to gain access to the “Create a Playlist” command.
2. Press **8** **#** to select Playlist 8.
3. Press **1** **#** to add a message to the playlist.
4. Press **8** **1** **#** to add Message 81.
5. Press **0** **#** to return to the root of the “Create a Playlist” command.
6. Press **2** **#** to insert a playlist to run one time each loop.
7. Press **9** **#** to insert playlist 9.

As a result, the NX8R will play Message 81, followed by the contents of Playlist 9.

- ➔ **Note:** There is a limitation of one level of playlist insertion. They may not be “stacked”; that is, one playlist may call on a second playlist to run, but the second may not call on a third. It is however, possible to insert multiple playlists in series, into the first.

Monitor a Playlist Message Sequence

Using this command will cause the NX8R to report the messages that are programmed in the selected playlist in the order they will broadcast. Use the following command sequence to monitor a playlist. In our example, we monitor Playlist 8.

1. Press ***42#** to start the “Monitor Playlists” command.
2. Choose one of the following:
 - a. Press **1#** to hear the playlist message number sequence.
 - b. Press **2#** to hear the actual recordings in sequence.
 - c. Press **8#** to hear Playlist 8’s sequence.

Delete a Playlist Message Sequence

Using this command sequence will delete an individual or multiple playlist message sequences. When a playlist sequence is deleted, the playlist will be empty and will not return to its original default setting of Playlist 1 containing Message 1, Playlist 2 containing Message 2 and so forth.

1. Press ***44#** to access to the “Delete Playlist” command.
2. Choose one of the following:
 - a. Press **8#** to delete Playlist 8 (or other playlist number).
 - b. Press **0#** to delete all playlists.
 - c. Press **1#** to confirm the deletion.

Set a Virtual Control Input or Activate a Higher Priority Playlist

This command is useful, for example, if you experience regular flooding on main roads and have a playlist (such as playlist 5) already programmed with detour messages, ready for broadcast. Using the “Set a Virtual Control Input” command, any of the NX8R’s eight control inputs and its playlist contents may be virtually activated using a remote phone or the control phone. This activation is virtual in that there is no physical closure on the control input’s contact. Using this command will cause the playlist associated with the activated control input to run until deactivated.

In the following example we will activate Control Input 5 via the control phone or remote phone, which will cause Playlist 5 and its contents to run.

1. Press ***92#** to start the “Set a Virtual Control Input” command.
2. Press **5#** to select Control Input 5.
3. Press **2#** to activate Control Input 5.

In the following example we will turn deactivate Control Input 5 via the control phone or remote phone, which will cause Playlist 5 to stop running and the next lowest activated (physical or virtual) control input and its associated playlist to run.

1. Press ***92#** to start the "Set a Virtual Control Input" command.
2. Press **5#** to select Control Input 5.
3. Press **3#** to deactivate Control Input 5.

➔ **IMPORTANT: You are also able to select ALL control inputs to activate. Selecting this option will cause the unit to temporarily malfunction.**

Additional Playlist Commands

Add a One-Time Spacing

In addition to the standard message spacing, a playlist may insert a one-time spacing. This playlist command will delay the processing of the next command for the amount of time you specify in tenths of a second. A one-time spacing may be any amount of time from 0 seconds to 1 hour (36,000 tenths of a second). If a longer duration delay is required, two spacing commands may be used in series. In the following example we will program Playlist 8 to play Message 81 and then pause for 60 seconds.

1. Press ***41#** to gain access to the "Create a Playlist" command.
2. Press **8#** to select Playlist 8.
3. Press **1#** to add a message to the playlist.
4. Press **1#** to add Message 1.
5. Press **0#** to return to the root of the "Create a Playlist" command.
6. Press **7#** to add a one-time spacing.
7. Press **600#** to insert a 60 second spacing.

Set a Relay

The NX8R is equipped with four normally open relays that may be programmed to turn on, off, turn on for a specific period of time or operate automatically. These relays are useful for control of ancillary equipment. These relays may be controlled from within a playlist, anywhere in the program sequence. By default each relay is coupled with a corresponding Audio Output Channel; *i.e.*, Relay 1 is coupled to Audio Output Channel 1 and so forth for all relays. When a relay is programmed to turn on, the selected relay will close and remain closed until instructed to turn off. The same is true for the "Off" command. In automatic mode the relay will close whenever a message is played through, its corresponding audio output channel for the duration of the message. The relays may also be programmed to close for a specific period of time, up to one hour. In the following example we will program Playlist 8 to play Message 1 and turn on Relay 1.

1. Press ***41#** to gain access to the "Create a Playlist" command.
2. Press **8#** to select Playlist 8.
3. Press **1#** to add a message to the playlist.

4. Press **1#** to add Message 1.
5. Press **0#** to return to the root of the “Create a Playlist” command.
6. Press **4#** to program a relay.
7. Press **1#** to select relay 1.
8. Press **1#** to turn relay 1 on.

In this example we will program Playlist 8 to play Message 1 and turn on Relay 1 for 1 hour, in seconds.

1. Press ***41#** to gain access to the “Create a Playlist” command.
2. Press **8#** to select Playlist 8.
3. Press **1#** to add a message to the playlist.
4. Press **1#** to add Message 1.
5. Press **0#** to return to the root of the “Create a Playlist” command.
6. Press **4#** to program a relay.
7. Press **1#** to select relay 1.
8. Press **4#** to turn relay 1 on for a specific period of time.
9. Press **3600#** for 1 hour.

➔ **IMPORTANT: This is a global command; i.e., if a relay is told to close, it will remain closed until it is told to open.**

Set an Audio Output Volume

The output volume can be changed from within a playlist. This is valuable if you use an auxiliary audio source in your playlists that has a lower or higher volume than your recorded messages. You will be prompted to enter a value for the channel you select, 0-100, where 0 is no volume and 100 is maximum volume. The default value is 30. Also, the NX8R has 3 output channels. Only Channel 1 is used for broadcast. In the following example we will program Playlist 8 to play Message 1 and then set the output volume to 100.

1. Press ***41#** to gain access to the “Create a Playlist” command.
2. Press **8#** to select Playlist 8.
3. Press **1#** to add a message to the playlist.
4. Press **1#** to add Message 1.
5. Press **0#** to return to the root of the “Create a Playlist” command.
6. Press **9#** to set the audio output volume.
7. Press **100#** to increase the volume to 100.

8. Press **1#** to select Output Channel 1.

➔ **IMPORTANT: This is a global command; i.e., once an output level is set to a particular value, it will remain at that value until changed.**

Enable Audio Outputs

NX8Rs are equipped with 3 audio outputs. Messages may be output over any or all of these channels. Only Channel 1 is used for your broadcast audio and is enabled by default. Channels 2 and 3 are disabled. If you have a need for the audio to be available for another device such as an audio to Ethernet adapter, you may turn them on using the following command. The playlist audio will be available on all channels selected, simultaneously. Make sure this is the first entry in your command string and make sure to include Channel 1. In the following example we will Program Playlist 8 turn on Channel 1, Channel 2 and to play Message 1.

1. Press ***41#** to gain access to the “Create a Playlist” command.
2. Press **8#** to select Playlist 8.
3. Press **13#** to enable audio outputs.
4. Press **1 & 2#** to enable channels 1 and 2.
5. Press **1#** to add a message to the playlist.
6. Press **1#** to add Message 1.

As a result, the NX8R will play message number 1 on both channels 1 and 2 simultaneously.

➔ **Note: Audio from the auxiliary sources will only be present on Audio Output Channel 1.**

➔ **IMPORTANT: This is a global command; i.e., once an audio output is enabled, it will remain enabled until disabled.**

Special Function Commands

Automatically Activate a Weekend Playlist

The following set of commands is useful for automatically changing program content for weekends or special events. Using the “Set a Virtual Control Input” command in conjunction with the “Schedule a Playlist” command, the NX8R will automatically activate a Control Input and its associated playlist on the day and at the time you specify. To learn how to use the “Schedule a Playlist” command in detail, see the next section of the manual.

In the following example we will create Playlist 40 whose sole purpose will be to virtually ACTIVATE Control Input 7. This will cause Playlist 7 to run. Then we will create the schedule which will run it at 12 AM on Saturday morning.

1. Press ***41#** to gain access to the “Create a Playlist” command.
2. Press **40#** to select Playlist 40.
3. Press **15#** to set a virtual control input.

4. Press **7** **#** to select Control Input 7.
5. Press **2** **#** to activate Control Input 7.

The associated Schedule a Playlist entry which will run Playlist 40 at 12 AM Saturday morning will be as follows:

1. Press ***** **2** **1** **#** to start the "Schedule Playlist" command.
2. Press **1** **#** to create Schedule #1.
3. Press **1** **#** to make Schedule 1 a weekly event.
4. Press **7** **#** to run Saturday.
5. Press **0** **0** **0** **0** **#** to run at 12 AM Saturday morning.
6. Press **4** **0** **#** to run Playlist 40.
7. Press **8** **#** to assign it a priority level of 8 to allow higher level playlists to run, if activated.

In the following example we will create Playlist 41 which sole function will be to virtually DEACTIVATE Control Input 7, which will cause Playlist 7 to stop playing and allow the next lowest activated (Playlist 8) control input and its associated playlist to run.

1. Press ***** **4** **1** **#** to gain access to the "Create a Playlist" command.
2. Press **4** **1** **#** to select Playlist 41.
3. Press **1** **5** **#** to set a virtual control input.
4. Press **7** **#** to select Control Input 7.
5. Press **3** **#** to deactivate Control Input 7.

The associated "Schedule a Playlist" entry, which will run Playlist 41 at 12 AM Monday morning will be as follows.

1. Press ***** **2** **1** **#** to start the "Schedule Playlist" command.
2. Press **2** **#** to create Schedule #2.
3. Press **1** **#** to make Schedule 1 a weekly event.
4. Press **2** **#** to run Monday.
5. Press **0** **0** **0** **0** **#** to run at 12 AM Monday morning.
6. Press **4** **1** **#** to run Playlist 41.
7. Press **8** **#** to assign it a priority level of 8 to allow higher level playlists to run, if activated.

Scheduling Playlists

Commonly used to announce your radio stations FCC Station Identification message once every half-hour, scheduled playlists may be programmed to run hourly, daily, weekly or annually, at the time of your choosing. The NX8R can remember one hundred individual scheduled events and each individual schedule is assigned a number by the user for tracking purposes.

Scheduled playlists are also assigned a priority level (1-8) so that they operate in the same fashion and in tandem with playlists associated to control inputs. The numerical value of the assigned priority level should be considered to be one half-step higher than it was entered (*i.e.*, if you assigned a scheduled playlist a priority of 8, its true value is a 7.5. It will preempt Playlist 8). In other words, when a higher priority scheduled playlist is activated, the lower priority playlist will stop, and the contents of the higher priority scheduled playlist will be broadcast. If a playlist with higher priority than a scheduled playlist is activated, the scheduled playlist will stop and then resume only after the higher priority playlist is deactivated.

Scheduling Hourly Playlists

Hourly playlists schedules happen at an assigned time, once every hour. These hourly playlist schedules may also be programmed to occur every day of the week, on a particular day of the week, every weekday or weekends only. Hourly playlist schedules are programmed to occur at an assigned number of minutes of offset after the start of each hour, allowing playlists to execute, for example, on the hour or on the half-hour. This is particularly handy for broadcasting your stations FCC call sign every half-hour.

In the following example we will create Schedule 1, which will cause Playlist 50, which should contain only your call sign message, to run every day, every hour, at the top of the hour.

1. Press ***21#** to start the "Schedule Playlist" command.
2. Press **1#** to create Schedule #1.
3. Press **2#** to make Schedule 1 an hourly event.
4. Press **0#** to run every day.
5. Press **0#** to run at the top of the hour.
6. Press **50#** to run Playlist 50.
7. Press **1#** to assign it a priority level of 1.

You should also create another scheduled playlist that will run the same playlist at 30 minutes past the hour. This will assure that your call sign is broadcast every half-hour to meet FCC requirements. Also, remember to create Playlists 50 and record Message 99, your call sign message.

Scheduling Daily or Weekly Playlists

Daily or weekly playlist schedules happen on a particular day of the week at a particular time daily. For example, a playlist containing messages regarding traffic congestion may be scheduled to run at 5 PM on weekdays. The scheduled playlist will run one time and then return to your regular broadcast. To cause the scheduled playlist to broadcast for a longer duration of time, simply enter the message sequence several times within the playlist.

The day of the week key is as follows:

0 = All days	5 = Thursday
1 = Sunday	6 = Friday
2 = Monday	7 = Saturday
3 = Tuesday	8 = Every Weekday

4 = Wednesday 9 = both Saturday and Sunday

In the following example we will create Schedule 5, which will cause Playlist 9 to run weekdays at 5 PM.

1. Press ***21#** to start the "Schedule Playlist" command.
2. Press **5#** to create Schedule #5.
3. Press **1#** to make Schedule 1 a weekly event.
4. Press **8#** to run on weekdays.
5. Press **1700#** to run at 5 PM.
6. Press **9#** to run Playlist 9.
7. Press **8#** to assign it a priority level of 8.

Monitor a Scheduled Entry

Using this command sequence will cause the NX8R to respond with the Scheduled Entry parameters. Use the following command sequence:

1. Press ***22#** to start the "Monitor Playlists" command.
2. Press the Schedule Number followed by **#**

Delete a Scheduled Playlists (*24#)

Individual or multiple schedules may be deleted from the NX8R.

1. Press ***24#** to start the "Delete Scheduled Playlist" command.
2. Choose one of the following:
 - a. Press the Schedule Number followed by **#** to delete one scheduled playlist.
 - b. Press **0#** to delete all scheduled playlists.
 - c. Press **1#** to confirm.

Live Broadcast

With the NX8R you are also able to broadcast live via the control phone, a remote or cellular phone. This command takes priority over all other activity. All sounds, including touch-tones will be broadcast. The NX8R will not respond to touch-tones while this command is active. To terminate the live broadcast, simply hang up.

- Press ***99#** to broadcast live.

Set the Clock

The NX8R has a 365-day clock to allow playlist scheduling. The clock keeps track of the year, month day and time of day. This command should be run once or twice annually to ensure proper scheduled playlist activation.

In the following example we will set the clock to 12 PM using military time.

1. Press ***20#** to start the "Set Clock" command.
2. Press **1#** to set the time.
3. Press **1200#** to set the clock to 12 PM.

In the following example we will set the date to January 18, 2008, in yyyy# mm# dd# format.

1. Press ***20#** to start the "Set Clock" command.
2. Press **2#** to set the date.
3. Press **2008#** to set the year to 2008
4. Press **01#** to set the month to January.
5. Press **18#** to set the day to the 18th.

Initial Setup Commands

These set-up command sequences must be completed only in the event the NX8R has been reset to default values.

Standard Message Spacing

With this command sequence you can determine the amount of time between messages. Minimum spacing between messages is desired to keep the broadcast from sounding "choppy". The minimum spacing setting available is zero seconds. The default spacing between messages is one second. Change the spacing to zero seconds by using the following sequence.

1. Press ***4#** to gain access to the "Set Spacing" command.
2. Press **0#** to set the spacing to zero seconds.

If you have a circumstance where more time is desired between messages, you may set the spacing up to 18 hours (64800 seconds). Use the following procedure. In our example, we set the spacing to 2-seconds.

1. Press ***4#** to choose the "Set Spacing" function.
2. Press **2#** to set the spacing to two seconds.

Control Input Mode Setting

This command sets the NX8R to numerically prioritize control inputs. Other modes are available but should not be used with the ALERT AM format.

1. Press ***31#** to start to the “Control Input Mode” command.
2. Press **2#** to place the NX8R in the required mode.
3. Press **3#** to place the NX8R in the required mode

Deactivate Relays

This command sequence will deactivate the relays and prevent errant tripping of external devices wired to them.

1. Press ***62#** to start to the “Program Relays” command.
2. Press **0#** to select all relays.
3. Press **3#** to deactivate.

Local Record Source Input

At the ALERT AM site, you are able to make recordings using the SP55 Control Phone, the provided microphone or an auxiliary source such as a compact disk player. In order to do so, the NX8R must know which input source you intend to use. Inputs that are available for your use include the control phone, microphone and Aux 3. Aux 1 is reserved for the live NOAA All-Hazards Radio feed and Aux 2 is reserved for the Workstation Audio Control feed, if purchased.

Use the following procedure to choose an audio source.

1. Press ***7#** to gain access to the “Local Source Input” command.
2. Choose one of the following:
 - a. Press **1#** to record from the microphone.
 - b. Press **3#** to record with the onsite control phone.
 - c. Press **5#** to record using the Aux 3 input.
3. If you would like to verify that the correct source is selected, press ***7#** once more and the NX8R will respond with the current selection.

➔ **Note: When the NX8R receives a call from a remote telephone or cell phone, it will automatically record audio via the telephone line, despite which source has been set for local recording.**

Set the Audio Output Volume

The output volume should be set to 30.

1. Press ***11#** to gain access to the “Create a Playlist” command.

2. Press **1#** to select all outputs.
3. Press **30#** to set the output level to 30.

Set the Clock

The NX8R has a 365-day clock to allow playlist scheduling. The clock keeps track of the year, month day and time of day. This command should be run once or twice annually to ensure proper scheduled playlist activation.

In the following example we will set the clock to 12 PM using military time.

1. Press ***20#** to start the "Set Clock" command.
2. Press **1#** to set the time.
3. Press **1200#** to set the clock to 12 PM.

In the following example we will set the date to January 18, 2008, in yyyy# mm# dd# format.

1. Press ***20#** to start the "Set Clock" command.
2. Press **2#** to set the date.
3. Press **2008#** to set the year to 2008
4. Press **01#** to set the month to January.
5. Press **18#** to set the day to the 18th.

Factory Message Scripts

General NOAA Forecast Intro

"Now we join, in progress, the National Weather Service All-Hazards Radio broadcast for this area, to keep you updated on the latest forecasts and conditions."

General NOAA Forecast Outro

"We'll rejoin the National Weather Service All-Hazards Radio broadcast again in a few minutes. Stay tuned."

NOAA Warning Intro

"The National Weather Service All-Hazards Radio System has just issued the following important information for our area. Please stay tuned."

NOAA Warning Outro

“You have been listening to important information provided by the National Weather Service All-Hazards Radio System. If further advisories are issued for this area, regular programming will be preempted, and they will be broadcast on this Emergency Advisory Radio Station.”

Emergency Advisory Radio Mission Statement and Set a Button

“While you are thinking of it, consider setting a button on your radio receiver, so you can find this Emergency Advisory Radio Station quickly in an emergency. This radio station broadcasts messages 24 hours a day, on a special AM frequency licensed to this community by the Federal Communications Commission. In the event of an emergency, tune to this station for live and recorded broadcasts, which may include public safety information, instructions and advisories affecting life, property, communication and travel. Should the National Weather Service–All Hazard Radio System issue an advisory, watch, or warning which affects our area, we will automatically preempt regular programming and will broadcast that information immediately.”

NOAA is Weather and All Hazards

“Did you know that the National Weather Service Radio Station for this area has become an all-hazards service? Beginning in the 1970’s, NOAA Weather Radio Stations broadcast primarily weather forecasts, as well as severe weather watches and warnings. Now in the 21st century, these stations have been tasked to advise and warn you of more than just what you see in the sky. This new all-hazards service now can be activated to alert you to everything from AMBER alerts to 911 outages. In affected areas of the country, this service warns residents of hazards as varied as avalanches, flooding, dust storms, wildfires, nuclear incidents and volcanic activity. NOAA broadcasts can include law enforcement alerts, orders to evacuate an area or to shelter in place in the event of the release of hazardous materials. While you are thinking about it, consider the purchase of a tabletop National Weather Service/All-Hazards Radio Receiver for your home. It can be programmed to alert you when hazards are imminent in our area. And when you are in your car, keep your AM radio tuned to this Emergency Advisory Radio Station. Should such watches, warnings or advisories be issued for our area, we will preempt regular programming and rebroadcast this information immediately.”

Flashing Signs

“You may have noticed that special signs with embedded beacons have been erected along various streets in our area. The purpose of these signs is to alert you to listen to this radio station in the event of an emergency. When you see the beacons flash, tune to this radio frequency to learn the nature of the emergency and the action that you should take.”

Normal Programming Content

“We invite you to tune to this radio station for timely information relating to traffic, weather conditions and forecasts, special events, directions for visitors, travel advisories and helpful information regarding street repairs, and construction.”