NPR Digital Services
Live Streaming FAQs

1. Q. What streaming services does NPR Digital Services® provide?
   A. NPR Digital Services provides your station with a competitive "best of breed" streaming audio solution that includes revenue opportunities. The station receives:
   - 24/7 online stream of your terrestrial broadcast in Windows Media™ or MP3 format (MP3 streams can be played using Real Player, iTunes, Windows Media Player, WinAmp, and more.)
   - Unlimited simultaneous audio streams to your listeners
   - All hardware and software needed to stream (encoding computer, encoding software, etc.)
   - Industry standard media player and station-branded web space
   - 24/7 technical support
   - Streaming usage reports
   - **Automatic SoundExchange Streaming Logs**
   B. When visitors click a link on your homepage, they will be taken to your station's streaming web space, which is customized with your station logo, look and feel, and site navigation.

2. Q. How many on-line visitors will be able to listen to our live stream at any given time?
   A. An **unlimited** number of simultaneous listeners may stream at any time. Bandwidth requirements for streaming audio can be substantial, but our streaming provider gives us the ability to scale to handle an unlimited number of listeners without a decrease in stream quality.

3. Q. What are the technical requirements for the station?
   A. The station must be able to deliver one continuous stream to one streaming server via the Internet. The station must provide **a minimum of 56kbps (double the stream bit rate, plus a little) of bandwidth per 24k stream**, ideally we recommend **96 kbps or more per 24k stream (4 times the stream bit rate)** to allow for back ups and redundancy. We recommend that your station's total bandwidth be equal to or greater than DSL or cable modem. Options include ISDN, and T1. Satellite connection is not recommended.
   B. If using DSL, the connection must terminate in an external gateway that provides PPPoE support.
   C. Stations must also provide a static fixed IP address for the encoder.
   D. Stations must allow NPR Digital Services remote access to the encoder.
   E. Staff member time to help set up the encoder. Although only a few hours are needed, they are spread over a few days, so do take vacations, etc. into account.

4. Q. What streaming bit rates are available? What about a high bandwidth stream?
   A. Clients can choose streams from 24-128kbps. For reference, a near CD quality stream rate is 128kbps.
   B. Clients may stream at multiple bit rates (e.g., 32-96 kbps).
   C. We recommend that clients start with a 24 or 32 kbps stream, to better gauge usage. At higher bit rates, listeners with mobile and dial up connections may not be able to stream your station.
   D. 32kbps streams:
   http://www.publicbroadcasting.net/krwg/ppr/index.shtml
   http://www.publicbroadcasting.net/wiaa/ppr/index.shtml
   E. 64kbps stream: http://www.publicbroadcasting.net/knct/ppr/index.shtml
   F. 96-128kpbs streams: http://www.publicbroadcasting.net/ndpr/ppr/index.shtml

5. Q. What about streaming usage reporting? Will I know how many people are listening?
  A. We provide access to detailed online reports via http://control.llnw.com Contact us for your log in information.

6. Q. I'd like to add additional streams. Is that possible?
  A. Yes, it is possible to add additional streams for a small set up fee. Please contact your Client Relations Manager at NPR Digital Services for details.

7. Q. What streaming format do you recommend?
  A. MP3 is an open source format. MP3 streams can be played by iTunes, QuickTime, Real Player, WinAmp, Windows Media Player, and other media players, which gives you more flexibility with one stream.

8. Q. How do I get my signal on the Internet?
  B. NPR Digital Services will deliver all necessary hardware and software to the station. The station's signal is fed into the soundcard of the encoder, where it is encoded by the appropriate encoding software, and then delivered to our streaming provider via the Internet. Our streaming provider replicates the stream as needed using their network. When a listener requests a stream, it is served from the "closest" streaming server.

9. Q. Does NPR Digital Services offer on-demand storage, or archiving, for audio clips?
  A. Yes. You have the ability to upload short audio clips in Public NewsRoom and Public Arts, and also outside of NewsRoom and Arts using the JukeBox system.

10. Q. What type of hardware and software do you provide? Will I need to supply any equipment?
  A. NPR Digital Services sends stations all necessary hardware and software. This includes a preconfigured streaming computer loaded with necessary software.
  B. This computer will encode analog audio (your live air signal) using the appropriate encoding software. The encoder is preconfigured to plug into your local network and connect with the remote streaming server via the Internet.

11. Q. Why is a static IP address required?
  A. If you stream in Windows Media format, a static IP address is used to determine the best entry point on our streaming provider's network for you to stream your live stream.
  B. Windows streams are "pulled", meaning the stream is pulled from the encoder. Our streaming provider pulls the stream from the designated IP address.

12. Q. Why do you recommend streaming in mono?
  A. At rates under 64kbps, we recommend that stations stream in mono. At 20kbps, mono delivers a higher definition stream than stereo, and listeners will not receive the stereo separation cues. Stereo effects are generally not appreciated for streams under 64kbps. For reference, to stream at near CD quality, you'd have to stream at 128kbps.
  B. Furthermore, the majority of listeners are listening through PC speakers that will not represent a compressed stereo signal with much definition.
  C. You can stream at higher bit rates with NPR Digital Services!

13. Q. How can I increase the quality of my stream?
  A. **Filter the signal** before it hits the encoder.
  B. **Increase the bit rate of the stream or add a high bit rate stream**. Note that pricing for higher bit rate streams is higher. Following are some examples to listen to:
      32kbps streams: http://www.publicbroadcasting.net/krwg/ppr/index.shtml
      96kbps stream: http://www.publicbroadcasting.net/kxci/ppr/index.shtml
  C. **Upgrade the sound card** on the encoder. A few stations use an Orban sound card at around $1200: http://www.publicbroadcasting.net/niprfm/ppr/index.shtml .

14. Q. Our stream is offline. Who should I contact?
- **D.** **Business hours and non-urgent issues off hours**: Email techsupport@digitalservices.npr.org.
- **E.** **Off hours**: Clients have 24/7 access to NPR Digital Services staff should their stream go down. Please see this page for procedure: http://www.publicinteractive.com/support.html

15. Q. What about licensing: ASCAP, BMI, SESAC and SoundExchange/RIAA?
- **A.** NPR Digital Services does not cover the costs of any SoundExchange, ASCAP, BMI or related royalty fees associated with station generated or station licensed content. The CPB has negotiated online streaming licensing agreements with SESAC, SoundExchange and ASCAP on behalf of all CPB-qualified stations, and is in the process of negotiating a license with BMI. For more information, and to sign up, the station must register online at (http://stations.cpb.org/musicrights/account.php?mode=create)
- **B.** Stations are responsible for acquiring necessary clearances for streaming programming from network distributors and producers.

16. Q. What about SoundExchange Reporting?
- **A.** Stations that use our live streaming service do not need to submit streaming logs to us for SoundExchange reporting purposes - we already have that information and will automatically submit it on the stations behalf.

17. Q. How long till my station is streaming online?
- **A.** It typically takes 15-20 business days from receipt of payment and station streaming specifications to streaming live.

18. Q. Can I listen on an iPhone?
- **A.** Yes, via the Public Media Tuner App. NPR Digital Services is proud to be part of the collaboration. It's not too late to submit your stream for inclusion in the Public Radio Player. All live MP3 streams hosted by NPR Digital Services are compatible. Visit the Public Radio Player page at http://player.publicbroadcasting.net to sign up.
- **B.** iPhone applications like this play streams like ours: http://phobos.apple.com/WebObjects/MZStore.woa/wa/viewSoftware?id=284205617&mt=8 If you are not using a gateway, listeners should be able to use your .pls or .m3u address listed on your streaming page. If you are using a gateway, listeners will need the direct stream link, contact us for that.

19. Q. Can my stream be listed in iTunes?
- **C.** iTunes has a strict procedure to follow, and they do not guarantee that they will list you. Contact us for the directions.

To Start Streaming: To learn more about streaming with NPR Digital Services, contact our sales department at 888-729-8809. Additional support and information about streaming is available online on our client support site at http://digitalservices.npr.org/affstreaming.html.