TECHNICAL SPECIFICATIONS FOR SUBMITTING RADIO COMMERCIALS
Airing your radio campaign with NPO is not at all complicated, but of course we want to get it right. That is why we provide you with this list of all technical specifications for submitting radio commercials.

1. SPECIFICATIONS AUDIO FILE

Length
Radio commercials are accepted with a length of 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55 or 60 seconds, other spot lengths after consultation.

Sampling frequency
A sampling frequency of 48kHz is accepted; other sampling frequencies are not accepted.

Sound registration
Silence (mute) in a radio commercial must not exceed 3 seconds. If the commercial is a mono recording it should be presented on two channels. Both channels should have an identical signal and be of the same level.

Level
The loudness level of the material must comply with:

- The EBU R128 guideline: This has the preference. The specifications are listed below at ‘Format EBU R128’.
- Or:
- The EAR-specifications: The true peak level must be not more than -9dBfs, related to 0dBfs (full scale).

Format EBU R128

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>METRE INDICATION</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Loudness</td>
<td>I</td>
<td>-23 LUFS</td>
</tr>
<tr>
<td>Maximum True Peak Level</td>
<td>dBTP</td>
<td>-1 dBTP</td>
</tr>
<tr>
<td>Maximum Momentary Loudness</td>
<td>M</td>
<td>+8 LU</td>
</tr>
<tr>
<td>Maximum Short Term Loudness</td>
<td>S</td>
<td>No restriction</td>
</tr>
<tr>
<td>Loudness Range</td>
<td>LRA</td>
<td>No restriction</td>
</tr>
</tbody>
</table>

Audio files are submitted as 16 bit linear WAV / AIFF or in 24bit linear AIFF as stereo files.
2. METADATA
When uploading the audio files, the following data may also be supplied:
- Ster Spot ID / Internal code
- Commercial title
- Net commercial length in seconds
- Name of the advertised product
- Producer’s name
- Advertiser’s name

3. SUBMITTING RADIO COMMERCIALS
Radio commercials may be submitted to us digitally via the web application EAR (Elektronisch Aanleveren Radiocommercials = Electronic Submission Radio Commercials). In order to upload your commercial(s) here you need an EAR-account, which you may apply for at www.EAR.nu. A manual explaining how to submit a commercial is available for download there. Submitting commercial(s) is possible up to one working day before broadcast, before 12:00 hours. Any earlier is of course welcome.

Broadcasting instructions
The broadcasting instructions for the campaign may be submitted to the Traffic Team (at radiotraffic@ster.nl) up to one working day before the start of the campaign. This is a (extra) check for us to ensure we run the correct commercial at the correct time. A broadcasting instruction consists of:
- Your Ster number(s) + code(s)
- Campaign period
- Commercial title(s)
- In case of multiple commercials also state the relative division, so:
  - Commercial AA and AB may be run alternatingly
  - Commercial AA on channel X and Commercial AB on channel Y
  - Commercial AA (the main commercial) + AB (thee tag on)

4. CONTACT
If you have any questions about submitting or uploading your commercial, then please contact M&I Broadcast Services on +31 35 672 74 74 or at sales@mibroadcastservices.nl. For any other questions please contact the Traffic team on +31 35 672 55 00 or at radiotraffic@ster.nl.