How to Configure the Tape Output
on a
3rd Generation Rack-Mount RDMS™ Telemetry Receiver

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1 How To Configure Tape Output

This document assumes the use of Windows 7 with access via Telnet.

Access via Telnet is described in section 4.8 of the Installation and Operation Manual for the 3rd Generation Rack-Mount RDMS™ Telemetry Receiver. The contents of this document are also presented as Appendix E in the Rack-Mount Receiver manual.

Contact your local administrator when using other versions of Windows or non-Windows platforms.

1.1 Overview

The Tape Output feature uses the I/Video A or the Q/Video B outputs on the 1U rack mount receiver (refer to section 1.3 for 3U connectors). Connectors are listed in Table 1 and locations are illustrated in Figure 1.

<table>
<thead>
<tr>
<th>Output</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/Video A Channel 1</td>
<td>J5</td>
</tr>
<tr>
<td>Q/Video B Channel 1</td>
<td>J6</td>
</tr>
<tr>
<td>I/Video A Channel 2</td>
<td>J19</td>
</tr>
<tr>
<td>Q/Video B Channel 2</td>
<td>J20</td>
</tr>
<tr>
<td>I/Video A Channel Combiner</td>
<td>J29</td>
</tr>
<tr>
<td>Q/Video B Channel Combiner</td>
<td>J30</td>
</tr>
</tbody>
</table>

These connectors ordinarily provide the baseband video outputs. If they are used to drive a bit-sync, that functionality may not be available when using Tape Out.

For PCM/FM, only I/Video A is used for baseband video, leaving Q/Video B available for Tape Out. In any QPSK mode (that requires both I and Q baseband outputs), using Tape Out is mutually exclusive.

This is not a persistent configuration. Changing modes or power cycling the unit causes the Video outputs to revert to their normal, baseband outputs.
1.2 Commands

After connecting to Channel 1, Channel 2, or Channel 3 (the combiner), the command prompt displays. The following commands configure the Tape Out on Q/Video B. Anything past the ‘#’ is a comment, and can be discarded.

`ahob p0t;`  # Routes Physical channel 0 tape output source to Q/Video B
`ahmx.x;`    # Sets the tape out mixer to x.x MHz
`ahmb 1;`    # Enables the tape out mixer on Q/Video B output

The following commands configure the Tape Out on I/Video A.

`aho a p0t;`  # Routes Physical channel 0 tape output source to I/Video A
`ahmx.x;`    # Sets the tape out mixer to x.x MHz
`ahma 1;`    # Enables the tape out mixer on I/Video A output

In both cases, the x.x MHz is in the range of 0.075 to 20.0 MHz. Frequencies outside of that range result in unpredictable behavior.

Example:

To configure Q/Video B out for 5.1 MHz center frequency:

Aho b p0t
ahm 5.1
ahmb 1

To configure I/Video A out for 2.8 MHz center frequency:

aho a p0t
ahm 2.8
ahma 1

1.2.1 Notes

This is not a persistent configuration. Changing modes or power cycling the unit cause the Video outputs to revert to their normal, baseband outputs.

While the Tape Out can be configured simultaneously on I/Video A and Q/Video B, they cannot have independent frequencies. The frequency specified by ‘ahm x.x’ will be used for BOTH.

1.3 3U Connectors

The Tape Output feature on the 3U Receiver uses the I/Video A, Q/Video B, Video C, and Video D outputs. The 3U connectors are listed in Table 2 and locations are illustrated in Figure 2.
### Table 2: 3U Tape Output Connectors

<table>
<thead>
<tr>
<th>Output</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>I/Video A Channel 1</td>
<td>J3</td>
</tr>
<tr>
<td>Q/Video B Channel 1</td>
<td>J8</td>
</tr>
<tr>
<td>Video C Channel 1</td>
<td>J13</td>
</tr>
<tr>
<td>Video D Channel 1</td>
<td>J18</td>
</tr>
<tr>
<td>I/Video A Channel 2</td>
<td>J28</td>
</tr>
<tr>
<td>Q/Video B Channel 2</td>
<td>J33</td>
</tr>
<tr>
<td>Video C Channel 2</td>
<td>J38</td>
</tr>
<tr>
<td>Video D Channel 2</td>
<td>J43</td>
</tr>
<tr>
<td>I/Video A Channel Combiner</td>
<td>J53</td>
</tr>
<tr>
<td>Q/Video B Channel Combiner</td>
<td>J58</td>
</tr>
<tr>
<td>Video C Combiner</td>
<td>J63</td>
</tr>
<tr>
<td>Video D Combiner</td>
<td>J68</td>
</tr>
</tbody>
</table>

**Figure 2: 3U Rear Panel**
1.4 Troubleshooting

If you are still having difficulties at this point, contact Quasonix technical support.

Quasonix Technical Support
(1-513-942-1287) or email (support@quasonix.com)

When calling technical support, it will speed things up if you have the following information handy:

- Model number ***Note that this is different from the customer part number.***
- Serial number
- Software Version

It is also helpful if you can call from a phone in your lab so our tech support people can actually walk you through setting, checking, and controlling your receiver.