

Transmodulator 5352 - 5353

Colosseum 8550 – 8555

EPG forwarding

1. Introduction

This document explains the prerequisites of transmodulator 5352 – 5353 and Colosseum 8550 - 8555 to support EPG forwarding.

2. Resources

Satellite: Astra 3B (23.5°E)

Transponders: DVB-S2 – 8PSK – Vertical High

- Freq: 11739 MHz, Baud Rate: 27500 kBaud, NID: 3, TID:3202
- Freq: 11856 MHz, Baud Rate: 27500 kBaud, NID:3, TID:3208

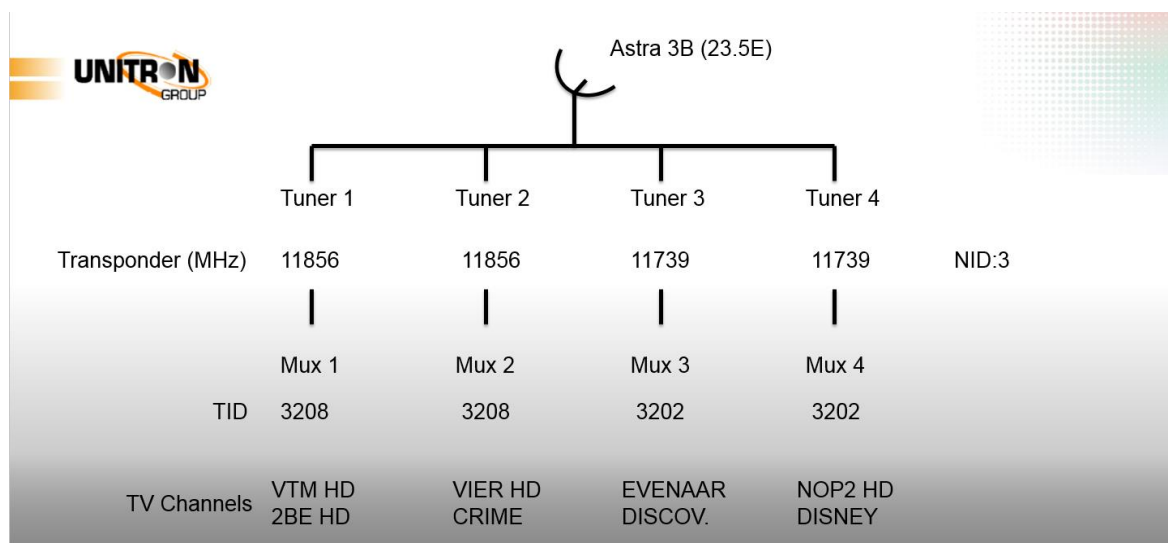
TV: SAMSUNG TV LE32C530

DTH operator: TV Vlaanderen

3. Setup module 5352Q

In this setup TV channels of a transponder are transmodulated in 2 multiplexers.

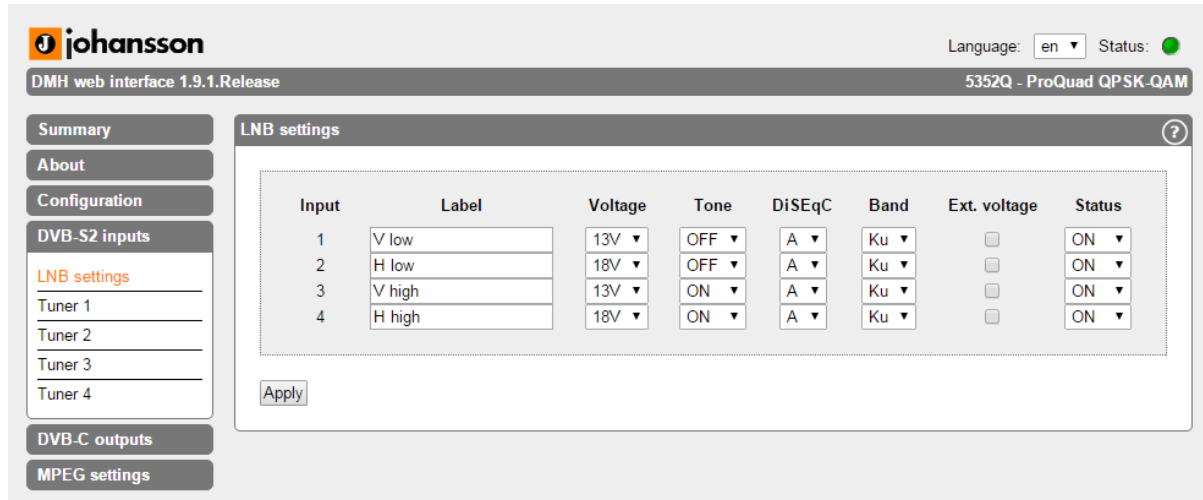
Mux 1 and Mux 2 transmodulate TV channels coming from Transponder 11856 Mhz, Mux 3 and Mux 4 transmodulate TV channels coming from Transponder 11739 Mhz



Configuration module 5352Q

a. DVB-S2 Inputs

i. LNB Settings



johansson Language: en Status: ●

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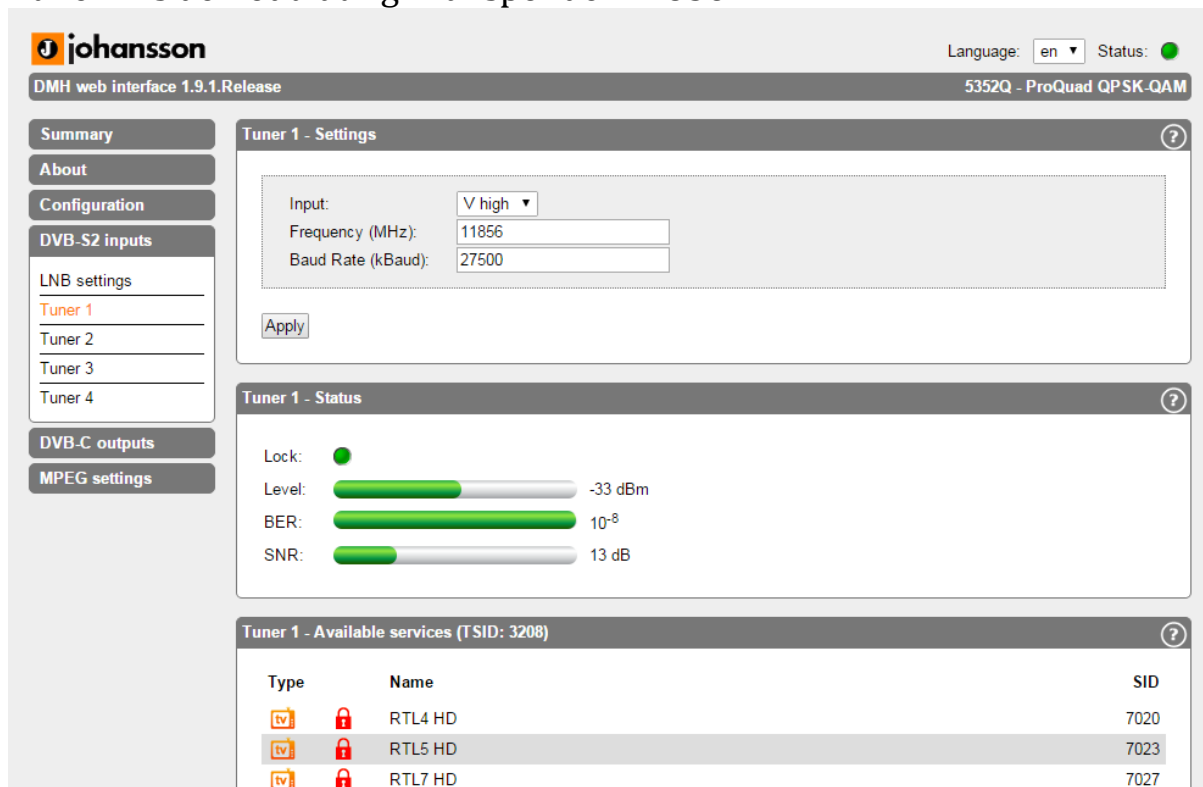
LNB settings

| Input | Label | Voltage | Tone | DiSEqC | Band | Ext. voltage | Status |
|-------|--------|---------|------|--------|------|--------------------------|--------|
| 1 | V low | 13V | OFF | A | Ku | <input type="checkbox"/> | ON |
| 2 | H low | 18V | OFF | A | Ku | <input type="checkbox"/> | ON |
| 3 | V high | 13V | ON | A | Ku | <input type="checkbox"/> | ON |
| 4 | H high | 18V | ON | A | Ku | <input type="checkbox"/> | ON |

Apply

ii. Tuner 1

Tuner 1 is demodulating Transponder 11856 MHz



johansson Language: en Status: ●

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Tuner 1 - Settings

Input: V high

Frequency (MHz): 11856

Baud Rate (kbaud): 27500

Apply

Tuner 1 - Status

Lock: ●

Level: -33 dBm

BER: 10^{-8}

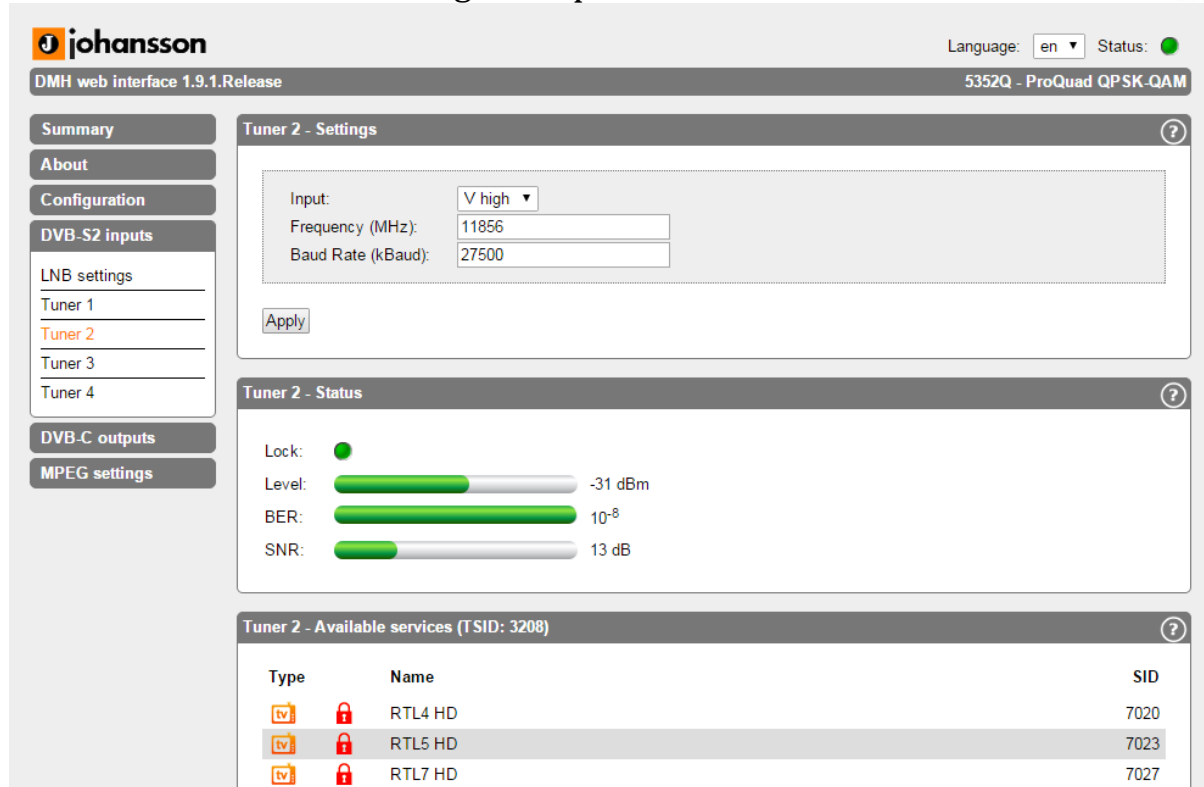
SNR: 13 dB

Tuner 1 - Available services (TSID: 3208)

| Type | Name | SID |
|------|---------|------|
| TV | RTL4 HD | 7020 |
| TV | RTL5 HD | 7023 |
| TV | RTL7 HD | 7027 |

iii. Tuner 2

Tuner 2 is also demodulating Transponder 11856 MHz



johansson Language: en Status: ●

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MPEG settings

Tuner 2 - Settings

Input: V high
Frequency (MHz): 11856
Baud Rate (kBaud): 27500

Apply

Tuner 2 - Status

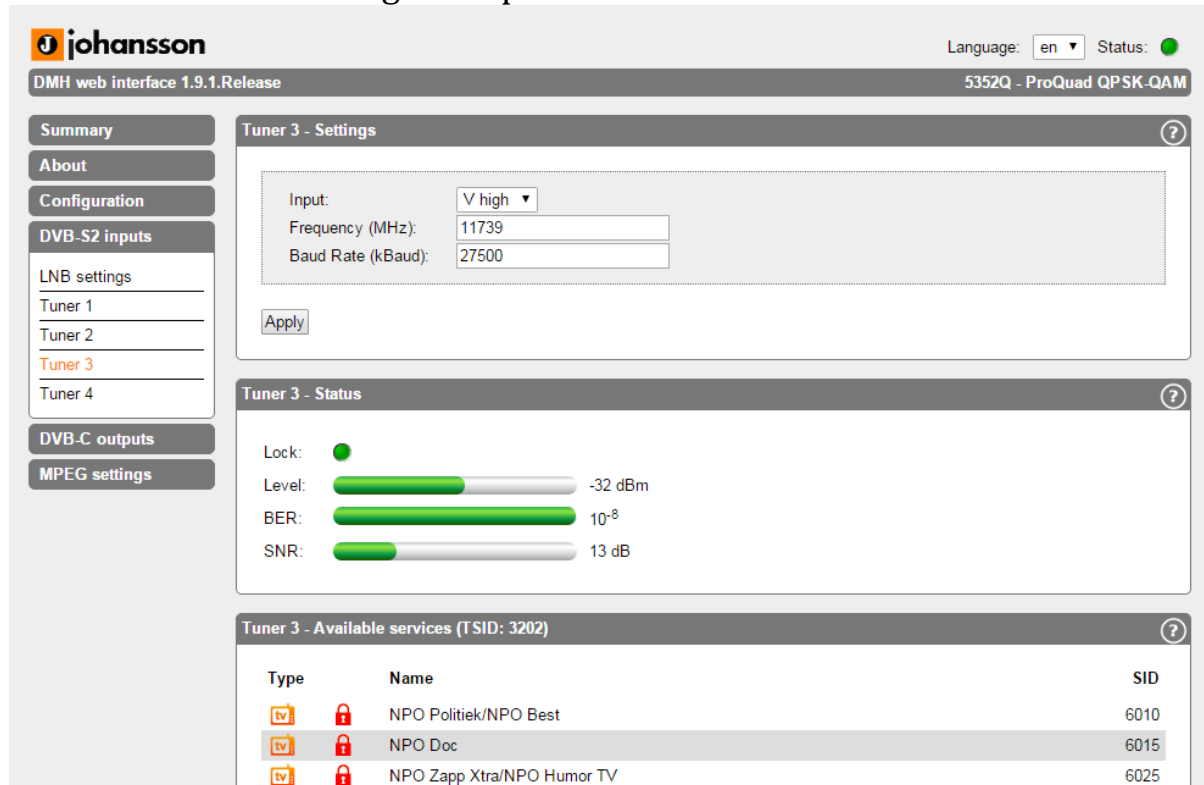
Lock: ●
Level: -31 dBm
BER: 10^{-8}
SNR: 13 dB

Tuner 2 - Available services (TSID: 3208)

| Type | Name | SID |
|------|---------|------|
| TV | RTL4 HD | 7020 |
| TV | RTL5 HD | 7023 |
| TV | RTL7 HD | 7027 |

iv. Tuner 3

Tuner 3 is demodulating Transponder 11739 MHz



johansson Language: en Status: ●

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Tuner 3 - Settings

Input: V high
Frequency (MHz): 11739
Baud Rate (kBaud): 27500

Apply

Tuner 3 - Status


Lock: ●
Level: -32 dBm
BER: 10^{-8}
SNR: 13 dB

Tuner 3 - Available services (TSID: 3202)

| Type | Name | SID |
|------|----------------------------|------|
| TV | NPO Politiek/NPO Best | 6010 |
| TV | NPO Doc | 6015 |
| TV | NPO Zapp Xtra/NPO Humor TV | 6025 |

v. Tuner 4

Tuner 4 is also demodulating Transponder 11739 MHz


Language: en Status: ●

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Tuner 4 - Settings







Input: V high
Frequency (MHz): 11739
Baud Rate (kBaud): 27500

Apply

Tuner 4 - Status

Lock: ●
Level: -35 dBm
BER: 10⁻⁸
SNR: 13 dB

Tuner 4 - Available services (TSID: 3202)

| Type | Name | SID |
|---|--|------|
|  |  NPO Politiek/NPO Best | 6010 |
|  |  NPO Doc | 6015 |
|  |  NPO Zapp Xtra/NPO Humor TV | 6025 |


b. DVB-C outputs

i. Network parameters

All transponders should have the same NID.

The “Original Network ID” should match the Transponder NID

| | | | | | | | | | | | | |
|--------|-----------------------------|--------------------------|----------------|---|--------------|---------------------|--------|------|-----|--|--------------|----------|
| 23.5°E | Astra 3B | 11739.00 V 66 Europe | DVB-S2 | 8PSK | 27500 2/3 | M7 Group, 54.5 Mbps | | | | | NID:3 | TID:3202 |
| ITV | Best 24 16:9 | The Netherlands General | Canal Digitaal | Mediaguard 3 Nagravision 3 Viaccess 5.0 | 6010 | 512 | 80 ned | 2410 | 512 | | 2015-04-18 + | |
| ITV | Politiek 24 Time sharing | The Netherlands Politics | Canal Digitaal | Mediaguard 3 Nagravision 3 Viaccess 5.0 | 6010 | 512 | 80 ned | 2410 | 512 | | 2015-04-18 + | |
| ITV | NPO Cultura 16:9 | The Netherlands Cultural | Canal Digitaal | Mediaguard 3 Nagravision 3 Viaccess 5.0 | 6015 | 513 | 82 ned | 2415 | 513 | | 2015-12-28 + | |


Language: en Status: ●

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5352Q - ProQuad QPSK-QAM

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- MUX settings
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Network parameters

Version number:

Network name:

Network_ID:

* Original_Network_ID:

* Private_Data_Specifier_ID:


Country:

ii. Mux Settings

TID of the Multiplexers should match the TID of the Transponders

| | | | | | | | | | | | | |
|--------|----------|----------------------|----------|----------------|---|---------------------|--------|------------------------|------|-------|----------|--------------|
| 23.5°E | Astra 3B | 11856.00 V 72 Europe | DVB-S2 | 8PSK | 27500 2/3 | M7 Group, 54.5 Mbps | | | | NID:3 | TID:3208 | |
| Zap | Name | Country | Category | Packages | Encryption | SID | VPID | Audio | PMT | PCR | TXT | Last updated |
| ZAP | RTL 4 HD | The Netherlands | General | Canal Digitaal | Mediaguard 3 Nagravision 3 Viaccess 5.0 | 7020 | 514 HD | 84 [DOLBY DIGITAL] ned | 2520 | 514 | 34 | 2015-04-18 + |
| ZAP | RTL 5 HD | The Netherlands | General | Canal Digitaal | Mediaguard 3 Nagravision 3 Viaccess 5.0 | 7023 | 523 HD | 83 [DOLBY DIGITAL] ned | 2523 | 523 | 33 | 2015-04-18 + |
| ZAP | RTL 7 HD | The Netherlands | General | Canal Digitaal | Mediaguard 3 Nagravision 3 Viaccess 5.0 | 7027 | 527 HD | 87 [DOLBY DIGITAL] ned | 2527 | 527 | 37 | 2015-04-18 + |

| | | | | | | | | | | | | |
|--------|--------------------------|----------------------|----------|----------------|---|---------------------|-----|--------|------|-----|-------|--------------|
| 23.5°E | Astra 3B | 11739.00 V 66 Europe | DVB-S2 | 8PSK | 27500 2/3 | M7 Group, 54.5 Mbps | | | | | NID:3 | TID:3202 |
| ITV | Best 24 16:9 | The Netherlands | General | Canal Digitaal | Mediaguard 3 Nagravision 3 Viaccess 5.0 | 6010 | 512 | 80 ned | 2410 | 512 | | 2015-04-18 + |
| ITV | Politiek 24 Time sharing | The Netherlands | Politics | Canal Digitaal | Mediaguard 3 Nagravision 3 Viaccess 5.0 | 6010 | 512 | 80 ned | 2410 | 512 | | 2015-04-18 + |
| ITV | NPO Cultura 16:9 | The Netherlands | Cultural | Canal Digitaal | Mediaguard 3 Nagravision 3 Viaccess 5.0 | 6015 | 513 | 82 ned | 2415 | 513 | | 2015-12-28 + |


Language: en Status: ●

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MUX settings

| Mux | Frequency (kHz) | Baud Rate (kbaud) | Level (dBm) | Constellation | Status |
|-----|-----------------|-------------------|-------------|---------------|--------|
| 1 | 330000 | 6900 | -25 | 64QAM | ON |
| 2 | 338000 | 6900 | -25 | 64QAM | ON |
| 3 | 346000 | 6900 | -25 | 64QAM | ON |
| 4 | 354000 | 6900 | -25 | 64QAM | ON |

Bandwidth: 8 MHz
Spectral inversion: OFF

Apply

TSID & LCN

| MUX | TSID | LCN | HD LCN |
|-------|------|-----|--------|
| MUX 1 | 3208 | 1 | |
| MUX 2 | 3208 | 3 | |
| MUX 3 | 3202 | 5 | |
| MUX 4 | 3202 | 7 | |

1: 1
2: 2
3: 9
4: 10
5: 11
6: 12
7: 13
8: 14

1: 3
2: 4
3: 15
4: 16
5: 17
6: 18
7: 19
8: 20

1: 5
2: 6
3: 21
4: 22
5: 23
6: 24
7: 25
8: 26

1: 7
2: 8
3: 27
4: 28
5: 29
6: 30
7: 31
8: 32

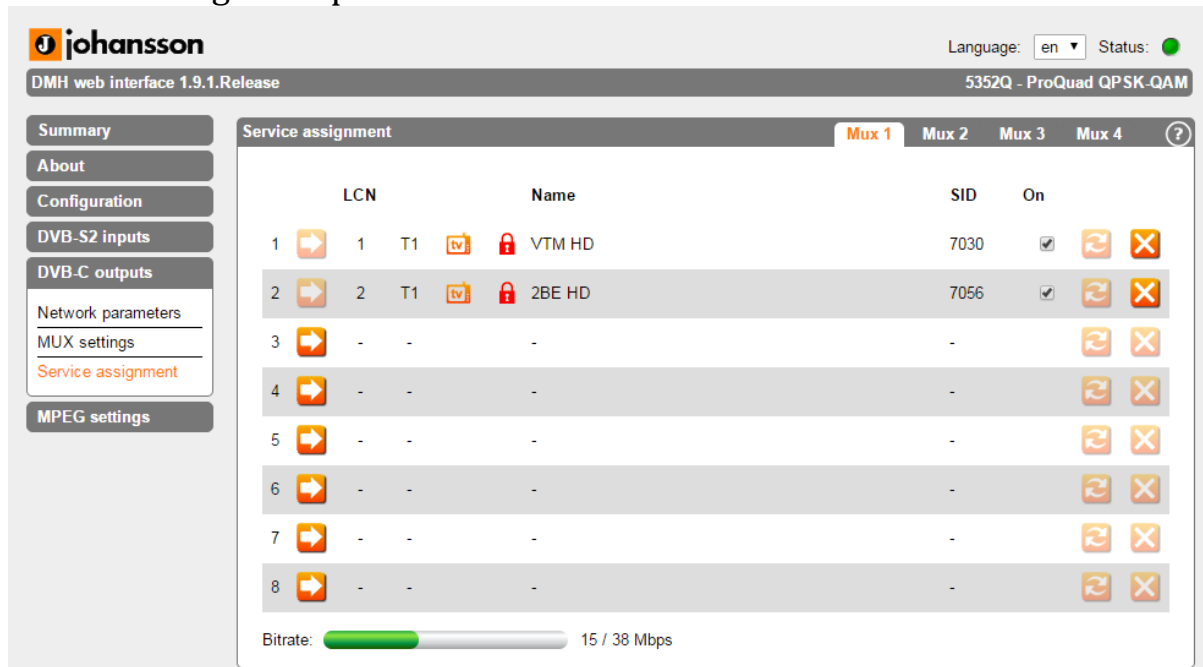
Apply

Note: Not all receivers fully support these parameters. Results may vary...

iii. Service assignment

1. Mux 1

I've added 2 TV channels (VTM HD and 2BE HD) from Tuner 1 which is demodulating Transponder 11856 MHz.



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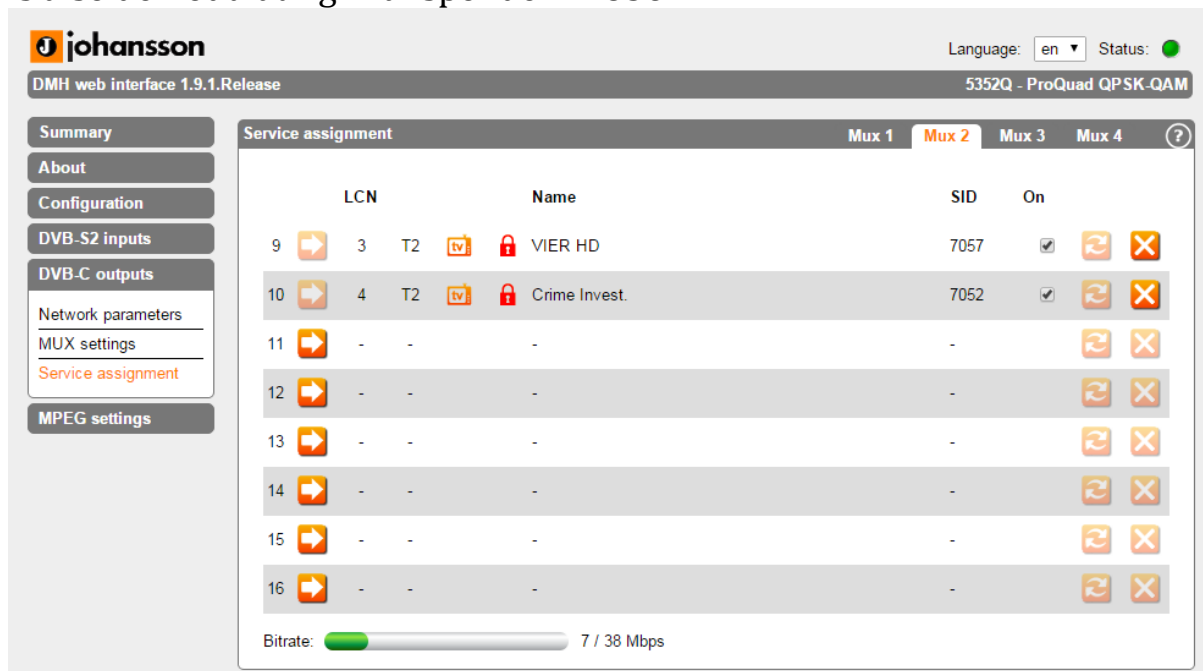
Service assignment Mux 1 Mux 2 Mux 3 Mux 4

| LCN | Name | SID | On |
|-------------|------|-------------------------------------|----|
| 1 T1 VTM HD | 7030 | <input checked="" type="checkbox"/> | |
| 2 T1 2BE HD | 7056 | <input checked="" type="checkbox"/> | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |

Bitrate: 15 / 38 Mbps

2. Mux 2

I've added 2 TV channels (VIER HD and Crime Invest) from Tuner 2 which is also demodulating Transponder 11856 MHz.



johansson Language: en Status: ●
DMH web interface 1.9.1.Release 5352Q - ProQuad QPSK-QAM

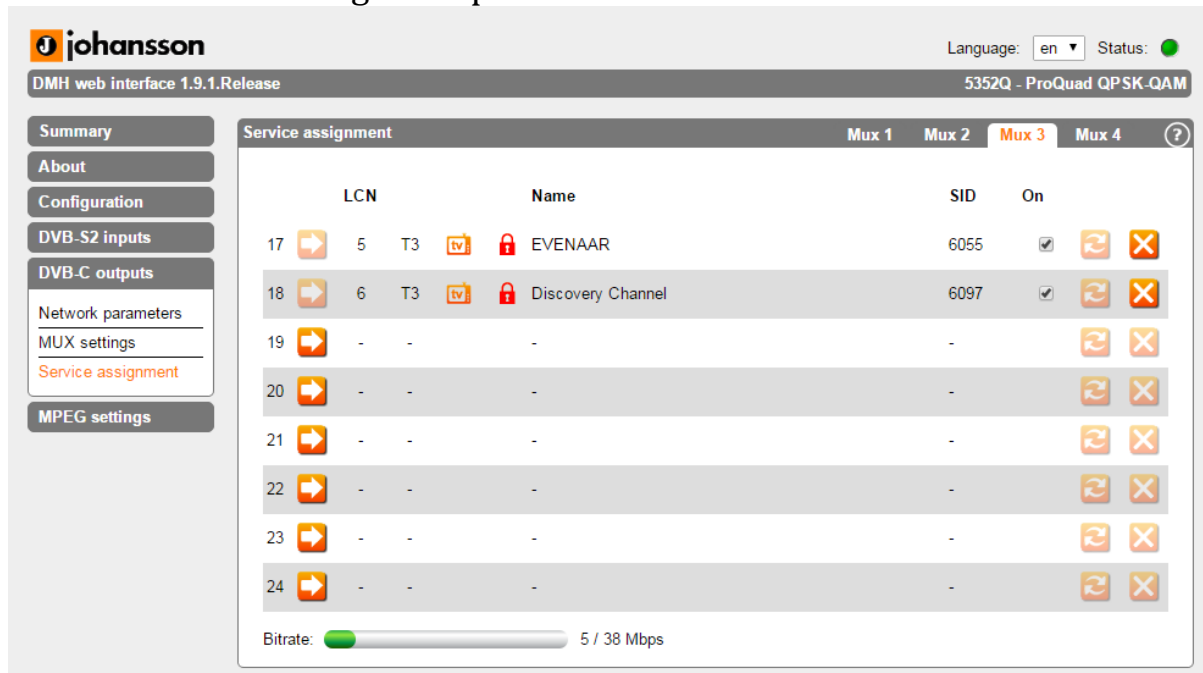
Service assignment Mux 1 Mux 2 Mux 3 Mux 4

| LCN | Name | SID | On |
|--------------------|------|-------------------------------------|----|
| 3 T2 VIER HD | 7057 | <input checked="" type="checkbox"/> | |
| 4 T2 Crime Invest. | 7052 | <input checked="" type="checkbox"/> | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |

Bitrate: 7 / 38 Mbps

3. Mux 3

I've added 2 TV channels (EVENAAR and Discovery Ch) from Tuner 3 which is demodulating Transponder 11739 MHz.



johansson Language: en Status: ●

DMH web interface 1.9.1.Release 5352Q - ProQuad QPSK-QAM

Summary About Configuration DVB-S2 inputs DVB-C outputs Network parameters MUX settings Service assignment MPEG settings

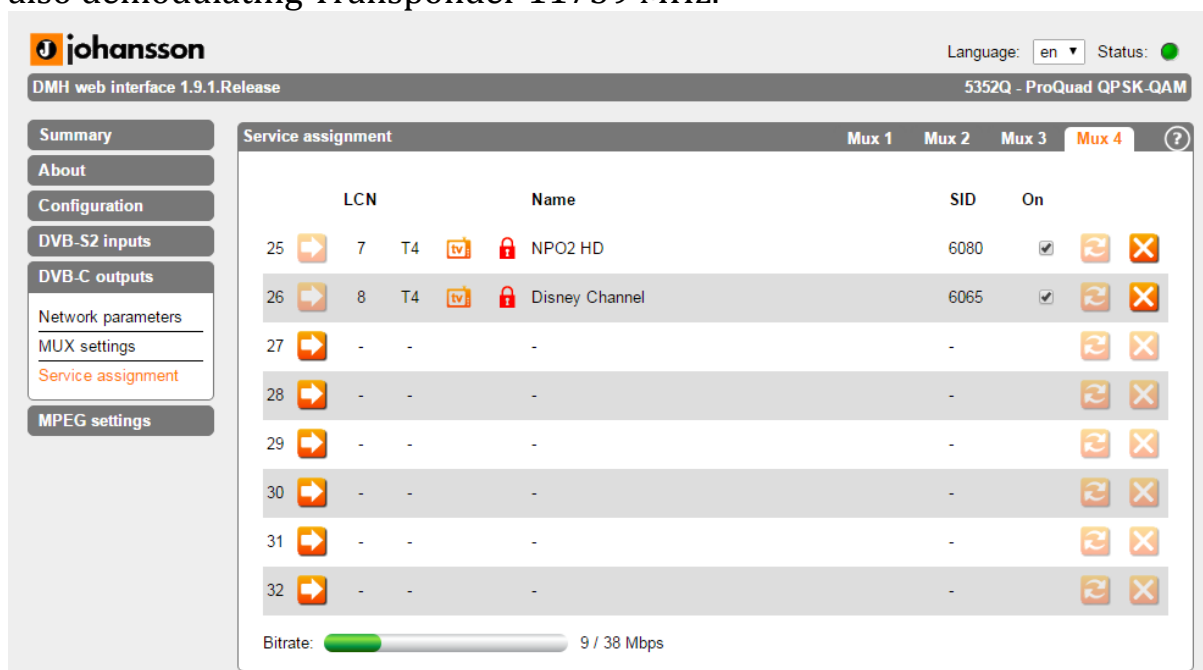
Service assignment Mux 1 Mux 2 **Mux 3** Mux 4 ?

| LCN | Name | SID | On |
|-----------|-------------------|------|----|
| 17 → 5 T3 | EVENAAR | 6055 | ✓ |
| 18 → 6 T3 | Discovery Channel | 6097 | ✓ |
| 19 → - - | - | - | |
| 20 → - - | - | - | |
| 21 → - - | - | - | |
| 22 → - - | - | - | |
| 23 → - - | - | - | |
| 24 → - - | - | - | |

Bitrate: 5 / 38 Mbps

4. Mux 4

I've added 2 TV channels (NPO2 HD and Disney Ch) from Tuner 4 which is also demodulating Transponder 11739 MHz.



johansson Language: en Status: ●

DMH web interface 1.9.1.Release 5352Q - ProQuad QPSK-QAM

Summary About Configuration DVB-S2 inputs DVB-C outputs Network parameters MUX settings Service assignment MPEG settings

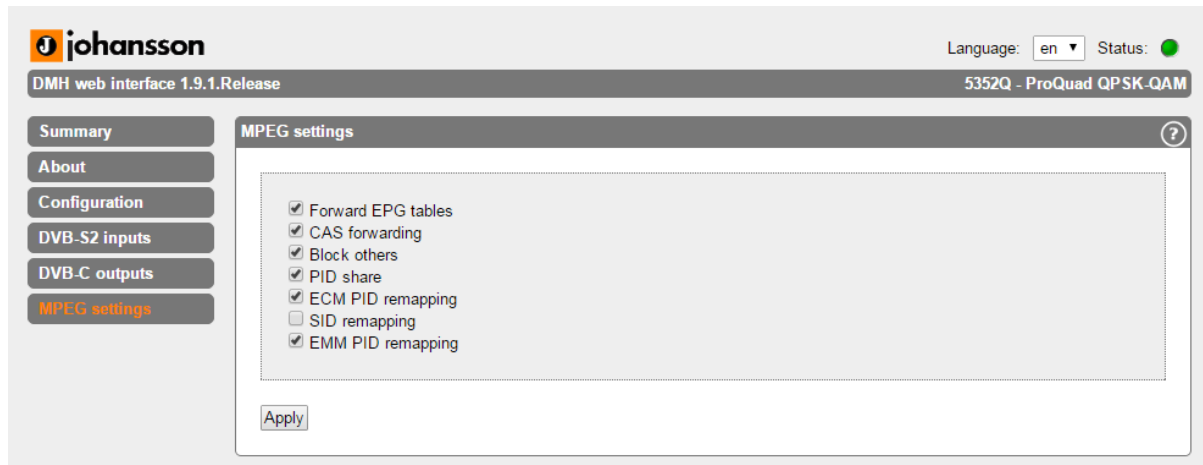
Service assignment Mux 1 Mux 2 Mux 3 **Mux 4** ?

| LCN | Name | SID | On |
|-----------|----------------|------|----|
| 25 → 7 T4 | NPO2 HD | 6080 | ✓ |
| 26 → 8 T4 | Disney Channel | 6065 | ✓ |
| 27 → - - | - | - | |
| 28 → - - | - | - | |
| 29 → - - | - | - | |
| 30 → - - | - | - | |
| 31 → - - | - | - | |
| 32 → - - | - | - | |

Bitrate: 9 / 38 Mbps

c. MPEG settings

“Forward EPG tables” should be enabled and “SID remapping” should be disabled as both don’t work together.



4. Results

EPG information of all TV channels is forwarded and shown on the TV.



5. Conclusion

EPG forwarding is possible but some prerequisites have to be taken into account, see below.

- There is a one-on-one link between Tuner and Multiplex as EPG information is only forwarded between Tuner and Multiplex with same number, so Tuner 1 forwards EPG tables only to Mux 1 and so on.
- Network ID (NID) of all transponders should be the same and entered in “Network parameters” of transmodulator.
- TID or TSID of each multiplex, see “Mux settings”, should match TID of transponder, therefore a multiplex can only contain TV channels coming from the same transponder, they cannot be mixed.
- “Forward EPG tables” should be enabled and “SID remapping” disabled.