SCOPE

1.1. Identification

This document describes the Emotiva Network Remote Control protocol.

1.2. Purpose

The Emotiva Network Remote Control Protocol is designed to allow control of Emotiva devices over a Local Area Network by third-party remote control devices.

1.3. Document Overview

This document describes the protocol so that third-party remote-control device vendors may implement the protocol.

1.4. Version

This is version 1.0 of this document
Emotiva
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Protocol Architecture

1.5. Transport Layer

The Emotiva Remote network protocol is based on UDP. Six basic packet transactions are defined: Transponder, Command, Subscribe, Unsubscribe, Notification, and Update.

1.5.1. Transponder

The Emotiva device listens for Transponder packets on UDP port number 7000.

The device responds to Transponder packets with a self-identification packet sent on port number 7001.

The self-identification packet specifies the model of Emotiva device (e.g., "XMC-1"), the user-supplied name of the device (e.g., "living room"), and the UDP port numbers to be used for Control, Notification, and Information packets.

NOTE: Information packets transactions are currently not implemented, and are not covered by this document.

The self-identification packet also specifies the version of the protocol implemented by the device. This document describes Version 1.0.

1.5.2. Commands

The Emotiva device listens for command packets on the UDP port number specified for **Control** in the Transponder self-identification packet.

Command packets are used to send commands from the remote to the Emotiva device. Commands are similar to those sent by an IR remote control.

The command packet can optionally specify that an acknowledgement packet be returned to the remote. This will be returned to the remote on the UDP command port.

NOTE: The acknowledgement is of the receipt of the command. It does not acknowledge execution of the command.

The Emotiva device will generate a notification upon completion of the command, if the remote has subscribed to notifications.

1.5.3. Notifications

The Emotiva device will generate a notification packet whenever one of the monitored conditions changes, whether as a result of a UDP command packet (from any remote) an IR command, a front-panel command, a menu selection, or an internal status change.

The Emotiva device sends notifications to the UDP port number specified for **Notification** in the Transponder self-identification packet.

In order to receive notifications, the remote device must subscribe to receive them.

1.5.4. Subscriptions

The Emotiva device will report changes in several operational parameters. Each parameter must be subscribed to explicitly – there is no global "get everything" subscription.

For example, a remote device might subscribe to notifications of changes in Zone 1 volume level, power state, and input. Another remote device may only be interested in Zone 2, so it would not subscribe to any Zone 1 notifications.

A remote device may subscribe to one or more notifications in a single subscription packet. The Emotiva device listens for Subscription packets on the UDP port number specified for **Control** in the Transponder selfidentification packet.

The Emotiva device sends the Subscription response packet to the UDP port number specified for **Control** in the Transponder self-identification packet.

Subscription packets may be sent to the Emotiva device at any time. There is no penalty for subscribing to the same notification multiple times – only one notification will be sent regardless of the number of times it is subscribed to.

1.5.5. Unsubscribe

In many cases it is desirable to cancel subscription notifications. For example, if a remote device is monitoring multiple Emotiva devices, it may wish to only receive notifications from one of those devices at any given time. In that case, it can unsubscribe to notifications from the other Emotiva devices.

As with Subscription packets, each notification parameter must be unsubscribed explicitly. There is no "unsubscribe all" command.

However, a remote device may unsubscribe from one or more notifications in a single subscription packet. The Emotiva device listens for Unsubscribe packets on the UDP port number specified for **Control** in the Transponder self-identification packet.

The Emotiva device sends the Unsubscribe response packet to the UDP port number specified for **Control** in the Transponder self-identification packet.

Unsubscribe packets may be sent to the Emotiva device at any time. There is no penalty for unsubscribing from the same notification more than once.

The remote device can re-subscribe at any time.

1.5.6. Update

The remote device can request immediate notification of one or more subscribed parameters by transmitting the Update packet. An Update packet contains a list of one or more parameters. The remote device must be subscribed to each parameter it wants an update on.

The Emotiva device listens for Update packets on the UDP port number specified for **Control** in the Transponder self-identification packet.

Upon receiving an Update packet, the Emotiva device will obtain the current values for each requested parameter, and it will issue a Notification packet with these values. The Emotiva device sends the update response packet to the UDP port number specified for **Control** in the Transponder selfidentification packet.

The remote device can request an Update at any time.

1.6. Data Encoding

The contents of all UDP packets in this protocol are formatted as XML documents. Specific packet formats are detailed in Section 0.

1.7. Establishing Communications

The protocol implements a simple scheme for zero-configuration networking. Each Emotiva device listens for UDP packets on Port 7000. When it receives a properly formatted emotivaPing packet, it responds to the sender's UDP Port 7001 with an XML-formatted response packet.

It is the responsibility of the remote device to discover the Emotiva device(s) on its local network by using UDP Broadcast mode to send the emotivaPing packet to all Emotiva devices on the network.

The emotivaPing response packet contains identification information unique to each Emotiva device on the network. The remote device is expected to transact with each Emotiva device, and it is responsible for remembering the IP addresses of each so that it can send commands and display notification values correctly and coherently.

1.8. Commands

Command packets are formatted as XML documents. Each command packet contains a list of one or more command identifiers, along with value for the each command, and an indication of whether or not an acknowledgement is requested for the command identifier.

Supported commands are detailed in Section 1.12. In most cases, the command value will either be zero, or will be in the form of an integer increment or decrement. For example, the "volume" command might have a value of "+1" to indicate that the volume should be raised by 1 dB, or a value of "-1" to indicate that the volume should be lowered by 1 dB.

Other commands require no specific value, and the value should be set to "0". For example, the "power_on" command is not a toggle. It will always execute a power-on regardless of the current state of the Emotiva device. Set the value of the "power_on" and "power_off" commands to "0".

The acknowledgement only acknowledges receipt of a valid command by the Emotiva device. It does not indicate successful and complete execution of the command. Completion is indicated by the transmission of a notification packet (if at least one remote device is subscribed to that notification).

1.9. Subscriptions

Subscription, Unsubscribe, and Update packets are formatted as XML documents. Each contains a list of one or more notification parameters (for example, current Zone 1 volume, current Zone 1 input, current Zone 1 power status, etc.).

The Emotiva device will respond to Subscription, Unsubscribe and Update packets with a list of the same notification parameters. Each valid parameter will be marked with a status attribute of "ack". Invalid parameters will be marked with a status attribute of "nak".

For Subscribe and Update response packets, each valid parameter will also be marked with a value attribute, containing the current value of the parameter.

1.10. Notifications

Notification packets are formatted as XML documents. Each packet contains a list of one or more notification parameters (for example, current Zone 1 volume, current Zone 1 input, current Zone 1 power status, etc.).

Each parameter will be marked with a value attribute, containing the current value of the parameter.

The Emotiva device sends Notification packets to the UDP port number specified for **Notify** in the Transponder self-identification packet.

Protocol Detailed Design

1.11. Transponder Transactions

The remote device initiates a transponder transaction by broadcasting a UDP packet on port 7000. The packet format is as follows:

```
<?xml version="1.0" encoding="utf-8"?>
<emotivaPing />
```

Each emotiva device on the network will respond to the remote device on UDP port 7001. The response packet format is as follows:

```
<?xml version="1.0"?>
<emotivaTransponder>
  <model>XMC-1</model>
  <name>Living Room</name>
  <control>
    <version>1.0</version>
    <controlPort>7002</controlPort>
    <notifyPort>7003</notifyPort>
    <infoPort>7004</infoPort>
    <setupPortTCP>7100</setupPortTCP>
  </control>
</emotivaTransponder>
```

In this example, the Emotiva device is an XMC-1, as reported in the `<model>` tag. Also, the `<name>` value is "Living Room". However, the actual value is will be set by the user as the 'friendly name' of the Emotiva device.

The `<version>` tag reports the version of this protocol being used. It does not indicate any sort of version information of the Emotiva device.

The `<controlPort>` tag contains the UDP port number where the Emotiva device listens for control packets, i.e., command, subscribe, unsubscribe, and update packets. Responses to these packets are returned to the remote device at the same port.

The `<notifyPort>` tag contains the UDP port number to which the Emotiva device sends Notification packets. The Emotiva device does not listen for packets on this port.

No transactions on the `<infoPort>` are currently implemented. It is reserved for future use.

The <setupPortTCP> tag contains the TCP port number on which the Emotiva device listens for remote setup connections. Remote Setup is a separate function from remote control, and is not detailed in this document.

1.12. Command Transactions

The remote device initiates a command transaction by sending a UDP packet to the Emotva device's Control port. The packet format consists of one or more command tags. Each command tag takes a "value" attribute, and an optional "ack" attribute.

The "value" attribute is required. The attribute's assigned value is specific to the command. Commands and values are described in Section 1.17.

The "ack" attribute takes a value of either "yes" or "no", depending upon whether or not an acknowledgement packet is requested.

The following is an example of a power-on command transaction. The remote device sends an <emotivaControl> packet with a "power_on" command tag. The nominal value for a power_on command is 0. An acknowledgement of receipt is requested.

```
<?xml version="1.0" encoding="utf-8"?>
<emotivaControl>
  <power_on value="0" ack="yes" />
</emotivaControl>
```

When the Emotiva device receives the command, it generates an acknowledgement packet and sends it to the remote on the UDP control port. The acknowledgement simply indicates successful receipt of the command packet.

```
<?xml version="1.0"?>
<emotivaAck>
  <power_on status="ack"/>
</emotivaAck>
```

The following is an example of a volume-up command transaction. The remote device sends an <emotivaControl> packet with a "volume" command tag. The value for the volume command is 1, indicating that the volume setting of the Emotiva device should be incremented by 1 dB (a value of "-1" would indicate that the volume should be decremented by 1dB). An acknowledgement of receipt is requested.

```
<?xml version="1.0" encoding="utf-8"?>
<emotivaControl>
  <volume value="1" ack="yes" />
</emotivaControl>
```

The Emotiva Device responds with an acknowledgement packet.

```
<?xml version="1.0"?>
<emotivaAck>
  <volume status="ack"/>
</emotivaAck>
```

When the command is completed, the Emotiva device will generate a notification packet, containing updated operational parameters resulting from the execution of the command. For example, a notification packet containing the current volume setting will be generated as a result of a volume command. See Section 1.14 for details of Notification packets

1.13. Subscription Transactions

The remote device initiates a Subscription Transaction by sending a UDP packet to the Emotiva device on the UDP `<controlPort>` identified in the `<emotivaTransponder>` packet.

An example Subscription packet is as follows:

```
<?xml version="1.0" encoding="utf-8"?>
<emotivaSubscription>
  <power />
  <zone2_power />
  <source />
  <mode />
</emotivaSubscription>
```

In the example, the remote device is subscribing to updates for Zone 1 power status (i.e., “On”, “Off”), Zone 2 power status, zone 1 source (input), and zone 1 mode (e.g., “Direct”, Stereo”, “Auto”, etc.).

There can be one or more parameters in the subscription list. The complete list of notification parameters is in Section 1.18.

The Emotiva device responds with the current values of each element in the subscription list. It also includes a status attribute of “ack” or “nak”, indicating whether or not the requested parameter was a valid.

```
<emotivaSubscription>
  <power value="On" status="ack" visible="true"/>
  <zone2_power value="Off" status="ack" visible="true"/>
  <source value="HDMI 5" status="ack" visible="true"/>
  <mode value="Surround" status="ack" visible="true"/>
</emotivaSubscription>
```

The Subscription response packet is sent to the remote device on the UDP `<controlPort>` identified in the `<emotivaTransponder>` packet. The "visible" attribute is present in most subscription notification tags, but is relevant only to the following mode and input notifications. It indicates whether or not the mode or input is currently available on the XMC:

input_1	User name assigned to Input Button 1
input_2	User name assigned to Input Button 2
input_3	User name assigned to Input Button 3
input_4	User name assigned to Input Button 4
input_5	User name assigned to Input Button 5
input_6	User name assigned to Input Button 6
input_7	User name assigned to Input Button 7
input_8	User name assigned to Input Button 8
mode_ref_stereo	"Reference Stereo"
mode_stereo	"Stereo"
mode_music	"Music"
mode_movie	"Movie"
mode_direct	"Direct"
mode_dolby	"Dolby"
mode_dts	"DTS"
mode_all_stereo	"All Stereo"
mode_auto	"Auto"

1.14. Notifications

Notification packets are sent automatically by the Emotiva device whenever subscribed parameters change. The remote device does not initiate a notification transaction, and must be prepared to receive notification packets at any time.

An example notification packet is as follows:

```
<?xml version="1.0"?>
<emotivaNotify>
  <tuner_signal value="Stereo 39dBuV"/>
```

```
  <tuner_channel value="FM 106.50MHz" visible="true"/>
  <tuner_program value="Country" visible="true"/>
  <tuner_RDS value="Now Playing Old Alabama by Brad Paisley"
visible="true"/>
  <audio_input value="Tuner" visible="true"/>
  <audio_bitstream value="PCM 2.0" visible="true"/>
  <audio_bits value="32kHz 24bits" visible="true"/>
  <video_input value="HDMI 1" visible="true"/>
  <video_format value="1920x1080P/60" visible="true"/>
  <video_space value="RGB 8bits " visible="true"/>
</emotivaNotify>
```

In the example, the Emotiva device is reporting current values for tuner status, tuner channel, tuner program, and tuner RDS, as well as the current audio input, audio bitstream, audio bits, video input, video format, and video color space

There can be one or more parameters in the subscription list. The complete list of notification parameters is in Section 1.18.

The "visible" attribute is present in most notification tags, but is relevant only to the following mode and input notifications. It indicates whether or not the mode or input is currently available on the XMC:

input_1	User name assigned to Input Button 1
input_2	User name assigned to Input Button 2
input_3	User name assigned to Input Button 3
input_4	User name assigned to Input Button 4
input_5	User name assigned to Input Button 5
input_6	User name assigned to Input Button 6
input_7	User name assigned to Input Button 7
input_8	User name assigned to Input Button 8
mode_ref_stereo	"Reference Stereo"
mode_stereo	"Stereo"
mode_music	"Music"
mode_movie	"Movie"
mode_direct	"Direct"
mode_dolby	"Dolby"
mode_dts	"DTS"
mode_all_stereo	"All Stereo"
mode_auto	"Auto"

1.15. Unsubscribe Transactions

The remote device initiates a Unsubscribe Transaction by sending a UDP packet to the Emotiva device on the UDP <controlPort> identified in the <emotivaTransponder> packet.

An example Unsubscribe packet is as follows:

```
<?xml version="1.0" encoding="utf-8"?>
<emotivaUnsubscribe>
  <power />
  <zone2_power />
  <source />
  <mode />
</emotivaUnsubscribe>
```

In the example, the remote device is unsubscribing from updates for Zone 1 power status (i.e., "On", "Off"), Zone 2 power status, zone 1 source (input), and zone 1 mode (e.g., "Direct", Stereo", "Auto", etc.).

There can be one or more parameters in the subscription list. The complete list of notification parameters is in Section 1.18.

The Emotiva device responds with a status attribute of "ack" or "nak", indicating whether or not the named parameter was valid.

```
<?xml version="1.0" encoding="utf-8"?>
<emotivaUnsubscribe>
  <power status="ack"/>
  <zone2_power status="ack"/>
  <source status="ack"/>
  <mode status="ack"/> </emotivaUnsubscribe>
```

The Unsubscribe response packet is sent to the remote device on the UDP <controlPort> identified in the <emotivaTransponder> packet.

1.16. Update Transactions

The remote device initiates an UpdateTransaction by sending a UDP packet to the Emotiva device on the UDP <controlPort> identified in the <emotivaTransponder> packet.

An example Subscription packet is as follows:

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<emotivaUpdate>
  <power />
  <source />
  <volume />
  <audio_bitstream />
  <audio_bits />
  <video_input />
  <video_format />
  <video_space /> </emotivaUpdate>
```

In the example, the remote device is requesting updates for Zone 1 parameters power status, source, volume, audio bitstream, audio bits, video input, video format, and video color space

There can be one or more parameters in the update list. The complete list of parameters is in Section 1.18.

The Emotiva device responds with the current values of each element in the update list. It also includes a status attribute of "ack" or "nak", indicating whether or not the requested parameter was valid.

```
<?xml version="1.0" encoding="utf-8"?>
<emotivaUpdate>
  <power value="On" status="ack"/>
  <source value="HDMI 1" status="ack"/>
  <volume value="-40.0" status="ack"/>
  <audio_bitstream value="PCM 0.0" status="ack"/>
  <audio_bits value="48kHz 24bits" status="ack"/>
  <video_input value="HDMI 1" status="ack"/>
  <video_format value="1920x1080P/60" status="ack"/>
  <video_space value="RGB 8bits " status="ack"/> </emotivaUpdate>
```

The Update response packet is sent to the remote device on the UDP `<controlPort>` identified in the `<emotivaTransponder>` packet.

Data Description

1.17. Command Tags

Command	Value	Description
none	0	No command. Ignored.
standby	0	Enter standby mode
source_tuner	0	Set source to Tuner
source_1	0	Set source to Input 1
source_2	0	Set source to Input 2
source_3	0	Set source to Input 3
source_4	0	Set source to Input 4
source_5	0	Set source to Input 5
source_6	0	Set source to Input 6
source_7	0	Set source to Input 7
source_8	0	Set source to Input 8
menu	0	Enter/Exit menu
up	0	Menu Up
down	0	Menu Down
left	0	Menu Left
right	0	Menu Right
enter	0	Menu Enter
dim	0	Cycle through FP dimness settings
mode	+1/-1	Mode up/down
info	0	Show Info screen
mute	0	Zone 1 Mute Toggle
mute_on	0	Zone 1 Mute on
mute_off	0	Zone 1 Mute off
reference_stereo	0	Set Mode to Reference Stereo
music	0	Select Music preset
movie	0	Select Movie preset
center	+*n*/-*n*	Center Volume increment up/down
subwoofer	+*n*/-*n*	Subwoofer Volume increment up/down
surround	+*n*/-*n*	Surrounds Volume increment up/down
back	+*n*/-*n*	Backs Volume increment up/down
input	+*n*/-*n*	Change Zone 1 Input up/down
input_up	0	Zone 1 Input selection increment up
input_down	0	Zone 1 Input selection increment down
power_on	0	Zone 1 Power On
power_off	0	Zone 1 Power Off
volume	+*n*/-*n*	Zone 1 Volume increment up/down

set_volume	*n*	Zone 1 Volume set level -96..11
loudness_on	0	Loudness On
loudness_off	0	Loudness Off

loudness	0	Toggle Zone 1 Loudness on/off
speaker_preset	0	Cycle through Speaker Presets
mode_up	0	Mode increment up
mode_down	0	Mode increment down
bass_up	0	Bass level increment up
bass_down	0	Bass level increment down
treble_up	0	Treble level increment up
treble_down	0	Treble level increment down
zone2_power	0	Toggle Zone 2 Power On/Off
zone2_power_off	0	Zone 2 Power Off
zone2_power_on	0	Zone 2 Power On
zone2_volume	+*n*/-*n*	Zone 2 Volume increment up/down
zone2_set_volume	*n*	Zone 2 Volume set level -96..11
zone2_input	+1/-1	Change Zone 2 Input up/down
zone1_band	0	Toggle Tuner Band AM/FM (also changes tuner in Zone 2)
band_am	0	Set Tuner Band AM (changes tuner in Zone 1 and Zone 2)
band_fm	0	Set Tuner Band FM (changes tuner in Zone 1 and Zone 2)
zone2_mute	0	Toggle Zone 2 Mute
zone2_mute_off	0	Zone 2 Mute Off
zone2_mute_on	0	Zone 2 Mute On
zone2_band	0	Not implemented
frequency	+1/-1	Tuner Frequency up/down
seek	+1/-1	Tuner Seek up/down
channel	+1/-1	Tuner Preset Station up/down
direct	0	Select mode Stereo
dolby	0	Select mode Dolby
dts	0	Select mode DTS
all_stereo	0	Select mode All Stereo
auto	0	Select mode Auto
preset1	0	Select speaker preset 1
preset2	0	Select speaker preset 2
dirac	0	Select speaker DIRAC
hdmi1	0	Select input HDMI 1

hdmi2	0	Select input HDMI 2
hdmi3	0	Select input HDMI 3
hdmi4	0	Select input HDMI 4
hdmi5	0	Select input HDMI 5
hdmi6	0	Select input HDMI 6
hdmi7	0	Select input HDMI 7
hdmi8	0	Select input HDMI 8
coax1	0	Select input Coax 1

coax2	0	Select input Coax 2
coax3	0	Select input Coax 3
coax4	0	Select input Coax 4
optical1	0	Select input Optical 1
optical2	0	Select input Optical 2
optical3	0	Select input Optical 3
optical4	0	Select input Optical 4
ARC	0	Select input ARC
usb_stream	0	Select input USB stream
tuner	0	Select input Tuner 1
analog1	0	Select input Analog 1
analog2	0	Select input Analog 2
analog3	0	Select input Analog 3 4
analog4	0	Select input Analog 5
analog5	0	Select input Analog 7.1
analog7.1	0	Select input Analog
front_in	0	Select input Front
center_trim_set	*n*	Center Volume set level -12.0..+12.0
subwoofer_trim_set	*n*	Subwoofer Volume set level -12.0..+12.0
surround_trim_set	*n*	Surrounds Volume set level -12.0..+12.0
back_trim_set	*n*	Backs Volume set level -12.0..+12.0
zone2_analog1	0	Select Zone 2 input Analog 1
zone2_analog2	0	Select Zone 2 input Analog 2
zone2_analog3	0	Select Zone 2 input Analog 3
zone2_analog4	0	Select Zone 2 input Analog 4
zone2_analog5	0	Select Zone 2 input Analog 5
zone2_analog71	0	Select Zone 2 input Analog 7.1
zone2_analog8	0	Select Zone 2 input Analog 8
zone2_front_in	0	Select Zone 2 input Front
zone2_ARC	0	Select Zone 2 input ARC
zone2_ethernet	0	Select Zone 2 input Ethernet

zone2_follow_main	0	Select Zone 2 input Follow Main
zone2_coax1	0	Select Zone 2 input Coax 1
zone2_coax2	0	Select Zone 2 input Coax 2
zone2_coax3	0	Select Zone 2 input Coax 3
zone2_coax4	0	Select Zone 2 input Coax 4
zone2_optical1	0	Select Zone 2 input Optical 1
zone2_optical2	0	Select Zone 2 input Optical 2
zone2_optical3	0	Select Zone 2 input Optical 3
zone2_optical4	0	Select Zone 2 input Optical 4
channel_1	0	Select Tuner Station 1
channel_2	0	Select Tuner Station 2
channel_3	0	Select Tuner Station 3
channel_4	0	Select Tuner Station 4
channel_5	0	Select Tuner Station 5
channel_6	0	Select Tuner Station 6
channel_7	0	Select Tuner Station 7
channel_8	0	Select Tuner Station 8
channel_9	0	Select Tuner Station 9
channel_10	0	Select Tuner Station 10
channel_11	0	Select Tuner Station 11
channel_12	0	Select Tuner Station 12
channel_13	0	Select Tuner Station 13
channel_14	0	Select Tuner Station 14
channel_15	0	Select Tuner Station 15
channel_16	0	Select Tuner Station 16
channel_17	0	Select Tuner Station 17
channel_18	0	Select Tuner Station 18
channel_19	0	Select Tuner Station 19
channel_20	0	Select Tuner Station 20

1.18. Notification Parameter Tags

The maximum length of Notification Parameter strings is 16 characters. An exception is the tuner_program and tuner_RDS parameters. In these two cases, the maximum length is 64 characters.

Parameter	Description
power	Zone 1 power “On”/”Off”
source	Zone 1 Input: “HDMI 1”, HDMI 2”, etc.
dim	Front Panel Dimness: “0”, “20”, “40”,”60”,”80”,”100”
mode	Zone 1 Mode: “Stereo”, “Direct”, “Auto”, etc.
speaker_preset	Speaker Preset Name

center	Center Volume in dB
subwoofer	Subwoofer Volume in dB
surround	Surrounds Volume in dB
back	Backs Volume in dB
volume	Zone 1 Volume in dB
loudness	Zone 1 Loudness “On”/”Off”
zone2_power	Zone 2 power “On”/”Off”
zone2_volume	Zone 2 Volume in dB
zone2_input	Zone 2 Input: “HDMI 1”, HDMI 2”, etc.
tuner_band	Tuner Band: “AM” or “FM”
tuner_channel	User –assigned station name
tuner_signal	Tuner signal quality
tuner_program	“Country”, “Rock”, “Classical”, etc.
tuner_RDS	Tuner RDS string
audio_input	Audio Input: “HDMI 1”, HDMI 2”, etc.
audio_bitstream	Audio Bitstream: “PCM 2.0”, etc.

audio_bits	Audio Bits:”32kHz 24bits”, etc.
video_input	Video Input: “HDMI 1”, HDMI 2”, etc.
video_format	Video Format: “1920x1080i/60”, etc.
video_space	Video Space: “YCbCr 8bits”, etc.
input_1	User name assigned to Input Button 1
input_2	User name assigned to Input Button 2
input_3	User name assigned to Input Button 3
input_4	User name assigned to Input Button 4
input_5	User name assigned to Input Button 5
input_6	User name assigned to Input Button 6
input_7	User name assigned to Input Button 7
input_8	User name assigned to Input Button 8
mode_ref_stereo	"Reference Stereo"
mode_stereo	"Stereo"
mode_music	"Music"
mode_movie	"Movie"
mode_direct	"Direct"
mode_dolby	"Dolby"
mode_dts	"DTS"
mode_all_stereo	"All Stereo"
mode_auto	"Auto"

Changes:

0.1: Original
0.2: Add tuner_band notification
0.3: Additional command and notification tags
Add “visible” attribute to Notifications and Subscription Notifications