Application Specifications

7

70

1

Control of Audio and Video Equipment

General Principles

Summary

This document specifies data formats for controlling Audio and Video Equipment through KNX.

Version 01.00.00 is a KNX Approved Standard.

This document is part of the KNX Specifications v2.1.

Document updates

Version	Date	Modifications
0.1	2008.11	Preparation of document on basis of function list elaborated by TF AV Control
0.2	2008.12	Result discussions TF AV Control
0.3	2009.02	Finalisation for submission to Working Group Interworking
0.4	2009.06	No comments from WGI - WGI approved
0.4	2009.06.26	Editorial update in view of inclusion in the KNX Specifications v2.0.
01.00.00	2013.10.29	Editorial updates for the publication of KNX Specifications 2.1.

Filename: 07_70_01 Audio Video Control v01.00.00 AS.docx
Version: 01.00.00
Status: Approved Standard
Savedate: 2013.10.29
Number of pages: 9

Contents

Abbreviations

AV	Audio Video

1 AV Control

1.1 Aims and Objectives

The aim of the document is not to specify functional blocks for controlling Audio and Video equipment.

The aim of the document lies in providing an overview of typical AV functions and the way such functions could be realised as group objects in a KNX compatible AV sink or could be sent out by a device addressing such an AV sink.

The AV sink is thought to be most likely a gateway coupling KNX to one or more pieces of AV equipment. The device addressing an AV sink is thought to be most likely a commonly available KNX compatible switch, touch panel or visualisation/control software running on a PC.

1.2 Functional Specification

The underneath specification consists of a list of AV functions that can be realised in a KNX compatible AV sink or in devices controlling such a sink.

As such a sink is thought to be most likely a gateway, the specification does not oblige the mandatory use of a minimum subset of the listed data points.

As devices addressing such a sink are thought to be most likely common push buttons, the specification does not oblige the mandatory implementation of a minimum subset of the listed data points either.

In other words, when realizing any of the above devices, the manufacturer can freely choose which of the listed data points he wishes to implement. However, when realising a function contained in the underneath list, the manufacturer is obliged to realise the respective in- or output data point according to the given data point type.

The specification therefore serves to ensure that for the listed functions, the manufacturers use the required data point types in their realizations.

1.3 Constraints

There are no constraints for this Functional Block specification.

1.4 Data points

Data point	Description/Remarks	Data point Type	Coding	Remarks
Play/Stop	Start playing – Stop playing	DPT_Start	1 = play/start 0 = stop	
Pause	Temporarily halt playing	DPT_Enable	1 = Pause 0 = Resume	
Skip	Browsing through channels/tracks/tuned stations/discs up and down one by one	DPT_Step	0 = Backward 1 = Forward	
Fast Forward/Backward Stop Fast Forward/Backward	Moving fast forward or fast backward within the current title/track or stopping it	DPT_Control Dimming	See coding DPT 3.007	First bit: direction 0 = Moving backward 1 = Moving forward next 3 bits indicates the rate of the fast/backward Coding 000 = stop moving back/forward
Tune/Search/Scan	Searching for new channel/station up or down	DPT_Step	0 = Backward 1 = Forward	'Forward' in case of stations implies higher frequencies
Stop Tuning/Searching/Scanning	Halting the search for a new channel/station up or down	DPT_Trigger	0, 1 = Dedicated Stop	Some implementations might require a dedicated stop for halting an initiated tuning/searching/scanning activity
Record	Start and stop recording	DPT_Start	1 = start recording 0 = stop recording	
Volume/Bass/Treble/Balance Absolute	Setting the volume to an absolute value	DPT_Scaling	See coding of DPT 5.001	Range from 0 to 100%
Volume/Bass/Treble/Balance Relative Control	Increasing or decreasing the volume, bass, treble, balance (relative control)	DPT_Control Dimming	See coding DPT 3.007	When using this function, it shall be taken into account that when the stop command is not received, the volume might increase to the maximum value.
Volume/Bass/Treble/Balance Relative Step	Increasing or decreasing the volume, bass, treble, balance (relative by steps)	DPT_Step	0=Decrease 1=Increase	The volume step shall be parameterized in the AV sink

Data point	Description/Remarks	Data point Type	Coding	Remarks
Main Power (on/off – toggle)	Setting the main power on and off	DPT_Switch	1 = on 0 = off	
Main Power (standby)	Putting main power to standby	DPT_Enable	1 = enable standby 0 = disable standby	
Sleep Mode	Activates and deactivates the sleep mode	DPT_Enable	1 = enable sleep mode 0 = disable sleep mode	
Set time to Sleep Mode	Setting the time until the sleep mode becomes active in seconds	DPT_TimePeriodMin	See coding of DPT 7.006	
Audio Mute	Entering and exiting mute mode	DPT_Enable	1 = enable mute 0 = disable mute	
Select Disc/Track/Station/Channel	Selecting and/or storing a specific disc, track, station, channel through number	DPT_Value_1_ Ucount	See coding of DPT 5.010	
Repeat	Activates and deactivates the repeat mode	DPT_Enable	1 = Enable repeat 0 = Disable repeat	
Random/Shuffle	Activates and deactivates the shuffle mode	DPT_Enable	1 = Enable shuffle 0 = Disable shuffle	
Source step by step	Source selection up/down	DPT_Step	0 = Backward 1 = Forward	
Source absolute	Selecting a specific source through a number	DPT_Value_1_ Ucount	See coding of DPT 5.010	
Surround on/off	Toggling between setting surround on and off	DPT_Enable	1 = Enable surround 0 = Disable surround	
Scenes (up to 64)	Calling and storing AV memorized settings (e.g. storing and calling disc, track, station, channel, ...)	DPT_SceneControl	See coding of DPT 18.001	It is the AV sink that determines the setting of the connected AV equipment In the case where there is a need to be able to store more than 64 different settings, additional DPT_SceneControl objects shall be implemented

Data point	Description/Remarks	Data point Type	Coding	Remarks
Text information (short)	Returns the denomination of the source, track, station, ... (for displaying purposes)	DPT_String_ASCII	See coding of DPT 16.001	
Text information (long)	Returns the denomination of the source, track, station, ... (for displaying purposes)	DPT_VarString_8859_1	See coding of DPT 24.001	For denominations larger than 14 octets (error handling for non-supported lengths according to DPT 24.001)
Play/storing Frequency	Selecting frequency in Hz of desired station – storing this frequency	DPT_Value_ Frequency	See coding of DPT 14.033	
Read Frequency	Reading out frequency of currently playing station or reading out memorized frequency	DPT_Value_ Frequency	See coding of DPT 14.033	
RDS	Enable and disable RDS function	DPT_Enable	1 = Enable RDS 0 = Disable RDS	
Zone/Duty call	Start or stop an emergency call in all or in one zone	DPT_Enable	1 = enable zone call 0 = disable zone call	

Navigation functions for KNX remote control with visual feedback

Data point	Description/Remarks	Data point Type	Coding	Remarks
Menu	Entering or leaving a menu	DPT_State	0 = deactivate menu 1 = activate menu	
Cursor Up/Down	Positioning of the cursor	DPT_UpDown	0 = Up 1 = Down	
Cursor Left/Right	Positioning of the cursor	DPT_Left/Right	0 = Left 1 = Right	New DPT 1.xxx
Select	Selecting the chosen function	DPT_Trigger	0,1 = Trigger	
Enter/Return	Entering the previously selected function	DPT_Trigger	0,1 = Trigger	