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Generic RS-232 protocol

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RS-232 Setup

9600-8-N-1 (default, may be changed)

Commands

Use capitals only, don't type spaces between command and argument(s). Commands are executed as soon as the last expected digit is received. There is no need for a return character or any other command delimiter.

ACK

Function

System acknowledge

Description

A device responds to certain commands with a return code. This code tells you more about the result of the command you sent to the device.

Command

-	Response (Len=8)
	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
code	Error code	00 = Ok 01 = Error 02 = Unknown command 03 = Wrong parameter 04 = Busy (E ² ROM write)

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

UID

Function

Set/get unit Id

Description

It's possible to control 1 device on a RS-232 connection or up to 32 devices on an RS-485 bus connection. To identify each device on the shared connection, a unique identification number is given to each of them. From the moment an id is set, the device will only respond to messages containing that specific id. If the id of a message is set to 0, all devices will respond. **WARNING:** issue this command if only one unit is connected, otherwise all units will receive the same id!

Commands

Set (Len=6)	Response (Len=8)
>UID uid	<ACK uid code

Get (Len=4)	Response (Len=6)
?UID	<UID uid

Parameters

Parameter	Description	Value
uid	Unit Id	01..32

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

RES

Function

Reset device

Description

Resets a device (normally used for test purposes only). This is the same as a cold boot: the device will startup like if the power is switched on.

Command

Command (Len=8)	Response (Len=8)
>RES uid module	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	00 = all units 01..32 = specific unit
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

RSP

Function

Set/get responses

Description

Some automatically generated responses can be controlled by this command.

Commands

Set (Len=14)	Response (Len=8)
>RSP uid flags4 flags3 flags2 flags1	<ACK uid code

Get (Len=6)	Response (Len=14)
?RSP uid	<RSP uid flags4 flags3 flags2 flags1

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
flags4	Response control flags (logical OR)	Reserved, should be 0
flags3	Response control flags (logical OR)	Reserved, should be 0
flags2	Response control flags (logical OR)	Reserved, should be 0
flags1	Response control flags (logical OR) bit0 = echo bit1 = fader status bit2 = input status bit3 = output status bit4 = key status bit5 = reserved bit6 = reserved bit7 = reserved	00..FF hex 1 = echo characters 1 = fader status updates 1 = input status updates 1 = output status updates 1 = key status updates Reserved, should be 0 Reserved, should be 0 Reserved, should be 0

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

TYP

Function

Get unit type

Description

To be able to control all functions and configure all settings of the connected device, the configuration software must know the type of the connected device. This command lets a connected device identify itself.

Command

Get (Len=6)	Response (Len=16)
?TYP uid	<TYP uid type hwrev swrev options status

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
type	Device type identifier	01 = I-TAL 02 = Q-MIX 03 = 2-MUX 04 = HeControl
hwrev	Hardware revision	10..99 (V1.0 .. V9.9)
swrev	Software revision	10..99 (V1.0 .. V9.9)
options	Reserved	00
status	Configuration status	00 = not configured AA = configured

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

Function

Save system settings

Description

This command enables you to save all volatile settings (like fade times, routing and volumes) to non-volatile memory. The next time you reboot or reset the device, these settings will be used as a default.

Command

Command (Len=8)	Response (Len=8)
>SAV uid module	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	00 = all units 01..32 = specific unit
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

MTY

Function

Get module type

Description

Requests the module type of installed modules in a frame (modular system).

Commands

Get (Len=8)	Response (Len=18)
?MTY uid module	<MTY uid module type hwrev swrev options status

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
type	Module type	0x00 = Blind panel 0x10 = Power supply 0x20 = System controller 0x21 = RS-232/485 port 0x30 = Stereo audio input 0x40 = Stereo audio output 0x50 = GPI 8 opto-coupler 0x51 = GPIO 4 o.c. + 4 rel 0x52 = GPI Klotz 532 0x53 = GPIO Adlink 0x60 = GPO 8 opto-coupler 0x61 = GPO 8 relay 0x62 = GPO Klotz 532 0x63 = GPIO N-Det/S-Det
hwrev	Hardware revision	10..99 (V1.0 .. V9.9)
swrev	Software revision	10..99 (V1.0 .. V9.9)
options	Reserved	00
status	Configuration status	00 = not configured AA = configured

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	No

Function

Set/get audio configuration

Description

Each audio input can be muted, manually controlled or fade automatically. Use this command to set the selected operation mode. On some models, the stereo mode and phase can also be selected. The start-up volume is set in units of 0,5 dB. A volume of C0 hex corresponds to unity gain. Extra gain using values above C0 hex may introduce distortion.

Commands

Set (Len=22)	Response (Len=8)
>ACF uid module channel voll volr stereo phase mode opt	<ACK uid code

Get (Len=10)	Response (Len=22)
?ACF uid module channel	<ACF uid module channel voll volr stereo phase mode opt

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
voll	Startup level left channel	00..FF hex
volr	Startup level right channel	00..FF hex
stereo	Stereo mode	00 = mute (mute, mute) 01 = left (L, mute) 02 = right (mute, R) 03 = left mono (L, L) 04 = right mono (R, R) 05 = mono (L+R, L+R) 06 = stereo (L, R) 07 = reverse (R, L)
phase	Signal phase	00 = both in phase 01 = left out of phase 02 = right out of phase 03 = both out of phase
mode	Fader mode	00 = mute 01 = external control 02 = automatic fader
opt	Configuration options	0

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Limited	Limited	Limited

ALB

Function

Set/get audio label

Description

You can identify each audio input or output more easily by means of this 4-character label.

Commands

Set (Len=18)	Response (Len=8)
>ALB uid module channel char1 char2 char3 char4	<ACK uid code

Get (Len=10)	Response (Len=18)
?ALB uid module channel	<ALB uid module channel char1 char2 char3 char4

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
char1..char4	ASCII character	20..FE hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

ALV

Function

Get audio levels

Description

Request the measured audio level of the selected audio input or output.

Commands

Get (Len=10)	Response (Len=14)
?ALV uid module channel	<ALV uid module channel volumel volumer

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
volumel	Audio level left channel	00..FF hex
volumer	Audio level right channel	00..FF hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	Yes

FCV

Function

Set/get fader curve

Description

The device uses a table with a fader curve for all automatic fades. You can define the curve with remote control software or modify the values manually with this command. The resolution of the curve is 0,5 dB, a configured value of C0 hex corresponds to unity gain. Introducing too much gain, e.g. by using values above C0 hex may introduce distortion because of clipping.

Commands

Set (Len=14)	Response (Len=8)
>FCV uid module channel step volume	<ACK uid code

Get (Len=12)	Response (Len=14)
?FCV uid module channel step	<FCV uid module channel step volume

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
step	Fader step (total 128 steps)	01..80 hex = step
volume	Fader volume (steps of 0,5 dB)	00 hex = mute 01 hex = -95,5 dB C0 hex = 0 dB FF hex = +31,5 dB

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	No	No

FTM

Function

Set/get default fade times

Description

Reads or configures the default fade in and fade out times for a specific audio channel. These times will be loaded into RAM during startup of the device and will be used until you change them.

Command

Command (Len=14)	Response (Len=8)
>FTM uid module channel timein timeout	<ACK uid code

Get (Len=10)	Response (Len=14)
?FTM uid module channel	<FTM uid module channel timein timeout

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
timein	Fade-in time in multiples of 0,1 s	00..99
timeout	Fade-out time in multiples of 0,1 s	00..99

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	No	No

FDI

Function

Fade in

Description

Starts an automatic fade in with the given duration.

Command

Command (Len=12)	Response (Len=8)
>FDI uid module channel time	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
time	Fade-in time in multiples of 0,1 s	00 = configured time 01..99 = specific time

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	No	No

FDO

Function

Fade out

Description

Starts an automatic fade out with the given duration.

Command

Command (Len=12)	Response (Len=8)
>FDO uid module channel time	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
time	Fade-out time in multiples of 0,1 s	00 = configured time 01..99 = specific time

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	No	No

FDX

Function

Crossfade

Description

Starts an automatic crossfade between two audio channels using the given fade times.

Command

Command (Len=18)	Response (Len=8)
>FDX uid modout chout timeout modin chin timein	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
modout	Module Id to fade out (0 for non-modular systems)	00 = all modules 01..32 = specific module
chout	Fader / audio input / audio output to fade out	00 = all channels 01..32 = specific channel
timeout	Fade out time in multiples of 0,1 s	00..99
modin	Module Id to fade in (0 for non-modular systems)	00 = all modules 01..32 = specific module
chin	Fader / audio input / audio output to fade in	00 = all channels 01..32 = specific channel
timein	Fade in time in multiples of 0,1 s	00..99

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	No	No

FLV

Function

Set/get fader levels

Description

The volume or left/right balance of a manual controlled fader can be set using this command. The fader volume is set in units of 0,5 dB. A volume of C0 hex corresponds to unity gain. Extra gain using values above C0 hex may introduce distortion.

Commands

Set (Len=14)	Response (Len=8)
>FLV uid module channel volumel volumer	<ACK uid code

Get (Len=10)	Response (Len=14)
?FLV uid module channel	<FLV uid module channel volumel volumer

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
volumel	Left fader volume (steps of 0,5 dB)	00 = mute 01 hex = -95,5 dB C0 hex = 0 dB FF hex = +31,5 dB
volumer	Right fader volume (steps of 0,5 dB)	00 = mute 01 hex = -95,5 dB C0 hex = 0 dB FF hex = +31,5 dB

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	No	No

FST

Function

Get fader status

Description

Requests the current state of a fader.

Command

Get (Len=10)	Response (Len=16)
?FST uid module channel	<FST uid module channel volumel volumer status

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
volumel	Left fader volume (steps of 0,5 dB)	00 = mute 01 hex = -95,5 dB C0 hex = 0 dB FF hex = +31,5 dB
volumer	Right fader volume (steps of 0,5 dB)	00 = mute 01 hex = -95,5 dB C0 hex = 0 dB FF hex = +31,5 dB
status	Fader status	00 = off-air (mute) 01 = fade-out 02 = on-air 03 = fade-in 04 = manual

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

XST

Function

Set/get matrix status

Description

Enables you to control the behaviour of the matrix. By starting a salvo, the crosspoints will be remembered in memory and become effective as soon as you stop the salvo. This enables you to update multiple crosspoints at the same time.

Commands

Set (Len=8)	Response (Len=8)
>XST uid control	<ACK uid code

Get (Len=6)	Response (Len=8)
?XST uid	<XST uid control

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
control	Control operation	00 = clear all crosspoints 01 = start salvo 02 = stop salvo

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	No

XPT

Function

Set/get matrix routing crosspoint

Description

Makes or breaks the connection between an audio input or output and an audio bus.

Commands

Set (Len=14)	Response (Len=8)
>XPT uid module channel bus onoff	<ACK uid code

Get (Len=12)	Response (Len=14)
?XPT uid module channel bus	<XPT uid module channel bus onoff

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
channel	Fader / audio input / audio output	00 = all channels 01..32 = specific channel
bus	Bus to rout the signal to (inputs) or from (outputs)	00 = all busses 01..32 = specific bus
onoff	Crosspoint status	00 = off (connected) 01 = on (not connected)

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	No

KTY

Function

Get keyboard type

Description

Requests the type of installed keyboards and remote controls in a modular system.

Commands

Get (Len=8)	Response (Len=18)
?KTY uid keyboard	<KTY uid keyboard type hwrev swrev options status

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
keyboard	Keyboard Id	00 = all 01 = front panel 02..32 = remote controls
type	Keyboard type	0x90 = 8 Function Keys
hwrev	Hardware revision	10..99 (V1.0 .. V9.9)
swrev	Software revision	10..99 (V1.0 .. V9.9)
options	Reserved	00
status	Configuration status	00 = not configured AA = configured

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	No

KCF

Function

Set/get key configuration

Description

Configures the mode of a function key, so it can behave in various ways of operation.

Commands

Set (Len=22)	Response (Len=8)
>KCF uid keyboard key mode d1 d2 d3 d4 options	<ACK uid code

Get (Len=10)	Response (Len=22)
?KCF uid keyboard key	<KCF uid keyboard key mode d1 d2 d3 d4 options

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
keyboard	Keyboard Id	00 = all 01 = front panel 02..32 = remote controls
key	Function key	01..32
mode	Key function <ul style="list-style-type: none">- key press/release generates KST messages- fade in starts as soon as key is pressed- fade out starts as soon as key is pressed- fade in or fade out starts on each key press- fade in if key is pressed, fade out if released- cross-fade on each key press- cross-fade in if key pressed, out if released- mute input if key is pressed- don't mute input if key is pressed- toggle mute status every time the key is pressed- mute if key is pressed, don't mute is key is released- cross-mute on each key press- cross-mute in if key pressed, out if released	00 = not used (off) 01 = external control 02 = fade in 03 = fade out 04 = fade in / out (pulse) 05 = fade in / out (level) 06 = cross-fade (pulse) 07 = cross-fade (level) 08 = mute on 09 = mute off 10 = mute on / off (pulse) 11 = mute on / off (level) 12 = cross-mute (pulse) 13 = cross-mute (level)
d1	Configuration data	mode 02..05, 08..11 mode 06, 07, 12, 13 01..32 (module) 01..32 (module out)
d2	Configuration data	mode 02..05, 08..11 mode 06, 07, 12, 13 01..32 (channel) 01..32 (channel out)
d3	Configuration data	mode 06, 07, 12, 13 01..32 (module in)
d4	Configuration data	mode 06, 07, 12, 13 01..32 (channel in)
options	Configuration options	0

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Limited	Limited

KLB

Function

Set/get key label

Description

You can identify each key more easily by means of this 4-character label.

Commands

Set (Len=18)	Response (Len=8)
>KLB uid keyboard key char1 char2 char3 char4	<ACK uid code

Get (Len=10)	Response (Len=18)
?KLB uid keyboard key	<KLB uid keyboard key char1 char2 char3 char4

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
keyboard	Keyboard Id	00 = all 01 = front panel 02..32 = remote controls
key	Function key	01..32
char1..char4	ASCII character	20..FE hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

KEY

Function

Key press

Description

Emulates the press of a function key (part of a front panel or remote control keyboard).

Commands

Command (Len=12)	Response (Len=8)
>KEY uid keyboard key updown	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
keyboard	Keyboard Id	00 = all 01 = front panel 02..32 = remote controls
key	Key to 'press'	01..32
updown	Key press status	00 = up (released) 01 = down (pressed)

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

KST

Function

Get key status

Description

Requests the status of the keys of the selected keyboard.

Commands

Get (Len=8)	Response (Len=16)
?KST uid keyboard	<KST uid keyboard key4 key3 key2 key1

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
keyboard	Keyboard Id	00 = all 01 = front panel 02..32 = remote controls
key4	Keys 32..25 (logical OR)	00..FF hex
key3	Keys 24..17 (logical OR)	00..FF hex
key2	Keys 16..9 (logical OR)	00..FF hex
key1	Keys 8..1 (logical OR)	00..FF hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

LCF

Function

Set/get led configuration

Description

Configures the mode of a bi-color LED (most of the time this LED is placed inside a function key), so it can behave in various ways of operation.

Commands

Set (Len=22)	Response (Len=8)
>LCF uid keyboard led mode d1 d2 d3 d4 options	<ACK uid code

Get (Len=10)	Response (Len=22)
?LCF uid keyboard led	<LCF uid keyboard led mode d1 d2 d3 d4 options

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
keyboard	Keyboard Id	00 = all 01 = front panel 02..32 = remote controls
led	LED Id (if placed in function key, this index is the same as the key index)	01..32
mode	LED function	00 = not used (off) 01 = external control 02 = fader status 03 = mute status 04 = key status 05 = GPI status 06 = GPO status
d1	Configuration data mode 01..05	01..32 (module)
d2	Configuration data mode 01..05	01..32 (input)
d3	Configuration data	00
d4	Configuration data	00
options	Configuration options	0

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	No	No

LLB

Function

Set/get led label

Description

You can identify each led more easily by means of this 4-character label.

Commands

Set (Len=18)	Response (Len=8)
>LLB uid keyboard led char1 char2 char3 char4	<ACK uid code

Get (Len=10)	Response (Len=18)
?LLB uid keyboard key	<LLB uid keyboard key char1 char2 char3 char4

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
keyboard	Keyboard Id	00 = all 01 = front panel 02..32 = remote controls
led	Led Id, index of the LED to control	01..64
char1..char4	ASCII character	20..FE hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

LED

Function

Set/get LED blink pattern and color

Description

External control of the color of the LED inside a function key or on a display. The LED must be configured for external control, otherwise the software decides which blink pattern and color the LED will have.

Commands

Command (Len=14)	Response (Len=8)
>LED uid keyboard led pattern color	<ACK uid code

Command (Len=10)	Response (Len=14)
?LED uid keyboard led	<LED uid keyboard led pattern color

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
keyboard	Keyboard Id	00 = all 01 = front panel 02..32 = remote controls
led	Led Id, index of the LED to control	01..64
pattern	Blink pattern	00 = off 01 = on (continuous) 02 = blink 1Hz 03 = blink 2Hz 04 = blink 4Hz 05 = 1 pulse / s 06 = 2 pulses / s 07 = 3 pulses / s
color	Color of the LED (if possible)	00 = no change 01 = red 02 = green 03 = yellow 04 = blue

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	No	No

ICF

Function

Set/get input configuration

Description

Configures the active level and mode of an input, so it can behave in various ways of operation.

Commands

Set (Len=22)	Response (Len=8)
>ICF uid module input mode d1 d2 d3 d4 options	<ACK uid code

Get (Len=10)	Response (Len=22)
?ICF uid module input	<ICF uid module input mode d1 d2 d3 d4 options

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
input	Opto-coupler input	01..32 (specific input)
mode	Input function <ul style="list-style-type: none"> - change of input level generates IST messages - fade in starts as soon as input becomes active - fade out starts as soon as input becomes active - fade in or fade out starts on each active pulse - fade in if input becomes active, fade out if inactive - cross-fade on each active pulse - cross-fade in if input becomes active, out if inactive 	00 = not used (off) 01 = external control 02 = fade in 03 = fade out 04 = fade in / out (pulse) 05 = fade in / out (level) 06 = cross-fade (pulse) 07 = cross-fade (level) 08 = mute on 09 = mute off 10 = mute on / off (pulse) 11 = mute on / off (level) 12 = cross-mute (pulse) 13 = cross-mute (level)
d1	Configuration data	mode 02..05, 08..11 mode 06, 07, 12, 13 01..32 (module) 01..32 (module out)
d2	Configuration data	mode 02..05, 08..11 mode 06, 07, 12, 13 01..32 (channel) 01..32 (channel out)
d3	Configuration data	mode 06, 07, 12, 13 01..32 (module in)
d4	Configuration data	mode 06, 07, 12, 13 01..32 (channel in)
options	Configuration options	bit 0 = Active level 0 = normal operation 1 = inverted bit 1..7 = Reserved 0

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	No

ILB

Function

Set/get input label

Description

You can identify each input more easily by means of this 4-character label.

Commands

Set (Len=18)	Response (Len=8)
>ILB uid module input char1 char2 char3 char4	<ACK uid code

Get (Len=10)	Response (Len=18)
?ILB uid module input	<ILB uid module input char1 char2 char3 char4

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
input	Opto-coupler input	01..32 (specific input)
char1..char4	ASCII character	20..FE hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

Function

Get input status

Description

Requests the status of the inputs of the selected module.

Commands

Get (Len=8)	Response (Len=16)
?IST uid module	<IST uid module in4 in3 in2 in1

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
in4	Opto-coupler input 32..25 (logical OR)	00..FF hex
in3	Opto-coupler input 24..17 (logical OR)	00..FF hex
in2	Opto-coupler input 16..9 (logical OR)	00..FF hex
in1	Opto-coupler input 8..1 (logical OR)	00..FF hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	No

OCF

Function

Set/get output configuration

Description

Configures the active level and mode of an output, so it can behave in various ways of operation.

Commands

Set (Len=22)	Response (Len=8)
>OCF uid module output mode d1 d2 d3 d4 options	<ACK uid code

Get (Len=10)	Response (Len=22)
?OCF uid module output	<OCF uid module output mode d1 d2 d3 d4 options

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
output	Relay or opto-coupler output	01..32 (specific output)
mode	Output function <ul style="list-style-type: none">- Output changes generate OST message- On during on-air, flash during fading- On if mute is on- On if key is pressed- On if GPI is active- On if another GPO is active	00 = not used (off) 01 = external control 02 = fader status 03 = mute status 04 = key status 05 = GPI status 06 = GPO status
d1	Configuration data mode 01 mode 02..06	00..99 (default pulse length) 01..32 (module)
d2	Configuration data modes 02..03 mode 04 mode 05 mode 06	01..32 (channel) 01..32 (key) 01..32 (input) 01..32 (output)
d3	Configuration data	00
d4	Configuration data	00
options	Configuration options bit 0 = Active level bit 1 = Startup level bit 2..7 = Reserved	0 = normal operation 1 = inverted 0 = inactive at startup 1 = active at startup 0

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	No

OLB

Function

Set/get output label

Description

You can identify each output more easily by means of this 4-character label.

Commands

Set (Len=18)	Response (Len=8)
>OLB uid module output char1 char2 char3 char4	<ACK uid code

Get (Len=10)	Response (Len=18)
?OLB uid module output	<OLB uid module output char1 char2 char3 char4

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
output	Relay or opto-coupler output	01..32 (specific output)
char1..char4	ASCII character	20..FE hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	Yes

OON

Function

Output on

Description

Switches one or all outputs to the logic on state. Depending on the configured active level, the on state will be active high or active low.

Command

Command (Len=10)	Response (Len=8)
>OON uid module output	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
output	Relay or opto-coupler output	00 (all outputs) 01..32 (specific output)

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	No

OOF

Function

Output off

Description

Switches one or all outputs to the logic off state. Depending on the configured active level, the off state will be active low or active high.

Command

Command (Len=10)	Response (Len=8)
>OOF uid module output	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
output	Relay or opto-coupler output	00 (all outputs) 01..32 (specific output)

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	No

OPS

Function

Output pulse

Description

Switches one or all outputs to the logic on state for a specific duration, thus generating a pulse. Depending on the configured active level, the on state will be active high or active low.

Command

Command (Len=12)	Response (Len=8)
>OPS uid module output time	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
output	Relay or opto-coupler output	00 (all outputs) 01..32 (specific output)
time	Pulse duration in multiples of 0,1 second	00 (configured time) 01..99

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	No

OMP

Function

Output multiple pulses

Description

Switches specified outputs to the logic on state for a specific duration, thus generating synchronized pulses. Depending on the configured active level, the on state will be active high or active low.

Command

Command (Len=18)	Response (Len=8)
>OMP uid module out4 out3 out2 out1 time	<ACK uid code

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
out4	Relay or opto-coupler output 32..25 (logical OR)	00..FF hex
out3	Relay or opto-coupler output 24..17 (logical OR)	00..FF hex
out2	Relay or opto-coupler output 16..9 (logical OR)	00..FF hex
out1	Relay or opto-coupler output 8..1 (logical OR)	00..FF hex
time	Pulse duration in multiples of 0,1 second	00 (configured time) 01..99

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	No

OST

Function

Set/get output status

Description

Switches specified outputs synchronized to the logic on or off state. Depending on the configured active level, the on state will be active high or active low.

Commands

Set (Len=16)	Response (Len=8)
>OST uid module out4 out3 out2 out1	<ACK uid code

Get (Len=8)	Response (Len=16)
?OST uid module	<OST uid module out4 out3 out2 out1

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
out4	Relay or opto-coupler output 32..25 (logical OR)	00..FF hex
out3	Relay or opto-coupler output 24..17 (logical OR)	00..FF hex
out2	Relay or opto-coupler output 16..9 (logical OR)	00..FF hex
out1	Relay or opto-coupler output 8..1 (logical OR)	00..FF hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	Yes	Yes	No

VFP

Function

Set/get virtual fader position

Description

Requests or sets (in case of a moving fader) the fader position of a specific virtual fader. The actual volume depends on the used fader curve (128 steps).

Commands

Set (Len=12)	Response (Len=8)
>VFP uid module fader position	<ACK uid code

Get (Len=10)	Response (Len=12)
?VFP uid module fader	<VFP uid module fader position

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
fader	Fader channel of the virtual fader module	01..32
position	Fader position	00..7F hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	No

VTL

Function

Set/get virtual fader tally

Description

Generates a blinking pattern on the lamp of a channel of a virtual fader module.

Commands

Set (Len=12)	Response (Len=8)
>VTL uid module fader tally	<ACK uid code

Get (Len=10)	Response (Len=12)
?VTL uid module fader	<VTL uid module fader tally

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
fader	Fader channel of the virtual fader module	01..32
tally	Blink pattern	00 = off 01 = on 02 = blink 1Hz 03 = blink 2Hz 04 = blink 4Hz 05 = 1 pulse / s 06 = 2 pulses / s 07 = 3 pulses / s bit7 = color modifier
code	Error code	See ACK command

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	No

HPS

Function

Set/get HF preset

Description

Selects one of the available preset frequencies of a connected HF receiver. This command is available only on equipment with a Hecom 'HeControl' interface board. The actual frequency is of course depending on the configuration of the receiver.

Commands

Set (Len=10)	Response (Len=8)
>HPS uid module preset	<ACK uid code

Get (Len=8)	Response (Len=10)
?HPS uid module	<HPS uid module preset

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
preset	Receiver preset	01..32

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	Yes

HTX

Function

Set/get HF transmit frequency

Description

Selects a new frequency for a transmitter in a connected HF device. This command is available only on equipment with a Hecom 'HeControl' interface board.

Commands

Set (Len=16)	Response (Len=8)
>HTX uid module f1 f2 f3 f4	<ACK uid code

Get (Len=8)	Response (Len=16)
?HTX uid module	<HTX uid module f1 f2 f3 f4

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
f1..f4	Frequency G.Mmm.KKk.u f1 = G.M f2 = mm. f3 = KK f4 = k.u	00..99 00..99 00..99 00..99

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	Yes

HRX

Function

Set/get HF receive frequency

Description

Selects a new frequency for a receiver in a connected Hecom device. This command is available only on equipment with a Hecom 'HeControl' interface board.

Commands

Set (Len=16)	Response (Len=8)
>HRX uid module f1 f2 f3 f4	<ACK uid code

Get (Len=8)	Response (Len=16)
?HRX uid module	<HTX uid module f1 f2 f3 f4

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
f1..f4	Frequency G.Mmm.KKk.u f1 = G.M f2 = mm. f3 = KK f4 = k.u	00..99 00..99 00..99 00..99

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	Yes

HAN

Function

Set/get HF antenna

Description

Selects how the connected HF receiver should handle the connected antennas. You can force the receiver to use a specific antenna or enable the True Diversity function. In case of diversity, the response will include the active antenna.

Commands

Set (Len=10)	Response (Len=8)
>HAN uid module antenna	<ACK uid code

Get (Len=8)	Response (Len=12)
?HAN uid module	<HAN uid module antenna activeant

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
antenna	Antenna select	00 = True Diversity 01 = antenna A 02 = antenna B
activeant	Active antenna	00 = unknown 01 = antenna A 02 = antenna B

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	Yes

HRF

Function

Get HF receiver RF level

Description

Request the current RF level of the selected receiver.

Commands

Get (Len=10)	Response (Len=12)
?HRF uid module antenna	<HRF uid module antenna level

Parameters

Parameter	Description	Value
uid	Unit Id	01..32
module	Module Id (0 for non-modular systems)	00 = all modules 01..32 = specific module
antenna	Antenna to get the RF level from	01 = Antenna A 02 = Antenna B
level	RF level, to be interpreted by remote control software	00..FF hex

Availability

I-TAL	Q-MIX	2-MUX	HeControl
Yes	No	No	Yes