

VIDEO SWITCHER
V-1-4K

Remote Control Guide



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MIDI Implementation

Model: V-1-4K
Date: April 9, 2026
Version: 1.00

Symbol	Item	Setting Range
n	MIDI Channel	Fixed at 00H

1. MIDI messages received at MIDI IN

■ System Exclusive Messages

Status	Data Byte	Status
F0H	iiH, ddH, ..., eeH	F7H
F0H:	Status of system exclusive message	
ii= ID number:	This is the ID to recognize manufacturer of the exclusive message (manufacturer ID). The manufacturer ID of Roland is 41H. The ID numbers of 7EH and 7FH are expansion of MIDI standards and used as universal non-realtime message (7EH) of universal realtime message (7FH).	
dd, ..., ee= data:	00H–7FH (0–127)	
F7H:	EOX (end of exclusive)	

● Data Request 1 (RQ1)

This is the message to request of “send data” to the connected device. Specify data type and amount using address and size. When this is received, the unit sends the requested data as “Data Set 1 (DT1)” message in case the unit is in status where the sending of data is possible and requested address and size are appropriate. If not, the unit sends nothing.

Status	Data Byte	Status
F0H	41H, 10H, 01H, 06H, 10H, 11H, aaH, bbH, ccH, ssH, ttH, uuH, sum	F7H

Byte	Explanation
F0H	Exclusive Status
41H	Manufacturer ID (Roland)
10H	Device ID
01H	1st byte of model ID (V-1-4K)
06H	2nd byte of model ID (V-1-4K)
10H	3rd byte of model ID (V-1-4K)
11H	Command ID (RQ1)
aaH	Address upper byte
bbH	Address middle byte
ccH	Address lower byte
ssH	Size upper byte
ttH	Size middle byte
uuH	Size lower byte
sum	Checksum
F7H	EOX (end of exclusive)

* Depending on the data type, the amount of single-time transmission is specified. It is necessary to execute data request according to the specified first address and size. Refer to the “2. Parameter address map” (p. 3) for address and size.

* See “Example of an Exclusive Message and Calculating a Checksum” (p. 19) for checksum.

● Data Set 1 (DT1)

This is the message of actual data transmission. Use this when you want to set data to the unit.

Status	Data Byte	Status
F0H	41H, 10H, 01H, 06H, 10H, 12H, aaH, bbH, ccH, ddH, ..., eeH, sum	F7H

Byte	Explanation
F0H	Exclusive Status
41H	Manufacturer ID (Roland)
10H	Device ID
01H	1st byte of model ID (V-1-4K)
06H	2nd byte of model ID (V-1-4K)
10H	3rd byte of model ID (V-1-4K)
12H	Command ID (DT1)
aaH	Address upper byte
bbH	Address middle byte
ccH	Address lower byte
ddH	Data: actual data to transmit. Multiple byte data is sent in address order.
:	:
eeH	Data
sum	Checksum
F7H	EOX (end of exclusive)

* Depending on the data type, the amount of single-time transmission is specified. It is necessary to execute data request according to the specified first address and size. Refer to the “2. Parameter address map” (p. 3) for address and size.

* See “Example of an Exclusive Message and Calculating a Checksum” (p. 19) for checksum.

* Data exceeding 256 bytes should be divided into packets of 256 bytes or smaller. If you send data set 1 successively, set interval of 20 msec or longer between packets.

2. Parameter address map

Start Address	Description
00H 00H 00H	Video Parameter Area
01H 00H 00H	Audio Parameter Area
02H 00H 00H	System Parameter Area
0AH 00H 00H	Command Area
0BH 00H 00H	Panel Area
0CH 00H 00H	Tally Area

Start Address	Description
10H 00H 00H	Video Parameter (Memory 1)
11H 00H 00H	Audio Parameter (Memory 1)
12H 00H 00H	Video Parameter (Memory 2)
13H 00H 00H	Audio Parameter (Memory 2)
:	:
1EH 00H 00H	Video Parameter (Memory 8)
1FH 00H 00H	Audio Parameter (Memory 8)
60H 00H 00H	Memory Name

● Video Address

○ VIDEO ASSIGN

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H 00H 00H	INPUT 1 ASSIGN	00H-04H	HDMI IN 1, STILL 1-2, BLACK, N/A
00H 00H 01H	INPUT 2 ASSIGN	00H-04H	HDMI IN 2, STILL 1-2, BLACK, N/A
00H 00H 02H	INPUT 3 ASSIGN	00H-04H	HDMI IN 3, STILL 1-2, BLACK, N/A
00H 00H 03H	INPUT 4 ASSIGN	00H-04H	HDMI IN 4, STILL 1-2, BLACK, N/A
00H 00H 04H	INPUT 5 ASSIGN	00H-04H	HDMI IN 5, STILL 1-2, BLACK, N/A
00H 00H 05H	INPUT 6 ASSIGN	01H-04H	STILL 1-2, BLACK, N/A
00H 00H 06H	INPUT 7 ASSIGN	01H-04H	STILL 1-2, BLACK, N/A
00H 00H 07H	INPUT 8 ASSIGN	01H-04H	STILL 1-2, BLACK, N/A
00H 00H 08H	ROI 1 ASSIGN	00H-04H	ROI 1, STILL 1-2, BLACK, N/A
00H 00H 09H	ROI 2 ASSIGN	00H-04H	ROI 2, STILL 1-2, BLACK, N/A
00H 00H 0AH	ROI 3 ASSIGN	00H-04H	ROI 3, STILL 1-2, BLACK, N/A
00H 00H 0BH	ROI 4 ASSIGN	00H-04H	ROI 4, STILL 1-2, BLACK, N/A
00H 00H 0CH	reserved		
00H 00H 0DH	reserved		
00H 00H 0EH	HDMI OUT 3 ASSIGN	00H-09H	PROGRAM, PREVIEW, INPUT 1-8
00H 00H 0FH	HDMI OUT 4 / USB OUT ASSIGN	00H-09H	PROGRAM, PREVIEW, INPUT 1-8
00H 00H 10H	HDMI OUT 3 ASSIGN FADE TIME	00H-14H	0.0-2.0 sec
00H 00H 11H	HDMI OUT 4 / USB OUT ASSIGN FADE TIME	00H-14H	0.0-2.0 sec

○ VIDEO INPUT

* xxH: 01H-05H (HDMI IN 1-5)

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H xxH 00H	DYNAMIC RANGE	00H-03H	AUTO, SDR, HDR(PQ), HDR(HLG)
00H xxH 01H	EDID	00H-0EH	INTERNAL, 1080i50, 1080i59.94/60, 1080p23.98/24, 1080p25, 1080p29.97/30, 1080p50, 1080p59.94/60, 2160p(UHD)23.98/24, 2160p(UHD)25, 2160p(UHD)29.97/30, 2160p(UHD)50, 2160p(UHD)59.94/60, 2160p(UHD)50(YUV420), 2160p(UHD)59.94/60(YUV420)
00H xxH 02H 03H	ZOOM	00H 64H-4EH 10H	10.0-1000.0%
00H xxH 04H	SCALING TYPE	00H-04H	FULL, LETTER BOX, CROP, DOT BY DOT, MANUAL
00H xxH 05H 06H 07H	MANUAL SIZE H	7EH 6AH 00H-01H 16H 00H	-19200-0-19200
00H xxH 08H 09H 0AH	MANUAL SIZE V	7FH 2BH 50H-00H 54H 30H	-10800-0-10800
00H xxH 0BH 0CH 0DH	POSITION H	7EH 6AH 00H-01H 16H 00H	-19200-0-19200
00H xxH 0EH 0FH 10H	POSITION V	7FH 2BH 50H-00H 54H 30H	-10800-0-10800

○ HDMI OUT 3

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H 08H 00H	COLOR GAMUT	00H-01H	SYSTEM, REC.709
00H 08H 01H	DYNAMIC RANGE	00H-01H	SYSTEM, HDR
00H 08H 02H	1080p DOWN CONVERT	00H-01H	OFF, ON

○ HDMI OUT 4

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H 09H 00H	COLOR GAMUT	00H-01H	SYSTEM, REC.709
00H 09H 01H	DYNAMIC RANGE	00H-01H	SYSTEM, HDR
00H 09H 02H	1080p DOWN CONVERT	00H-01H	OFF, ON

○ MIX, WIPE

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H 0BH 00H	TRANSITION	00H-01H	MIX, WIPE
00H 0BH 01H	MIX TIME	00H-28H	0.0-4.0 sec
00H 0BH 02H	WIPE TYPE	00H-08H	HORIZONTAL, VERTICAL, UPPER LEFT, UPPER RIGHT, LOWER LEFT, LOWER RIGHT, H-CENTER, V-CENTER, BOX
00H 0BH 03H	WIPE TIME	00H-28H	0.0-4.0 sec
00H 0BH 04H	WIPE DIRECTION	00H-02H	NORMAL, REVERSE, ROUND TRIP
00H 0BH 05H	WIPE BORDER COLOR	00H-09H	WHITE, YELLOW, CYAN, GREEN, MAGENTA, RED, BLUE, BLACK, CUSTOM, SOFT EDGE

○ PinP&KEY

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H 0CH 00H	PinP&KEY SW	00H-01H	OFF, ON
00H 0CH 01H	reserved		
00H 0CH 02H	TYPE	00H-03H	PinP, LUMINANCE-WHITE KEY, LUMINANCE-BLACK KEY, CHROMA KEY
00H 0CH 03H 04H	POSITION H	7CH 0CH-00H 00H-03H 74H	-50.0-0.0-50.0%
00H 0CH 05H 06H	POSITION V	7CH 0CH-00H 00H-03H 74H	-50.0-0.0-50.0%
00H 0CH 07H 08H	SIZE	00H 00H-07H 68H	0.0-100.0%
00H 0CH 09H 0AH	CROPPING H	00H 00H-07H 68H	0.0-100.0%
00H 0CH 0BH 0CH	CROPPING V	00H 00H-07H 68H	0.0-100.0%
00H 0CH 0DH	BORDER COLOR	00H-08H	WHITE, YELLOW, CYAN, GREEN, MAGENTA, RED, BLUE, BLACK, CUSTOM
00H 0CH 0EH 0FH	BORDER COLOR R	00H 00H-01H 7FH	0-255
00H 0CH 10H 11H	BORDER COLOR G	00H 00H-01H 7FH	0-255
00H 0CH 12H 13H	BORDER COLOR B	00H 00H-01H 7FH	0-255
00H 0CH 14H	BORDER WIDTH	00H-0EH	0-14
00H 0CH 15H 16H	VIEW POSITION H	7CH 0CH-00H 00H-03H 74H	-50.0-0.0-50.0%
00H 0CH 17H 18H	VIEW POSITION V	7CH 0CH-00H 00H-03H 74H	-50.0-0.0-50.0%
00H 0CH 19H 1AH	VIEW ZOOM	07H 68H-1FH 20H	100.0-400.0%
00H 0CH 1BH 1CH	KEY LEVEL	00H 00H-01H 7FH	0-255
00H 0CH 1DH 1EH	KEY GAIN	00H 00H-01H 7FH	0-255
00H 0CH 1FH 20H	reserved		
00H 0CH 21H	reserved		
00H 0CH 22H	HUE WIDTH	62H-00H-1EH	-30-0-+30
00H 0CH 23H 24H	HUE	00H 00H-02H 68H	0-360
00H 0CH 25H 26H	SATURATION WIDTH	7FH 00H-00H 00H-00H 7FH	-128-0-+127
00H 0CH 27H 28H	SATURATION	00H 00H-01H 7FH	0-255
00H 0CH 29H 2AH	VALUE WIDTH	7FH 00H-00H 00H-00H 7FH	-128-0-+127
00H 0CH 2BH 2CH	VALUE	00H 00H-01H 7FH	0-255

○ SPLIT

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H 0FH 00H	SPLIT SW	00H-01H	OFF, ON
00H 0FH 01H	SPLIT TYPE	00H-01H	SPLIT V, SPLIT H
00H 0FH 02H 03H	SPLIT PGM/A-CENTER	7CH 0CH-00H 00H-03H 74H	-50.0-0.0-50.0%
00H 0FH 04H 05H	SPLIT PST/B-CENTER	7CH 0CH-00H 00H-03H 74H	-50.0-0.0-50.0%
00H 0FH 06H 07H	SPLIT CENTER POSITION	7CH 0CH-00H 00H-03H 74H	-50.0-0.0-50.0%
00H 0FH 08H	SPLIT BORDER COLOR	00H-08H	WHITE, YELLOW, CYAN, GREEN, MAGENTA, RED, BLUE, BLACK, CUSTOM
00H 0FH 09H 0AH	SPLIT BORDER COLOR R	00H 00H-01H 7FH	0-255
00H 0FH 0BH 0CH	SPLIT BORDER COLOR G	00H 00H-01H 7FH	0-255
00H 0FH 0DH 0EH	SPLIT BORDER COLOR B	00H 00H-01H 7FH	0-255
00H 0FH 0FH	SPLIT BORDER WIDTH	00H-0EH	0-14

○ DSK

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H 10H 00H	SOURCE	00H-0EH	HDMI IN 1-5, STILL 1-2, INPUT 1-8
00H 10H 01H	TIME	00H-28H	0.0-4.0 sec
00H 10H 02H	PGM SW	00H-01H	OFF, ON
00H 10H 03H	PVW SW	00H-01H	OFF, ON
00H 10H 04H	TYPE	00H-01H	LUMINANCE-WHITE, LUMINANCE-BLACK
00H 10H 05H 06H	LEVEL	00H 00H-01H 7FH	0-255
00H 10H 07H 08H	GAIN	00H 00H-01H 7FH	0-255
00H 10H 09H 0AH	MIX LEVEL	00H 00H-01H 7FH	0-255

○ ROI

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H 11H 00H	ROI MODE	00H-01H	OFF, ON
00H 11H 01H 02H	ROI 1 ZOOM	07H 68H-1FH 20H	100.0-400.0%
00H 11H 03H 04H	ROI 1 POSITION H	71H 00H-00H 00H-0FH 00H	-1920-0-1920
00H 11H 05H 06H	ROI 1 POSITION V	77H 48H-00H 00H-08H 38H	-1080-0-1080
00H 11H 07H 08H	ROI 2 ZOOM	07H 68H-1FH 20H	100.0-400.0%
00H 11H 09H 0AH	ROI 2 POSITION H	71H 00H-00H 00H-0FH 00H	-1920-0-1920
00H 11H 0BH 0CH	ROI 2 POSITION V	77H 48H-00H 00H-08H 38H	-1080-0-1080
00H 11H 0DH 0EH	ROI 3 ZOOM	07H 68H-1FH 20H	100.0-400.0%
00H 11H 0FH 10H	ROI 3 POSITION H	71H 00H-00H 00H-0FH 00H	-1920-0-1920
00H 11H 11H 12H	ROI 3 POSITION V	77H 48H-00H 00H-08H 38H	-1080-0-1080
00H 11H 13H 14H	ROI 4 ZOOM	07H 68H-1FH 20H	100.0-400.0%
00H 11H 15H 16H	ROI 4 POSITION H	71H 00H-00H 00H-0FH 00H	-1920-0-1920
00H 11H 17H 18H	ROI 4 POSITION V	77H 48H-00H 00H-08H 38H	-1080-0-1080

○ PANEL

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
00H 12H 00H	PGM SELECT	00H-0FH	HDMI IN 1-5, STILL 1-2, INPUT 1-8, BLACK
00H 12H 01H	PST SELECT	00H-0FH	HDMI IN 1-5, STILL 1-2, INPUT 1-8, BLACK
00H 12H 02H 03H	PGM/PST FADER LEVEL	00H 00H-1FH 7FH	0-4095
00H 12H 04H	FADER BASE	00H-01H	UPPER, LOWER

● Audio Address

○ AUDIO KNOB ASSIGN

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 00H 00H	AUDIO IN	00H-06H	AUDIO IN, USB IN, HDMI IN 1-5
01H 00H 01H	USB OUT	00H-03H	MAIN BUS, AUX 1 BUS, AUX 2 BUS, USB OUT
01H 00H 02H	MAIN BUS	00H-03H	MAIN BUS, AUX 1 BUS, AUX 2 BUS, USB OUT

○ AUDIO INPUT

* xxH: 01H-07H (AUDIO IN, USB IN, HDMI IN 1-5)

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H xxH 00H 01H	DIGITAL GAIN	7CH 5CH-00H 00H-03H 24H	-42.0-0.0-42.0 dB
01H xxH 02H 03H 04H	INPUT LEVEL	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H xxH 05H	INPUT MUTE	00H-01H	OFF, ON
01H xxH 06H	MONO	00H-03H	OFF, L ONLY, R ONLY, LR MIX
01H xxH 07H	SOLO	00H-01H	OFF, ON
01H xxH 08H 09H	DELAY	00H 00H-27H 08H	0.0-500.0 msec
01H xxH 0AH	MAIN SEND	00H-01H	OFF, ON
01H xxH 0BH	reserved		
01H xxH 0CH	NOISE GATE SW	00H-01H	OFF, ON
01H xxH 0DH	NOISE GATE THRESHOLD	30H-00H	-80-0 dB
01H xxH 0EH	NOISE GATE RELEASE	00H-7FH	30-5000 msec
01H xxH 0FH	COMPRESSOR SW	00H-01H	OFF, ON
01H xxH 10H	COMPRESSOR THRESHOLD	4EH-00H	-50-0 dB
01H xxH 11H	COMPRESSOR RATIO	00H-0DH	1.00: 1, 1.12: 1, 1.25: 1, 1.40: 1, 1.60: 1, 1.80: 1, 2.00: 1, 2.50: 1, 3.20: 1, 4.00: 1, 5.60: 1, 8.00: 1, 16.0: 1, INF: 1
01H xxH 12H	COMPRESSOR ATTACK	00H-73H	0.0-100 msec
01H xxH 13H	COMPRESSOR RELEASE	00H-7FH	30-5000 msec
01H xxH 14H	COMPRESSOR MAKEUP GAIN	58H-00H-28H	-40-0-40 dB
01H xxH 15H	HIGH PASS FILTER SW	00H-01H	OFF, ON
01H xxH 16H	HIGH PASS FILTER FREQUENCY	01H-45H	20.0 Hz-1.00 kHz
01H xxH 17H	EQUALIZER SW	00H-01H	OFF, ON
01H xxH 18H	EQUALIZER Hi GAIN	04H-7CH	-12.0-12.0 dB
01H xxH 19H	EQUALIZER Hi FREQUENCY	24H-3EH	1.00-20.0 kHz
01H xxH 1AH	EQUALIZER Hi-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H xxH 1BH	EQUALIZER Hi-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H xxH 1CH	EQUALIZER Hi-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H xxH 1DH	EQUALIZER Lo-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H xxH 1EH	EQUALIZER Lo-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H xxH 1FH	EQUALIZER Lo-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H xxH 20H	EQUALIZER Lo GAIN	04H-7CH	-12.0-12.0 dB
01H xxH 21H	EQUALIZER Lo FREQUENCY	02H-2AH	20 Hz-2.00 kHz

○ AUDIO OUTPUT ASSIGN

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 20H 00H	HDMI OUT 1	00H-03H	MAIN BUS, AUX 1 BUS, AUX 2 BUS, MONITOR BUS
01H 20H 01H	HDMI OUT 2	00H-03H	MAIN BUS, AUX 1 BUS, AUX 2 BUS, MONITOR BUS
01H 20H 02H	HDMI OUT 3	00H-03H	MAIN BUS, AUX 1 BUS, AUX 2 BUS, MONITOR BUS
01H 20H 03H	HDMI OUT 4	00H-03H	MAIN BUS, AUX 1 BUS, AUX 2 BUS, MONITOR BUS
01H 20H 04H	HDMI OUT 5	00H-03H	MAIN BUS, AUX 1 BUS, AUX 2 BUS, MONITOR BUS
01H 20H 05H	AUDIO OUT	00H-03H	MAIN BUS, AUX 1 BUS, AUX 2 BUS, MONITOR BUS
01H 20H 06H	USB OUT	00H-03H	MAIN BUS, AUX 1 BUS, AUX 2 BUS, MONITOR BUS
01H 20H 07H	PHONES OUT	00H-02H	MAIN BUS, AUX 1 BUS, AUX 2 BUS

○ AUDIO MAIN BUS

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 21H 00H 01H 02H	LEVEL	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 21H 03H	MUTE	00H-01H	OFF, ON
01H 21H 04H	SOLO	00H-01H	OFF, ON
01H 21H 05H 06H	DELAY	00H 00H-27H 08H	0.0-500.0 msec
01H 21H 07H	EQUALIZER SW	00H-01H	OFF, ON
01H 21H 08H	EQUALIZER Hi GAIN	04H-7CH	-12.0-12.0 dB
01H 21H 09H	EQUALIZER Hi FREQUENCY	24H-3EH	1.00-20.0 kHz
01H 21H 0AH	EQUALIZER Hi-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H 21H 0BH	EQUALIZER Hi-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H 21H 0CH	EQUALIZER Hi-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H 21H 0DH	EQUALIZER Lo-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H 21H 0EH	EQUALIZER Lo-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H 21H 0FH	EQUALIZER Lo-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H 21H 10H	EQUALIZER Lo GAIN	04H-7CH	-12.0-12.0 dB
01H 21H 11H	EQUALIZER Lo FREQUENCY	02H-2AH	20 Hz-2.00 kHz
01H 21H 12H	COMPRESSOR/LIMITER SW	00H-01H	OFF, ON
01H 21H 13H	COMPRESSOR/LIMITER TYPE	00H-01H	COMPRESSOR, LIMITER
01H 21H 14H	COMPRESSOR THRESHOLD	4EH-00H	-50-0 dB
01H 21H 15H	COMPRESSOR RATIO	00H-0DH	1.00: 1, 1.12: 1, 1.25: 1, 1.40: 1, 1.60: 1, 1.80: 1, 2.00: 1, 2.50: 1, 3.20: 1, 4.00: 1, 5.60: 1, 8.00: 1, 16.0: 1, INF: 1
01H 21H 16H	COMPRESSOR ATTACK	00H-73H	0.0-100 msec
01H 21H 17H	COMPRESSOR RELEASE	00H-7FH	30-5000 msec
01H 21H 18H	COMPRESSOR MAKEUP GAIN	58H-00H-28H	-40-0-40 dB
01H 21H 19H	LIMITER THRESHOLD	58H-00H	-40-0 dB
01H 21H 1AH	GEQ SW	00H-01H	OFF, ON
01H 21H 1BH 1CH	GEQ GAIN 25 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 1DH 1EH	GEQ GAIN 40 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 1FH 20H	GEQ GAIN 60 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 21H 22H	GEQ GAIN 100 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 23H 24H	GEQ GAIN 160 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 25H 26H	GEQ GAIN 250 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 27H 28H	GEQ GAIN 400 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 29H 2AH	GEQ GAIN 630 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 2BH 2CH	GEQ GAIN 1 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 2DH 2EH	GEQ GAIN 1.6 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 2FH 30H	GEQ GAIN 2.5 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 31H 32H	GEQ GAIN 4 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 33H 34H	GEQ GAIN 6.3 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 35H 36H	GEQ GAIN 10 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 21H 37H 38H	GEQ GAIN 16 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB

○ AUDIO AUX 1 BUS

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 22H 00H 01H 02H	LEVEL	7EH 00H 00H, 7FH 79H 60H-0H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 22H 03H	MUTE	00H-01H	OFF, ON
01H 22H 04H	SOLO	00H-01H	OFF, ON
01H 22H 05H 06H	DELAY	00H 00H-27H 08H	0.0-500.0 msec
01H 22H 07H	EQUALIZER SW	00H-01H	OFF, ON
01H 22H 08H	EQUALIZER Hi GAIN	04H-7CH	-12.0-12.0 dB
01H 22H 09H	EQUALIZER Hi FREQUENCY	24H-3EH	1.00-20.0 kHz
01H 22H 0AH	EQUALIZER Hi-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H 22H 0BH	EQUALIZER Hi-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H 22H 0CH	EQUALIZER Hi-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H 22H 0DH	EQUALIZER Lo-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H 22H 0EH	EQUALIZER Lo-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H 22H 0FH	EQUALIZER Lo-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H 22H 10H	EQUALIZER Lo GAIN	04H-7CH	-12.0-12.0 dB
01H 22H 11H	EQUALIZER Lo FREQUENCY	02H-2AH	20 Hz-2.00 kHz
01H 22H 12H	COMPRESSOR/LIMITER SW	00H-01H	OFF, ON
01H 22H 13H	COMPRESSOR/LIMITER TYPE	00H-01H	COMPRESSOR, LIMITER
01H 22H 14H	COMPRESSOR THRESHOLD	4EH-00H	-50-0 dB
01H 22H 15H	COMPRESSOR RATIO	00H-0DH	1.00: 1, 1.12: 1, 1.25: 1, 1.40: 1, 1.60: 1, 1.80: 1, 2.00: 1, 2.50: 1, 3.20: 1, 4.00: 1, 5.60: 1, 8.00: 1, 16.0: 1, INF: 1
01H 22H 16H	COMPRESSOR ATTACK	00H-73H	0.0-100 msec
01H 22H 17H	COMPRESSOR RELEASE	00H-7FH	30-5000 msec
01H 22H 18H	COMPRESSOR MAKEUP GAIN	58H-00H-28H	-40-0-40 dB
01H 22H 19H	LIMITER THRESHOLD	58H-00H	-40-0 dB
01H 22H 1AH	GEQ SW	00H-01H	OFF, ON
01H 22H 1BH 1CH	GEQ GAIN 25 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 1DH 1EH	GEQ GAIN 40 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 1FH 20H	GEQ GAIN 60 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 21H 22H	GEQ GAIN 100 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 23H 24H	GEQ GAIN 160 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 25H 26H	GEQ GAIN 250 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 27H 28H	GEQ GAIN 400 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 29H 2AH	GEQ GAIN 630 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 2BH 2CH	GEQ GAIN 1 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 2DH 2EH	GEQ GAIN 1.6 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 2FH 30H	GEQ GAIN 2.5 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 31H 32H	GEQ GAIN 4 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 33H 34H	GEQ GAIN 6.3 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 35H 36H	GEQ GAIN 10 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 22H 37H 38H	GEQ GAIN 16 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB

○ AUDIO AUX 1 SEND

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 23H 00H 01H 02H	AUDIO IN SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 23H 03H 04H 05H	USB IN SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 23H 06H 07H 08H	HDMI IN 1 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 23H 09H 0AH 0BH	HDMI IN 2 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 23H 0CH 0DH 0EH	HDMI IN 3 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 23H 0FH 10H 11H	HDMI IN 4 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 23H 12H 13H 14H	HDMI IN 5 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 23H 15H	AUDIO IN SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 23H 16H	USB IN SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 23H 17H	HDMI IN 1 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 23H 18H	HDMI IN 2 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 23H 19H	HDMI IN 3 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 23H 1AH	HDMI IN 4 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 23H 1BH	HDMI IN 5 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER

○ AUDIO AUX 2 BUS

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 24H 00H 01H 02H	LEVEL	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 24H 03H	MUTE	00H-01H	OFF, ON
01H 24H 04H	SOLO	00H-01H	OFF, ON
01H 24H 05H 06H	DELAY	00H 00H-27H 08H	0.0-500.0 msec
01H 24H 07H	EQUALIZER SW	00H-01H	OFF, ON
01H 24H 08H	EQUALIZER Hi GAIN	04H-7CH	-12.0-12.0 dB
01H 24H 09H	EQUALIZER Hi FREQUENCY	24H-3EH	1.00-20.0 kHz
01H 24H 0AH	EQUALIZER Hi-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H 24H 0BH	EQUALIZER Hi-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H 24H 0CH	EQUALIZER Hi-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H 24H 0DH	EQUALIZER Lo-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H 24H 0EH	EQUALIZER Lo-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H 24H 0FH	EQUALIZER Lo-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H 24H 10H	EQUALIZER Lo GAIN	04H-7CH	-12.0-12.0 dB
01H 24H 11H	EQUALIZER Lo FREQUENCY	02H-2AH	20 Hz-2.00 kHz
01H 24H 12H	COMPRESSOR/LIMITER SW	00H-01H	OFF, ON
01H 24H 13H	COMPRESSOR/LIMITER TYPE	00H-01H	COMPRESSOR, LIMITER
01H 24H 14H	COMPRESSOR THRESHOLD	4EH-00H	-50-0 dB
01H 24H 15H	COMPRESSOR RATIO	00H-0DH	1.00: 1, 1.12: 1, 1.25: 1, 1.40: 1, 1.60: 1, 1.80: 1, 2.00: 1, 2.50: 1, 3.20: 1, 4.00: 1, 5.60: 1, 8.00: 1, 16.0: 1, INF: 1
01H 24H 16H	COMPRESSOR ATTACK	00H-73H	0.0-100 msec
01H 24H 17H	COMPRESSOR RELEASE	00H-7FH	30-5000 msec
01H 24H 18H	COMPRESSOR MAKEUP GAIN	58H-00H-28H	-40-0-40 dB
01H 24H 19H	LIMITER THRESHOLD	58H-00H	-40-0 dB
01H 24H 1AH	GEQ SW	00H-01H	OFF, ON
01H 24H 1BH 1CH	GEQ GAIN 25 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 1DH 1EH	GEQ GAIN 40 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 1FH 20H	GEQ GAIN 60 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 21H 22H	GEQ GAIN 100 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 23H 24H	GEQ GAIN 160 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 24H 25H 26H	GEQ GAIN 250 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 27H 28H	GEQ GAIN 400 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 29H 2AH	GEQ GAIN 630 Hz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 2BH 2CH	GEQ GAIN 1 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 2DH 2EH	GEQ GAIN 1.6 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 2FH 30H	GEQ GAIN 2.5 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 31H 32H	GEQ GAIN 4 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 33H 34H	GEQ GAIN 6.3 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 35H 36H	GEQ GAIN 10 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB
01H 24H 37H 38H	GEQ GAIN 16 kHz	7EH 6AH-00H 00H-01H 16H	-15.0-+15.0 dB

○ AUDIO AUX 2 SEND

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 25H 00H 01H 02H	AUDIO IN SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 25H 03H 04H 05H	USB IN SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 25H 06H 07H 08H	HDMI IN 1 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 25H 09H 0AH 0BH	HDMI IN 2 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 25H 0CH 0DH 0EH	HDMI IN 3 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 25H 0FH 10H 11H	HDMI IN 4 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 25H 12H 13H 14H	HDMI IN 5 SEND	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 25H 15H	AUDIO IN SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 25H 16H	USB IN SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 25H 17H	HDMI IN 1 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 25H 18H	HDMI IN 2 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 25H 19H	HDMI IN 3 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 25H 1AH	HDMI IN 4 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER
01H 25H 1BH	HDMI IN 5 SEND POINT	00H-02H	DRY, PRE FADER, POST FADER

○ AUDIO USB OUT

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 26H 00H 01H 02H	LEVEL	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB
01H 26H 03H	MUTE	00H-01H	OFF, ON
01H 26H 04H 05H	DELAY	00H 00H-27H 08H	0.0-500.0 msec
01H 26H 06H	EQUALIZER SW	00H-01H	OFF, ON
01H 26H 07H	EQUALIZER Hi GAIN	04H-7CH	-12.0-12.0 dB
01H 26H 08H	EQUALIZER Hi FREQUENCY	24H-3EH	1.00-20.0 kHz
01H 26H 09H	EQUALIZER Hi-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H 26H 0AH	EQUALIZER Hi-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H 26H 0BH	EQUALIZER Hi-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H 26H 0CH	EQUALIZER Lo-Mid GAIN	04H-7CH	-12.0-12.0 dB
01H 26H 0DH	EQUALIZER Lo-Mid FREQUENCY	02H-3EH	20 Hz-20.0 kHz
01H 26H 0EH	EQUALIZER Lo-Mid Q	00H-05H	0.5, 1.0, 2.0, 4.0, 8.0, 16.0
01H 26H 0FH	EQUALIZER Lo GAIN	04H-7CH	-12.0-12.0 dB
01H 26H 10H	EQUALIZER Lo FREQUENCY	02H-2AH	20 Hz-2.00 kHz

○ AUDIO MONITOR BUS

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 27H 00H 01H 02H	LEVEL	7EH 00H 00H, 7FH 79H 60H-00H 00H 00H-00H 00H 64H	-INF dB, -80.0-0.0-10.0 dB

○ AUDIO FOLLOW

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 30H 00H	HDMI IN 1	00H-01H	OFF, ON
01H 30H 01H	HDMI IN 2	00H-01H	OFF, ON
01H 30H 02H	HDMI IN 3	00H-01H	OFF, ON
01H 30H 03H	HDMI IN 4	00H-01H	OFF, ON
01H 30H 04H	HDMI IN 5	00H-01H	OFF, ON
01H 30H 05H	AUDIO IN	00H-0FH	OFF, HDMI IN 1-5, STILL 1-2, INPUT 1-8
01H 30H 06H	USB IN	00H-0FH	OFF, HDMI IN 1-5, STILL 1-2, INPUT 1-8
01H 30H 07H	DSK FOLLOW	00H-01H	OFF, ON

○ AUDIO AUTO MIXING

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
01H 31H 00H	AUTO MIXING SW	00H-01H	OFF, ON
01H 31H 01H	AUDIO IN	00H-01H	DISABLE, ENABLE
01H 31H 02H	USB IN	00H-01H	DISABLE, ENABLE
01H 31H 03H	HDMI IN 1	00H-01H	DISABLE, ENABLE
01H 31H 04H	HDMI IN 2	00H-01H	DISABLE, ENABLE
01H 31H 05H	HDMI IN 3	00H-01H	DISABLE, ENABLE
01H 31H 06H	HDMI IN 4	00H-01H	DISABLE, ENABLE
01H 31H 07H	HDMI IN 5	00H-01H	DISABLE, ENABLE
01H 31H 08H	AUDIO IN WEIGHT	00H-64H	0-100%
01H 31H 09H	USB IN WEIGHT	00H-64H	0-100%
01H 31H 0AH	HDMI IN 1 WEIGHT	00H-64H	0-100%
01H 31H 0BH	HDMI IN 2 WEIGHT	00H-64H	0-100%
01H 31H 0CH	HDMI IN 3 WEIGHT	00H-64H	0-100%
01H 31H 0DH	HDMI IN 4 WEIGHT	00H-64H	0-100%
01H 31H 0EH	HDMI IN 5 WEIGHT	00H-64H	0-100%

● System Address

○ VERSION

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 00H 00H	SYSTEM VERSION Major	00H–09H	0–9
02H 00H 01H	SYSTEM VERSION Minor (1)	00H–09H	0–9
02H 00H 02H	SYSTEM VERSION Minor (2)	00H–09H	0–9
02H 00H 03H	SYSTEM VERSION Build (1)	00H–09H	0–9
02H 00H 04H	SYSTEM VERSION Build (2)	00H–09H	0–9
02H 00H 05H	SYSTEM VERSION Build (3)	00H–09H	0–9

○ SYSTEM

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 01H 00H	HDCP	00H–01H	OFF, ON
02H 01H 01H	SYSTEM FORMAT	00H–01H	2160p, 1080p
02H 01H 02H	FRAME RATE	00H–07H	60 Hz, 59.94 Hz, 50 Hz, 30 Hz, 29.97 Hz, 25 Hz, 24 Hz, 23.98 Hz
02H 01H 03H	COLOR GAMUT	00H–01H	REC.709, REC.2020
02H 01H 04H	DYNAMIC RANGE	00H–02H	SDR, HDR(PQ), HDR(HLG)
02H 01H 05H	PANEL OPERATION	00H–01H	A/B, PGM/PST
02H 01H 06H	CUT SW ASSIGN	00H–03H	▲AUTO TAKE, ▲AUTO TAKE▼, ▲CUT, ▲CUT▼
02H 01H 07H	AUTO SW ASSIGN	00H–03H	AUTO TAKE▼, ▲AUTO TAKE▼, CUT▼, ▲CUT▼
02H 01H 08H	AUDIO KNOB MODE	00H–01H	CATCH, DIRECT
02H 01H 09H	OUTPUT FADE TIME	00H–28H	0.0–4.0 sec
02H 01H 0AH	OUTPUT FADE ASSIGN AUDIO FADE	00H–01H	OFF, ON
02H 01H 0BH	LED DIMMER	01H–08H	1–8
02H 01H 0CH	MENU POS	00H–01H	LEFT, RIGHT
02H 01H 0DH	TALLY FRAME	00H–01H	OFF, ON
02H 01H 0EH	reserved		
02H 01H 0FH	PREVIEW LABEL	00H–01H	OFF, ON
02H 01H 10H	LABEL SIZE	00H–01H	SMALL, NORMAL
02H 01H 11H	MULTI-VIEW LAYOUT	00H–01H	PVW/PGM, PGM/PVW
02H 01H 12H	TEST PATTERN	00H–01H	OFF, COLOR BARS
02H 01H 13H	TEST TONE LEVEL	00H–03H	OFF, -20 dB, -10 dB, 0 dB
02H 01H 14H	TEST TONE FREQUENCY L	00H–02H	500 Hz, 1 kHz, 2 kHz
02H 01H 15H	TEST TONE FREQUENCY R	00H–02H	500 Hz, 1 kHz, 2 kHz

○ PANEL LOCK

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 02H 00H	PGM/A 1 BUTTON	00H–01H	OFF, ON
02H 02H 01H	PGM/A 2 BUTTON	00H–01H	OFF, ON
02H 02H 02H	PGM/A 3 BUTTON	00H–01H	OFF, ON
02H 02H 03H	PGM/A 4 BUTTON	00H–01H	OFF, ON
02H 02H 04H	PGM/A 5 BUTTON	00H–01H	OFF, ON
02H 02H 05H	PGM/A 6 BUTTON	00H–01H	OFF, ON
02H 02H 06H	PGM/A 7 BUTTON	00H–01H	OFF, ON
02H 02H 07H	PGM/A 8 BUTTON	00H–01H	OFF, ON
02H 02H 08H	PST/B 1 BUTTON	00H–01H	OFF, ON
02H 02H 09H	PST/B 2 BUTTON	00H–01H	OFF, ON
02H 02H 0AH	PST/B 3 BUTTON	00H–01H	OFF, ON
02H 02H 0BH	PST/B 4 BUTTON	00H–01H	OFF, ON
02H 02H 0CH	PST/B 5 BUTTON	00H–01H	OFF, ON
02H 02H 0DH	PST/B 6 BUTTON	00H–01H	OFF, ON
02H 02H 0EH	PST/B 7 BUTTON	00H–01H	OFF, ON
02H 02H 0FH	PST/B 8 BUTTON	00H–01H	OFF, ON
02H 02H 10H	TRANSITION BUTTON	00H–01H	OFF, ON
02H 02H 11H	CUT BUTTON	00H–01H	OFF, ON
02H 02H 12H	AUTO BUTTON	00H–01H	OFF, ON
02H 02H 13H	VIDEO FADER	00H–01H	OFF, ON
02H 02H 14H	ASSIGNABLE PADS SELECT BUTTON	00H–01H	OFF, ON
02H 02H 15H	ASSIGNABLE PADS A BUTTON	00H–01H	OFF, ON
02H 02H 16H	ASSIGNABLE PADS B BUTTON	00H–01H	OFF, ON
02H 02H 17H	ASSIGNABLE PADS C BUTTON	00H–01H	OFF, ON
02H 02H 18H	ASSIGNABLE PADS D BUTTON	00H–01H	OFF, ON

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 02H 19H	PinP&KEY BUTTON	00H-01H	OFF, ON
02H 02H 1AH	SPLIT BUTTON	00H-01H	OFF, ON
02H 02H 1BH	CONTROL 1 KNOB	00H-01H	OFF, ON
02H 02H 1CH	CONTROL 2 KNOB	00H-01H	OFF, ON
02H 02H 1DH	DSK LEVEL KNOB	00H-01H	OFF, ON
02H 02H 1EH	DSK GAIN KNOB	00H-01H	OFF, ON
02H 02H 1FH	DSK PVW BUTTON	00H-01H	OFF, ON
02H 02H 20H	DSK PGM BUTTON	00H-01H	OFF, ON
02H 02H 21H	AUDIO IN KNOB	00H-01H	OFF, ON
02H 02H 22H	USB OUT KNOB	00H-01H	OFF, ON
02H 02H 23H	MAIN KNOB	00H-01H	OFF, ON
02H 02H 24H	CAPTURE IMAGE BUTTON	00H-01H	OFF, ON
02H 02H 25H	OUTPUT FADE BUTTON	00H-01H	OFF, ON

○ MEMORY

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 03H 00H	START UP	7FH-00H-07H	LAST MEMORY, MEMORY 1-8
02H 03H 01H	START UP - PRIORITY	00H-01H	MEMORY, PANEL
02H 03H 02H	MEMORY PROTECT	00H-01H	OFF, ON
02H 03H 03H	FADE TIME	00H-05H	0.0-0.5 sec
02H 03H 04H	LOAD PARAMETERS - VIDEO ASSIGN	00H-01H	OFF, ON
02H 03H 05H	LOAD PARAMETERS - VIDEO INPUT	00H-01H	OFF, ON
02H 03H 06H	LOAD PARAMETERS - VIDEO OUTPUT	00H-01H	OFF, ON
02H 03H 07H	LOAD PARAMETERS - TRANSITION TYPE	00H-01H	OFF, ON
02H 03H 08H	LOAD PARAMETERS - MIX/WIPE	00H-01H	OFF, ON
02H 03H 09H	LOAD PARAMETERS - PinP&KEY	00H-01H	OFF, ON
02H 03H 0AH	LOAD PARAMETERS - SPLIT	00H-01H	OFF, ON
02H 03H 0BH	LOAD PARAMETERS - DSK	00H-01H	OFF, ON
02H 03H 0CH	LOAD PARAMETERS - ROI MODE	00H-01H	OFF, ON
02H 03H 0DH	LOAD PARAMETERS - ROI SETTINGS	00H-01H	OFF, ON
02H 03H 0EH	LOAD PARAMETERS - PGM/A, PST/B	00H-01H	OFF, ON
02H 03H 0FH	LOAD PARAMETERS - VIDEO FADER	00H-01H	OFF, ON
02H 03H 10H	LOAD PARAMETERS - AUDIO KNOB ASSIGN	00H-01H	OFF, ON
02H 03H 11H	LOAD PARAMETERS - AUDIO INPUT	00H-01H	OFF, ON
02H 03H 12H	LOAD PARAMETERS - AUDIO OUTPUT	00H-01H	OFF, ON
02H 03H 13H	LOAD PARAMETERS - AUDIO FOLLOW	00H-01H	OFF, ON
02H 03H 14H	LOAD PARAMETERS - AUDIO AUTO MIXING	00H-01H	OFF, ON

○ MEMORY EXIST

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 04H 00H	MEMORY 1 EXIST	00H-01H	Not Exist, Exist * Read only
02H 04H 01H	MEMORY 2 EXIST	00H-01H	Not Exist, Exist * Read only
02H 04H 02H	MEMORY 3 EXIST	00H-01H	Not Exist, Exist * Read only
02H 04H 03H	MEMORY 4 EXIST	00H-01H	Not Exist, Exist * Read only
02H 04H 04H	MEMORY 5 EXIST	00H-01H	Not Exist, Exist * Read only
02H 04H 05H	MEMORY 6 EXIST	00H-01H	Not Exist, Exist * Read only
02H 04H 06H	MEMORY 7 EXIST	00H-01H	Not Exist, Exist * Read only
02H 04H 07H	MEMORY 8 EXIST	00H-01H	Not Exist, Exist * Read only

○ MEMORY THUMBNAIL POSITION

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 05H 00H	MEMORY 1 THUMBNAIL POSITION - PROGRAM OUT	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 01H	MEMORY 2 THUMBNAIL POSITION - PROGRAM OUT	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 02H	MEMORY 3 THUMBNAIL POSITION - PROGRAM OUT	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 03H	MEMORY 4 THUMBNAIL POSITION - PROGRAM OUT	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 04H	MEMORY 5 THUMBNAIL POSITION - PROGRAM OUT	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 05H	MEMORY 6 THUMBNAIL POSITION - PROGRAM OUT	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 06H	MEMORY 7 THUMBNAIL POSITION - PROGRAM OUT	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 07H	MEMORY 8 THUMBNAIL POSITION - PROGRAM OUT	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 08H	MEMORY 1 THUMBNAIL POSITION - DSK	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 09H	MEMORY 2 THUMBNAIL POSITION - DSK	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 0AH	MEMORY 3 THUMBNAIL POSITION - DSK	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 0BH	MEMORY 4 THUMBNAIL POSITION - DSK	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 0CH	MEMORY 5 THUMBNAIL POSITION - DSK	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 0DH	MEMORY 6 THUMBNAIL POSITION - DSK	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 0EH	MEMORY 7 THUMBNAIL POSITION - DSK	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT
02H 05H 0FH	MEMORY 8 THUMBNAIL POSITION - DSK	00H-08H	UPPER LEFT, UPPER, UPPER RIGHT, LEFT, CENTER, RIGHT, LOWER LEFT, LOWER, LOWER RIGHT

○ STILL IMAGE

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 06H 00H	CAPTURE SAVE	00H-01H	DISABLE, ENABLE

○ Roland FILL+KEY

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 07H 00H	MODE	00H-01H	OFF, ON

○ AUTO SWITCHING

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 08H 00H	AUTO SWITCHING SW	00H-01H	OFF, ON
02H 08H 01H	reserved		
02H 08H 02H	INPUT SCAN - SCAN SEQUENCE	00H-02H	NORMAL, REVERSE, RANDOM
02H 08H 03H	INPUT SCAN - SCAN TRANSITION TIME	00H-28H	0.0-4.0 sec
02H 08H 04H	INPUT SCAN - INPUT 1 TIME	00H-78H	OFF, 1-120 sec
02H 08H 05H	INPUT SCAN - INPUT 2 TIME	00H-78H	OFF, 1-120 sec
02H 08H 06H	INPUT SCAN - INPUT 3 TIME	00H-78H	OFF, 1-120 sec
02H 08H 07H	INPUT SCAN - INPUT 4 TIME	00H-78H	OFF, 1-120 sec
02H 08H 08H	INPUT SCAN - INPUT 5 TIME	00H-78H	OFF, 1-120 sec
02H 08H 09H	INPUT SCAN - INPUT 6 TIME	00H-78H	OFF, 1-120 sec
02H 08H 0AH	INPUT SCAN - INPUT 7 TIME	00H-78H	OFF, 1-120 sec
02H 08H 0BH	INPUT SCAN - INPUT 8 TIME	00H-78H	OFF, 1-120 sec

○ PREVIEW LABEL

* xxH: 20H–26H (HDMI IN 1–5, STILL 1–2), 29H (BLACK), 2AH (PGM), 2BAH (PVW), 2CH–2FH (ROI 1–4)

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H xxH 00H	LABEL (0)	00H–7FH	
02H xxH 01H	LABEL (1)	00H–7FH	
02H xxH 02H	LABEL (2)	00H–7FH	
02H xxH 03H	LABEL (3)	00H–7FH	
02H xxH 04H	LABEL (4)	00H–7FH	
02H xxH 05H	LABEL (5)	00H–7FH	
02H xxH 06H	LABEL (6)	00H–7FH	
02H xxH 07H	LABEL (7)	00H–7FH	

○ CAMERA CONTROL COMMON

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H 50H 00H	CAMERA ID	00H–04H	CAMERA 1–5
02H 50H 01H	CAMERA CONTROL MODE	00H–01H	OFF, ON
02H 50H 02H	ALL CAMERAS RECALL	00H–01H	OFF, ON

○ CAMERA CONTROL

* xxH: 51H–55H (CAMERA 1–5)

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
02H xxH 00H	PROTOCOL	00H–06H	N/A, JVC, Panasonic, Canon, VISCA over IP, PTZOptics, Avonic
02H xxH 01H 02H	IP ADDRESS 1	00H 00H–01H 7FH	0–255
02H xxH 03H 04H	IP ADDRESS 2	00H 00H–01H 7FH	0–255
02H xxH 05H 06H	IP ADDRESS 3	00H 00H–01H 7FH	0–255
02H xxH 07H 08H	IP ADDRESS 4	00H 00H–01H 7FH	0–255
02H xxH 09H	LOGIN NAME 1	00H–7FH	
02H xxH 0AH	LOGIN NAME 2	00H–7FH	
02H xxH 0BH	LOGIN NAME 3	00H–7FH	
02H xxH 0CH	LOGIN NAME 4	00H–7FH	
02H xxH 0DH	LOGIN NAME 5	00H–7FH	
02H xxH 0EH	LOGIN NAME 6	00H–7FH	
02H xxH 0FH	LOGIN NAME 7	00H–7FH	
02H xxH 10H	LOGIN NAME 8	00H–7FH	
02H xxH 11H	PASSWORD 1	00H–7FH	
02H xxH 12H	PASSWORD 2	00H–7FH	
02H xxH 13H	PASSWORD 3	00H–7FH	
02H xxH 14H	PASSWORD 4	00H–7FH	
02H xxH 15H	PASSWORD 5	00H–7FH	
02H xxH 16H	PASSWORD 6	00H–7FH	
02H xxH 17H	PASSWORD 7	00H–7FH	
02H xxH 18H	PASSWORD 8	00H–7FH	
02H xxH 19H	PASSWORD 9	00H–7FH	
02H xxH 1AH	PASSWORD 10	00H–7FH	
02H xxH 1BH	PASSWORD 11	00H–7FH	
02H xxH 1CH	PASSWORD 12	00H–7FH	
02H xxH 1DH	PASSWORD 13	00H–7FH	
02H xxH 1EH	PASSWORD 14	00H–7FH	
02H xxH 1FH	PASSWORD 15	00H–7FH	
02H xxH 20H	PASSWORD 16	00H–7FH	
02H xxH 21H	CURRENT PRESET	7FH–00H–63H	None, PRESET 1–100 * Read only
02H xxH 22H	PAN	7FH–00H–01H	LEFT, STOP, RIGHT
02H xxH 23H	TILT	7FH–00H–01H	DOWN, STOP, UP
02H xxH 24H	PAN/TILT SPEED	01H–18H	1–24
02H xxH 25H	ZOOM	7EH–00H–02H	WIDE(FAST), WIDE(SLOW), STOP, TELE(SLOW), TELE(FAST)
02H xxH 26H	FOCUS	7FH–00H–01H	NEAR, STOP, FAR
02H xxH 27H	AUTO FOCUS	00H–01H	OFF, ON
02H xxH 28H	EXPOSURE	00H–01H	MANUAL, AUTO
02H xxH 29H	TALLY CHANNEL	00H–04H	HDMI IN 1–5
02H xxH 2AH 2BH 2CH	PORT	00H 00H 00H–03H 7FH 7FH	0–65535

● Command Address

○ MEMORY

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
0AH 00H 00H	MEMORY LOAD Trigger	7FH-00H-08H	None, MEMORY 1-8 * Write only
0AH 00H 01H	MEMORY SAVE Trigger	7FH-00H-08H	None, MEMORY 1-8 * Write only
0AH 00H 02H	MEMORY INITIALIZE Trigger	7FH-00H-08H	None, MEMORY 1-8 * Write only
0AH 00H 03H	Loaded Memory Number	7FH-00H-08H	LAST MEMORY, MEMORY 1-8 * Read only
0AH 00H 04H	Memory Fading	00H-01H	OFF, ON * Read only

○ CAPTURE IMAGE

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
0AH 05H 00H	CAPTURE SOURCE	00H-04H	HDMI IN 1-5
0AH 05H 01H	TARGET STORAGE	00H-01H	STILL 1-2
0AH 05H 02H	CAPTURE Execute Trigger	01H	Execute
0AH 05H 03H	DELETE STILL IMAGE Trigger	01H	Execute
0AH 05H 04H	reserved		
0AH 05H 05H	DELETE STILL IMAGE Target	7FH-00H-01H	ALL, STILL 1-2

● Panel Control

○ SWITCH CONTROL (panel switch ON/OFF)

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
0BH 00H 00H	PGM/A 1 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 01H	PGM/A 2 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 02H	PGM/A 3 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 03H	PGM/A 4 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 04H	PGM/A 5 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 05H	PGM/A 6 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 06H	PGM/A 7 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 07H	PGM/A 8 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 08H	PST/B 1 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 09H	PST/B 2 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 0AH	PST/B 3 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 0BH	PST/B 4 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 0CH	PST/B 5 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 0DH	PST/B 6 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 0EH	PST/B 7 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 0FH	PST/B 8 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 10H	ASSIGNABLE PADS SELECT Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 11H	ASSIGNABLE PAD 1	00H-01H	0: take your finger off the pad, 1: press the pad
0BH 00H 12H	ASSIGNABLE PAD 2	00H-01H	0: take your finger off the pad, 1: press the pad
0BH 00H 13H	ASSIGNABLE PAD 3	00H-01H	0: take your finger off the pad, 1: press the pad
0BH 00H 14H	ASSIGNABLE PAD 4	00H-01H	0: take your finger off the pad, 1: press the pad
0BH 00H 15H	ASSIGNABLE PAD 5	00H-01H	0: take your finger off the pad, 1: press the pad
0BH 00H 16H	ASSIGNABLE PAD 6	00H-01H	0: take your finger off the pad, 1: press the pad
0BH 00H 17H	ASSIGNABLE PAD 7	00H-01H	0: take your finger off the pad, 1: press the pad
0BH 00H 18H	ASSIGNABLE PAD 8	00H-01H	0: take your finger off the pad, 1: press the pad
0BH 00H 19H	TRANSITION Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 1AH	CUT Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 1BH	AUTO Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 1CH	PinP&KEY Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 1DH	SPLIT Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 1EH	CONTROL 1 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 1FH	CONTROL 2 Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 20H	CAPTURE IMAGE Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 21H	DSK PVW Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 22H	DSK PGM Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 23H	MENU Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 24H	ENTER Button	00H-01H	0: take your finger off the button, 1: press the button
0BH 00H 25H	OUTPUT FADE Button	00H-01H	0: take your finger off the button, 1: press the button

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● Tally Address

○ TALLY INFO

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
0CH 00H 00H	HDMI IN 1 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 01H	HDMI IN 2 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 02H	HDMI IN 3 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 03H	HDMI IN 4 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 04H	HDMI IN 5 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 05H	STILL 1 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 06H	STILL 2 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 07H	INPUT 1 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 08H	INPUT 2 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 09H	INPUT 3 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 0AH	INPUT 4 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 0BH	INPUT 5 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 0CH	INPUT 6 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 0DH	INPUT 7 Tally	00H-02H	OFF, PGM, PST * Read only
0CH 00H 0EH	INPUT 8 Tally	00H-02H	OFF, PGM, PST * Read only

○ TALLY AUTO SEND

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
0CH 01H 00H	Tally Send Active	00H-01H	OFF, ON ON: Automatically sends the tally information when it changes. Set to "OFF" when the unit is turned on.

● Camera Control

○ CAMERA CONTROL

* xxH: 00H-04H (Camera 1-5)

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
0DH xxH 00H	PRESET RECALL	00H-63H	PRESET 1-100 * Write only
0DH xxH 01H	PRESET STORE	00H-63H	PRESET 1-100 * Write only
0DH xxH 02H	ZOOM Reset	01H	Resets the zoom * Write only

● Memory Name

* xxH: 00H-07H (MEMORY 1-8)

Address	Parameter Name	Sys.Ex.Value	Meaning of Value
60H xxH 00H	Name (0)		Name of memory number xx (1st character)
60H xxH 01H	Name (1)		Name of memory number xx (2nd character)
60H xxH 02H	Name (2)		Name of memory number xx (3rd character)
60H xxH 03H	Name (3)		Name of memory number xx (4th character)
60H xxH 04H	Name (4)		Name of memory number xx (5th character)
60H xxH 05H	Name (5)		Name of memory number xx (6th character)
60H xxH 06H	Name (6)		Name of memory number xx (7th character)
60H xxH 07H	Name (7)		Name of memory number xx (8th character)

3. Supplementary material

● Decimal and Hexadecimal Table

(Hexadecimal Numbers are Indicated by "H")

In MIDI documentation, data values and addresses/sizes of exclusive messages etc. are expressed as hexadecimal values for each 7 bits.

The following table shows how these correspond to decimal numbers.

D	H	D	H	D	H	D	H
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	72	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	59	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

D: decimal

H: hexadecimal

* Decimal expressions used for MIDI channel, bank select, and program change are 1 greater than the decimal value shown in the above table.

* Hexadecimal values in 7-bit units can express a maximum of 128 levels in one byte of data. If the data requires greater resolution, two or more bytes are used. For example, a value indicated by a hexadecimal expression in two 7-bit bytes aa bbH would be $aa \times 128 + bb$.

* Data marked "nibbled" is expressed in hexadecimal in 4-bit units. A value expressed as a 2-byte nibble 0a 0bH has the value of $a \times 16 + b$.

<Example 1>

What is the decimal expression of 5AH?

From the preceding table, 5AH = 90

<Example 2>

What is the decimal expression of the value 12 34H given as hexadecimal for each 7 bits?

From the preceding table, since 12H = 18 and 34H = 52

$18 \times 128 + 52 = 2356$

● Example of an Exclusive Message and Calculating a Checksum

Roland Exclusive messages are transmitted with a checksum at the end (before F7) to make sure that the message was correctly received. The value of the checksum is determined by the address and data (or size) of the transmitted exclusive message.

○ How to Calculate the Checksum

(Hexadecimal Numbers are Indicated by "H")

The checksum is a value that produces a lower 7 bits of zero when the address, size, and checksum itself are summed. If the exclusive message to be transmitted has an address of aa bb ccH and the data is dd ee ffH, the actual calculation would be as follows:

$aa + bb + cc + dd + ee + ff = \text{sum}$

$\text{sum} / 128 = \text{quotient} \dots \text{remainder}$

$128 - \text{remainder} = \text{checksum}$

(However, the checksum will be 0 if the remainder is 0.)

<Example>

When setting PGM Select to Input 2 for data set 1

From the "Parameter Address Map", the address of the PGM SELECT is 00H 12H 00H and the INPUT 2 parameter is 08H. Therefore ...

F0H	41H	10H	01H 06H 10H	12H	00H 12H 00H	08H	??H	F7H
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

(1) Exclusive Status

(2) ID Number (Roland)

(3) Device ID

(4) Model ID

(5) Command ID (DT1)

(6) Address

(7) Data

(8) Checksum

(9) EOX

Next calculate the checksum. Add (6) to (7).

$00H + 12H + 00H + 08H = 0 + 18 + 0 + 8 = 26 \text{ (sum)}$

$26 \text{ (sum)} / 128 = 0 \text{ (quotient)} \dots 26 \text{ (remainder)}$

$\text{Checksum} = 128 - 26 \text{ (remainder)} = 102 = 66H$

Thus, the message to transmit is :

F0H 41H 10H 01H 06H 10H 12H 00H 12H 00H 08H 66H F7H

MIDI Implementation Chart

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1	1	
	Changed	1	1	
Mode	Default	x	x	
	Messages	x	x	
	Altered	*****	*****	
Note Number	True Voice	x	x	
Velocity	Note On	x	x	
	Note Off	x	x	
After Touch	Key's	x	x	
	Channel's	x	x	
Pitch bend		x	x	
Control Change	0-9	x	x	
	10-31	x	x	
	32-51	x	x	
	52-60	x	x	
	61-119	x	x	
Program Change	: True Number	x	x	
System Exclusive		o	o	
System Common	: Song Position	x	x	
	: Song Select	x	x	
	: Tune Request	x	x	
System Real Time	: Clock	x	x	
	: Commands	x	x	
Aux Messages	: All Sound Off	x	x	
	: Reset All Controllers	x	x	
	: Local On/Off	x	x	
	: All Notes Off	x	x	
	: Active Sensing	x	x	
	: System Reset	x	x	
Notes				

LAN Command Reference

The V-1-4K support two types of remote-interface communication: LAN.

Using the LAN CONTROL port to send specific commands to the V-1-4K from a controlling device lets you operate the V-1-4K remotely.

LAN interface

This uses the LAN CONTROL port on the V-1-4K.

You use Telnet to operate the V-1-4K remotely over a LAN (TCP/IP protocol).

Communication standards

Port	LAN CONTROL jack
TCP port number	8023

Specifying the V-1-4K's network settings

1. [MENU] button → "NETWORK" → "LAN SETUP" → select the menu item shown below, and press the [VALUE] knob.

```
LAN SETUP ( 1/ 1 )
CONFIGURE USING DHCP
IP ADDRESS 192.168. 11. 2
SUBNET MASK 255.255.255. 0
DEFAULT GATEWAY 192.168. 11. 1
```

Menu item	Explanation
CONFIGURE	Selects how settings are made for the IP address, subnet mask, and default gateway. USING DHCP: The IP address and other information needed for connecting to the network is obtained automatically from the DHCP server of the LAN. MANUALLY: The IP address, subnet mask, and default gateway are specified manually.
IP ADDRESS	Shows the IP address. (*1)
SUBNET MASK	Shows the subnet mask. (*1)
DEFAULT GATEWAY	Shows the default gateway. (*1)

(*1) When "CONFIGURE" is set to "MANUALLY", set these respectively according to the network.

2. Use the [VALUE] knob to change the value of the setting.
3. Press the [MENU] (EXIT) button to return to the previous screen.
4. Use the [VALUE] knob to select "NETWORK PASSWORD", and press the [VALUE] knob.

5. Set a network password (eight characters).

Input the password that's set here when connecting a computer or other device on the same network to access the V-1-4K.

6. Press the [MENU] button several times to close the menu.

Command format

Commands are formatted using the configuration shown below. Commands are all in ASCII code.

Command code	:	Parameter	,	Parameter	;
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Command code	This specifies the command type (three single-byte alphanumeric characters).
Parameter	This is appended to a command that requires one or more parameter. The command and the parameter portion are separated by a ":" (colon). When there are multiple parameters, they are each separated by "," (comma) characters.
;	This is the code that this unit recognizes as the end of a command.

List of commands

See "MIDI Implementation" (p. 2) for the SysEx addresses and setting values.

* The codes of stx (02H), xon (11H), and xoff (13H) are the control codes.

Item	Sent command	Response command	Parameter
Parameter write (SysEx-supported command)	DTH:a,b;	stxACK;	a: SysEx address (hexadecimal, three bytes) b: Setting value (hexadecimal) <Example> When setting "01H" to address 12H 34H 56H → DTH:123456,01;
Parameter value retrieve (SysEx-supported command)	RQH:a,b;	stxDTH:a,c;	a: SysEx address (hexadecimal, three bytes) b: Request size (hexadecimal, three bytes) c: Setting value (hexadecimal)
Version information	VER;	stxVER:a,b;	a: V-1-4K (Product name) b: Version number <Example> 1.00
Flow control	xon		
Flow control	xoff		

Commands spontaneously sent from the V-1-4K

Item	Sent command	Response command	Parameter
Command receive		stxACK;	
Error detected		stxERR:a;	a: 0 (syntax error) The received command contains an error. 4 (invalid) This has no effect because it is controlled by another setting. 5 (out of range error) An argument of the received command is out of range.
Flow control		xon	
Flow control		xoff	