

RS232C/LAN command list
MODEL : LCD Display with Light ID transmission function TH-80SF2H/70SF2H

2017/11/28
Panasonic Corporation

TYPE	Function	Control Command		Inquiry Command			Range and kind of parameter Call-back	Explanation
		Transmission Command[:Parameters]	Standby	Transmission Command[:Parameters]	Reply Command[:Parameters]	Standby		
Basic Control	Power ON	PON	Avail	-	-	-	-	Power ON
	Power OFF	POF	-	-	-	-	-	Power OFF
	Power Status	-	-	QPW	QPW:*	Avail	0 / 1	0 : Standby (Off) 1 : Power ON (On)
	Input Change	IMS (:***)	Not avail	QMI	QMI:***	Avail	Control:(Toggle) HM1/HM2/DL1/DV1/PC1/VD1/UD1/MV1 Inquiry: HM1/HM2/DL1/DV1/PC1/VD1/UD1/MV1	HM1 : HDMI1 HM2 : HDMI2 DL1 : DIGITAL LINK DV1 : DVI-D PC1 : PC VD1 : VIDEO UD1 : USB MV1 : MEMORY VIEWER
	Digital Link Input select for YFB Series	IMS:DL1***	Not avail	QMI:DL1	QMI:DL1***	Avail	HD1/HD2/PC1/PC2/SVD/VID (YFB100) HD1/ HD2/ PC1/ PC2 /VID (YFB200)	*YFB100/YFB200 Available when YFB100 is connected. HD1 : HDMI1 HD2 : HDMI2 PC1 : COMPUTER 1 PC2 : COMPUTER 2 SVD : S-VIDEO (* YFB100 only) VID : VIDEO
	Audio Volume	AVL:***	Not avail	-	-	-	000 ~ 100	Volume value
	Volume Up	AUU	Not avail	-	-	-	-	Volume Up
	Volume Down	AUD	Not avail	-	-	-	-	Volume Down
	Current Audio Volume	-	-	QAV	QAV:***	Avail	000 ~ 100	Volume value
	Audio Mute	AMT (:*)	Not avail	QAM	QAM:*	Avail	Control:(Toggle) 0 / 1	Toggle (Audio mute Off) / (Audio mute On)
	Video Mute	VMT (:*)	Not avail	QVM	QVM:*	Avail	Control:(Toggle) 0 / 1	Toggle (Video mute Off) / (Video mute On)
	Aspect Change	DAM:****	Not avail	QAS	QAS:****	Not avail	FULL / NORM / ZOOM / ZOM2	FULL / NORMAL / ZOOM1 / ZOOM2
	Picture Mode	VPC:MEN***	Not avail	QPC:MEN	QPC:MEN***	Not avail	VIV / NAT / STD / SUV / GRH / DCM	VIV : VIVID SIGNAGE NAT : NATURAL SIGNAGE STD : STANDARD SUV : SURVEILLANCE GRH : GRAPHIC DCM : DICOM
	Picture Adjustment	Backlight	VPC:BLT***	Not avail	QPC:BLT	QPC:BLT***	Avail	000 ~ 100 DEF
Picture Contrast		VPC:PIC***	Not avail	QPC:PIC	QPC:PIC***	Avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE
Black Level Brightness		VPC:BLK***	Not avail	QPC:BLK	QPC:BLK***	Avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE
Color		VPC:COL***	Not avail	QPC:COL	QPC:COL***	Avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE
Tint		VPC:TIN***	Not avail	QPC:TIN	QPC:TIN***	Not avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE
Sharpness		VPC:SHP***	Not avail	QPC:SHP	QPC:SHP***	Avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE
Enhance level		VPC:SHE*	Not avail	QPC:SHE	QPC:SHE*	Not avail	1 / 2	1: low 2: high
Gamma		VWB:GMM**	Not avail	QWB:GMM	QWB:GMM**	Not avail	20 / 22 / 24 / 26	2.0 / 2.2 / 2.4 / 2.6
Color Temperature		VPC:TMP***	Not avail	QPC:TMP	QPC:TMP***	Not avail	032 / 040 / 050 / 065 / 075 / 093 / 107 / NTV / U01 / U02	3200K ~ 10700K / NaTiVe / USER1 / USER2
Red Gain		VWB:RGN****	Not avail	QWB:RGN	QWB:RGN****	Not avail	0000 ~ 0255	0 ~ 255 Available when Color Temperature is USER1 or USER2.
Green Gain		VWB:GGN****	Not avail	QWB:GGN	QWB:GGN****	Not avail	0000 ~ 0255	0 ~ 255 Available when Color Temperature is USER1 or USER2.
Blue Gain		VWB:BGN****	Not avail	QWB:BGN	QWB:BGN****	Not avail	0000 ~ 0255	0 ~ 255 Available when Color Temperature is USER1 or USER2.
Red Bias		VWB:RBS****	Not avail	QWB:RBS	QWB:RBS****	Not avail	-127 ~ 0000 ~ 0128	-127 ~ 128 Available when Color Temperature is USER1 or USER2.
Green Bias		VWB:GBS****	Not avail	QWB:GBS	QWB:GBS****	Not avail	-127 ~ 0000 ~ 0128	-127 ~ 128 Available when Color Temperature is USER1 or USER2.
Blue Bias		VWB:BBS****	Not avail	QWB:BBS	QWB:BBS****	Not avail	-127 ~ 0000 ~ 0128	-127 ~ 128 Available when Color Temperature is USER1 or USER2.
6-segment color management	VWB:CMF*	Not avail	QWB:CMF	QWB:CMF*	Not avail	0 / 1	0 : off / 1 : on	
6-segment color management select color	VWB:CML* **** **** ****	Not avail	QWB:CML*	QWB:CML* **** **** ****	Not avail	R / Y / G / C / B / M -511 ~ 0000 ~ 0511 -127 ~ 0000 ~ 0127 -127 ~ 0000 ~ 0127	Red / Yellow / Green / Cyan / Blue / Magenta TINT : -511 ~ 511 SATURATION : -127 ~ 127 VALUE : -127 ~ 127 Available when 6-segment color management is on	

TYPE	Function	Control Command		Inquiry Command			Range and kind of parameter Call-back	Explanation	
		Transmission Command[:Parameters]	Standby	Transmission Command[:Parameters]	Reply Command[:Parameters]	Standby			
P i c t u r e	Picture Adjustment	6-segment color management reset	VWB:CMR	Not avail	-	-	Not avail	-	Available when 6-segment color management is on
		Dynamic Contrast	VPC:DCO**	Not avail	QPC:DCO	QPC:DCO**	Not avail	00 ~ 10	0 ~ 10
		Color Enhancement	VPC:PAJ*	Not avail	QPC:PAJ	QPC:PAJ*	Not avail	0 / 1	OFF / ON
		Refine enhancer	VPC:SRC*	Not avail	QPC:SRC	QPC:SRC*	Not avail	0 / 1 / 2 / 3	OFF / Low / Mid / High
	Gradation smoother	VPC:GRS*	Not avail	QPC:GRS	QPC:GRS*	Not avail	0 / 1	0 : off / 1 : on	
	Memory function	Memory delete	VPF:DEL**	Not avail	-	-	-	01 ~ 06	Memory No.1 - Memory No.6
		Memory load	VPF:LOD**	Not avail	-	-	-	01 ~ 06	Memory No.1 - Memory No.6
		Memory name change	VPF:NAM** *.*.*	Not avail	QPF:NAM**	QPF:NAM** *.*.*	Not avail	01 ~ 06 space ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\] ^ _ ` a b c d e f g h i j k l m n o p q r s t u v w x y z { } ~	Memory No.1 - Memory No.6 Memory name(Max 20 Parameters)
		Memory save	VPF:SAV** *.*.*	Not avail	-	-	-	01 ~ 06 space ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\] ^ _ ` a b c d e f g h i j k l m n o p q r s t u v w x y z { } ~	Memory No.1 - Memory No.6 Memory name(Max 20 Parameters)
		Memory state	-	-	QPF:STA	QPF:STA*****	Not avail	- / 0 (Memory No.1 - No.06)	Unused / Use
-		-	-	-	-	-	-	-	-
S o u n d	Sound Adjustment	Output Select	AAC:OUT***	Not avail	QAC:OUT	QAC:OUT***	Not avail	SPO / LNO	SPEAKERS / AUDIO OUT
		Balance	AAC:BAL***	Not avail	QAC:BAL	QAC:BAL***	Not avail	-20 ~ 000 ~ +20(020)	-20 ~ 20 Available when Output Select is SPEAKERS.
		Sound Mode	AAC:MEN***	Not avail	QAC:MEN	QAC:MEN***	Not avail	STD(AUT) / DYN / CLR	STANDARD / DYNAMIC / CLEAR Available when Output Select is SPEAKERS.
		Bass	AAC:BAS***	Not avail	QAC:BAS	QAC:BAS***	Not avail	-20 ~ 000 ~ +20(020)	-20 ~ 20 Available when Output Select is SPEAKERS.
		Treble	AAC:TRE***	Not avail	QAC:TRE	QAC:TRE***	Not avail	-20 ~ 000 ~ +20(020)	-20 ~ 20 Available when Output Select is SPEAKERS.
		Surround	AAC:SUR***	Not avail	QAC:SUR	QAC:SUR***	Not avail	MON / OFF	ON / OFF Available when Output Select is SPEAKERS.
P o s i t i o n	Position/Size Adjustment	Horizontal Position	DGE:HPO****	Not avail	QGE:HPO	QGE:HPO****	Not avail	-100 ~ 0000 ~ +100(0100)	H-Pos : -100 - 0000 - +100(0100)
		Horizontal Size	DGE:HSZ****	Not avail	QGE:HSZ	QGE:HSZ****	Not avail	-100 ~ 0000 ~ +100(0100)	H-Size : -100 - 0000 - +100(0100)
		Vertical Position	DGE:VPO****	Not avail	QGE:VPO	QGE:VPO****	Not avail	-100 ~ 0000 ~ +100(0100)	V-Pos : -100 - 0000 - +100(0100)
		Vertical Size	DGE:VSZ****	Not avail	QGE:VSZ	QGE:VSZ****	Not avail	-100 ~ 0000 ~ +100(0100)	V-Size : -100 - 0000 - +100(0100)
		Clock Phase	DGE:CLK***	Not avail	QGE:CLK	QGE:CLK***	Not avail	00 ~ 30	0 ~ 30
		Dot Clock	DGE:DCL***	Not avail	QGE:DCL	QGE:DCL***	Not avail	-5 ~ 00 ~ +5(05)	-5 ~ 5
		1:1 Pixel Mode	DGE:DBD*	Not avail	QGE:DBD	QGE:DBD*	Not avail	0 / 1	OFF / ON
		Overscan	DGE:OVS*	Not avail	QGE:OVS	QGE:OVS*	Not avail	0 / 1	OFF / ON
		Pos./Size Lump Setting	DGE:PSZ**** **** **** ****	Not avail	QGE:PSZ	QGE:PSZ**** **** **** ****	Not avail	-100 ~ 0000 ~ +100(0100), -100 ~ 0000 ~ +100(0100), -100 ~ 0000 ~ +100(0100), -100 ~ 0000 ~ +100(0100)	H-Pos : -100 - 0000 - +100(0100) H-Size : -100 - 0000 - +100(0100) V-Pos : -100 - 0000 - +100(0100) V-Size : -100 - 0000 - +100(0100)
		Auto Setup	DGE:ASU *	Not avail	QGE:ASU	QGE:ASU **	Not avail	Control: 1 Inquiry: OK NG OF NW	Control: 1 : Execution start Inquiry: OK : result OK NG : result NG OF : Un-performing or when not effective NW : adjusting
S e t u p	Set up	Wobbling	OSP:WOB*	Not avail	QSP:WOB	QSP:WOB*	Not avail	0 / 1	OFF / ON
		No activity power off	SSU:NAO*	Not avail	QSU:NAO	QSU:NAO*	Not avail	0 / 1	OFF / ON
		OSD Language	SSU:LNG***	Not avail	QSU:LNG	QSU:LNG***	Not avail	ENG / DEU / FRA / ITL(ITA) / ESP / USA / CHA / JPN / RUS	English (UK) / German / French / Italian / Spanish / English (US) / Chinese/Japanese/Russian
		Display Orientation	SSU:DOR*	Not avail	QSU:DOR	QSU:DOR*	Not avail	0 / 1	Landscape / Portrait
		Image rotation	SSU:IMR*	Not avail	QSU:IMR	QSU:IMR*	Not avail	0 / 1	Off / 180 degrees
		Menu Position	SSU:OPS*	Not avail	QSU:OPS	QSU:OPS*	Not avail	1 / 2 / 3	1:Left(Landscape) / Upper(Portrait) 2:Center 3:Right(Landscape) / Lower(Portrait)
		Menu Display Duration	SSU:MDT***	Not avail	QSU:MDT	QSU:MDT***	Not avail	005 ~ 180	Timeout time of a menu display 5 - 180 seconds (5 second unit)
	Menu Transparency	SSU:MTL***	Not avail	QSU:MTL	QSU:MTL***	Not avail	000 ~ 100	Transmissivity of a menu 0 ~ 100% (10% unit)	
	Signal	3D Y/C Filter	SSG:YCS*	Not avail	QSG:YCS	QSG:YCS*	Not avail	0 / 1	OFF / ON
		Color System	SSG:COS ***	Not avail	QSG:COS	QSG:COS ***	Not avail	NTS / PAL / SCM / 4NT / MPA / NPA / AUT	NTSC / PAL / SECAM / NTSC4.43 / PAL-M / PAL-N / AUTO
		Sync Signal Setting	SSG:SNC ***	Not avail	QSG:SNC	QSG:SNC ***	Not avail	HAV / GRN / HVS	Available when PC is selected. Auto detection / Sync On Green / Hvsync
		Cinema Reality 3:2 Pull Down	SSG:DCR*	Not avail	QSG:DCR	QSG:DCR*	Not avail	0 / 1	OFF / ON
		XGA Mode	SSG:XGA*	Not avail	QSG:XGA	QSG:XGA*	Not avail	1 / 2 / 3 / 4	1:1024x768 2:1280x768 3:1366x768 4:Auto
		-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-
-		-	-	-	-	-	-	-	

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		Transmission Command[:Parameters]	Standby	Transmission Command[:Parameters]	Reply Command[:Parameters]	Standby			
S e t u p	Signal	Noise Reduction	SSG:NRS***	Not avail	QSG:NRS	QSG:NRS***	Not avail	OFF / AUT / LOW / MID / HIG	OFF / Auto / Low / Middle / High
		MPEG Noise Reduction	SSG:MNR***	Not avail	QSG:MNR	QSG:MNR***	Not avail	OFF / LOW / MID / HIG	OFF / Low / Middle / High
		Signal Range	SSG:HRC***	Not avail	QSG:HRC	QSG:HRC***	Not avail	VID / FUL / AUT	(HDMI input) Video / FULL / Auto (DVI-D input) Video / FULL / Auto (Other input) not avail
		Component/RGB-IN Select	SSU:CMP***	Not avail	QSU:CMP	QSU:CMP***	Not avail	YBR / RGB	YBR Signal / RGB Signal Available when PC is selected.
		YUV/RGB-IN Select	SSU:DYR***	Not avail	QSU:DYR	QSU:DYR***	Not avail	YUV / RGB	YUV Signal / RGB Signal Available when HDMI1/HDMI2/DVI-D is selected.
		Input Level	VWB:ILV***	Not avail	QWB:ILV	QWB:ILV***	Not avail	-16 ~ 000 ~ +16(016)	-16 ~ 16
		Dynamic backlight control	SSG:DBC*	Not avail	QSG:DBC	QSG:DBC*	Not avail	0 / 1	OFF / ON
	Screensaver	Screensaver ON/OFF	OSP:SCR*	Not avail	QSP:SCR	QSP:SCR*	Not avail	0 / 5	0 : stop 5 : operating
		Screensaver Mode	SSC:MOD*	Not avail	QSC:MOD	QSC:MOD*	Not avail	0 / 1 / 2 / 3 / 4	0:OFF 1:Interval 2:Time Designation 3:ON 4:Standby after Screensaver
		Interval Screensaver	SSC:INT**** ****	Not avail	QSC:INT	QSC:INT**** ****	Not avail	0000 ~ 2359, 0000 ~ 2359	Periodic time Operating time
		Time Designation Screensaver	SSC:TIM**** ****	Not avail	QSC:TIM	QSC:TIM**** ****	Not avail	0000 ~ 2359, 0000 ~ 2359	Start time Finish time
		Standby after Screensaver	SSC:AOF****	Not avail	QSC:AOF	QSC:AOF****	Not avail	0000 ~ 2359	Time of operation(hour:minute)
	Input label	Set Label for Current Input	SSU:ILA***	Not avail	QSU:ILA	QSU:ILA***	Not avail	INP / PCN / DV1 / DV2 / DV3 / BD1 / BD2 / BD3 / CTV / VCR / STB / SKP	reset input name(Except PC) / reset input name(for PC) DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
		Set Label for EACH INPUT	SSU:ILA*****	Not avail	QSU:ILA+++	QSU:ILA +++ ***	Not avail	+++ HM1/HM2/DL1/DV1/PC1/VD1 *** INP / DV1 / DV2 / DV3 / BD1 / BD2 / BD3 / CTV / VCR / STB / SKP	INPUT HDMI1 / HDMI2 / DIGITAL LINK / DVI-D / PC / VIDEO (reset input name) / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
	Power management settings	Power Management Mode	SSU:ECS*	Not avail	QSU:ECS	QSU:ECS*	Not avail	0 / 1	CUSTOM / ON
		No Signal Power Off	SSU:AOF*	Not avail	QSU:AOF	QSU:AOF*	Not avail	0 / 1	OFF / ON
		HDMI1 Power Management	SSU:D1H*	Not avail	QSU:D1H	QSU:D1H*	Not avail	0 / 1	OFF / ON
		HDMI2 Power Management	SSU:D2H*	Not avail	QSU:D2H	QSU:D2H*	Not avail	0 / 1	OFF / ON
		DIGITAL LINK Power Management	SSU:D1L*	Not avail	QSU:D1L	QSU:D1L*	Not avail	0 / 1	OFF / ON
		DVI-D Power Management	SSU:D1V*	Not avail	QSU:D1V	QSU:D1V*	Not avail	0 / 1	OFF / ON
		PC Power Management	SSU:DPM*	Not avail	QSU:DPM	QSU:DPM*	Not avail	0 / 1	OFF / ON
Power Save		SSU:ECO*	Not avail	QSU:ECO	QSU:ECO*	Not avail	0 / 1	OFF / ON	
Extended standby mode	SSU:ESM*	Not avail	QSU:ESM	QSU:ESM*	Not avail	0 / 1	OFF / ON		
S e t u p	HDMI-CEC control	SHC:FNC*	Not avail	QHC:FNC	QHC:FNC*	Not avail	0 / 1	Disable / Enable	
	HDMI1 (change device)	SHC:HM1***	Not avail	-	-	-	NXT / PRE	Change to next device / Change to previous device	
	HDMI1 (get device name)	-	-	QHC:HM1	QHC:HM1*...*	Not avail	space ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\] ^ _ ` a b c d e f g h i j k l m n o p q r s t u v w x y z { } -	Device name (Max 23 Parameters)	
	HDMI2 (change device)	SHC:HM2***	Not avail	-	-	-	NXT / PRE	Change to next device / Change to previous device	
	HDMI2 (get device name)	-	-	QHC:HM2	QHC:HM2*...*	Not avail	space ! " # \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [\] ^ _ ` a b c d e f g h i j k l m n o p q r s t u v w x y z { } -	Device name (Max 23 Parameters)	
	MENU code	SHC:MNC*	Not avail	QHC:MNC	QHC:MNC*	Not avail	1 / 2 / 3 / 4 / 5 / 6	1 / 2 / 3 / 4 / 5 / 6	
	Display → Device	SHC:PTS***	Not avail	QHC:PTS	QHC:PTS***	Not avail	OFF / POF / PWR	"Disable" / "Power off" / "Power on / off"	
	Device → Display	SHC:STP***	Not avail	QHC:STP	QHC:STP***	Not avail	OFF / PON / PWR	"Disable" / "Power on" / "Power on / off"	
	Image settings Startup image settings	Display setting	SCI:SIM*	Not avail	QCI:SIM	QCI:SIM*	Not avail	0 / 1	OFF / ON
		Image select	SCI:SCG*	Not avail	QCI:SCG	QCI:SCG*	Not avail	0 / 1	0 : Default image 1 : User image
Display setting		SCI:NIM*	Not avail	QCI:NIM	QCI:NIM*	Not avail	0 / 1	OFF / ON	
	Image select	SCI:NCG*	Not avail	QCI:NCG	QCI:NCG*	Not avail	0 / 1	0 : Default image 1 : User image	

TYPE	Function	Control Command		Inquiry Command			Range and kind of parameter Call-back	Explanation	
		Transmission Command[:Parameters]	Standby	Transmission Command[:Parameters]	Reply Command[:Parameters]	Standby			
Setup	USB media player settings	Video Playback Mode	SUS:VPB*	Not avail	QUS:VPB	QUS:VPB*	Not avail	0 / 1	Standard / Adjust
		Resume play	SUS:RSP*	Not avail	QUS:RSP	QUS:RSP*	Not avail	0 / 1	OFF / ON
		Slide show duration	SUS:SSD***	Not avail	QUS:SSD	QUS:SSD***	Not avail	010 ~ 600	10 - 600 seconds (5 second unit)
		Play mode	SUS:SPM*	Not avail	QUS:SPM	QUS:SPM*	Not avail	0 / 1	Individual play / Synchronize play
		get Schedule play mode	-	-	QUS:CMS	QUS:CMS*	Avail	0 / 1	Normal mode / Schedule play mode (standby : Normal standby / Schedule wait standby)
	Memory viewer settings	Memory viewer function	SMS:MVF*	Not avail	QMS:MVF	QMS:MVF*	Not avail	0 / 1	OFF / ON
		View	SMS:VIE***	Not avail	QMS:VIE	QMS:VIE***	Not avail	THU / LIS	Thumbnail / List
		Content select	SMS:CON***	Not avail	QMS:CON	QMS:CON***	Not avail	STL / VID / AUD / ALL / SAV / SAA / VAA	Picture / Video / Audio / All / Picture/Video / Picture/Audio / Video/Audio
		Sort type	SMS:TYP***	Not avail	QMS:TYP	QMS:TYP***	Not avail	DAT / NAM	Date / Name
		Sort order	SMS:ODR***	Not avail	QMS:ODR	QMS:ODR***	Not avail	ASD / DSD	Ascending / Descending
		Play method	SMS:RPT***	Not avail	QMS:RPT	QMS:RPT***	Not avail	NON / ONE / ALL / RAN / SEL / PRG	None / Repeat one file / Repeat all files / Random / Select / Program
		Picture duration	SMS:SSD***	Not avail	QMS:SSD	QMS:SSD***	Not avail	010 ~ 600	10 - 600 seconds (5 second unit)
	Function button settings	Auto display content info	SMS:INF*	Not avail	QMS:INF	QMS:INF*	Not avail	0 / 1	OFF / ON
		Auto display operation guide	SMS:GUI*	Not avail	QMS:GUI	QMS:GUI*	Not avail	0 / 1	OFF / ON
		Function Group	OSP:KGR***	Not avail	QSP:KGR	QSP:KGR***	Not avail	INP / MEM / ACT	INPUT / MEMORY / ACTION & MENU(SHORTCUT)
		Function Button Settings	OSP:KFN***	Not avail	QSP:KFN*	QSP:KFN***	Not avail	1 - 6 (ACTION & MENU) SIG / SSV / SUT / LNS / ECO / OSH / MLT / DZM / DID / HCO / PLE (INPUT) HM1/HM2/DL1/DV1/PC1/VD1/UD1/MV1	setup to FUNCTION KEY 1 - 6 (ACTION & MENU) SIG : Signal menu SSV : Screensaver menu SUT : Timer setup menu LNS : Network settings menu ECO : Power management settings menu OSH : AV Mute MLT : Multi display settings menu DZM : Digital zoom DID : Display ID & Display Name HCO : HDMI-CEC operation PLE : Playlist edit (INPUT) HM1 : HDMI1 HM2 : HDMI2 DL1 : DIGITAL LINK DV1 : DVI-D PC1 : PC VD1 : VIDEO UD1 : USB MV1 : MEMORY VIEWER
		Function guide Settings	OSP:KFG*	Not avail	QSP:KFG	QSP:KFG*	Not avail	0 / 1	OFF / ON
	Options Menu	On screen display	OSP:OSD*	Not avail	QSP:OSD	QSP:OSD*	Not avail	0 / 1	OFF / ON
		Initial input	OSP:IIN***	Not avail	QSP:IIN	QSP:IIN***	Not avail	OFF /HM1/HM2/DL1/DV1/PC1/VD1/UD1/MV1	OFF / HDMI1 / HDMI2 / DIGITAL LINK / DVI-D / PC / VIDEO / USB / MEMORY VIEWER
		Initial VOL level	OSP:IVL****	Not avail	QSP:IVL	QSP:IVL****	Not avail	0 / 1, 000 ~ 100	function : OFF / ON, volume : 0~100
Maximum VOL level		OSP:MVL****	Not avail	QSP:MVL	QSP:MVL****	Not avail	0 / 1, 000 ~ 100	function : OFF / ON, volume : 0~100	
Input lock		OSP:INL***	Not avail	QSP:INL	QSP:INL***	Not avail	OFF /HM1/HM2/DL1/DV1/PC1/VD1/UD1/MV1	OFF / HDMI1 / HDMI2 / DIGITAL LINK / DVI-D / PC / VIDEO / USB / MEMORY VIEWER	
Button lock		OSP:BTL***	Not avail	QSP:BTL	QSP:BTL***	Not avail	OFF / MEN / ALL	OFF / MENU&ENTER / ON	
Controller User level		OSP:RCM*	Not avail	QSP:RCM	QSP:RCM*	Not avail	0 / 1 / 2 / 3	OFF / User1 / User2 / User3	
PC auto setting		OSP:PAS*	Not avail	QSP:PAS	QSP:PAS*	Not avail	0 / 1	OFF / ON	
Off-timer function		OSP:OFT*	Not avail	QSP:OFT	QSP:OFT*	Not avail	0 / 1	OFF / ON	
Initial Startup		OSP:ISU***	Not avail	QSP:ISU	QSP:ISU***	Not avail	LST PON STB	LST : Last memory(return to a front state) PON : ON STB : STANDBY	
Display ID		-	-	QID:DID	QID:DID***	Not avail	000 ~ 100	Display ID	
Serial ID function		SID:SID*	Not avail	QID:SID	QID:SID*	Not avail	0 / 1	OFF / ON	
Serial Response (Normal)		SCT:RIN*	Not avail	QCT:RIN	QCT:RIN*	Not avail	0 / 1	OFF / ON	
Serial Response (ID all)		SCT:RIA*	Not avail	QCT:RIA	QCT:RIA*	Not avail	0 / 1	OFF / ON	
Serial ID Setup (Serial ID Function and Display ID)		SIF:***	Not avail	QIF	QIF:***	Not avail	0 / 1, 000~100	OFF / ON Display ID	
Serial daisy chain position	SCT:DCP***	Not avail	QCT:DCP	QCT:DCP***	Not avail	TOP / DEF / END	TOP / --- / END		
LAN Control Protocol	OSP:LPN***	Not avail	QSP:LPN	QSP:LPN***	Not avail	LP1 / LP2	Protocol1 / Protocol2		

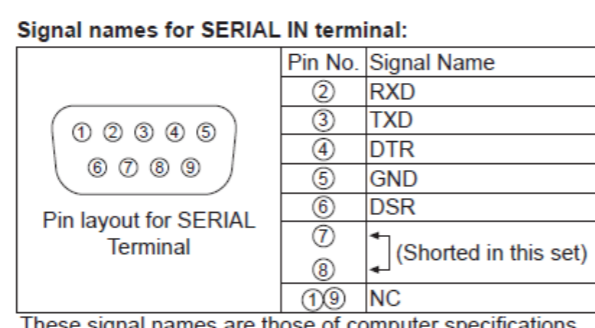
TYPE	Function	Control Command		Inquiry Command			Range and kind of parameter Call-back	Explanation	
		Transmission Command[:Parameters]	Standby	Transmission Command[:Parameters]	Reply Command[:Parameters]	Standby			
Options Menu	Power ON Screen Delay	OSP:POD**	Not avail	QSP:POD	QSP:POD**	Not avail	AT / 00 ~ 30	AT : Auto 0~30 : 0~30 seconds	
	Clock Display	OSP:CLK*	Not avail	QSP:CLK	QSP:CLK*	Not avail	0 / 1	OFF / ON	
	Power on message(No activity power off)	OSP:NAP*	Not avail	QSP:NAP	QSP:NAP*	Not avail	0 / 1	OFF / ON	
	Power on message(Power management)	OSP:PMM*	Not avail	QSP:PMM	QSP:PMM*	Not avail	0 / 1	OFF / ON	
	Input search	ISH:FNC***	Not avail	QSH:FNC	QSH:FNC***	Not avail	OFF / ALL / PRI / IDC	OFF / ALL inputs / Custom / Input detection	
	1st search input	ISH:PRI***	Not avail	QSH:PRI	QSH:PRI***	Not avail	NON / HM1 / HM2 / DV1 / PC1 / VD1 / UD1	(none) / HDMI1 / HDMI2 / DVI-D / PC / VIDEO / USB	
	2nd search input	ISH:SCI***	Not avail	QSH:SCI	QSH:SCI***	Not avail	NON / HM1 / HM2 / DV1 / PC1 / VD1 / UD1	(none) / HDMI1 / HDMI2 / DVI-D / PC / VIDEO / USB	
	Detect digital input	ISH:DIN*** +	Not avail	QSH:DIN***	QSH:DIN***+	Not avail	***:HM1 / HM2 / DL1 / DV1 / PC1 +:0 / 1	HDMI1 / HDMI2 / DIGITAL LINK / DVI-D / PC OFF / ON	
	Changing delay	ISH:CGD**	Not avail	QSH:CGD	QSH:CGD**	Not avail	00 / 01 / 02 / 03 / 04 / 05 / 06 / 07 / 08 / 09 / 10	00 : OFF 01~10 : changing time(sec)	
	Input Change Mode Off	SBI:OFF (NON NON *)	Not avail	QBI	QBI:OFF NON NON *	Not avail	0	0: Disable (Auto switch back mode)	
	Input Change Mode Quick	SBI:QIC (*** *** *)	Not avail	QBI	QBI:QIC *** *** *	Not avail	NON / HM1 / HM2 / DL1 / DV1 NON / HM1 / HM2 / DL1 / DV1 0 / 1	Primary backup input : (None) / HDMI1 / HDMI2 / DIGITAL LINK / DVI-D Secondary backup input : (None) / HDMI1 / HDMI2 / DIGITAL LINK / DVI-D Auto switch back mode : 0: Disable / 1 : Enable	
	Input Change Mode Normal	SBI:NOR (*** *** *)	Not avail	QBI	QBI:NOR *** *** *	Not avail	NON/HM1/HM2/DL1/DV1/PC1/VD1/UD1 NON/HM1/HM2/DL1/DV1/PC1/VD1/UD1 0 / 1	Primary backup input : (None) / HDMI1 / HDMI2 / DIGITAL LINK / DVI-D / PC / VIDEO / USB Secondary backup input : (None) / HDMI1 / HDMI2 / DIGITAL LINK / DVI-D / PC / VIDEO / USB Auto switch back mode : 0: Disable / 1 : Enable	
	Changing mode	SBI:CHM*	Not avail	QBI:CHM	QBI:CHM*	Not avail	2 / 1	High speed / Normal speed When [Quick] is selected, [Changing mode] can be adjusted.	
	Backup Input Status	-	-	QBI:STS	QBI:STS * *** *	Not avail	0 / 1 HM1/HM2/DL1/DV1/PC1/VD1/UD1/MV1 0 / 1 / 2	0: inactive / 1: active (Status) Main Input : HDMI1 / HDMI2 / DIGITAL LINK / DVI-D / PC / VIDEO / USB / MEMORY VIEWER 0: Main Input / 1: Primary Backup input / 2: Secondary Backup input (Current Input Status)	
	Backup Input Signal Status	-	-	QBI:SIG	QBI:SIG * * *	Not avail	0 / 1 0 / 1 0 / 1	0 : no signal / 1 : not no signal (Main input) 0 : no signal / 1 : not no signal (Primary backup input) 0 : no signal / 1 : not no signal (Secondary backup input)	
	Manual Switch Back	BIP:FSB	Not avail	-	-	Not avail	-	When Input change mode is not Off Enable when Input change mode is not Off and Auto switch back mode is Disable.	
	Audio input select	for Current Input	SAI:A+++	Not avail	QAI	QAI: V*** A+++	Not avail	*** HM1 / HM2 / DL1 / DV1 / PC1 / VD1 +++ HM1 / HM2 / DL1 / DV1 / PC1 / VD1 / NAD	HDMI1 / HDMI2 / DIGITAL LINK / DVI-D / PC / VIDEO HDMI1 / HDMI2 / DIGITAL LINK / AV IN / AV IN / AV IN / NO AUDIO
		for EACH INPUT	SAI: V*** A+++	Not avail	QAI:V***	QAI: V*** A+++	Not avail	*** HM1 / HM2 / DL1 / DV1 / PC1 / VD1 +++ HM1 / HM2 / DL1 / DV1 / PC1 / VD1 / NAD	HDMI1 / HDMI2 / DIGITAL LINK / DVI-D / PC / VIDEO HDMI1 / HDMI2 / DIGITAL LINK / AV IN / AV IN / AV IN / NO AUDIO
	Information Timing	No Signal Warning	SIT:NSW*	Not avail	QIT:NSW	QIT:NSW*	Not avail	0 / 1	0: Off /1:On On:display sends out the no signal warning. (QST:NSW*)
		No Signal Warning Timing	SIT:SWT**	Not avail	QIT:SWT	QIT:SWT**	Not avail	01 ~ 60	01 ~ 60 (minutes)
		Query status :No Signal Warning Timing	-	Not avail	QST:NSW	QST:NSW*	Not avail	0 / 1	1: No Signal Warning: 0: No warning for this function. *Reply "0" when No Signal Warning is set "OFF".
	Message of No Signal Warning (Auto) While RS-232C controls: message sent on the display automatically.	-	Not avail	-	QST:NSW*	Not avail	0 / 1	1: No Signal Warning: 0: No warning for this function.	
	No Signal Error	SIT:NSE*	Not avail	QIT:NSE	QIT:NSE*	Not avail	0 / 1	0: Off /1:On On:display sends out the no signal error..(QST:NSE*)	
	No Signal Error Timing	SIT:SET**	Not avail	QIT:SET	QIT:SET**	Not avail	01 ~ 90	01 ~ 90 (minutes)	

TYPE	Function	Control Command		Inquiry Command			Range and kind of parameter Call-back	Explanation
		Transmission Command[:Parameters]	Standby	Transmission Command[:Parameters]	Reply Command[:Parameters]	Standby		
Options menu	Information Timing							
	Query status :No Signal Error Timing	-	Not avail	QST:NSE	QST:NSE*	Not avail	0 / 1	1: No Signal Error 0: No error for this function. *Reply "0" when No Signal Error is set "OFF".
	Message of No Signal Error Timing (Auto) While RS-232C controls: message sent on the display automatically.	-	Not avail	-	QST:NSE*	Not avail	0 / 1	1: No Signal Error 0: No error for this function.
	Temperature Warning	SIT:TPW*	Not avail	QIT:TPW	QIT:TPW*	Not avail	0 / 1	0: Off /1:On On:display sends out the warning temperature.. (QST:TO*)
	Query status :Temperature warning	-	Not avail	QST:TO	QST:TO*	Not avail	0 / 1	1: "HIGH TEMPERATURE-MODE". *Please check the condition. 0: "NORMAL-MODE".
	Message of Temperature warning(Auto) While RS-232C controls: message sent on the display automatically.	-	Not avail	-	QST:TO*	Not avail	0 / 1	1: "HIGH TEMPERATURE-MODE". *Please check the condition. 0: "NORMAL-MODE".
Others	Recall	DDS	Not avail	-	-	-	-	Recall
	Display ID / Display name	DDS:DID	Not avail	-	-	-	-	Display ID / Display name
	Audio Mute	AOC:*	Not avail	-	-	-	0 / 1	MUTE OFF / MUTE ON
	OSD Clear	VDO	Not avail	-	-	-	-	OSD Clear
	digital zoom	DZM:* * * *	Not avail	QDZ	QDZ:* * * *	Not avail	0 / 1, 1 / 2 / 3 / 4, 1 / 2 / 3 / 4 / 5, 1 / 2 / 3 / 4 / 5	OFF / ON, Enlargement factor, display position(Horizontal), display position(Vertical)
	Off Timer	ZOT:**	Not avail	-	-	-	00 ~ 90	0~90(minutes)
	USB media player Skip to the next playback file	UMP:NXT	Not avail	-	-	Not avail	-	Play next content Available using USB media player
	USB media player Skip to the previous playback file	UMP:PRE	Not avail	-	-	Not avail	-	Play previous content Available using USB media player
	USB media player Playback again from top of the file	UMP:RPY	Not avail	-	-	Not avail	-	Play top of the content Available using USB media player
	Inquiry about Signal Status of input signal	-	-	QST:SGS	QST:SGS*	Not avail	0 / 1 / 2	Signal Status information 0 : Valid signal 1 : No signal 2 : Unsupported signal
	Inquiry about Signal Frequency of input signal	-	-	QFR	QFR:H***. ** V***. **	Avail	000.00 ~ 999.99, 000.00 ~ 999.99	Horizontal frequency Vertical frequency Displayed until the decimal point second place.
	Inquiry about Signal Format of input signal	-	-	QSF	QSF:*****	Avail	(MAX 20 Characters)	Signal format information
	Inquiry about detail of DIGITAL LINK status	-	-	QST:DLD	QST:DLD * *** * -** -** -** -** -** -** -** -**	Not avail	0 / 1 / 2 / 3 000-225, <20 0 / 1 / 2 -00~-99 -00~-99 -00~-99 -00~-99 -00~-99 -00~-99 -00~-99	No connect / Digital Link / LPM / Ethernet (Est. Cable Length)(m) (*) No HDMI / HDMI (No HDCP) / HDMI (HDCP) ChannelA Signal Quality ChannelB Signal Quality ChannelC Signal Quality ChannelD Signal Quality Minimum Signal Quality Maximum Signal Quality (*)Est. Cable Length VS100RXFirmware :000>20 (20mLAN)
	Auto Command Send Setting	RCM:* *	Not avail	-	-	-	0 / 1 0 / 1 (1~2 / Number of parameters is 1 to 2.)	OFF / ON --- QSS (QSS command) OFF / ON --- QSS:STSERR (QSS:STSERR)
	Inquiry about Model Name	-	-	QMN	QMN: ** * **	Avail	70 / 80 F 17	Inch size FHD model Product of 2017
Inquiry about Model	-	-	QID	QID: **. ***. * *	Avail	70 / 80 SF2H J / U / E / W / C	Inch size model market	
Software Version Main MCU	-	-	QRV	QRV: * .**** SF2H	Avail	*Example 1.0000 SF2H	Version model	

TYPE	Function	Control Command		Inquiry Command			Range and kind of parameter Call-back	Explanation	
		Transmission Command[:Parameters]	Standby	Transmission Command[:Parameters]	Reply Command[:Parameters]	Standby			
Others	Software Version Sub MCU	-	-	QRV:STB	QRV:STB**.**	Avail	*Example 01.00	Version	
	Software Version EEPROM	-	-	QRV:EEP	QRV:EEP**.**	Avail	*Example 01.00	Version	
	Software Version HDBaseT RX	-	-	QRV:HBT	QRV:HBT **.**.****	Avail	*Example 30.90.000C	Version	
	Serial number	-	-	QSN	QSN:*****	Avail	(ASCII 9~15 / 9 to 15 figures of the ASCII characters)	(Alphanumeric character)(capital letter of the alphabet)(Blank)'-' (0x30-0x39,0x41-0x5a,0x20,0x2d)	
	LAN data Cloning - Write protect	LCL:WRP*	Not Avail	QCL:WRP	QCL:WRP*	Not Avail	0 / 1	OFF / ON	
	SOS History	-	-	QSS	QSS:**. **. **. **. **. **.	Avail	00~FF. 00~FF. 00~FF. 00~FF. 00~FF. 00~FF.	Number of times First time SOS classification 2nd SOS classification 3n time SOS classification 3n+1st SOS classification 3n+2nd SOS classification * In the 10th time, it is arranged as follows. First time SOS classification 2nd SOS classification 9th SOS classification 10th SOS classification 8th SOS classification	
	Inquiry about SOS Status	-	-	QSS:STS	QSS:STS***	Avail	NON / ERR / EXT	NON : no SOS history ERR : SOS generating EXT : SOS history exists	
	Light ID Control	LightID mode (Select PWM Mode)	LID:MOD*	Not Avail	QLI:MOD	QLI:MOD*	Not Avail	0 / 1 / 2	PWM Control Mode LightID OFF / External Control Mode / Internal ID Mode (0 : Main CPU Control 1, 2 : Light ID Control)
		Stop LightID	LID:STP	Not avail	-	-	-	-	Stop LightID Sending
	Light ID Control	BackLight Control	LID:BLT*	Not avail	QLI:BLT	QLI:BLT*	Not Avail	1 / 2 / 3	Backlight Duty Control Low / Middle / High Not Available when LightID mode is Off. This command works as same as LID:BLC / QLI:BLC .
		BackLight Control	LID:BLC*	Not Avail	QLI:BLC	QLI:BLC*	Not Avail	1 / 2 / 3	Backlight Duty Control Low / Middle / High Not Available when LightID mode is Off. This command works as same as LID:BLT / QLI:BLT .

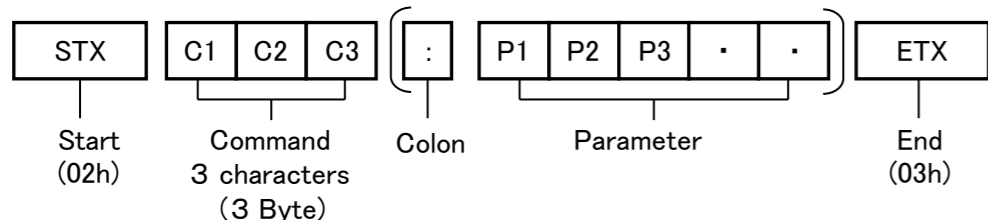
■SERIAL terminal connection

Communication parameters table with fields: Signal level, Synchronization method, Baudrate, Parity, Character length, Stop bit, Flow control.



type of cable : straight cable

Basic format for control data: The transmission of control data starts with a STX signal, followed by the command, the parameters, and lastly an ETX signal in that order.

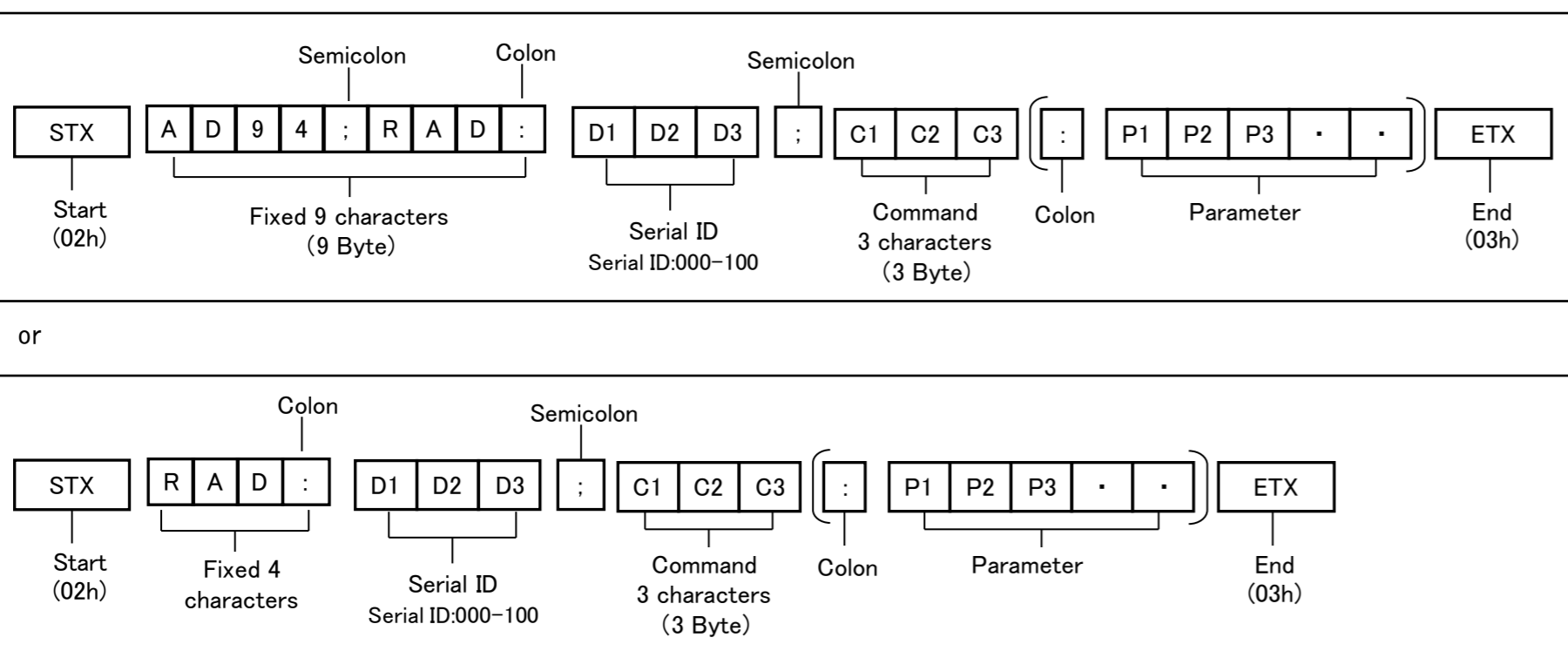


Hexadecimal character and binary tables. Includes examples for 'Power on' and 'Picture+85' commands.

- Notes: If an incorrect command is sent, this unit will reply an "ER401" command to the computer. If customer send multiple commands, be sure to wait for the response for the first command to come before sending the next command.

<When sending command with Display ID> When sending command with Display ID, set [Options] - [Serial ID function] to "on". If Display ID is "0", any ID number in command is acceptable to control.

Serial ID Format table showing examples like <STX>AD94:RAD:<NUM1><NUM2><NUM3>:*****<ETX>.



- "AD94:RAD:" or "RAD:" is fixed characters when sending command with ID. Serial ID is 3 characters and specified with Display ID which will be controlled.

■Control via LAN

The communication differs whether [Options] - [LAN control protocol] is set to [Protocol 1] or [Protocol 2].

<When [LAN control protocol] is set to [Protocol 1].>

- When the WEB control administrator privileges password has been set (Protect mode) Connection method 1. Obtain the display's IP address and the port number (Default is 1024), and request connection to the display.

Table for data part: #PDPCONTROL, ASCII character string, 10bytes.

- 3. Hash the following data with the MD5 algorithm, and generate a 32-byte hash value. zzzzzzzz : 8-byte random number obtained in step 2

Transmit in the following command format. Transmitted data

Table for transmitted data: Header, Control symbol, Data part, Control symbol, Last terminal symbol.

Table for received data: Control symbol, Data part, Control symbol, Last terminal symbol.

- When the WEB control administrator privileges password has not been set (Non protect mode) Connection method 1. Obtain the display's IP address and the port number (Default is 1024), and request connection to the display.

Table for data part: #PDPCONTROL, ASCII character string, 10bytes.

Transmit in the following command format. Transmitted data

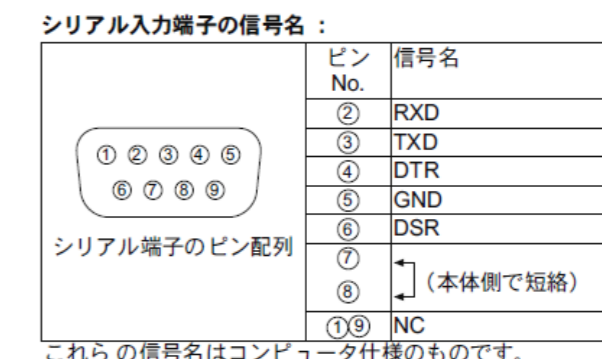
Table for transmitted data: Control symbol, Data part, Control symbol, Last terminal symbol.

Table for received data: Control symbol, Data part, Control symbol, Last terminal symbol.

通信規約

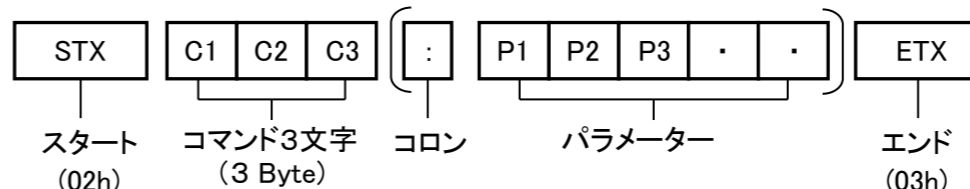
■シリアル端子接続

通信条件 table with fields: 信号レベル, 同期方式, ポーレート, パリティ, キャラクター長, ストップビット, フロー制御.



ケーブル種 : ストレート

基本フォーマット: データは、「STX」、「コマンド」、「パラメーター」、「ETX」の順に送信してください。

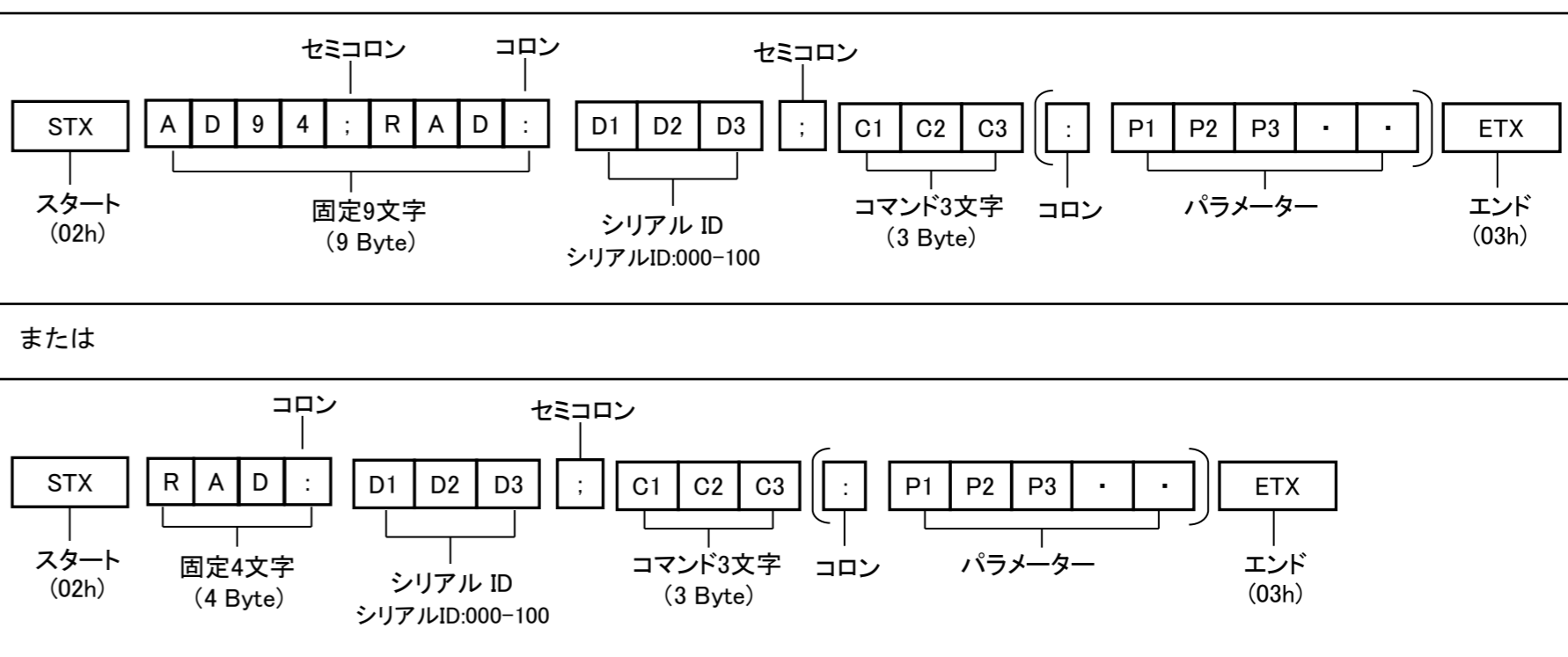


Hexadecimal character and binary tables. Includes examples for '電源オンコマンド' and 'ピクチャー+85設定' commands.

- その他: 間違ったコマンドを受信すると、「ER401」という応答コマンドを返信します。複数コマンドで制御する場合は、送信側が本機の応答を受け取ってから、次のコマンドを送信することを想定しています。

<ID付コマンドで制御する場合> シリアルID付で制御する場合は、「Options」メニューの「Serial ID function(シリアルID制御)」をオンに設定してください。

ID付コマンドフォーマット (シリアル制御のみ) Serial ID Format table showing examples like <STX>AD94:RAD:<NUM1><NUM2><NUM3>:*****<ETX>.



- "AD94:RAD:" または "RAD:" は、シリアルID付きコマンドを送る場合に必要となる固定文字列です。シリアルIDには、制御したいディスプレイのディスプレイIDを3文字で指定します。

■LAN経由制御

[Options]メニューの「LAN control protocol」の設定が「Protocol1」か「Protocol2」によって通信内容が異なります。

<「LAN control protocol」の設定が「Protocol1」の場合>

- WEB制御アドミニストレータ権限パスワード設定時 (プロテクトモード) 接続方法 1. ディスプレイのIPアドレスとポート番号を取得してディスプレイへ接続を要求してください。

Table for data part: #PDPCONTROL, ASCII character string, 10bytes.

- 3. MD5アルゴリズムを用いて、以下のデータから32バイトのハッシュ値を生成してください。 zzzzzzzz : 手順2で取得した8バイトの乱数

以下のコマンド形式で送信してください。 送信データ

Table for transmitted data: ヘッダー, 制御記号, データ部, 制御記号, 終端記号.

Table for received data: 制御記号, データ部, 制御記号, 終端記号.

- WEB制御アドミニストレータ権限パスワード非設定時 (非プロテクトモード) 接続方法 1. ディスプレイのIPアドレスとポート番号を取得してディスプレイへ接続を要求してください。

Table for data part: #PDPCONTROL, ASCII character string, 10bytes.

以下のコマンド形式で送信してください。 送信データ

Table for transmitted data: 制御記号, データ部, 制御記号, 終端記号.

Table for received data: 制御記号, データ部, 制御記号, 終端記号.

<When [LAN control protocol] is set to [Protocol 2].>

• When the WEB control administrator privileges password has been set (Protect mode)

Connection method

1. Obtain the display's IP address and the port number (Default is 1024), and request connection to the display.
2. The display responds.

Data part	Space	Mode	Space	Random number part	Last terminal symbol
['N]TCONTROL[' (ASCII character string)	f j 0x20	f j 0x31	f j 0x20	#zzzzzzz# (ASCII code hex number)	(CR) 0x0d
9bytes	1byte	1byte	1byte	8bytes	1byte

3. Hash the following data with the MD5 algorithm, and generate a 32-byte hash value.

『xxxxxx:yyyyy:zzzzzzz』
 xxxxxx : WEB control administrator privileges user name
 yyyy : Above administrator privileges user password
 zzzzzzz : 8-byte random number obtained in step 2

Command transmission method

Transmit in the following command format.

Header	Data part	Last terminal symbol
Hash value	Control command (ASCII character string)	(CR) 0x0d
32bytes	1byte	1byte

Received data

Header	Data part	Last terminal symbol
f0j 0x30	Control command (ASCII character string)	(CR) 0x0d
1byte	1byte	1byte

• When the WEB control administrator privileges password has not been set (Non protect mode)

Connection method

1. Obtain the display's IP address and the port number (Default is 1024), and request connection to the display.
2. The display responds.

Data part	Space	Mode	Last terminal symbol
['N]TCONTROL[' (ASCII character string)	f j 0x20	f0j 0x30	(CR) 0x0d
9bytes	1byte	1byte	1byte

Command transmission method

Transmit in the following command format.

Header	Data part	Last terminal symbol
f0j 0x30	Control command (ASCII character string)	(CR) 0x0d
1byte	1byte	1byte

Received data

Header	Data part	Last terminal symbol
f0j 0x30	Control command (ASCII character string)	(CR) 0x0d
1byte	1byte	1byte

(Note)

When setting to [Protocol 1], the response in the case that sent the inquiry command is omitted the first four characters of command.

Example:

	Control Command Transmission Command	Reply Command	Inquiry Command Transmission Command	Reply Command
Protocol1	IMS:HM1	IMS	OM1	OM1:HM1
	—	—	OP#	OP#:1
	VPC:PIC100	VPC	OPC:PIC	OPC:PIC100
Protocol2	IMS:HM1	IMS	OM1	HM1
	—	—	OP#	1
	VPC:PIC100	VPC	OPC:PIC	PIC100

For more details of the control via LAN, please obtain from the following web site.
<https://panasonic.net/cns/prodisplays/>

<「LAN control protocol」の設定が「Protocol2」の場合>

• WEB制御アドミニストレータ権限パスワード設定時 (プロテクトモード)

接続方法

1. ディスプレイのIPアドレスとポート番号を取得してディスプレイへ接続を要求してください。
2. ディスプレイからの応答があります。

データ部	空白	モード	空白	乱数部	終端記号
['N]TCONTROL[' (ASCII文字列)	f j 0x20	f j 0x31	f j 0x20	#zzzzzzzz# (ASCIIコード16進数)	(CR) 0x0d
9バイト	1バイト	1バイト	1バイト	8バイト	1バイト

3. MD5アルゴリズムを用いて、以下のデータから32バイトのハッシュ値を生成してください。

『xxxxxx:yyyyy:zzzzzzz』
 xxxxxx : WEB 制御のアドミニストレータ権限ユーザー名
 yyyy : 上記アドミニストレータ権限ユーザーのパスワード
 zzzzzzz : 手順2で取得した8バイトの乱数

コマンド送信方法

以下のコマンド形式で送信してください。

ヘッダー	データ部	終端記号
Hash値	制御コマンド (ASCII文字列)	(CR) 0x0d
32バイト	1バイト	1バイト

受信データ

ヘッダー	データ部	終端記号
f0j 0x30	制御コマンド (ASCII文字列)	(CR) 0x0d
1バイト	1バイト	1バイト

• WEB制御アドミニストレータ権限パスワード非設定時 (非プロテクトモード)

接続方法

1. ディスプレイのIPアドレスとポート番号を取得してディスプレイへ接続を要求してください。
2. ディスプレイからの応答があります。

データ部	空白	モード	終端記号
['N]TCONTROL[' (ASCII文字列)	f j 0x20	f0j 0x30	(CR) 0x0d
9バイト	1バイト	1バイト	1バイト

コマンド送信方法

以下のコマンド形式で送信してください。

ヘッダー	データ部	終端記号
f0j 0x30	制御コマンド (ASCII文字列)	(CR) 0x0d
1バイト	1バイト	1バイト

受信データ

ヘッダー	データ部	終端記号
f0j 0x30	制御コマンド (ASCII文字列)	(CR) 0x0d
1バイト	1バイト	1バイト

(お知らせ)

「Protocol2」で、問い合わせコマンドを送信した場合の応答は、コマンドの先頭4文字を省略したものを返信します。

例:

	制御コマンド 送信コマンド	応答	問い合わせコマンド 送信コマンド	応答
Protocol1	IMS:HM1	IMS	OM1	OM1:HM1
	—	—	OP#	OP#:1
	VPC:PIC100	VPC	OPC:PIC	OPC:PIC100
Protocol2	IMS:HM1	IMS	OM1	HM1
	—	—	OP#	1
	VPC:PIC100	VPC	OPC:PIC	PIC100

LAN経由制御に関するより詳細な説明は、以下のサポートサイトより入手してください。
 業務用ディスプレイ【まかせなサイト】 <https://panasonic.biz/cns/prodisplays/>