

RS232C/LAN command list
Full HD LCD Display MODEL : TH-32EF2

2022/6/7
Panasonic Connect Co.,Ltd.

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 OFF	POF	-	-	-	-			
	Power Status	-	-	QPW	QPW:*	Avail	0 / 1	0 : Standby (Off) 1 : Power ON (On)	
	Input Change	IMS (:***)	Not avail	QMI	QMI:***	Not avail	Control:(Toggle) HM1 / HM2 / DV1 / PC1 / VD1 / UD1 Inquiry: HM1 / HM2 / DV1 / PC1 / VD1 / UD1	HM1 : HDMI1 HM2 : HDMI2 DV1 : DVI-D PC1 : PC VD1 : VIDEO UD1 : USB	
	Audio Volume	AVL:***	Not avail	-	-	-	000 - 100	Volume value	
	Volume Up	AUU	Not avail	-	-	-	-		
	Volume Down	AUD	Not avail	-	-	-	-		
	Current Audio Volume	-	-	QAV	QAV:***	Not avail	000 - 100	Volume value	
	Audio Mute	AMT (:*)	Not avail	QAM	QAM: *	Not avail	Control:(Toggle) 0 / 1	Toggle (Audio mute Off) / (Audio mute On)	
	Video Mute	VMT (:*)	Not avail	QVM	QVM: *	Not 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 Adjustment	Picture Mode	VPC:MEN***	Not avail	QPC:MEN	QPC:MEN***	Not avail	STD / DYN / CNM	STANDARD / DYNAMIC / CINEMA	
	Backlight	VPC:BLT***	Not avail	QPC:BLT	QPC:BLT***	Not avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE Available when Power save is Off.	
	Picture Contrast	VPC:PIC***	Not avail	QPC:PIC	QPC:PIC***	Not avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE	
	Black Level Brightness	VPC:BLK***	Not avail	QPC:BLK	QPC:BLK***	Not avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE	
	Sharpness	VPC:SHP***	Not avail	QPC:SHP	QPC:SHP***	Not avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE Available except PC Input.	
	Color	VPC:COL***	Not avail	QPC:COL	QPC:COL***	Not avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE Available except PC Input.	
	Tint	VPC:TIN***	Not avail	QPC:TIN	QPC:TIN***	Not avail	000 ~ 100 DEF	0 ~ 100 DEF:SET SHIPPING VALUE Available except PC Input.	
	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.	
	Gamma	VWB:GMM**	Not avail	QWB:GMM	QWB:GMM**	Not avail	20 / 22 / 24 / 26	2.0 / 2.2 / 2.4 / 2.6	
	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	
	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)

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	Memory function	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
		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.
		Balance	AAC:BAL***	Not avail	QAC:BAL	QAC:BAL***	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
			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
		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
		PC Power Management	SSU:DPM*	Not avail	QSU:DPM	QSU:DPM*	Not avail	0 / 1	OFF / ON
		DVID Power Management	SSU:DPD*	Not avail	QSU:DPD	QSU:DPD*	Not avail	0 / 1	OFF / ON
		DVI-D1 Power Management	SSU:D1V*	Not avail	QSU:D1V	QSU:D1V*	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
		Power Save	SSU:ECO*	Not avail	QSU:ECO	QSU:ECO*	Not avail	0 / 1	OFF / ON
		Display Orientation	SSU:DOR*	Not avail	QSU:DOR	QSU:DOR*	Not avail	0 / 1	Landscape / Portrait
		Menu Position	SSU:OPS*	Not avail	QSU:OPS	QSU:OPS*	Not avail	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9	1:Upper/left 2:Upper/Center 3:Upper/right 4:Center/left 5:Center/Center 6:Center/right 7:Lower/left 8:Lower/Center 9:Lower/right
		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)		

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		Transmission Command[:Parameters]	Standby	Transmission Command[:Parameters]	Reply Command[:Parameters]	Standby			
S E T U P	Input Label	SSU:ILA+++***	Not avail	QSU:ILA+++	QSU:ILA+++ ***	Not avail	+++ HM1/HM2/DV1/PC1/VD1 *** INP / DV1 / DV2 / DV3 / BD1 / BD2 / BD3 / CTV / VCR / STB / SKP	INPUT HDMI1 / HDMI2 / DVI-D / PC / VIDEO (reset input name) / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)	
	Function Button Settings	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 (INPUT) HM1/HM2/DV1/PC1/VD1/UD1	(ACTION & MENU) SIG : Signal menu SSV : Screensaver menu SUT : Timer setup menu LNS : Network settings menu ECO : Power management settings menu OSH : AV Mute (INPUT) HM1 : HDMI1 HM2 : HDMI2 DV1 : DVI-D PC1 : PC VD1 : VIDEO UD1 : USB
		Function guide Settings	OSP:KFG*	Not avail	QSP:KFG	QSP:KFG*	Not avail	0 / 1	OFF / ON
	Multi Display Setup	Multi Display ON/OFF	MDC:*	Not avail	-	-	-	0 / 1	OFF / ON
		Multi Display Setup Detail	MDC:EXP* ** ** *** *** ***	Not avail	QDC:EXP	QDC:EXP* ** ** *** *** ***	Not avail	0 / 1, 01 ~ 05, 01 ~ 05, 000 ~ 100, 000 ~ 100, 001 ~ 025	OFF / ON, (Horizontal Scale) 1~5, (Vertical Scale) 1~5, (Bezel H Adjustment) 0~100, (Bezel V Adjustment) 0~100, (Location) (A1~E5)
		HDMI-CEC control	SHC:FNC*	Not avail	QHC:FNC	QHC:FNC*	Not avail	0 / 1	Disable / Enable
	HDMI-CEC settings	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"
	TimerSetup		TIM:PRG** * *** *** **** ***	Not avail	QIM:PRG**	QIM:PRG** * *** *** **** ***	Not avail	01 ~ 20, 0 / 1, SUN / MON / TUE / WED / THU / FRI / SAT / EVD, PON / POF, 0000 ~ 2359, HM1/HM2/DV1/PC1/VD1/UD1	Program number : 1~20, Function : OFF / ON, (*A lower parameter is not given when the upper setup is "OFF.") a day of the week : Sunday / Monday / Tuesday / Wednesday / Thursday / Friday / Saturday / Everyday Action type : PON / POF, Time : hour, minute, Start-up input : HDMI1/HDMI2/DVI-D/PC/VIDEO/USB

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			
S E T U P	Present Day	-	-	QIM:DAY	QIM:DAY***	Not avail	SUN / MON / TUE / WED / THU / FRI / SAT	(a day of the week): Sunday / Monday / Tuesday / Wednesday / Thursday / Friday / Saturday	
	Present Time	-	-	QIM:NOW	QIM:NOW0****	Not avail	0000 ~ 2359	Present time (hour:minute)	
	DAY TIME	TIM:DAT**** ** ** ** **	Not avail	QIM:DAT	QIM:DAT**** ** ** ** **	Not avail	YYYY : 2022 ~ 2099 MM : 01 ~ 12 DD : 01 ~ 31 hh : 00 ~ 23 mm : 00 ~ 59	(Year) (Month) (Day) (Hour) (Minute) format is "YYYYMMDDhhmm "	
USB media player Setup	USB media player	SUS:UMP*	Not avail	QUS:UMP	QUS:UMP*	Not avail	0 / 1	Disable / Enable	
	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)	
O p t i o n s M e n u	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 / DV1 / PC1 / VD1 / UD1	OFF / HDMI1 / HDMI2 / DVI-D / PC / VIDEO / USB	
	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 / DV1 / PC1 / VD1 / UD1	OFF / HDMI1 / HDMI2 / DVI-D / PC / VIDEO / USB	
	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 ID Setup (Serial ID Function and Display ID)	SIF:***	Not avail	QIF	QIF:***	Not avail	0 / 1 000~100	OFF / ON Display ID	
	LAN Control Protocol	OSP:LPN***	Not avail	QSP:LPN	QSP:LPN***	Not avail	LP1 / LP2	Procotol1 / Protocol2	
	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	Input search	ISH:FNC***	Not avail	QSH:FNC	QSH:FNC***	Not avail	OFF / ALL / PRI	OFF / ALL inputs / Custom
		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	
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 waring for this function.	
	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 waring 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)	
	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.	
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.		
O t h e r s	Recall	DDS	Not avail	-	-	-	-	Recall	
	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)	

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	USB media player Skip to the next playback file	UMP:NXT	Not avail	-	-	Not avail		Play next content Available using USB media player ※Supported by the main software Ver3.10 or later.
	USB media player Skip to the previous playback file	UMP:PRE	Not avail	-	-	Not avail		Play previous content Available using USB media player ※Supported by the main software Ver3.10 or later.
	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 ※Supported by the main software Ver3.10 or later.
	Inquiry about Signal Frequency of input signal	-	-	QFR	QFR:H***.*** V***.***	Not 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:*****	Not avail	(MAX 20 Characters)	Signal format information
	Inquiry about No Signal Warning	-	-	QST:NSW	QST:NSW*	Not avail	0 / 1	0 : Normal 1 : No Signal Warning *Reply "0" when No Signal Warning is set "OFF".
	Inquiry about No Signal Error	-	-	QST:NSE	QST:NSE*	Not avail	0 / 1	0 : Normal 1 : No Signal Error *Reply "0" when No Signal Error is set "OFF".
	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	32 F 22	32inch FHD model EF2
	Inquiry about Model	-	-	QID	QID: **. ***. *.	Not avail	32 EF2 J / E / W	32inch model market
	Software Version Main MCU	-	-	QRV	QRV: *. **** EF2	Avail	*Example 1.0000 EF2	Version model
	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
	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)
	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	

Protocol

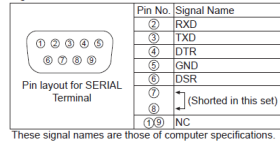
Communication parameters	
Signal level	RS-232C compliant
Synchronization method	Asynchronous
Baudrate	9600 bps
Parity	None
Character length	8 bits
Stop bit	1 bit
Flow control	None

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. If there are no parameters, the colon ":" does not need to be sent.

Signal names for SERIAL IN terminal:



通信規約

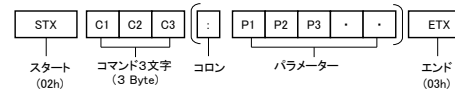
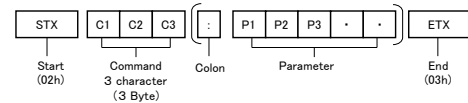
通信条件	
信号レベル	RS-232C準拠
同期方式	調歩同期 (非同期)
ボーレート	9600 bps
パリティ	なし
キヤラクター長	8 ビット
ストップビット	1 ビット
フロー制御	なし

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。パラメーターを必要としないコマンドを送信する場合は、コロン (:) を付けなくても構いません。

シリアル入力端子の信号名:



00	10	20	30	40	50	60	70												
00	DE	0	@	P	p	(Example)													
01	SH	D1	!	1	A	Q	a	q											
02	SX	D2	"	2	B	R	b	r											
03	EX	D3	#	3	C	S	c	s											
04	ET	D4	\$	4	D	T	d	t											
05	EO	NK	%	5	E	U	e	u											
06	AK	SN	&	6	F	V	f	v											
07	BL	EB	*	7	G	W	g	w											
08	BS	CN	(	8	H	X	h	x										
09	HT	EM	)	9	I	Y	i	y										
0A	LF	SB	*	:	J	Z	j	z											
0B	HM	EC	+	:	K	[	k	[
0C	CL	→	<	L	¥	l	l	Picture*85											
0D	CR	←	=	M] m	Character		STX	V	P	C	:	P	I	C	0	8	5	ETX
0E	SO	↑	>	N	^ n	Binary		02	56	50	43	3A	50	49	43	30	38	35	03
0F	SI	↓	?	O	_ o														

Notes:

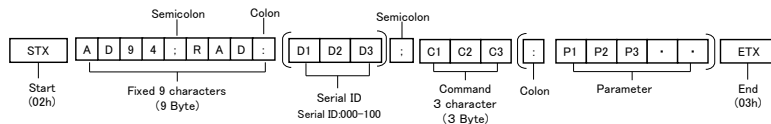
- If an incorrect command is sent, this unit will reply an "ER401" command to the computer.
- If customer send multiple commands, be sure to wait for the response for the first command to come before sending the next command.
- The length of the Parameters are different for each command.
- With the power off (stand-by mode), this display responds to "PON"/"OPW" command only.

<When sending command with Display ID>

- When sending command with Display ID, set [Options] - [Serial ID function] to "on".
- If Display ID is "00", any ID number in command is acceptable to control.
- If serial ID in command is "000", it is acceptable regardless of Display ID of target display.
- If a command is sent with serial ID, a response will be sent to the computer only in the following cases.
 - When [display ID and serial ID] is not 0: the display ID needs to match the serial ID.

How to send to add "Serial ID"

Serial ID Format	<STX>AD94:RAD:<NUM1><NUM2><NUM3>:*****ETX (Serial Control Only)
(ex.) Serial ID = 1	<STX>AD94:RAD:001:PON<ETX>



- AD94:RAD: is fixed characters when sending command with ID.
- Serial ID is 3 characters and specified with Display ID which will be controlled.
 - If Display ID is 1, Serial ID is 001.
 - If Display ID is 15, Serial ID is 015.

00	10	20	30	40	50	60	70														
00	DE	0	@	P	p	(コマンド例)															
01	SH	D1	!	1	A	Q	a	q													
02	SX	D2	"	2	B	R	b	r													
03	EX	D3	#	3	C	S	c	s													
04	ET	D4	\$	4	D	T	d	t													
05	EO	NK	%	5	E	U	e	u													
06	AK	SN	&	6	F	V	f	v													
07	BL	EB	*	7	G	W	g	w													
08	BS	CN	(	8	H	X	h	x												
09	HT	EM	)	9	I	Y	i	y												
0A	LF	SB	*	:	J	Z	j	z													
0B	HM	EC	+	:	K	[	k	[
0C	CL	→	<	L	¥	l	l	電源オンコマンド													
0D	CR	←	=	M] m	キャラクター		STX	P	O	N	ETX									
0E	SO	↑	>	N	^ n	バイナリ		02	50	4F	4E	03									
0F	SI	↓	?	O	_ o	ピクチャー*85設定		Character	STX	V	P	C	:	P	I	C	0	8	5	ETX	
								Binary		02	56	50	43	3A	50	49	43	30	38	35	03

その他

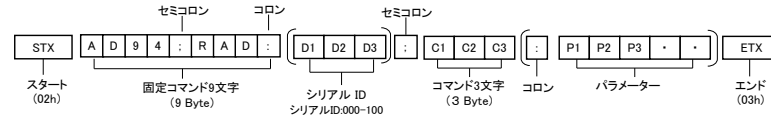
- 間違ったコマンドを受信すると、「ER401」という応答コマンドを返信します。
- 複数コマンドで制御する場合は、送信側が本機の応答を受け取ってから、次のコマンドを送信することを想定しています。
- パラメータの長さはコマンドごとに異なります。
- 電源「スタンバイ」状態（リモコンで電源「切」）中は「PON」「OPW」コマンド以外の動作は保証されません。

<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。
- ディスプレイIDが0の場合、コマンドに付与するIDはどのような数字でもコントロールします。
- 送信するコマンドのシリアルIDを「000」とすると、ディスプレイIDに関係なく制御します。
- ID付コマンドを送信した場合、以下の時のみコンピュータへの応答を返します。
 - ディスプレイID、シリアルID が0以外の場合:ディスプレイIDとシリアルID が一致した時

ID付コマンドフォーマット

Serial ID Format	<STX>AD94:RAD:<NUM1><NUM2><NUM3>:*****ETX (シリアル制御のみ)
(例) Serial ID = 1の場合	<STX>AD94:RAD:001:PON<ETX>



- AD94:RAD: は、シリアルID付きコマンドを送る場合に必要固定文字列です。
- 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。
 - ディスプレイID が 1 の場合、シリアルIDは 001 になります。
 - ディスプレイID が 15 の場合、シリアルIDは 015 になります。