

CONFIDENTIAL

SPECIFICATIONS

Model
P37FT05AUB
P65FT00AUB

FUJITSU GENERAL LIMITED

1. Application Range

This specification applies to the control of Wide Plasma Display Panel [with optional VIDEOBOARD] (Hereafter, referred to as PDP) with DTE terminal (Personal computer, etc., and hereafter, referred to as PC). Refer to User's Manual for the details of the function.

2. Communication Specification

The control of PDP with PC uses the RS-232C interface. PC sends each control command to PDP, and PDP can execute the function described in the function list. Basically, procedure structure is 'Handshake in which it starts with @G and terminates with @Q'. As a rule, the time-sharing by which the answering from PDP is monitored is used.

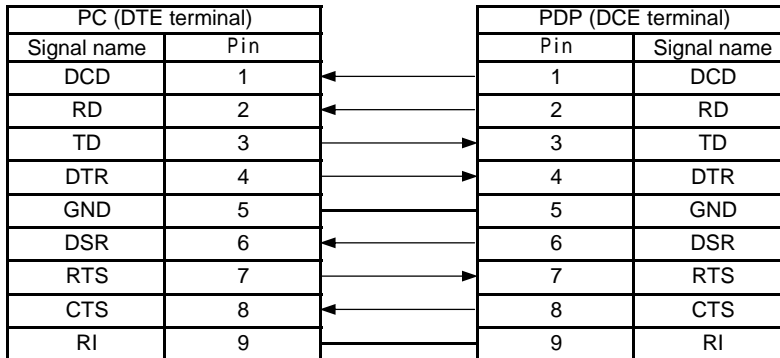
>Communication parameter

Baud rate	4800bps
Data length	8 bits
Parity	None
Stop bit	1 bit
Flow control	RTS/ CTS
Communication code	ASCII code
Reception time out	8 seconds

When status is not returned after sending the command, wait for the time out 8 seconds and send the command again.

3. Connection with PC

When using the DOS/V compatible machine, connect with it by the straight D-SUB 9 pins cable.



4. Communication Procedure

The handshake system is used for the communication between PC and PDP, and the status is returned against the command sending. Moreover, PC sends the communication start command and the communication termination command at the start and termination of the communication. The key of the remote control and the main unit becomes a disabling condition (does not function) because the communication has the priority when the communication starts after the @Q communication mode terminates.

4-1. Control format

The command and the reception status consist of ASCII code, and this specification describes it by the character string.

4-1-1. Communication start command

The communication starts.

@ G Cr

When this command is sent a text communication mode start,
and the communication command described in " 5.Function list " in clause 5 can be accepte
Wait for the normal reception status after sending this command.

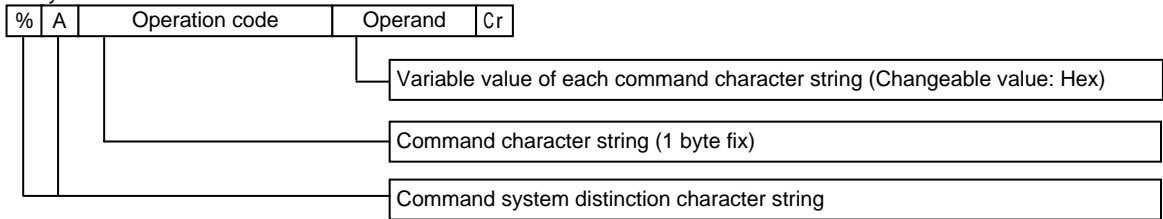
However, resend it even if reception status is not received for 8 seconds.

Resend it until returning the normal reception status because irregular data or

'irregular data + reception status' might return after sending the start command. Cr means Carriage Return.

4-1-2. Communication command

Command system



4-1-3. Status

Normal termination

@ S Cr

PDP returns the status to PC after PDP normally execute the command sent by PC.

Normal termination with condition data

@ S DT Cr

PDP sends the operating condition to PC after PC sends the condition reading command.

(Refer to 'Function list' in clause 5 for details of a reading command and above-mentioned DT value character string.)

Abnormal termination

@ E ST Cr

PDP sends it to PC if PDP does not normally execute the command sent by PC.

Above-mentioned ST value character string:

01: Communication error (For example, the cable is not correctly connected.)

02: Setting error (For example, the command is not correctly sent. [A non-corresponded command etc.])

03: Function execute error (For example, PDP fails in the execute of the command.)

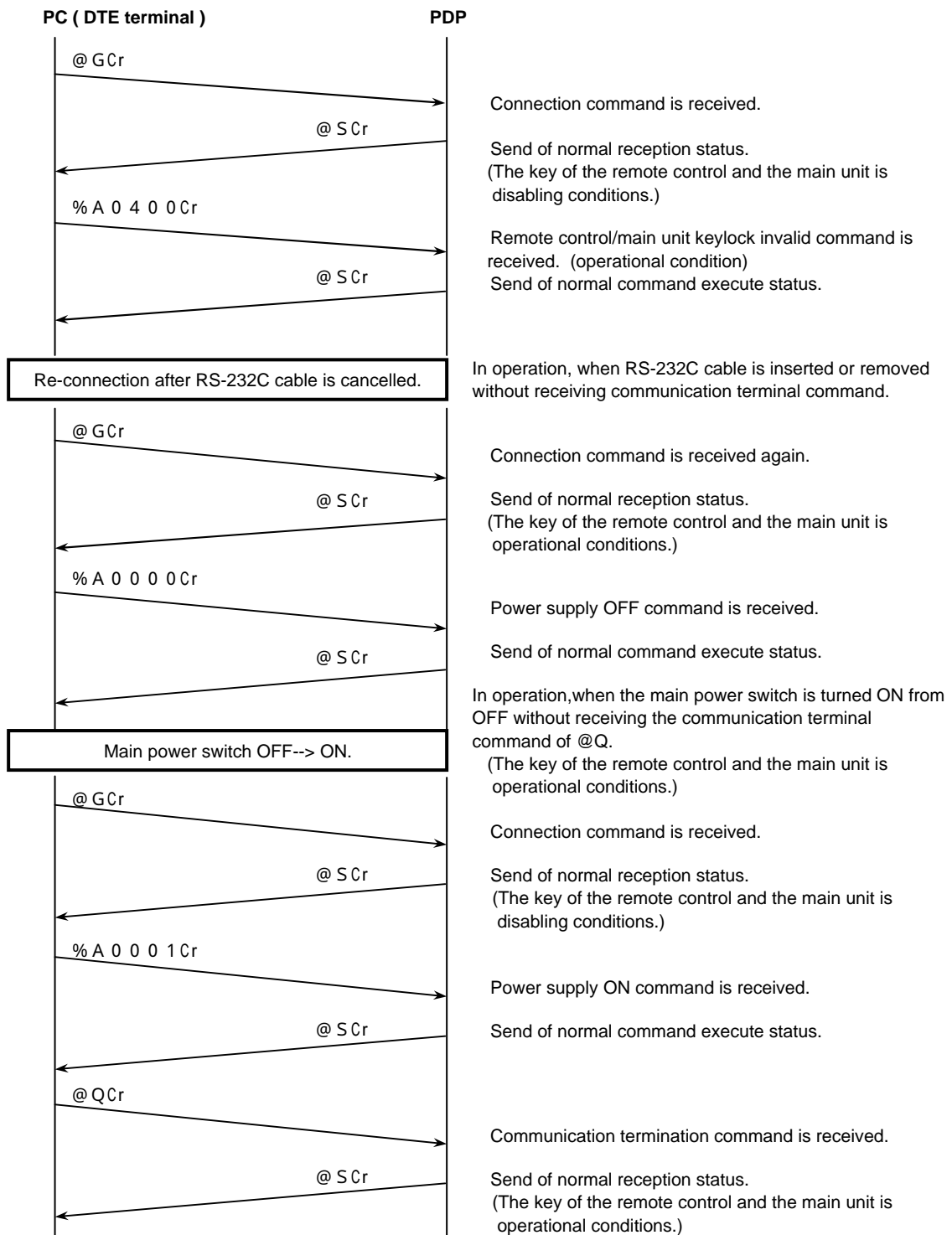
4-1-4. Communication termination command

The communication mode terminates.

@ Q Cr

4-2. Protocol procedure example

The protocol procedure example is as follows.



Communication code(hexadecimal) of protocol procedure example.

@GCr	= 40 47 0D	@SCr	= 40 53 0D
%A0400Cr	= 25 41 30 34 30 30 0D		
%A0000Cr	= 25 41 30 30 30 30 0D	%A0001Cr	= 25 41 30 30 30 31 0D
@QCr	= 40 51 0D		

5. Function List

'Cr' is added at the end of all communication commands. Moreover, variable value means the hex.

And only the command of "Power supply On/Off setting" and "Power supply condition reading" is controllable by the power supply standby state.

A power supply standby state shows the state of "Power supply condition Off: @S00"

Functions may not be available with some models and some device options.

Function	Communication command	P37FT05AUB P65FT00AUB	Note
System operation			
1	Power supply ON / OFF setting	Power supply OFF: %A0000 Power supply ON: %A0001	
	Power supply condition reading	%A0080 【 Return Code 】 @S00 : Power supply condition OFF @S01 : Power supply condition ON	
2	On screen automatic display ON / OFF setting	Automatic display OFF: %A0100 Automatic display ON: %A0101 Automatic display ON(Dark): %A0102	(Bright) OSD display setting
	On screen automatic display ON/OFF set condition reading	%A0180 【 Return Code 】 @S00 : Automatic display condition OFF @S01 : Automatic display condition ON @S02 : Automatic display condition ON(Dark)	
3	Setting of remote control/main unit keylock function	Remote control key is valid and main unit key is valid. : %A0400 Remote control key is valid and main unit keylock is invalid. : %A0401 Remote control key is invalid and main unit key is valid.: %A0402 Remote control key is invalid and main unit key is invalid.: %A0403	Note) When the communication is started again after the termination of the communication, the remote control key and the main unit key become a disabling condition (does not function) for the priority of the communication.
	Confirmation of remote control/main unit keylock setting	%A0480 【 Return Code 】 @S00 : Remote control key valid / Main unit key valid. @S01 : Remote control key valid / Main unit key invalid. @S02 : Remote control key invalid / Main unit key valid. @S03 : Remote control key invalid / Main unit key invalid.	
4	Initialization of user adjustable value	%A05	FACTORY DEFAULT
Video adjustment			
5	Video input selection	RGB_D-SUB input: %A1000	(RGB1)
		C-VIDEO_input: %A1010	(VIDEO3)
		C-VIDEO_input %A1011	(VIDEO4)
		VIDEO_input %A1012	(VIDEO1) (RCA)
		S-VIDEO_Mini-DIN input: %A1014	(VIDEO2)
		HDMI1 input: %A1016	(VIDEO5)
		HDMI2 input: %A1017	(VIDEO6)
		TV input: %A1030	
		IEEE1394 %A1040	
	Video input select condition reading	%A1080 【 Return Code 】 @S00 : RGB_D-SUB input @S10 : C-VIDEO @S11 : C-VIDEO @S12 : VIDEO @S14 : S-VIDEO_Mini-DIN input @S16 :HDMI1 input @S17 :HDMI2 input @S30 :TV input	

Function	Communication command	P37FT05AUB P65FT00AUB	Note
6	Display aspect selection	NORMAL: %A1100 WIDE1: %A1101 WIDE2: %A1102 ZOOM1 /Ture Signal %A1103 ZOOM2: %A1104	
	Display aspect select condition reading	%A1180 【 Return Code 】 @S00 : NORMAL @S01 : WIDE1 @S02 : WIDE2 @S03 : ZOOM1/Ture Signal @S04 : ZOOM2	
7	Picture mode setting	%A130F00	Natural
		%A130F01	Fine
		%A130F02	Effective
		%A130F03	Conventional
	Picture mode setting Condition reading	%A130F04 %A138F 【 Return Code 】 @S00 ~ @S04 : (Code details are referring to [which is a Picture mode setting command] the lower 2 figure.)	Still
8	Picture memory setting	【 Picture setting SAVE 】 %A150000 ~ %A150007 (Memory1 ~ 8) 【 Picture setting LOAD 】 %A150100 ~ %A150107 (Memory1 ~ 8)	
Audio			
9	Volume setting	【 Audio mute OFF 】 %A2200 (Volume Low) ~ %A2228 (Volume High) 【 Audio mute ON 】 %A2240	PDP adjustable range: 0 ~ 40
	Volume setting condition reading	%A2280 【 Return Code 】 @S00 (Volume Low) ~ @S28 (Volume High) @S40 ~ @S68 : Audio mute	
10	Tone balance setting	【 Balance 】 %A2306 (Left) ~ %A231A (Right) (Reference value:%A2310) 【 Bass 】 %A232A (Down) ~ %A2336 (Up) (Reference value:%A2330) 【 Treble 】 %A234A (Down) ~ %A2356 (Up) (Reference value:%A2350)	PDP adjustable range: -10 ~ +10 PDP adjustable range: -6 ~ +6 PDP adjustable range: -6 ~ +6
		【 Loudness 】 %A2360 (OFF) %A2361 (MIN.) %A2362 (MID.) %A2363 (MAX.) %A2380	
		【 Return Code 】 @S06 (Left) ~ @S1A (Right) : Balance %A2381 【 Return Code 】 @S0A (Down) ~ @S16 (UP) : Bass %A2382 【 Return Code 】 @S0A (Down) ~ @S16 (UP) : Treble %A2383	
	Tone balance setting condition reading	【 Return Code 】 @S00: Loudness OFF @S01: Loudness MIN. @S02: Loudness MID. @S03: Loudness MAX.	

Function	Communication command	P37FT05AUB P65FT00AUB	Note
11 Sound Mode	[Standard] %A250100		
	[Voice] %A250101		
	[Surround] %A250102		
	[Flat] %A250103		
	%A2581 【 Return Code 】 @S00: Standard @S01: Voice @S02: Surround @S03: Flat		
12 NIGHT Mode	[Standard] %A250000		
	[Night] %A250001		
	%A2580 【 Return Code 】 @S00: Standard @S01: Night		
Extended features			
13	White screen display	White screen display OFF: %A310300	
		White screen display ON: %A310301	
	White screen display condition reading	%A3183 【 Return Code 】 @S00 : White screen display OFF @S01 : White screen display ON	
14	Screen orbiter setting (Only RGB)	Screen orbiter OFF: %A310401	
		Minimum turn at constant intervals: %A310410	
		Standard turn at constant intervals: %A310411	
		Maximum turn at constant intervals: %A310412	
		Minimum turn at each mode change: %A310420	
		Standard turn at each mode change: %A310421	
		Maximum turn at each mode change: %A310422	
	Screen orbiter condition reading	%A3184 【 Return Code 】 @S01: Screen orbiter OFF @S10: Minimum turn at constant intervals @S11: Standard turn at constant intervals @S12: Maximum turn at constant intervals @S20: Minimum turn at each mode change @S21: Standard turn at each mode change @S22: Maximum turn at each mode change	

Function	Communication command	P37FT05AUB P65FT00AUB	Note
REMOTE CONTROL FUNCTION			It does not function when remote control is prohibited.
20 Power turns On/Off	%A328A00		
21 Power ON	%A328A01		
22 Power OFF	%A328A02		
23 Audio Mute	%A328C12		
24 OSD Display	%A328A08		
25 FINE	%A328A44		
26 Picture Memory	%A328A48		
27 Wide	%A328A10		
28 OFF-TIMER	%A328A41		
29 Video	%A328B16		
30 RGB	%A328B17		
31 LINK1394	%A328D61		
32 NIGHT	%A328C19		
33 Volume up	%A328C10		
34 Volume down	%A328C11		
35 Menu	%A328A22		
36 Menu cursor	%A328A23		
37 Menu cursor	%A328A20		
38 Menu cursor	%A328A21		
39 Menu cursor	%A328A24		
40 Enter	%A328A26		
41 Ch UP	%A328D0B		
42 Ch down	%A328D0C		
43 TV	%A328B0E		
44 1	%A328E40		
45 2	%A328E41		
46 3	%A328E42		
47 4	%A328E43		
48 5	%A328E44		
49 6	%A328E45		
50 7	%A328E46		
51 8	%A328E47		
52 9	%A328E48		
53 0	%A328E4A		
54 .	%A328D58		
55 ANTENNA	%A328D30		
56 CABLE	%A328D31		
57 EXIT	%A328D59		
58 FAVORITE	%A328D5A		
59 INFO	%A328D5B		
60 GUIDE	%A328D5C		
61 CC	%A328D5D		
62 MTS/STEREO	%A328D12		
63 CH RETURN	%A328D0E		
64 Picture Memory 1	%A328A50		
65 Picture Memory 2	%A328A51		
66 Picture Memory 3	%A328A52		
67 Picture Memory 4	%A328A53		
68 Picture Memory 5	%A328A54		
69 Picture Memory 6	%A328A55		
70 Picture Memory 7	%A328A56		
71 Picture Memory 8	%A328A57		