

CDP-D11
RS-232C INTERFACE MANUAL

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1. Outline

This manual has the technical information necessary to control the CDP-D11 with the RS-232C.

- Section 2 Explanation about the connection between CDP and PC.
- Section 3 Explanation about the communication conditions to communicate between the RS-232 and CDP.
- Section 4 Explanation about the packet format to be used for communication between CDP and PC.
- Section 5 Explanation about the remote mode which controls CDP independently of the main unit.
- Section 6 Explanation about each command to control CDP.
- Section 7 Explanation about each data which is output by CDP.

In this manual, “CDP” is substituted for CD PLAYER, and “PC” is substituted for the equipment, which controls CDP.

As for the numbers, the hexadecimal number is shown in *Italic* with “*H*” in the end.

Example: 18(decimal) = 12 <i>H</i> (hexadecimal)
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2. Physical connection

Form of the connector for the RS-232C equipped with CDP, name of the pins and the cables for connection are mentioned in this section.

2-1 Form of the connector and name of the pins

D-Sub 9 male pin is used in CDP-D11 at the RS-232C connector.

The name of pins is shown as below.

PIN NUM	NAME
1	OPEN
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	OPEN

Among them, the signal lines of 2: RXD, 3:TXD and 5:GND are connected to CDP.

4:DTR is connected to 6:DSR and 7:RTS is connected to 8:CTS inside of the CDP.

2-2 Connection of the cables necessary for control

Connections as follows are the minimum requirements to control CDP from PC.

CDP NAME	PIN NUM		PC NAME	D-Sub9(male pin)	D-Sub25(female pin)
RXD	2		TXD	3	2
TXD	3		RXD	2	3
GND	5		GND	5	7

Connection cables to meet these requirements are commercially available as what are called “cross cable” or “interlink cable”.

3. Communication conditions of RS-232C

Communication conditions between CDP and PC as follows.

Baud rate	: 9600bps
Character length	: 8bit
Parity	: Non parity
Stop bit	: 1bit

4. Communication packet format

The packet used in communication between CDP and PC is mentioned in this section.

4-1 Packet structure

It is changeable data length and composed of the following factors.

1	Header
2	Packet length
3	Format type
4	Category
5	Data
6	Terminator

The maximum packet length is 32 byte.

4-1-1 Header

Header is different between the packet transmission directions, that is PC to CDP or CDP to PC.

PC to CDP : 7EH
CDP to PC : 6FH

Packet length

Byte value from header to terminator.

The maximum packet length, 32 byte, occupies the value in the range from 05H to 20H.

4-1-3 Format type

The value of this factor always occupies 05H.

4-1-4 Category

The value of this factor always occupies 41H.

4-1-5 Data

According to the value of this factor, a control command or a request of condition is sent from PC to CDP.

And besides, a reply for control command or a current condition is sent from CDP to PC.

Details about these data are explained from section 6 onward.

4-1-6 Terminator

The value of this factor always occupies FFH.

4-2 Summary

When some data are sent from PC to CDP, packet structure is shown as follows.

Header	Packet length	Format type	Category	Data	Terminator
7EH	Packet length	05H	41H	Data.....	FFH

When PC receives some data from CDP, packet structure is shown as follows.

Header	Packet length	Format type	Category	Data	Terminator
6FH	Packet length	05H	41H	Data.....	FFH

Details about these data is explained from section 6 onward.

5. Remote mode

5-1 What is remote mode?

In CDP, processing way for RS-232C is different between during remote ON and during remote OFF.

To carry out the request from RS-232C, send off the remote ON command at first to set the CDP itself to remote ON mode.

When CDP is not in remote ON mode, it does not reply to a command from RS-232C.

5-2 Condition of CDP during remote ON

CDP with remote ON is capable of accepting any command via RS-232C. When CDP enters remote ON mode, CDP stops all workings and forcibly enters "STOP, CONTINUE, REPEAT OFF, A.CUE/PAUSE OFF, VARI SPEED OFF, SPEED 0.0%".

While CDP is remote ON, it accepts controls from RS-232C only and does not accept followings:

- Keys of main unit
- Wireless remote control
- Wired remote control
- Parallel remote input
- Relay playback

(Do not operated keys of main unit during remote ON to avoid malfunctions.)

While CDP is remote ON, output for the following operation can be done according to an alternation of inside condition:

- Parallel remote
- Relay playback

By sending REMOTE OFF command, CDP enters REMOTE OFF mode.

5-3 Condition of CDP during remote OFF

When the power is turned on, CDP is in this mode.

While CDP is remote OFF, remote ON, CDP information (6-6-1 to 6-6-6) PROGRAM WRITE command is acceptable.

5-4 Summary

To control CDP with RS-232C, it is necessary to send remote ON command after turning on the power to enter remote ON mode.

CDP does not accept input other than the one from RS-232C during remote mode.

6. Transmission data

6-1 Structure of this section

In this section, details about each command are mentioned.

The commands are classified as function, data length, and data details of function and example of transmission packet.

Function: General functions of commands are shown.

Data length: Data length of commands is shown.

Data: A fixed data is shown in hexadecimal notation. As for available value, meaning and range of the value are explained.

Details of function: Explanation of the function of commands, notation for command use and etc. are mentioned.

Example of transmission packet Data:

Concrete examples of transmission packet are shown.

6-2-1 REMOTE MODE ON

Function: To set the remote mode ON.

Data length: 2 bytes

Data: 10 H, 01H status

Details of function: Make CDP remote on status.

*This function is not acceptable when a Disc Error status.

Transmission packet:

7EH, 07H, 05H, 41H, 10H, 01H, FFH

6-2-2 REMOTE MODE OFF

Function: To set the remote mode OFF

Data length: 2 bytes

Data: 10 H, 02 H

Details of function: Make CDP remote OFF status.

Transmission packet:

7EH, 07H, 05H, 41H, 10H, 02H, FFH

6-3-1 PLAY

Function: To start playback

Data length: 2 bytes

Data: 02 H, 01 H

Details of function: This command starts playback.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 01H, FFH

6-3-2 STOP

Function: To stop playback

Data length: 2 bytes

Data: 02 H, 02 H

Details of function: This command stops during playback/pause status.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 02H, FFH

6-3-3 PAUSE ON/OFF

Function: To pause playback, to cancel pause mode

Data length: 2 bytes

Data: 02 H, 03 H

Details of function: This command has the same function as the PAUSE key in the main unit or the remote control.

In short, this command changes playback mode to pause mode, and pause mode to playback mode.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 03H, FFH

6-3-4 PAUSE ON

Function: To pause

Data length: 2 bytes

Data: 02 H, 06 H

Details of function: This commands changes playback mode to pause mode.

Different from “PAUSE ON/OFF” command, this command does not cancel pause mode so, if this command is sent during playback pause mode, playback does not start.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 06H, FFH

6-3-5 KEY OFF

Function: Set an OFF CODE to the key.

Data length: 1 byte

Data: 00H

Details of function: To stop REW/FF/SLOW REW/SLOW FF command.

Transmission packet:

7EH, 06H, 05H, 41H, 00H, FFH

6-3-6 REW

Function: To start rewinding.

Data length: 2 bytes

Data: 02 H, 13 H

Details of function: This command has the same function when REW key in a Remote control is pressed.

To stop REW, send “FF/REW OFF” command.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 13H, FFH

6-3-7 FF

Function: To start fast forward

Data length: 2 bytes

Data: 02 H, 14 H

Details of function: This command has the same function when FF key in the remote control is pressed.

To stop FF, send "KEY OFF" command.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 14H, FFH

6-3-8 SLOW REW

Function: To start slow rewinding.

Data length: 2 bytes

Data: 02 H, 17 H

Details of function: This command has the same function when SLOW REW key in the remote control is pressed.

To stop the SLOW REW, transmit a KEY OFF command.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 17H, FFH

6-3-9 SLOW FF

Function: To start slow fast forward

Data length: 2 bytes

Data: 02 H, 18 H

Details of function: This command has the same function when SLOW FF key in the remote control is pressed.

To stop the SLOW FF, transmit a KEY OFF command.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 18H, FFH

6-3-10 PREV

Function: To skip back to a previous Track.

Data length: 2 bytes

Data: 02 H, 15 H

Details of function: This command has the same function when AMS- key in the main unit is pressed(Acceptable for playback/pause status)
When this command is sent in the top of a track in playback pause mode(Less than a second, except first track), playback starting point goes back to the top of the previous track, and playback pause mode is remained.

When this command is sent in the middle of a track in playback pause mode(more than a second, except CUE search/PAUSE), starting point goes back to the top of the current track, and playback pause mode is remained.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 15H, FFH

6-3-11 NEXT

Function: To skip forward to the next track

Data length: 2 bytes

Data: 02 H, 16 H

Details of function: This command has the same function when AMS+ key in the main unit is pressed
When this command is sent during playback (except last track), playback starts from the next track.

When this command is sent in playback pause mode, starting point goes forward to the top of the next track, and playback pause mode is remained.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 16H, FFH

6-3-12 TRACK PLAY

Function: To start from the specified track.

Data length: 4 bytes

Data: *03 H, 42 H, 01 H*, Track No.

Track No.: 1 (*01 H*) to 99 (*63 H*)

* Only valid for CD Track No.

Details of function: This is the command to start playback from the specified track by entering the track number.

PROGRAM MODE is not acceptable for this command.

Example of transmission packet: Start playback from the 10th track.

7EH, 09H, 05H, 41H, 03H, 42H, 01H, 0AH, FFH,

6-3-13 TRACK PAUSE

Function: To pause playback in the specified track.

Data length: 4 bytes

Data: *03 H, 43 H, 01 H*, Track No.

Track No.: 1 (*01 H*) to 99 (*63 H*)

* Only valid for CD Track NO.

Details of function: This is the command to pause playback at the top of the specified track by entering the track number.

PROGRAM MODE is not acceptable for this command.

Example of transmission packet: Pause playback at the top of the 12th track.

7EH, 09H, 05H, 41H, 03H, 43H, 01H, 0CH, FFH

6-3-14 EJECT

Function: To eject a disc.

Data length: 2 bytes

Data: *02 H, 40 H*

Details of function: This command has the same function when EJECT key in the main unit is pressed.

When this command is send with a disc inside, the disc will be ejected.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 40H, FFH

6-3-15 CONTINOUS MODE

Function: To continue playback.

Data length: 2 bytes

Data: *02 H, 80 H*

Details of function: Playback continues next track during playback.

Cancel 1 Track pause mode.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 80H, FFH

6-3-16 1 TRACK PAUSE MODE

Function: To pause at the next track.

Data length: 2 bytes

Data: *02 H, 81 H*

Details of function: This is the command to pause track, which is changed to next track during playback.

This mode would be canceled after the pause.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 81H, FFH

6-3-17 MARK

Function: To mark.

Data length: 2 bytes

Data : *02 H, 90 H*

Details of function: This command has the same function when MARK key in the remote control is pressed.

When this command is sent during playback/pause, its

memorizes playback point.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 90H, FFH

6-3-18 LOCATE

Function: To locate.

Data length: 2 bytes

Data: *02 H, 91 H*

Details of function: This command has the same function when LOCATE in the remote control

Transmission packet:

7EH, 07H, 05H, 41H, 02H, 91H, FFH

6-3-19 DIRECT MARK

Function: To mark playback point from set CD.

Data length: 7 bytes

Data: *02 H, 92 H, 01 H, Track No., Min, Sec, Frm*

Track No. : *1(01H) to 99(63H)*

*Valid for CD track No.

Min: *0(00H) to +99(63H)*

Sec: *0(00H) to +59(3BH)*

Frms: *0(00H) to +74(4AH)*

*Specify a Time frame which relative to an each Track time.

Details of function: This command has the same function in the MENU specified the playback point from PC directly.

Example of transmission packet:

Mark 2 track playbacks 3 minutes and 45 seconds with 67 frame.

*7EH, 0CH, 05H, 41H, 02H, 92H, 01H, 02H,
03H, 2DH, 43H, FFH*

6-3-20 REPEAT OFF

Function: To cancel the Repeat Mode.

Data length: 2 bytes

Data: 02H, A0H

Details of function: This command makes Repeat Mode to REPEAT OFF status.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, A0H, FFH

6-3-21 ALL REPEAT

Function: To check ALL REPEATS.

Data length: 2 bytes

Data: 02H, A1H

Details of function: This command makes Repeat Mode to ALL REPEAT status.

CDP repeats Track table * .

*Track table is a range, which memorized Track turn.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, A1H, FFH

6-3-22 1 TRACK REPEAT

Function: To cancel the AUTO PAUSE/CUE Mode.

Data length: 2 bytes

Data: 02H, A2H

Details of function: This command makes Repeat Mode to 1 TRACK REPEAT status. Specified/Playback track would be playback continuously.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, A2H, FFH

6-3-23 AUTO OFF

Function: To cancel AUTO PAUSE/CUE Mode.

Data length: 2 bytes

Data: 02H, B0H

Details of function: This command makes AUTO PAUSE/CUE to AUTO OFF status.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, B0H, FFH

6-3-24 AUTO PAUSE

Function: To set AUTO PAUSE

Data length: 2 bytes

Data: 02H, B1H

Details of function: This command makes AUTO PAUSE/CUE mode to AUTO PAUSE status. AUTO PAUSE is the function to pause playback automatically in the end of each track.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, B1H, FFH

6-3-25 AUTO CUE

Function: To set AUTO CUE

Data length: 2 bytes

Data: 02H, B2H

Details of function: This command makes AUTO PAUSE/CUE Mode to AUTO CUE status.
AUTO CUE is the function to search Cue Point and pause in the specified track or the track that is changed during packet.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, B2H, FFH

6-3-26 VARI SPEED OFF

Function: To cancel Vari Speed.

Data length: 2 bytes

Data: 02H, C0H

Details of function: This command makes Vari Speed Mode to Speed Off status.

CDP is in this status after the REMOTE ON.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, C0H, FFH

6-3-27 VARI SPEED ON

Function: To set Speed On

Data length: 2 bytes

Data: 02 H, C1 H

Details of function: This command makes Vari Speed Mode to SPEED ON status

Transmission packet:

7EH, 07H, 05H, 41H, 02H, C1H, FFH

6-3-28 SPEED CHANGE

Function: To change Speed value.

Data length: 3 bytes

Data: 02 H, C2 H, Speed

Speed: From - 25(E7H) to +25(19H)

*CDP indicate that -12.5% to +12.5%.

Details of function: This command set the value of data to Speed.

In this case, a playback time also change, TOC DATA or TRACK TIME need to request again.

Example of transmission packet: Set -24/-12.0%/ o Speed.

7EH, 08H, 05H, 41H, 02H, C2H, E8H, FFH

6-3-29 PLAY MODE CONTINUE

Function: To set Play Mode to CONTINUE.

Data length: 2 bytes

Data: 02 H, D0 H

Details of function: This command makes Play Mode to CONTINUE status.

CDP is in this status after the REMOTE ON.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, D0H, FFH

6-3-30 PLAY MODE SHUFFLE

Function: To set Play Mode to SHUFFLE.

Data length: 2 bytes

Data: *02H, D1H*

Details of function: This command makes Play Mode to SHUFFLE status.

This status makes CDP playback in random order.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, D1H, FFH

6-3-31 PLAYMODE PROGRAM

Function: To set Play Mode to PROGRAM.

Data length: 2 bytes

Data: *02H, D2H*

Details of function: This command makes Play Mode to PROGRAM status.

This status can be playback as PROGRAM WRITE request order.

Transmission packet:

7EH, 07H, 05H, 41H, 02H, D2H, FFH

6-4-1 ELAPSED TIME

Function: To set to send out elapsed time

Data length: 2 bytes

Data: *07H, 10H*

Details of function: This is the command to set whether elapsed time displayed

in CDP will be sent out or not.

CDP can send out the new time data whenever the time is renewed.

CDP sends out only the elapsed times. To display remain time, first check the

Time of whole track by "TRACK TIME" command and then subtract the elapsed time from the time of whole track.

Transmission packet:

7EH, 07H, 05H, 41H, 07H, 10H, FFH

6-4-2 ELAPSED OFF

Function: To stop elapsed time transmission.

Data length: 2 bytes

Data: *07H, 11H*

Details of function: This is the command to stop whether elapsed time displayed in CDP sent out or not.

Transmission packet:

7EH, 07H, 05H, 41H, 07H, 11H, FFH

6-5 PROGRAM WRITE

Function: To set order of playback Track.

* Track table memorizes order of playback Track.

Data length: 19 bytes

Data: *1020H, PACKET No.01H (STEP 1DISC No.), STEP1Track No.*

01H (STEP2 DISC No.), STEP2 Track No.,

01H (STEP3 DISC No.), STEP3 Track No.,

01H (STEP 4DISC No.), STEP4 Track No.,

01H (STEP5 DISC No.), STEP5 Track No.,

01H (STEP6 DISC No.), STEP6 Track No.,

01H (STEP7 DISC No.), STEP7 Track No.,

01H (STEP8 DISC No.), STEP8 Track No.,

PACKET No.: 1 (01h) to 4 (04H)

STEP* Track No. : 1 (01H) to +99 (63H)

*Only valid for CD Track No.

Details of function: CDP sets the data to the track table.

When the Packet No. is 1, CDP sets the data,
changes the Play Mode to PROGRAM and stop playback.

CDP ignores the Track No. which is not exist.

When CDP does not set the data and the PACKET No is 2 to
4, Play Mode is in a out of PROGAM.

Example of transmission packet:

To forward 20, 18, 16, 14, 12, 10, 8, 6 Track to Track table,
set the Play Mode to PROGRAM and stop playback.

7EH, 18H, 05H, 41H, 10H, 20H, 01H, 01H,
14H, 01H, 12H, 01H, 10H, 01H, 0EH, 01H
0CH, 01H, 0AH, 01H, 08H, 01H, 06H, FFH

6-6-1 MODEL DATA

Function: To check Model information status.

Data length: 2 bytes

Data: 20H, 10H

Details of function: CDP outputs MODEL DATA(Disc number, Feature(function)),
when it receives this command.

1 Disc and PROGRAM WRITE of feature for CDP-D11.

Transmission packet:

7EH, 07H, 05H, 41H, 20H, 10H, FFH

6-6-2 STATUS DATA

Function: To check CDP information.

Data length: 2 bytes

Data: 20H, 20H

Details of function: CDP outputs this data when it receives this command.

Transmission packet:

7EH, 07H, 05H, 41H, 20H, 20H, FFH

6-6-3 DISC DATA

Function: To check the DISC status.

Data length: 2 bytes

Data: *20H, 21H*

Details of function: CDP outputs this data when it receives this command.

Transmission packet:

7EH, 07H, 05H, 41H, 20H, 21H, FFH

6-6-4 MODEL NAME

Function: To check Model name.

Data length: 2 bytes

Data: *20H, 22H*

Details of function: CDP outputs MODEL NAME packet when it receives this command.

Transmission packet:

7EH, 07H, 05H, 41H, 20H, 22H, FFH

6-6-5 TOC DATA

Function: To check TOC information

Data length: 3 bytes

Data: *20H, 24H, 01H*

Details of function: CDP outputs TOC DATA when it receives this command.

It would be need to request again if you change the speed in Vari Speed On status.

Transmission packet:

7EH, 08H, 05H, 41H, 20H, 24H, 01H, FFH

6-6-6 TRACK TIME

Function: To check Track information

Data length: 4 bytes

Data: 20H, 25H, 01H, Track No.

Track No.: 1(01H) to +99 (63H)

Only valid for CD Track No.

Details of function: CDP outputs the Track time when it receives this command.

It would be need to request again if you change the speed in
Vari Speed On status.

Example of transmission packet: To check 10 Tracks

7EH, 09H, 05H, 41H, 20H, 25H, 01H, 01H, 0AH, FFH

7. Reception Data

7-1 Structure of this section

This section will provide detail descriptions about each received data.

Each receive data's explanation is composed of items including Function,
Data length, Data, Details of function and Example of received packet.

Function: General function of received data.

Data length: Data length of received command data.

Data: Fixed data uses hexadecimal notation.

For the varying values, description of their meaning and range they vary
will be provided.

Details of function: Detail explanation on the receive data and precautions to use
it.

Examples of receive packet/Data: Gives concrete examples of receive packet.

7-2-1 PLAY

Function: Started playback.

Data length: 2 bytes

Data: 02H, 01H

Details of function: Indicates playing status.

Example of receive packet:

6FH, 07H, 05H, 41H, 02H, 01H, FFH

7-2-2 STOP

Function: Operation has stopped.

Data length: 2 bytes

Data: 02H, 02H

Details of function: This command indicates operation has stopped by "STOP"

Receive packet:

6FH, 07H, 05H, 41H, 02H, 02H, FFH

7-2-3 PAUSE

Function: playback has paused.

Data length: 2 bytes

Data: 02H, 02H

Details of function: This command indicates playback has paused.

Receive packet:

6FH, 07H, 05H, 41H, 02H, 03H, FFH

7-2-4 OPEN (EJECT)

Function: Ejected discs.

Data length: 2 bytes

Data: 02H, 40H

Details of function: It ejects a disc and indicates that CDP is a **Stay Disc** status.

Receive packet:

6FH, 07H, 05H, 41H, 02H, 40H, FFH

7-3-1 MODEL DATA

Function: CDP model information

Data length: 4 bytes

Data: 20H, 10H, 01H, Feature

Feature : b7: 0 fix

b6: 1 fix

b5 to b0: CDP-D11 0 fix

Details of function: Information on CDP's function.

Receive packet:

6FH, 09H, 05H, 41H, 20H, 10H, 01H, 40H, FFH

7-3-2 STATUS DATA

Function: Internal status

Data length: 7 bytes

Data: 20H, 20H, Data 1, Data2, 00H, 01H, Track No.

Data1: b7, b6: 0 fix

b5: No Disc?

0 : Disc

1 : No Disc

b4: 0 fix

b3-b0: PLAYER status

0000: STOP

0001: PLAY

0010: PAUSE

0011: OPEN(Stay Disc)

0100 to +1110: Reserved

1111: not available to play

Data2 : b7: TOC read?

0 : TOC read not yet

1 : TOC read done

b6: 0 Fix

b5-b4: REPEAT Mode

00: REPEAT OFF

01: ALL REPEAT

10: 1 TRACK REPEAT

11: AB REPEAT

b3-b0: PLAY Mode

0000: CONTINUE
0001: SHUFFLE
0010: PROGRAM
0011 to 1111: Reserved
Track No.:0 (00H) to 99(63H)
Track No. in playback(00H)

Details of function: Indicates CDP'S internal state.

When CDP receives "STATUS" command,
it outputs this data.

When the "REPEAT Mode/PLAY Mode" in Data2
changes, CDP outputs this data.

Examples of receive packet: Indicates Playback internal state

6FH, 0CH, 05H, 41H, 20H, 20H, 01H, 80H,
00H, 01H, 01H, FFH

7-3-3 MODEL NAME

Function: Model name information.

Data length: 16 bytes

Data: 20H, 22H, Model Name (14 bytes, remain data is filled with
00H.)

Details of function: Out puts model name using ASCII character string.

Receive packet:

6FH, 15H, 05H, 41H, 20H, 22H, 43H, 44H,
50H, 2DH, 44H, 31H, 31H, 00H, 00H, 00H,
00H, 00H, 00H, 00H, FFH

7-4-1 TRACK CHANGE

Function: Track has changed.

Data length: 6 bytes

Data: 20H, 50H, 01H Track No., Min, Sec

Track No.: 1 (01H) to +99 (63H)

Track No. in playback

Min: 0 (00H) to +99 (63H)

Sec: 0 (00H) to +59 (3BH)

Details of function: CDP outputs this data when it complete searching or, the Track has changed in a playback/pause status.

Example of receive packet: 2 Track (playback time: 3m10s)

6FH, 0BH, 05H, 41H, 20H, 50H, 01H, 02H, 03H, 0AH, FFH

7-4-2 ELAPSED TIME

Function: Elapsed time in playback mode.

Data length: 6 bytes

Data: 20H, 51H, Track No., Index, Min, Sec

Track No.: 1 (00H) to +99 (63H)

* Track No in playback.

Index: 0 (00H) to +99 (63H)

* Index in playback.

* PC indicate “ – “ for Elapsed Time when it is 0.

Min: 0 (00H) to +99 (63H)

Sec: 0 (00H) to +59 (3BH)

Details of function: After receiving ELAPSED TIME command, CDP outputs elapsed time data in each second.

Example of receive packet:

The third track playbacks 4 minutes and 56 seconds.

6FH, 0BH, 05H, 41H, 20H, 51H, 03H, 01H
04H, 38H, FFH

7-4-3 TOC DATA

Function: Information on TOC.

Data length: 8 bytes

Data: 20H, 60H, 01H First Track No., Last Track No., Min, Sec,
00H(Frm)

First Track No.: 1 (01H) to +99 (63H)

Last Track No.: 1 (01H) to +99 (63H)

Min: 0 (00H) to +99 (63H)

Sec: 0 (00H) to +59 (3BH)

Details of function: Information on start track, last track and total playback time of the CD. CDP outputs this data when it received " TOC DATA".

It outputs the value, which follows numeric of speed when CDP in Speed On status.

Example of receive packet:

The disc with starting track1, end track4 and 12 minutes and 34 seconds playback time.

6FH, 0DH, 05H, 41H, 20H, 60H, 01H, 01H, 04H,
0CH, 22H, 00H, FFH

7-4-4 TRACK TIME DATA

Function: Track time information.

Data length: 6 bytes

Data: 20H, 62H, 01H Track No., Min, Sec,

Track No: 1 (01H) to +99 (63H)

Min: 0 (00H) to +99 (63H)

Sec: 0 (00H) to +59 (3BH)

Details of function: Information on track time.

CDP outputs this data when it received " TRACK TIME DATA" command.

It outputs the value, which follows the numeric of speed when CDP in Speed On status.

Example of receives packet: One track's time is 2 minutes and 34 seconds.

6FH, 0BH, 05H, 41H, 20H, 62H, 01H, 01H, 02H,
22H, FFH

7-5-1 NO DISC

Function: There is no CD.

Data length: 2 bytes.

Data: *20H, 80H*

Details of function: CDP outputs this data when there is no CD or CD that specified request command (Disc 1 only).

Receive packet:

6FH, 07H, 05H, 41H, 20H, 80H, FFH

7-5-2 DISC EXIST

Function: TOC READ completed information

Data length: 2 bytes

Data: *20H, 81H*

Details of function: CDP outputs this data when TOC READ is completed.

Receive packet:

6FH, 07H, 05H, 41H, 20H, 80H, FFH

7-5-3 TRACK END

Function: Specified track switched.

Data length: 2 bytes

Data: *20H, 83H*

Details of function: CDP outputs this data after a PAUSE when track is switched in playback and 1 TRACK PAUSE command in transmit.

Receive packet:

6FH, 07H, 05H, 41H, 20H, 83H, FFH

7-5-4 TRACK LAST 30SEC

Function: Remaining time of playback track is 30 sec.

Data length: 2 bytes

Data: 20H, 84H

Details of function: CDP outputs this data when the remaining time of playback track is 30 sec.

The track below 30 sec transmits this command just after playback.

Receive packet:

6FH, 07H, 05H, 41H, 20H, 84H, FFH

7-5-5 NO TOC DATA

Function: There is no TOC information

Data length: 2 bytes

Data: 20H, 89H

Details of function: CDP outputs this data when it receives `TOC DATA`

Receive packet:

6FH, 07H, 05H, 41H, 20H, 89H, FFH

7-5-6 WRITE COMPLETE

Function: PROGRAM WRITE has completed.

Data length: 2 bytes

Data: 20H, 91H

Details of function: CDP outputs this data when PROGRAM WRITE command is written.

Receive packet:

6FH, 07H, 05H, 41H, 20H, 91H, FFH

7-5-7 NO DISC

Function: There is no specified CD.

Data length: 3 bytes

Data: 20H, 93H

Details of function: When there is no CD for the DISC DATA command, it outputs this data.

Receive packet:

6FH, 08H, 05H, 41H, 20H, 93H, 01H, FFH

7-5-8 DISC EXIST WITH NO.

Function: To transmit CD No. which read TOC completely.

Data length: 3 bytes

Data: *20H, 95H*

Details of function: After the CD was inserted, it outputs this data with TOC completed.

Receive packet:

6FH, 08H, 05H, 41H, 20H, 95H, 01H, FFH

7-5-9 CAN'T WRITE

Function: Impossible to write PROGRAM

Data length: 2 bytes

Data: *20H, 9AH*

Details of function: CDP outputs this data when Track table.

Receive packet:

6FH, 07H, 05H, 41H, 20H, 9AH, FFH

7-6 MARK POSITION

Function: To output MARK position

Data length: 7 bytes

Data: *20H, A0H, 01H, Track No, Min, Sec, Frm*

Track No.: 1 (*01H*) to 99 (*63H*)

Min: 0 (*00H*) to 99 (*63H*)

Sec: 0 (*00H*) to 59 (*3BH*)

Firm: 0 (*00H*) to 74 (*4AH*)

Details of function: This is the command to output current Mark Position to the MARK command.

Example of receive packet:

Marked 2 Tracks 3 minutes and 45 seconds with 67 frame.

6FH, 0CH, 05H, 41H, 20H, A0H, 01H, 02H, 03H, 2DH,
43H, FFH

7-7-1 UNDEFINED COMMAND

Function: Received an undefined command.

Data length: 2 bytes

Data: 40H, 01H

Details of function: Indicates that the received command is undefined when CDP receives an undefined command, it outputs this data.

Receive packet:

6FH, 07H, 05H, 41H, 40H, 01H, FFH

7-7-2 NO FUNCTIONS

Function: Received the command, which is not corresponding to CDP.

Data length: 2 bytes

Data: 40H, 02H

Details of function: When CDP receives a command, which is not corresponding to CDP-D11, it outputs this data.

Receive packet:

6FH, 07H, 05H, 41H, 40H, 02H, FFH

7-7-3 IMPOSSIBLE

Function: Impossible to execute

Data length: 2 bytes

Data: 40H, 03H

Details of function: Indicates that received command is impossible to execute. CDP outputs this information when the command does not fulfill the condition to be executed.

Receive packet:

6FH, 07H, 05H, 41H, 40H, 03H, FFH