

DP-105D

RS-485 to DMX interface 【 User Manual 】



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Chapter 1 Introduction

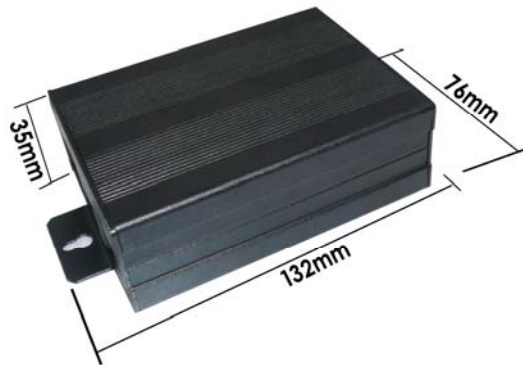
1-1 Features

Function of DP-105D:

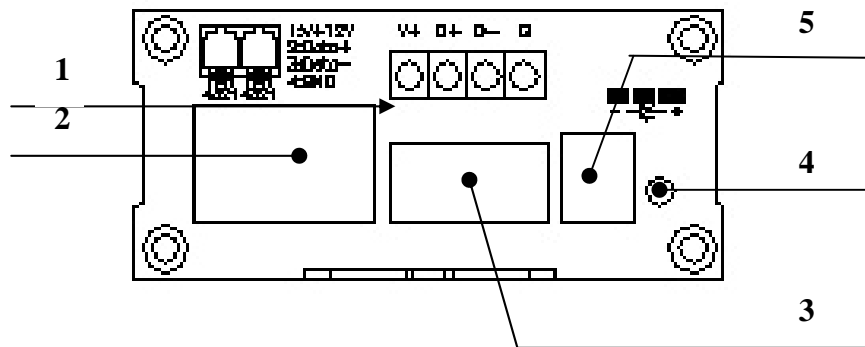
- RS-485 to DMX interface.

1-2 Specifications

- Voltage Input : DC 12V
- Signal Output : RS-485 Signal Output : DMX
- Size : 132 (W) *35 (H) *76 (D) mm
- Weight : 220g

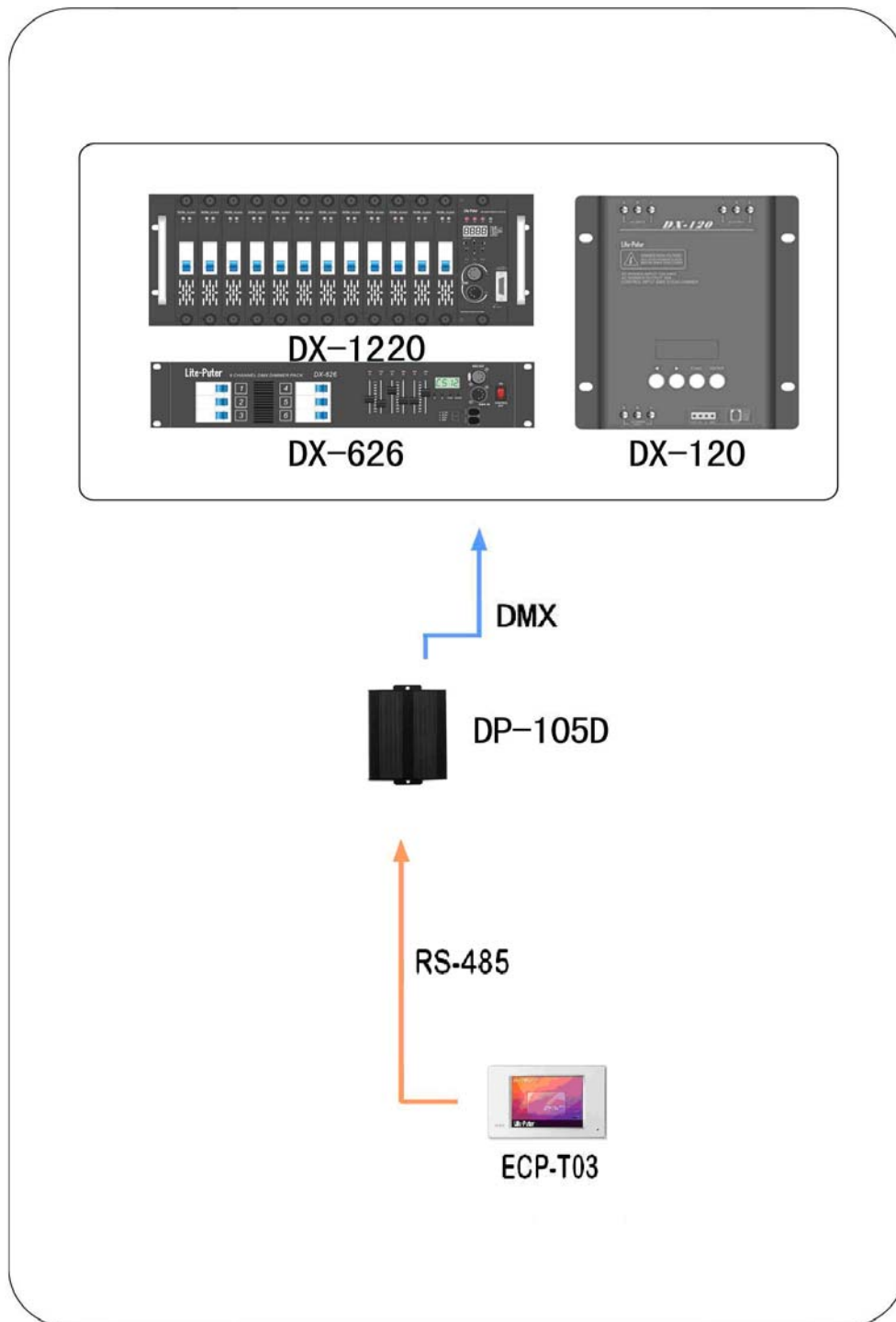


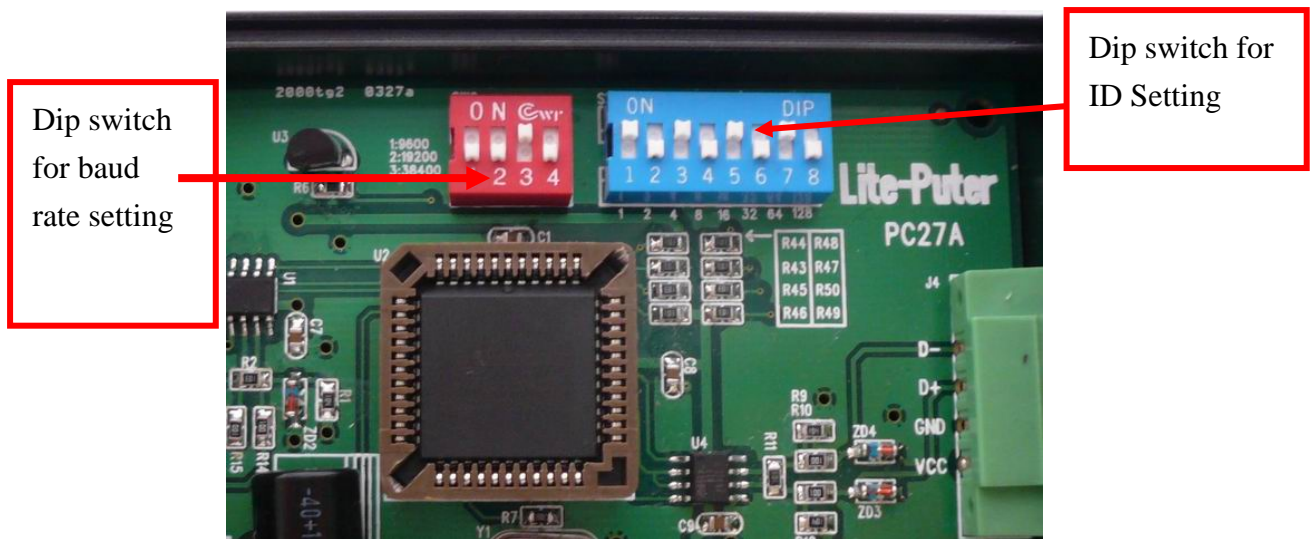
1-3 Panel Introductions



1	RS-485 interface
2	DMX signal output: PHONE JACK RJ11
3	DMX signal output: green terminal
4	Power indicator
5	Power input: DC 12V/1A

1-4 System Configuration

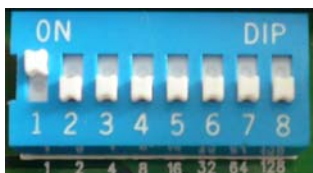




1-5 ID Setting

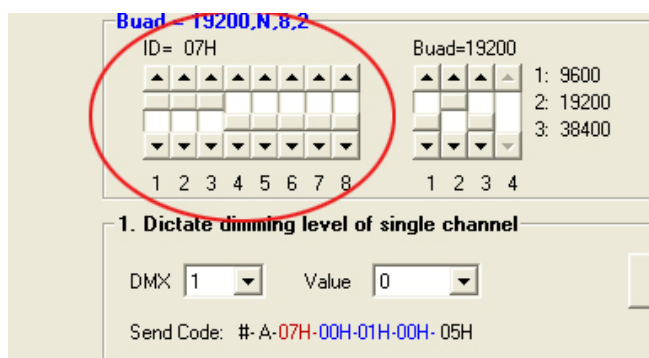
Several DP-105D can be applied, thus one system could control more than 512 channels. This achievement mainly attributed to each DP-105D owns an individual ID address.

Open the equipment, you will find 8 digital dip switch. That is for ID address setting.



ID encode with 8421code.

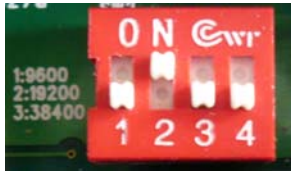
If you do not clear how to encode 8421, you can obtain the current ID through the figure control software attached to the equipment.



1-6 Baud Rate Setting

Three Baud rate are available:9600,19200 and 38400.

Users may choose one by the dip switch.



1 : 9600,N,8,1

2 : 19200,N,8,1

3 : 38400,N,8,1

Chapter 2 Communication Protocol

- Command is sent by characters.
- All the commands begin with special characters # or &, follow with a function code and then a digital code.
- Special characters and function codes are sent by single character, while digital characters are sent by double characters. The double characters are composed like this: convert the digit character to hexadecimal form first, and then take the former of two characters. For example, metrication 67 - > transformed to hexadecimal 43H , then take characters "4", "3"

NOTES: DP-105D comes with a control software which can generate the commands automatically.

2-1 Setting dimming level of a single channel by PC

#	A	ID	CH_H	CH_L	Value	05H	00H	00H
---	---	----	------	------	-------	-----	-----	-----

Description:

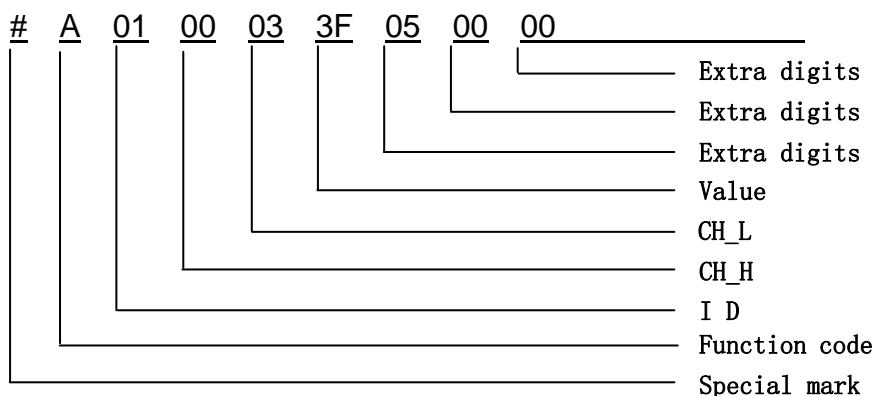
ID: ID address of DP-105D
 CH_H: High byte of DMX address
 CH_L: Low byte of DMX address
 Value: Brightness value

Example:

1.Modify DMX channel 3 on ID=1(DP-105D) and set its dimming level to 25%

25% = 63 (Metrication)= 3F H (Hexadecimal)

#A0100033F050000



2-2 Setting the same dimming level of continuous channels by PC

#	B	ID	Start_H	Start_L	End_H	End_L	Value	05H
---	---	----	---------	---------	-------	-------	-------	-----

Description:

ID: ID of DP-105D
 Start_H: High byte of DMX start address
 Start_L: Low byte of DMX start address
 End_H: High byte of DMX end address
 End_L: Low byte of DMX end address
 Value: Brightness value

Example:

1.Modify DMX 3-26 channels on ID=3(DP-105D) and set the dimming level to 50%

```
#B030003001A8005
# B 03 00 03 00 1A 80 05
```

2-3 Setting different dimming levels of continuous channels by PC

&	C	ID	Start_H	Start_L	Count_H	Count_L	CH1	CH2	...
---	---	----	---------	---------	---------	---------	-----	-----	-----

Description:

ID: ID of DP-105D
 Start_H: High byte of DMX start address
 Start_L: Low byte of DMX start address
 Count_H: High byte of counted channels
 Count_L: Low byte of counted channels
 CH 1: Brightness value of channel 1
 CH 2: Brightness value of channel 2

Example:

1.Modify DMX 1-6 channels on ID=2 (DP-105D) and set the dimming level to 10%,20%,30%,40%,50%,60% respectively.

```
&C02000100060A141E28323C
& C 02 00 01 00 06 0A 14 1E 28 32 3C
```

DP-105D

RS-485 to DMX interface

【使用手冊】



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第一章 系統簡介

1-1 DP-105D 功能簡介

DP-105D 的功能：

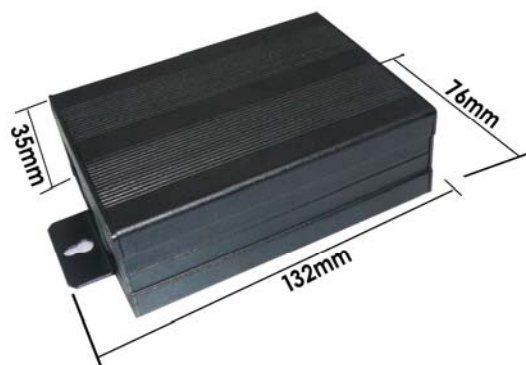
- RS-485 轉 DMX 信號轉換器。

1-2 DP-105D 產品規格

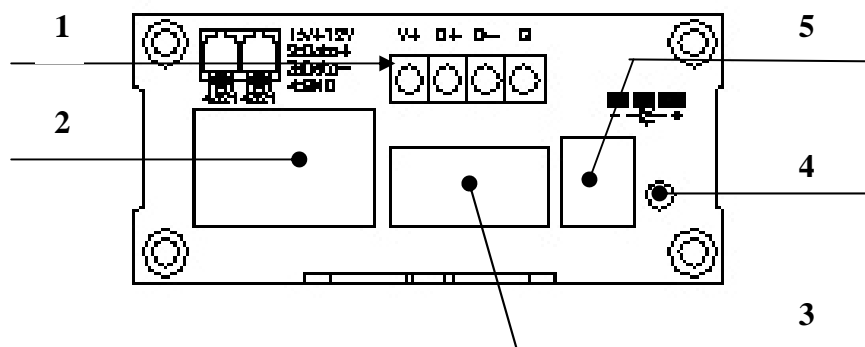
- 輸入電壓：DC 12V
- 輸入信號：RS-485 輸出信號：DMX
- 尺寸：132 (W) * 35 (H) * 76 (D) mm
- 重量：0.22Kg

1-3 DP-105D 產品機構圖

DP-105D 外觀尺寸

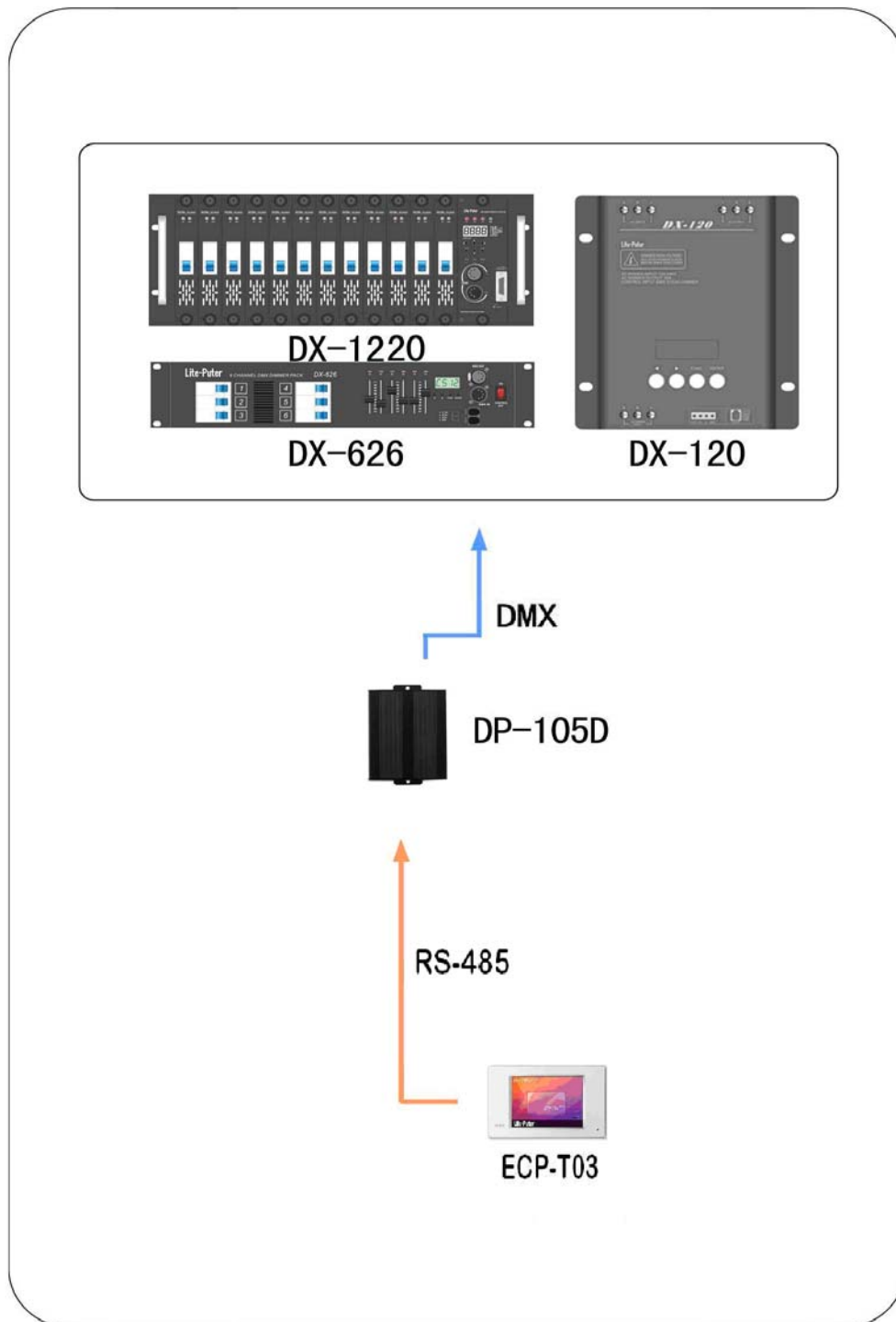


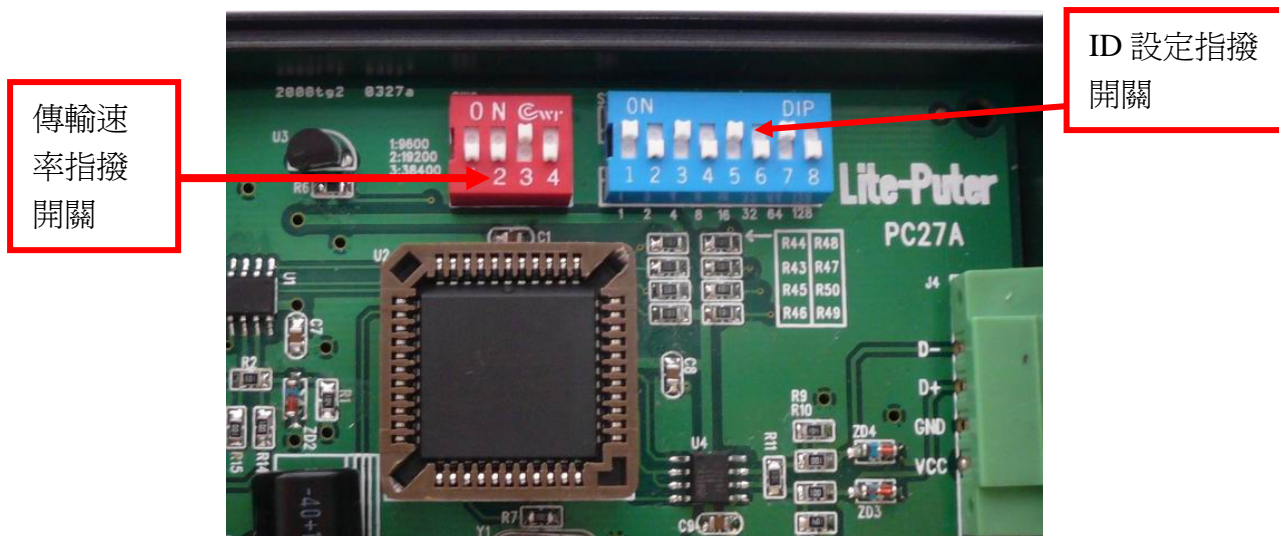
DP-105D 面板功能圖



1	RS-485 介面
2	DMX 信號輸出: PHONE JACK RJ11
3	DMX 信號輸出: 綠色端子
4	電源指示燈
5	電源輸入 DC 12V/1A

1-4 DP-105D 系統圖

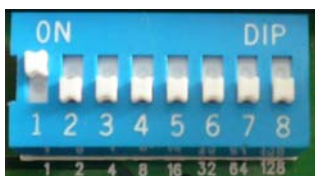




1-5 ID 設定

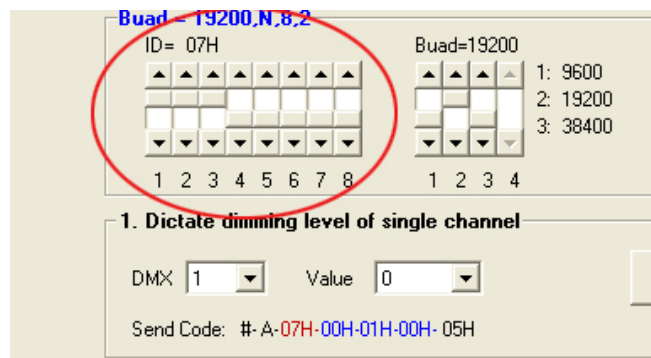
在一個系統中可以使用多台 DP-105D，從而實現回路數大與 512 的情況。而這一功能得以實現是因為每台 DP-105D 都有獨立的 ID。

打開設備可以看到有一個 8 位的直撥開關，這個開關是用來設定設備的 ID。



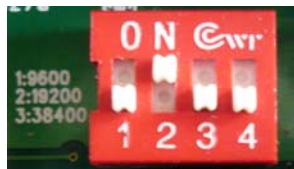
ID 的編碼方式使用的是 8421 碼

如您不清楚 8421 碼的編碼方式，可使用設備附帶的圖控獲得當前撥碼對應的 ID 號



1-6 傳輸速率設定

DP-105D 提供 3 種串列傳輸速率 (Baud)，9600，19200，38400 可供用戶選擇。用戶可通過直撥開關選擇串列傳輸速率。



- 1 : 9600, N, 8, 1
- 2 : 19200, N, 8, 1
- 3 : 38400, N, 8, 1

第二章 通訊協議

- 指令以字元方式發送。
 - 所有指令以特殊字元 # 或 & 開始，後接一位功能碼，功能碼後為數據位。
 - 特殊字元和功能碼都以單字元方式發送。數據位元以雙字元方式發送，其取值為將數據位轉換成十六進制數，然後取前後字元。
例如：十進制 67 - > 十六進制 43H，然後取字元 “4”， “3”
- 注：設備有附帶圖控可由圖控自動產生需要發送的指令碼

2-1 PC 指定單一回路的調光值

#	A	ID	CH_H	CH_L	Value	05H	00H	00H
---	---	----	------	------	-------	-----	-----	-----

Description

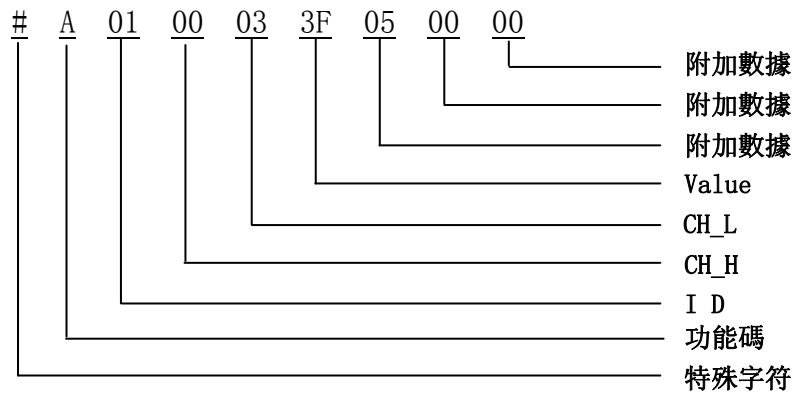
- ID : 控制的 DP-105D ID 號
- CH_H : DMX 位址的高位
- CH_L : DMX 地址的低位
- Value: 亮度值

Example:

1. 修改 ID=1 (DP-105D), DMX 第 3 回路, 將其調光值設定為 25%

25% = 63 (十進制方式) = 3F H (十六進制方式)

#A0100033F050000



2-2 PC 指定連續多回路的調光值 (相同調光值)

#	B	ID	Start_H	Start_L	End_H	End_L	Value	05H
---	---	----	---------	---------	-------	-------	-------	-----

Description

- ID : 控制的 DP-105D ID 號
- Start_H : DMX 起始位址的高位
- Start_L : DMX 起始位址的低位
- End_H : DMX 結束位址的高位
- End_L : DMX 結束地址的低位
- Value : 亮度值

Example:

1. 修改 ID=3 (DP-105D), DMX 3-26 回路, 將其調光值設定為 50%

#B030003001A8005

B 03 00 03 00 1A 80 05

2-3 PC 指定連續多回路的調光值 (調光值不同)

&	C	ID	Start_H	Start_L	Count_H	Count_L	CH1	CH2	...
---	---	----	---------	---------	---------	---------	-----	-----	-----

Description

- ID : 控制的 DP-105D ID 號
- Start_H : DMX 起始位址的高位
- Start_L : DMX 起始位址的低位
- Count_H : 需寫的回路總數的高位
- Count_L : 需寫的回路總數的低位
- CH 1 : 第 1 回路亮度
- CH 2 : 第 2 回路亮度

Example:

1. 修改 ID=2 (DP-105D), DMX 1-6 路, 將其調光值分別設定為 10, 20, 30, 40, 50, 60

&C02000100060A141E28323C

& C 02 00 01 00 06 0A 14 1E 28 32 3C