

# WORK<sup>®</sup>

English



## DMX ANALYZER

# User Manual



## ◆ General Information

### Introduction

**Thank you** for your purchase of the DMX ANALYZER !

That success of DMX ANALYZER is the useful features of stylish design, versatility and highly competitive price tag. There is a multi-selector can be only available for turning to select the 8 mainly menus. What is more, Some tests about DMX packet and cable can be done , which can catch whether there are some errors. And the received DMX data can also be displayed and transmitted by a specific means, complying with the your setting. If you would like to know more , please read this user's instruction carefully, and keep it possible for future reference.

### **Unpacking**

This unit has been thoroughly tested and carefully packed. For some unexpected reasons, check it carefully to be sure that your product is not damaged and all accessories are not missing. If your product happens to be damaged or missing, please do not use it. Contact the local dealer or distributor without hesitation.

### Safety Instructions

Reduce the risk of electric shock or fire when using this unit.

Do not immerse in or expose to water.

Turn off this unit, if not being used for a long time.

Do not use immediately in the event of malfunction.

Do not dismantle or modify the unit, only by qualified staff.

## ◆ Specifications

Model No:	DMX ANALYZER
Power Input:	DC 9v , 500mA ( an AC ~ DC adaptor included or built-in chargeable battery )
DMX In :	3 and 5 pins male XLR connectors
DMX Out :	3 and 5 pins female XLR connectors
MIDI In:	5 pins Multi connector
Dimensions:	200×160×55 mm
Weight:	1.2 kg

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## ◆ Operation Guide

DMX ANALYZER, which can be applied in various lighting occasions to meet your requirements, provides ample menu options in 20 x 4 LCD window for you. The desired menu or window can be activated by turning the multi-selector, and then pressing this multi-selector a little in the central place will allow to access the menu functions.

**NOTE:** If you want to browse the next forward menu, please turn the multi-selector right. On the contrary, you may turn it left to browse the previous menu option.

The power of this unit can be supplied by built-in storage battery or DC 9v adaptor. When using DC 9v adaptor for this unit, the built-in battery will automatically be charged at the same time. To increase the charging speed, do not switch on this unit. The time for full charging battery can be 3~5 hours, which can supply this unit for 6~8 hours. When switching this unit on at first, with its switch at back cover, the LCD window shows main window information as follows:

```
===== WORK=====
DMX ANALYZER
REV1.2
Copyright 2003  >
```

In this case, you can forward to the main window information by multi-selector.

After continuing to forward, there are 8 main menu options for your choice, including **DMX packet test**, **DMX data—RX**, **DMX data—TX**, **Moving light**, **Save Cue**, **Cable test**, **MIDI data—RX**, **System setup**.

≤	DMX special test	>	↑ Save Cue	?
	DMX data—RX	>	Cable test	
	DMX data—TX	>	MIDI data -- RX	
↓	Moving light	>	System setup	

## ● DMX packet test

Turn the multi-selector right to select **DMX packet test** and then press the multi-selector to access this menu function.

```
≤ DMX packet test:
1. Data format >
2. Data timing >
3. Data level ( Volt ) >
```

- ▼ If there is no signal input and you have accessed each menu of Data format, Data timing, Data level ( Volt ) by the multi-selector, the LCD window shows the same as follows:

```

≤ DMX packet test:

Receive no signal
                                ?
  
```

You may locate the cursor to the label ? for help. In this case, the help message usually shows:

```

≤ DMX-512 tester help
No signal or signal
not complying with
USITT DMX-512( 1990 )
  
```

- ▼ On the contrary, if there is signal input, you can do some DMX packet tests .

### **1. Data format**

Turn the multi-selector to select **Data format** and press it for viewing the total channels of external operator and the states of BREAK when receiving the signals.

The LCD window shows the channel information of external connected DMX operator.

( For example, here the external connected DMX operator is DC-1216II of NCW . )

<pre> ≤ Data format :      ? RX-Chan: 192 Break: --OK-- Signal present   </pre>		<pre> means: the total channels of DC-1216II   </pre>
---	---	---



To know more, you may enable the help function by the multi-selector. Help information can be given as follows.

```

≤ Data format :
Indication of --OK--
means: Received
signal is good
  
```

To return to the previous menu, press the ≤ by multi-selector.

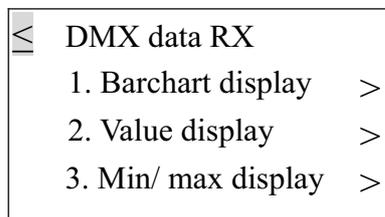
### **2. Data timing**

Turn the multi-selector to select **Data timing** and press it for application. You can view all the parameters of the received signals, including BREAK, MaB, START CODE, CHAN TIME,



## ● DMX data -- RX

Turn the multi-selector to select **DMX data--RX** and then press the multi-selector access this menu function. There are 3 sub-menu options, including **Barchart display**, **Value display** and **Min/max display**.



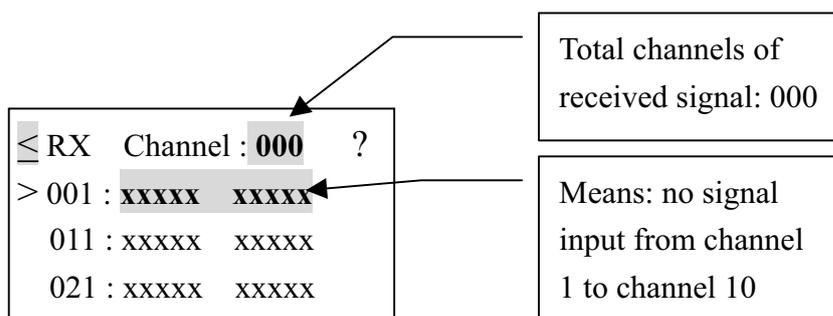
This DMX data--RX function can display the value of signal input by the means of Barchart and Value and Min/max, complying with the display mode that can be adjusted in the System setup menu. There are two display modes: Normal and Hold Mode.

In the **Normal** display mode, when pushing the fader relative to the specific channel of external operator ( e.g. DC-1216II ), the relative channel value of the LCD window will change temporarily, conforming with the position of fader.

In the **Hold** display mode, when pushing the fader relative to the specific channel of external operator ( e.g. DC-1216II ), the relative channel value of the LCD window may not change temporarily. The display value is only the max. value of all the adjustment by the fader.

### 1. Barchart display

Turn the multi-selector forward to enter the Barchart display option. If there is no signal input, the LCD window always show empty information as follows:



Each line can indicate the values of 10 channels in all. To browse the other values of channels, turn the multi-selector forward to select > , then press the multi-selector . At this time you can turn multi-selector backward or forward for this purpose.

On the contrary, if there is signal input, the LCD window will display the values of received signals in the bar chart diagram.( e.g. DC-1216II )



The display values of the relative channels will temporarily be changed according to the new setting.

NOTE: Other main display values of this unit may be converted, complying with the new display mode.



To know more, you may enable the help function by the multi-selector. Help information can be given as follows.

```

≤ 2. Value display
   Display ten number
   in decimal, hexadeci-
   mal or percent
    
```

### 3. Min / max display

You can also display the values in a simple way when using this option , only for min. value, typical value, max. value. But the values will comply with the decimal, hexadecimal or percent display mode what you have set.

Supposed that you have set the percent display mode. If there is no signal input, the LCD window will show as follows.

```

≤ RX Channle : 000
  Chan.  min  typ  max
  >001  ---  ---  --- %
  >Count at : xxxxx Sec
    
```

On the contrary, if the signal input has been received correctly, the LCD window will display the following diagram.( e.g. DC-1216II )

<pre> ≤ RX Channle : <b>192</b>   Chan.  <b>min</b>  <b>typ</b>  <b>max</b>   &gt;001  000  28  70 %   &gt;Count at : <b>00010</b> <b>Sec</b>         </pre>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin-bottom: 20px;">Total channels</div> <div style="border: 1px solid black; padding: 5px; width: fit-content;">Time counter for reference.</div>
--	---

**Note:** The min value display is the min. value of all the adjustments referring to the present channel; the typ value display is the set value of the present channel; the max display is the max. value of all the adjustments referring to the present channel.

To browse the value of each channel, turn the multi-selector to select > at the third line of LCD window, then press the multi-selector. At this time you can browse the desired channel by turning the multi-selector backward or forward.

## ● DMX data -- TX

When switching on this unit, the receiving DMX signal can be transmitted automatically, with the STARTCODE you have set. Supposed that you aren't in this DMX data--TX menu now and there is no DMX signal input, if you have run the specific saved cue just now , the cue will be transmitted repeatedly. In this case the new coming DMX signal will have priority to be transmitted. However, when accessing the Cable Test or MIDI data-RX menus, the transmitting signal will be halted.

While accessing this DMX data--TX menu, new coming DMX signal will be disabled. You will be allowed to temporarily set the levels for the intended channels, and also have priority to transmit cue ( scene ) at a set rate. Remember there are only 15 cues available.

Turn the multi-selector to select **DMX data--TX** and then press the multi-selector to access this menu function. There are 4 sub-menu options, including **512 Channel**, **Single Channel**, **Cue/Memory**, **Run Cues ( Scenes )**.

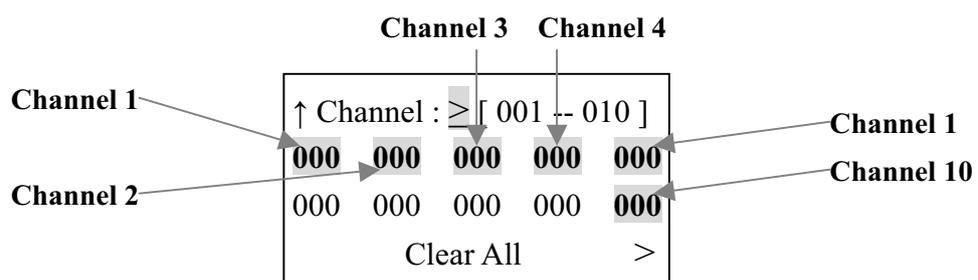
### 1. 512 Channel

This option can display the levels of 512 channels, and also be used for temporary adjustments, while the actual channel value can be held. When using the multi-selector to enter this sub-menu, the LCD window usually shows as follows:

≤	1. 512	Channel	?
	Mode :	Modify mode	
	Chan :	001	>
↓	Data :	000 = 000 %	>

To adjust the temporary value of the desired channel, first enable the multi-selector to > at the third line. Then adjust the "Data" at the fourth line. The "Data" display the value by the means of decimal and percent.

You may turn the multi-selector to scroll to the next page. The LCD window shows the values of 10 channels at the following diagram.



You can set these values of 10 channels ( 001 -- 010 ).For example, set one channel level. Locate the cursor to the desired channel, press the multi-selector to select it.Then turning the multi-selector to adjust the level. When satisfying the adjustment, press the multi-selector again to confirm the settings.

You may also adjust the other 502 channels levels. Locate the cursor to > at the first line of LCD, press the multi-selector and turn it to the desired channels for new settings. Remember that there are only 10 continual channels available for your choices every time.

If you would like to set these 512 channels to be 000, use the Clear All function by pressing the > at the fourth line.



Locate the label ? for more details. Help information can be given as follows.

< 1. 512 Channel  
 Modify = Each  
 channel will hold  
 its preset value

## 2. Single Channel

Turn the multi-selector to select **Single Channel** option. You can adjust the speed, channel, mode, level for your requirements when applying this function. The speed value can be increased from 1 to 10. And there are 5 modes for reference, including Fade Only, Fade Fine, Auto On/ Off, Ramping, Stop.

**Fade Only:** Changing the channel value by only fader.

**Fade Fine:** Based on the initial channel value by fader at present, pushing the fader can increase the value one by one. When the incremented value has been 31, pushing the fader will changed the channel value into the initial value.

**Auto On/Off:** The channel value will be changed between 000 and 255, complying with the speed.

**Ramping:** The channel value will steadily increase one by one till to 255, complying with the speed. Then repeat the sequence 0 to 255.

**Stop :** The channel value can not be changed and be hold.

The LCD window usually shows the following diagram.

≤ Auto Speed : 01 > ?  
 Chan : 001 >  
 Mode : Fader Only >  
 Level : 000 = 000 % >

The Speed can only be taken effect when the mode is set to Auto On/Off or Ramping. In this case, the lever of the desired channel is adjusted automatically by this unit.

You can adjust the level by fader when the mode is set to Fader Only or Fader Fine. However, there is only one channel level varied from the other 511 channels levels. And the other 511 channels levels can only be same.

In addition, when the channel is set to be " 001 - 512 ( all ) ", you can set all the 512 channels to the same values.



Locate the label ? for more details. Help information can be given as follows.

≤ 2. Single Channel  
512 data is same, or  
one data is special  
the other is zero

### 3. Cue/Memory

This option can transmit the received data saved as cues. Remember that there are only 15 Cues available for you. Therefore the Cue number is at most 15. When turn the multi-selector to select this function, the LCD window shows a message as follows:

≤ 3. TX data as Cue ?  
  
Cue number: 001 >

To transmit data saved the desired cue, turn the multi-selector to select the cue, then press the multi-selector again to confirm. The cue will automatically be transmitted.

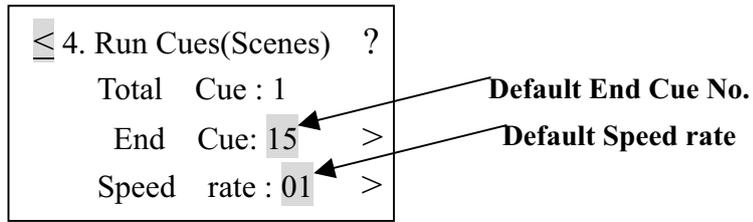


Locate the label ? for more details. Help information can be given as follows.

≤ The 512 data of cue  
come from RX or from  
old cue which can be  
modified in 'TX-512'

### 4. Run Cues ( Scenes )

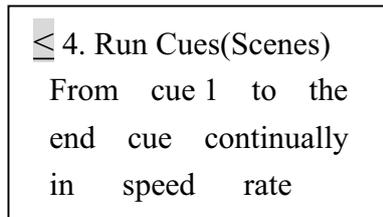
Turning the multi-selector to select **Run Cues( Scenes )** , you can transmit cues continually at a specific rate. When accessing this option, the LCD window shows the following diagram.



The default start cue is cue 1. You can adjust the end cue No. and speed rate ( 1 -10 ) by multi-selector.

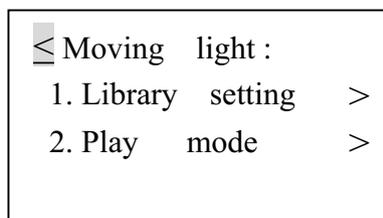


For more information, press ? for help.



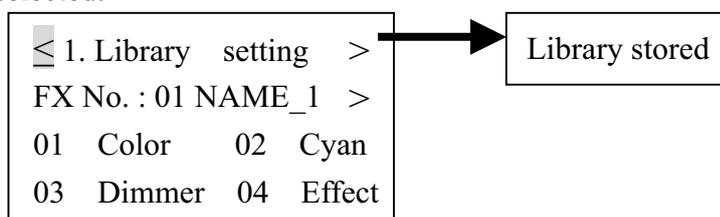
## ● Moving light

Turn the multi-selector to select **Moving light** and then press the multi-selector to access this menu function. There are 2 sub-menu options, including **Library setting** , **Play mode**. You can set the function of each fixture channel, complying with the present library. The library of this unit is preset to meet your requirements in general. If you would like to use your own library, please mail us an attachment of this information for update. For more tests, in the **Play Mode** you can use the library settings and adjust the parameters of relative channels for this purpose. After accessing the **Moving light**, the LCD window usually shows as follows:



### 1. Library setting

To set the lighting function of the desired channel, you can use multi-selector to access this option. The LCD window will show the fixture number, name and function of each channel. Remember that there are only 36 channels and 10 kind of fixtures in all, which can be set. And each channel has 29 effect functions to be selected.



You can adjust the fixture number, name and function of each channel by multi-selector.

If you would save your new settings, press > at the first line of LCD window, the label will display "Library stored". Pressing the multi-selector again can save the present fixture settings.

\* To change the fixture name, locate the cursor to the label > and press the multi-selector . The label > will change to ← , then you can locate the desired characters and press the multi-selector. Label ←← will appear, then you can enter a new character by turning the multi-selector. Press multi-selector to confirm your setting. Repeat the procedures for the adjustment of any other characters.

\* To change the lighting function of the desired channel, e.g. channel 1. First locate the cursor to 01 and press the multi-selector. Then turn the multi-selector to the right lighting function and press the multi-selector to confirm.

You can turn the multi-selector to browse the functions of other channels. The next four pages with turning the multi-selector can be given as follows:

fig.1

05 Focus	06 Frost
07 Gobo	08 Gobo rot
09 Inten'ty	10 Iris
11 Lamp	12 Magenta

fig.2

13 Pan	14 Pan fine
15 Prism	16 Reset
17 Rot spel	18 Shutter
19 Special	20 Speed CG

fig.3

21 Speed P	22 Speed PT
23 Speed T	24 Strobe
25 Tilt	26 Tilt Fine
27 Yellow	28 Zoom

fig.4

29 -----	30 -----
31 Laser	32 Dimmer
33 Color	34 Cyan
35 Dimmer	36 Effect

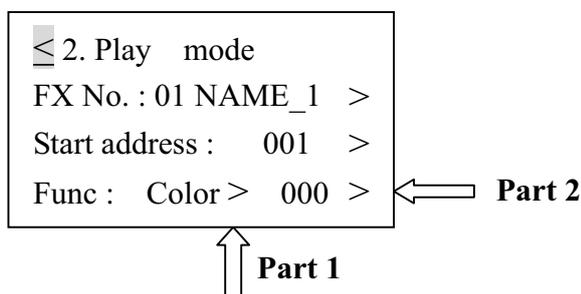
If you would like to set the lighting function of this unit for testing the other lighting equipment , do pay attention to the relative channels parameters of them. What you have set must be complying with the devices.

## 2. Play mode

In this function you can test the fixtures by using the previous library settings. Turn on the multi-selector to select **Play mode** . The LCD window a message as follows:

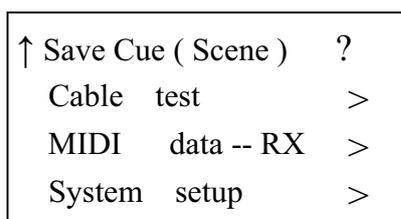
≤	2. Play mode
FX No. :	01 NAME_1 >
Start address :	001 >
Func :	Color > 000 >

Locate to > at the second line and turn the multi-selector. Then you can select the set fixture name. The relative library settings can be available. Complying with the fixture channel, locate to > at the third line and turn the multi-selector to set the right start address.



For some tests, first locate the > at the part [1] to select the desired function. Then locate the > at the part [2] to adjust the level by turning the multi-selector.

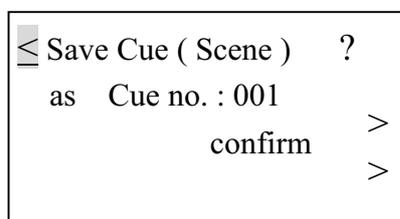
Supposed that the start address is assigned to 001 and function is set to Pan, complying with the specific fixture. Then change the level. The fixture arms will rotate horizontally at your disposal. For another option, pressing < will give access to the previous menu. Continue to press < again for main menus. Turning the multi-selector can display the other 4 main menus.



## ● Save Cue ( Scene )

If there is DMX signal input at present, the saved cue can be the received signal. However, when no signal input, enabling this Save Cue function will save the previous received or running cue as new one. By the way, you can access the 512 channel of DMX data--TX menu to set values of the desired channels or modify the existed cue, and then enabling this Save Cue can also save the settings as new cue.

When accessing this menu, the LCD window will ask for you the cue number to be saved.



The default cue no. is preset to be 001. You can change the default cue number to the desired one. First locate to > at the second line and turn the multi-selector for this purpose. To save the received data, press > at the third line to confirm. Otherwise, automatically save the received data and the cue number will increase by 1 for the next saving.

NOTE: After you have locate to > at the second line, turning the multi-selector can allow you to select the " Clear all Cues ". When you confirm this function, the LCD window will ask for you " Be sure ? Yes > No > " at the fourth line . Press the first label > to confirm, all the stored cues will be cleared out. For no clearing the cues, press the second label > to quit.



For more information,  
press ? for help.

```

< Save Cue ( Scenes )
The cue with 512 data
can be stored to
memory or clear cues.
  
```

## ● Cable test

When enable this function, you can test the cable whether there are errors or not. The cable can be tested for digital and analog mode. After accessing this menu, then a message will appear as follows.

```

< Analog cable test >
Connect cable to
both sockets, press
Start ! >
  
```

The default test mode is analogy mode. To select the digital mode, turn the multi-selector to > at the first line, pressing the multi-selector will allow you to enable the digital mode. Use the standard DMX In/Output of this unit for connecting the cable. One head for female plug-in, another head for male plug-in. Then press > at the fourth line to start the test, If the cable works normal, the LCD window shows as follows:

```

< Cable Test ---
Result successful !
-> TEST OK !
  
```

Otherwise, if the cable can not work normal, the LCD window shows:

```

< Cable Test ---
Result:
-> Cable not OK
  
```

## ● MIDI data -- RX

This option can test the MIDI data whether there are some errors when transmitting them. When the cable isn't connected normal and you have accessed this function, the LCD window usually shows :

```

< MIDI data -- RX
$

```

However, if there are signal inputs and no errors, the LCD window usually shows as follows:

```

< MIDI data -- RX
$ FE FE FE   FE FE FE
  FE 43 00   45 00 FE
  90 43 00   FE FE FE

```

FE means:  
NULL signal

## ● System setup

In this menu you can set the system settings at your disposal. There are three sub-menus for your choice, including **DMX setting**, **Language**, **Display setting**. You can set the DMX display mode, value display mode, and so on.

Turn the multi-selector to System setup and press it to enable this function. The LCD window shows as follows.

```

< System setup :
  1. DMX setting  >
  2. English      >
  3. Display setting >

```

### 1. DMX setting

Turn the multi-selector to DMX setting and press it, then the LCD window shows the following message for you.

```

< Start code TX : 000 >
  Display : Normal >
  Input Pin : + 2 : - 3 >
  ?          Confirm >

```

You can set the start code for 512 DMX signals transmission. Generally, you need not to adjust it. The default of start code is set to 000. If you would like to amend it, make use of the multi-selector for this purpose.

There are two display modes: Normal and Hold Mode, as mentioned in the DMX data -- RX. In the **Normal** display mode, when changing the value referring to the specific channel of external

operator , the relative channel value of the unit will change instantly, conforming with the position of fader.

In the **Hold** display mode, when changing the value referring to the specific channel of external operator , the relative channel value of the unit may not change temporarily. The display value is only the max. value of all the adjustment by the fader.

Turn the multi-selector to > at the second line, then pressing it can shift display mode between Normal mode and Hold mode.

You can also use the multi-selector to shift input pin between +2 -3 and -2 +3. However, this adjustment will comply with the receiving signals, which can be normal or reverse.

Enable the label > at the fourth line to save all the settings by the multi-selector. Or, return to the previous menu without saving by enabling the label < .



For more information, press ? for help.

≤ 1. DMX setting
Startcode TX : 00-FF
Display Hold mode
Input normal : -2 +3

## 2. English

This unit supports 5 languages for convenient operation, including English, German, Spanish, French, Italy. The default is English version. Only by turning the multi-selector to choose the desired language version, and then pressing the multi-selector to confirm, you will be allowed to adjust the system language temporarily.

When charging this unit next time, if you want the adjustment to be still available, you must store the adjustment. To store it, you can scroll to DMX setting or Display setting sub-menus and select the “confirm” item. Press the multi-selector to enable the storing function.

**Note:** After you have confirm the desired language, all the windows of this unit will following this adjustment to be the language version interfaces. When switching this unit again the stored setting can also be valid.

## 3. Display setting

In this sub-menu you can adjust the contrast level of the LCD window by multi-selector. The default level is 05 and it must range from 01 to 10.

◀	Contrast_level : 06	>
	Back Light : off	>
	Display : percent	>
?	Confirm	>

To change the state of back light, you can enable the label > at the second line. Pressing the multi-selector can turn on the back light, while pressing it again can go out the back light.

NOTE: If there is no trigger of the multi-selector, the back light will automatically go out in 10 seconds for decreasing the consume of power supply.

You can also change the value display in three modes, including decimal, hexadecimal and percent. To save what you have set, press the label > at the fourth line to confirm by multi-selector. Without saving, enable the label < to return the previous menu.



For more information, press ? for help.

◀	3. Display setting
	Contrast_level : 1-10
	Back Light : On./Off
	dec, hex or % data



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