

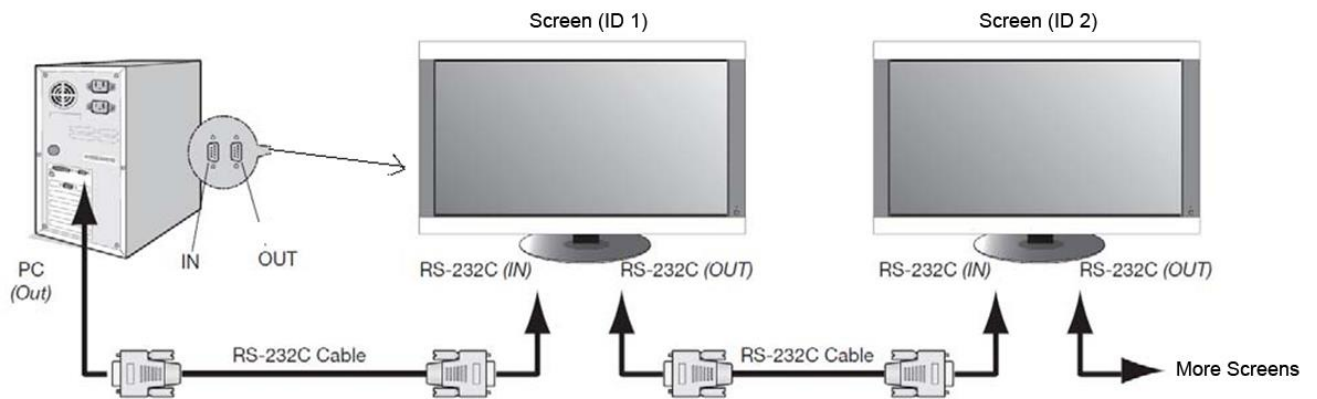
**RS-232 Protocol Specification
(Video Wall – 46-55Inch-182)
28.06.2017**

RS-232 Control

You can control this monitor by using a personal computer with RS-232 terminal. RS-232 data is transmitted between devices through a DUB9 Cable.

RS-232 Data Flow (using by 9P RS-232 Cable)

You can control this monitor by using a personal computer with RS-232 terminal. RS-232 data is transmitted between devices through a DUB9 Cable.



COM Port Settings

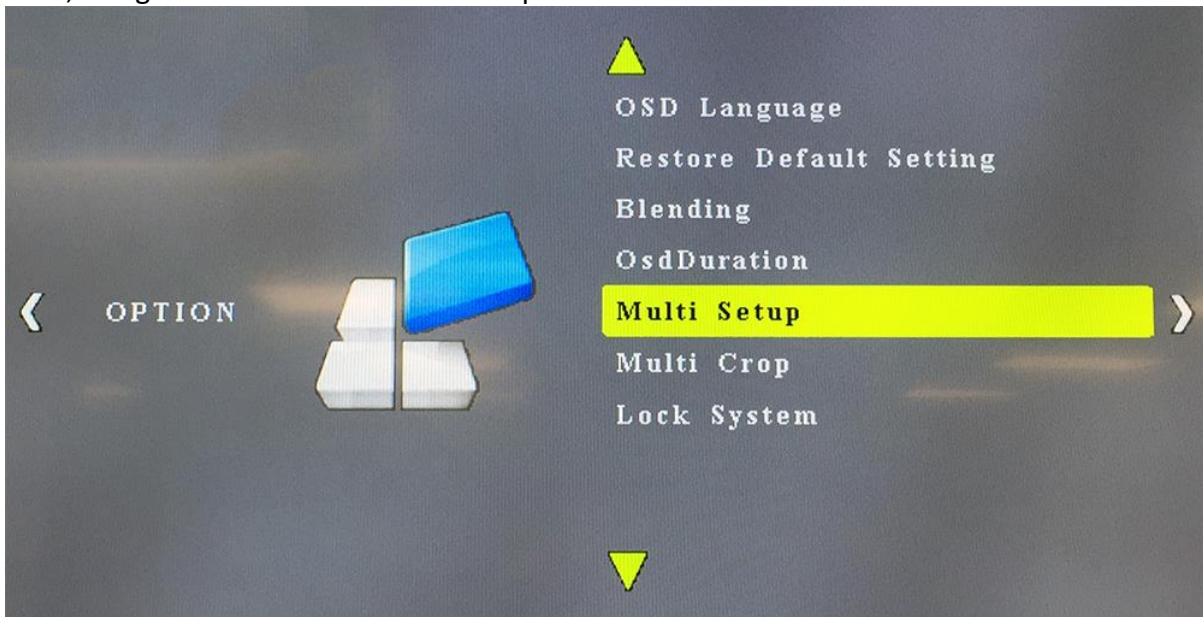
Protocol	RS-232
Baud Rate	9600bps
Data Bits	8 Bit
Parity Bit	None
Stop Bit	1 Bit
Flow Control	None
Communication Code	HEX

Write ID Control Command Format

You can either set your screens' IDs using the software or manually using the remote control.

Using Software: SET BOARD ID: 0x89, 0x0, 0x0, byte (Screen ID)

Manually: Using the remote control press “MENU” then navigate to the “Option” sub-menu. Next, navigate to and select “Multi Setup”:



Then ensure that each screen’s “Board ID” has a unique value so that you can send commands separately to each screen:



You can use the “LEFT” and “RIGHT” buttons to change your screen’s ID.

Control OSD Command Format

SOH: Start of Header ASCII SOH (89h)

Command	SOH	Message	Message	ID
SOURCE	0x89	0x75	0x21	byte
MENU	0x89	0x73	0x23	byte
UP	0x89	0x63	0x33	byte
DOWN	0x89	0x83	0x13	byte
LEFT	0x89	0x72	0x24	byte
RIGHT	0x89	0x74	0x22	byte
POWER	0x89	0x76	0x20	byte
1	0x89	0x92	0x04	byte
2	0x89	0xA2	0xF4	byte
3	0x89	0xB2	0xE4	byte
4	0x89	0x93	0x03	byte
5	0x89	0xA3	0xF3	byte
6	0x89	0xB3	0xE3	byte
7	0x89	0x94	0x02	byte
8	0x89	0xA4	0xF2	byte
9	0x89	0xB4	0xE2	byte
0	0x89	0x95	0x01	byte

- byte: 1 0 bit5 bit4 bit3 bit2 bit1 bit0
- bit0-bit5 is the BOARD ID
- byte: 0x9F (control all boards at once)

Note: Above code of 'POWER' is for changing the power status of the screen. Please use following code for dedicated control of Power on and off.

Power On	01 30 2A 30 41 30 43 02 43 32 30 33 44 36 30 30 30 31 03 18 0D
Power Off	01 30 2A 30 41 30 43 02 43 32 30 33 44 36 30 30 30 34 03 1D 0D

Control All Boards at Once

SOH: Start of Header ASCII SOH (FFh)

SOH	Send Bytes Num	Message
0xFF	Send_Bytes_Num	Byte_a1, Byte_a2, Byte_a3, Byte_a4
0xFF	Send_Bytes_Num	Byte_b1, Byte_b2, Byte_b3, Byte_b4
0xFF	Send_Bytes_Num	Byte_c1, Byte_c2, Byte_c3, Byte_c4
0xFF	Send_Bytes_Num	Byte_d1, Byte_d2, Byte_d3, Byte_d4

- byte1: 0 1 bit5 bit4 bit3 bit2 bit1 bit0
 - Board ID (bit0-bit5)
- byte2: bit7 bit6 bit5 0 0 0 1 0
 - Source (bit7, bit6, bit5)

- 000 - CVBS
- 101 - VGA
- 001 - CVBS2
- 010 - DVI
- byte3: TotalX(bit7-bit4) TotalY(bit3-bit0)
- byte4: CurrentX(bit7-bit4) CurrentY(bit3-bit0)

Example (Single Unit)

The code format needs to be HEX. The RS-232 code can be used to do everything you can do with our remote control unit, including setting the video wall configuration.

Command	SOH	Message	Message	ID
SOURCE	89	75	21	01
MENU	89	73	23	01
UP	89	63	33	01
DOWN	89	83	13	01
LEFT	89	72	24	01
RIGHT	89	74	22	01
POWER	89	76	20	01
1	89	92	04	01
2	89	A2	F4	01
3	89	B2	E4	01
4	89	93	03	01
5	89	A3	F3	01
6	89	B3	E3	01
7	89	94	02	01
8	89	A4	F2	01
9	89	B4	E2	01
0	89	95	01	01

Example (4x4 Video Wall using DVI)

First, set up an ID code for each screen before attempting any RS-232 commands.

To set each tile as an individual screen:

```
FF 44 41 42 44 11 42 42 44 21 43 42 44 31 44 42 44 41 45 42 44 21 46 42 44 22 47 42 44 23
48 42 44 24 41 42 44 31 42 42 44 32 43 42 44 33 44 42 44 34 45 42 44 41 46 42 44 42 47 42
44 43 48 42 44 44
```

To set entire wall to perform as a single screen (the red numbers are the codes which determine the screen configuration):

```
FF 44 41 42 11 11 42 42 11 11 43 42 11 11 44 42 11 11 45 42 11 11 46 42 11 11 47 42 11 11
48 42 11 11 41 42 11 11 42 42 11 11 43 42 11 11 44 42 11 11 45 42 11 11 46 42 11 11 47 42
11 11 48 42 11 11
```

RS-232 Protocol Specification

You will notice some numbers are coloured in green, these represent the screen input method. The code can be used to change the input using the following codes in the place of the green numbers:

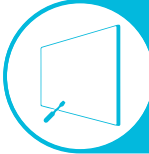
- VGA: A2
- DVI: 42
- HDMI: 82
- AV: 02

Why Choose Our Commercial Display Solutions?



Lifetime Technical Support

From the moment you receive your product, throughout the duration of your warranty and even after your warranty has expired we are here to support you. If you require any assistance setting up or using your product, or have any problems at all, we can provide free technical support via telephone and email.



On-site Support and Maintenance*

If needed, we can provide an installation service for any of our products. We can also set up service-level agreements for larger projects that require maintenance contracts.



Extended Warranty*

All of our commercial display products come with a 3 year commercial warranty as standard but if you want to extend this you can upgrade this to cover a 5 year period at point of purchase.



Training

As well as providing free remote CMS training sessions and webinars we can also visit you to deliver bespoke training for our software and hardware*.



Advanced Replacements†

Should your display suffer from any kind of hardware failure during the warranty period we will send you an advanced replacement and arrange for your old display to be collected, free of charge. This ensures no downtime where you are without a screen.



Custom Product Testing & Configuration

If you need us to test third party software or a website, or configure your screen in a particular way before it is dispatched (e.g. in a particular orientation or network mode), we can do so to make your life easier.



3D Rendering

Want to know how a particular screen will look once installed? Send us a photo of the location and we will create a 3D rendering of any screen in situ to help you to visualise how amazing it will look.



Logistics Support

We hold more stock in our UK warehouse than any other manufacturer so we can help you meet tight deadlines. For last minute orders we can also offer special express or morning delivery options*. We also carry out UK based quality control checks on every display before it leaves our warehouse.



Project Support

If you need to loan a sample unit to test we'd be more than happy to arrange this. We can also provide a rental service for temporary projects*.



Customisation*

Your display can be customised to suit your requirements by adding your logo or printed graphics or even tailoring the colour of a display. We can also carry out hardware modifications to existing products or manufacture bespoke solutions for special projects.



Extras*

As well as being able to provide accessories and add-ons, such as extra remote controls, NUC PCs and video wall controllers, we can also supply custom made flight cases which are great if a display needs to be moved safely from place to place.

†UK mainland only

*These particular services may incur additional charges