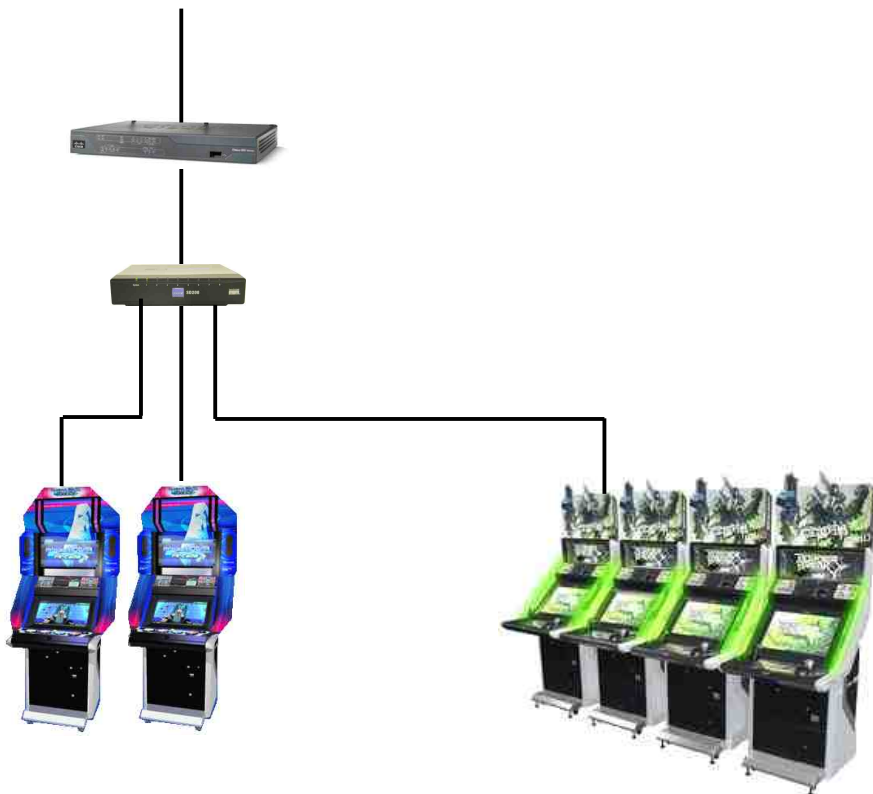


# ALL.Net Installation Manual

## Specifications for Operator



SEGA Corporation

19 MAY 2011

# TOC

A. Cabling Works from ALL.Net Router.....	- 3 -
A-1 Connection between ALL.Net Router and Switching Hub .....	- 3 -
A-2 Connection between ALL.Net Router and Game Machine .....	- 3 -
A-3 Connection between Switching Hub and Game Machine.....	- 3 -
B. Cable Tagging .....	- 4 -
B-1 Tag .....	- 4 -
B-2 Tag Script Sample .....	- 4 -
C. Cable Protection .....	- 5 -
C-1 Notice where to route .....	- 5 -
C-2 Molding LAN Cable .....	- 5 -
D. Cable Specifications.....	- 6 -
D-1 LAN Cable Measurement Lists .....	- 6 -
D-1-1 Fiber-controlled Trial.....	- 6 -
D-1-2 Wire Length Measurement Test.....	- 6 -
D-1-3 Insertion Loss Test.....	- 6 -
D-1-4 Near-end Crosstalk Attenuation Test.....	- 6 -
E. Connecting Cases.....	- 7 -
F. Such Connections Cause Trouble.....	- 8 -
F-1 Trouble Case 1 Loop Connection of LAN Cable.....	- 8 -
F-2 Trouble Case 2 Long LAN Cable .....	- 9 -
F-3 Trouble Case 3 Non-Sega-Standardized Switching Hub.....	- 10 -
F-4 Trouble 4 Way beyond the 4 <sup>th</sup> Cascade Hierarchy of Hub Connection.....	- 11 -
F-5 Other Notices.....	- 12 -
G. References.....	- 13 -
H. Contact Point .....	- 14 -

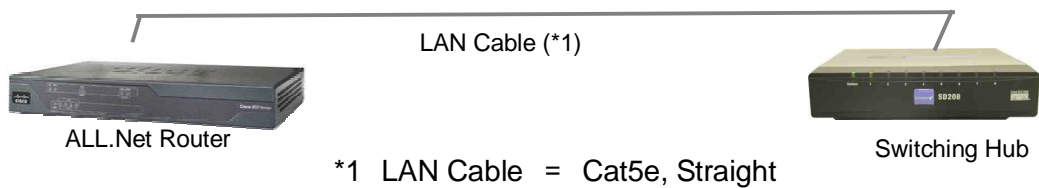
LAN cabling works from ALL.Net Router to the games are laid under the administrative responsibility of operator, or arcade center.

Please refer to LAN cabling works as follows.

## A. Cabling Works from ALL.Net Router

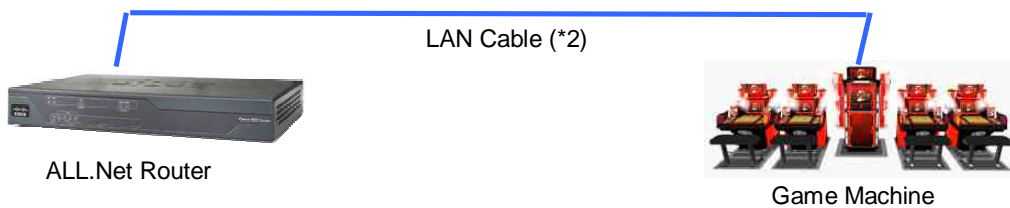
### A-1 Connection between ALL.Net Router and Switching Hub

Please connect by LAN cable (\*1) from ALL.Net Router (LAN1-1) to Switching Hub (port1) setting up in store .



### A-2 Connection between ALL.Net Router and Game Machine

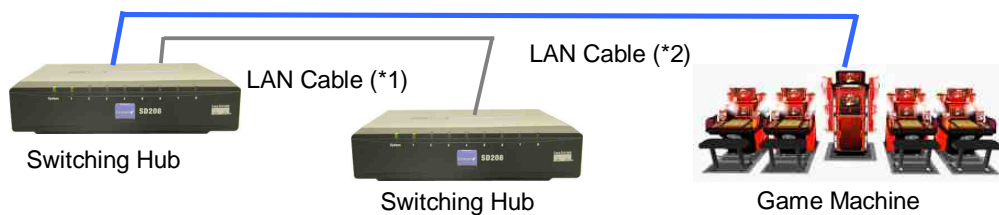
Please connect by LAN cable (\*2) from ALL.Net Router (LAN1-1) to each game machine (Switching Hub).



\*2 Please use 50m LAN cable (Cat5e, Straight) to the priority, which has been included for the game.

### A-3 Connection between Switching Hub and Game Machine

Please connect by LAN cable (\*1 or \*2) from Switching Hub (port2 to 7) setting up in store to each game machine (Switching Hub).



## B. Cable Tagging

In connecting each LAN cable, we recommend you should tag both edges of the connection to be able to readily describe. The reference is as below.

### B-1 Tag

- Within 50cm from both edges of LAN cable
- Ignorance of its shape, but readily comprehensive



### B-2 Tag Script Sample

- SW[Hub #]-[Port #]/[Game Title]

EX) SW3-5/ST = Switching Hub #3 - Port #5 / Sangokushi Taisen

- Alphanumeric character is the most recommended.

## C. Cable Protection

Please pay attention to preventing players or customers from direct contact as you route LAN cable.

### C-1 Notice where to route

- Please route along the wall and behind the game machine.
- Please route on the ceiling (Hanging LAN cable).
- Please route even space behind the wall etc.



Please set up LAN cable in any way you can fit in the operation site.

Also, please make up with LAN cable mold when you hang it on the ceiling.

### C-2 Molding LAN Cable

In case you inevitably route LAN cable on the floor, please laminate the protection cover such as a molding.



Cable Mold

## D. Cable Specifications

LAN cable connecting to store must utilize over Cat5e or higher quality, and if you test the cable measurement, please refer to the following items.

### D-1 LAN Cable Measurement Lists

#### D-1-1 Fiber-controlled Trial

The Pair Swap (No Split Pair), Short Circuit, and No Bad Connection

#### D-1-2 Wire Length Measurement Test

Testing length of LAN cable, and making sure of Sega acceptable measurement within 50m

#### D-1-3 Insertion Loss Test

Measuring the attenuation on frequency 100.0MHz, and making sure of the specified value

- Cat5e

Insertion Loss (/100m)

Single Wire – below 22dB, Stranded Wire – below 26.4dB

- Cat6

Insertion Loss (/100m)

Single Wire – below 19.8dB, Stranded Wire – below 23.8dB

#### D-1-4 Near-end Crosstalk Attenuation Test

Measuring near-end crosstalk attenuation on frequency 100.0MHz, and making sure of the specified value

- Cat5e

Near-end Crosstalk Attenuation (NEXT)

Single Wire – below 35.3dB, Stranded Wire – below 35.3dB

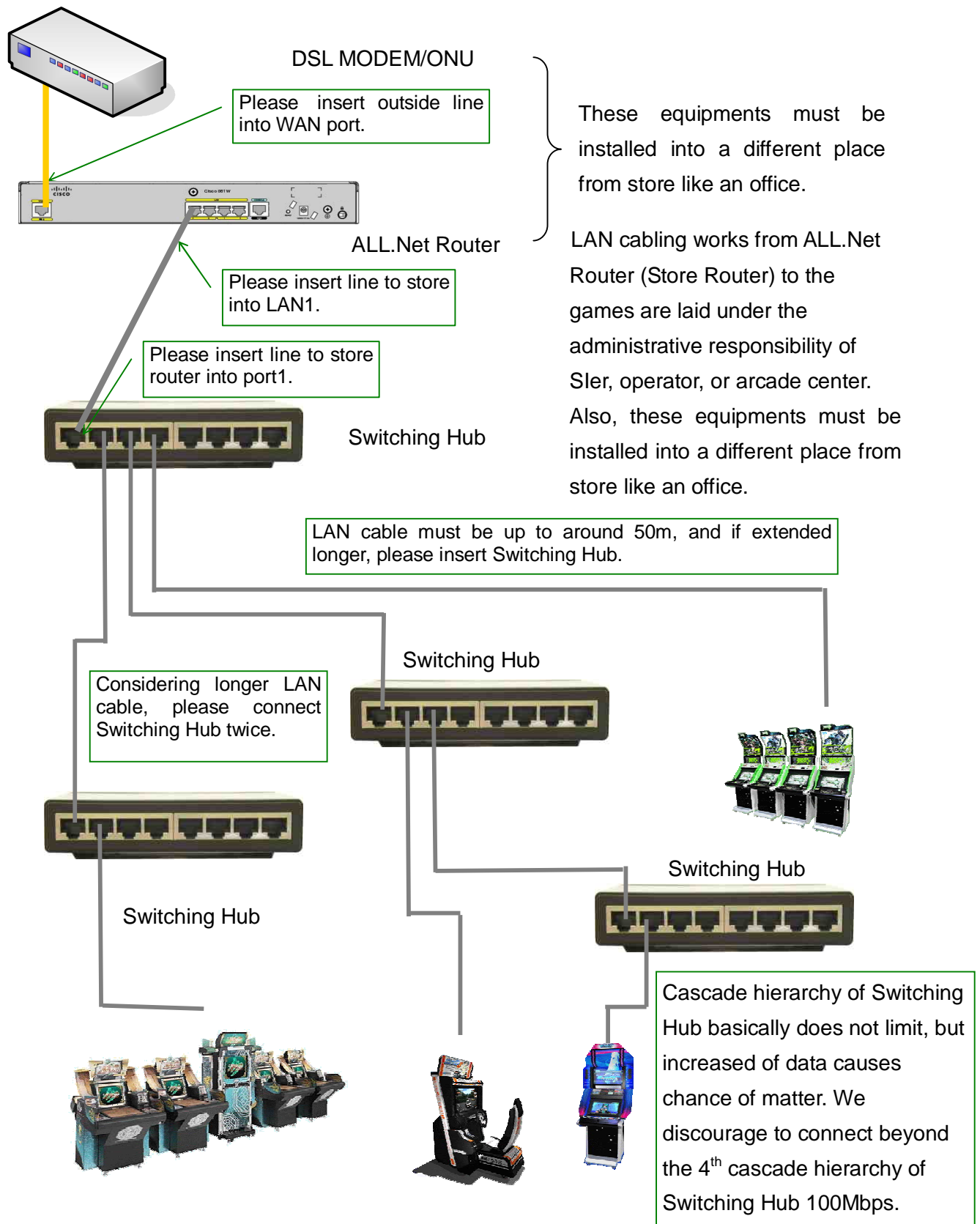
- Cat6

Near-end Crosstalk Attenuation (NEXT)

Single Wire – below 44.3dB, Stranded Wire – below 44.3dB

## E. Connecting Cases

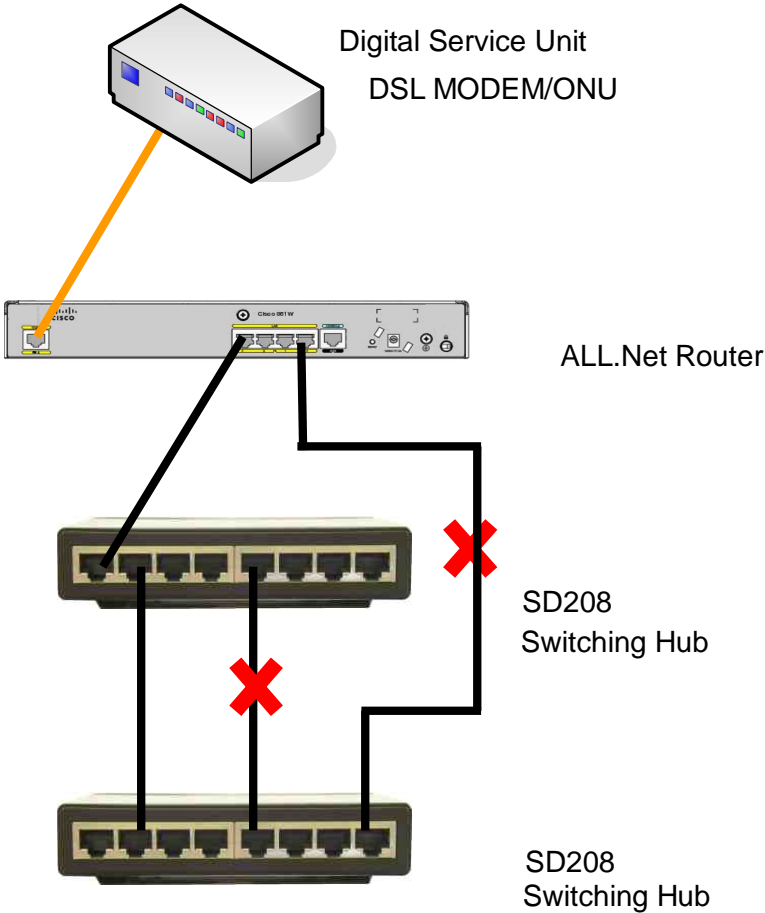
The following figure shows an example of how the connection. Please refer to the time of the actual cabling.



F. Such Connections Cause Trouble

The figure as below illustrates trouble cases on the connection in store.

F-1 Trouble Case 1 Loop Connection of LAN Cable

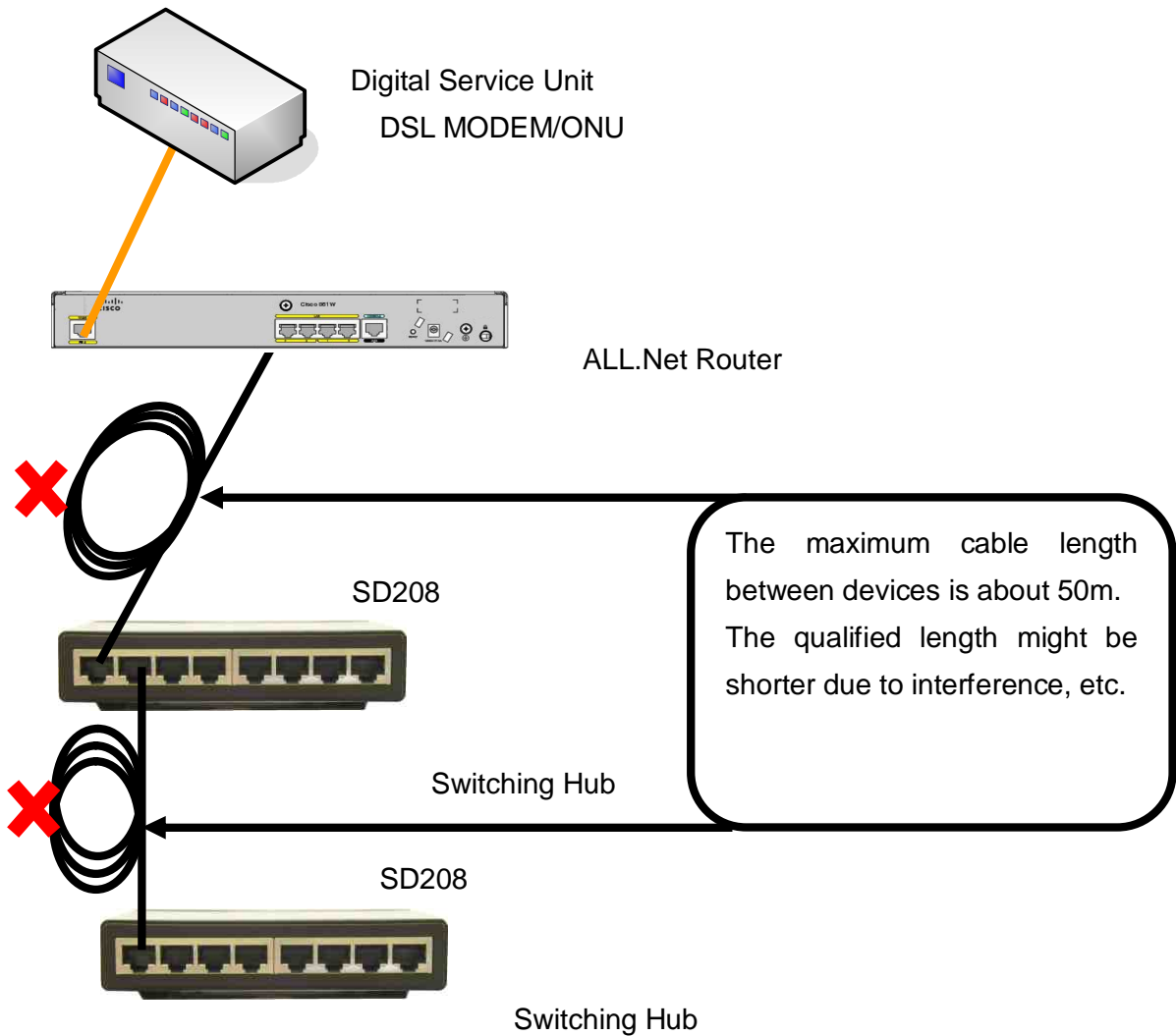


We do not connect same Switching Hub with two LAN cables. This causes malfunction.



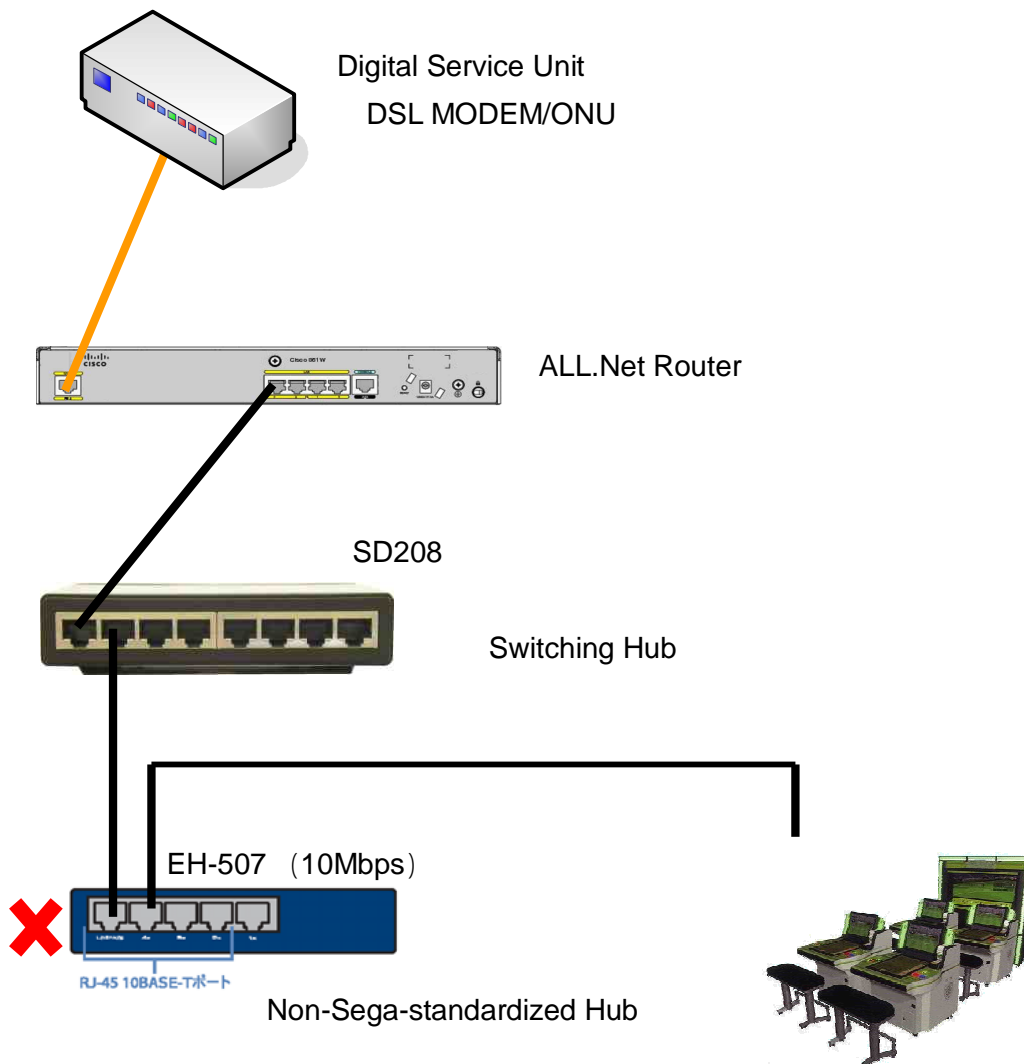
## F-2 Trouble Case 2 Long LAN Cable

For standard use for LAN cable as Cat5e, the qualified value is 100m. However, due to many disorders such as noise, we encourage the length at 50m for ALL.Net use. Unless there is improvement in disorder from the noise, please also try to use STP (Shield Twisted Pair) cable.



### F-3 Trouble Case 3 Non-Sega-Standardized Switching Hub

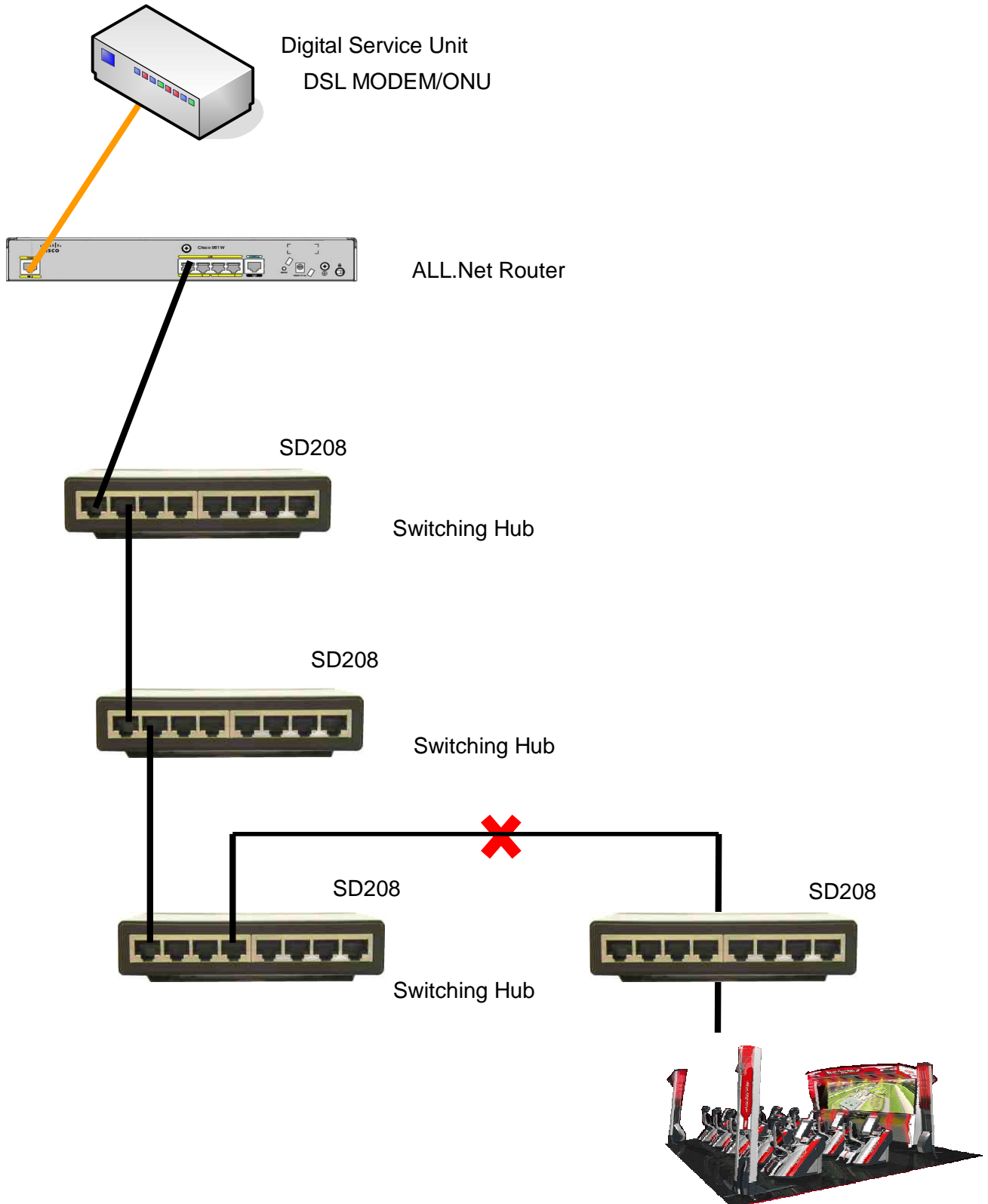
Please use Sega-standardized Switching Hub any time. In case use of non-Sega-standardized hub due to inventory in store, etc, please check specifications standards.



Please use specification with AutoMDI/MID-X function when you use the non-Sega-standardized.

## F-4 Trouble 4 Way beyond the 4<sup>th</sup> Cascade Hierarchy of Hub Connection

Cascade hierarchy of Switching Hub basically does not limit, but increased of data causes chance of matter. We discourage to connect beyond the 4<sup>th</sup> cascade hierarchy of Switching Hub 100Mbps.



## F-5 Other Notices

- Please do not use LAN extension connector.
- Please avoid routing around strong noise of electromagnetic equipment such as air conditioner, etc.
- Please secure what LAN connector is tied without chipping.
- Please do not trample on LAN cable by game machine, equipment, furniture, etc.

## G. References

For Switching Hub (SD-208)

Front Panel

System LED

Green : The System LED will light up when the Switch is Powered on.

1-8 LED

Green : Each LED will light up when there is a connection made through its corresponding port. It will flash when there is activity on its corresponding port.



Back Panel

- The network ports are located on the back panel of the Switch.
- 1-8 These ports are connection points for PCs and other network devices, such as additional switches.



\*This is reference from English manual of Switching Hub (SD208).

## H. Contact Point

When you can't understand well by the contents mentioned above, or when some problems occurred by installation, please inquire to the following contact point.

SEGA Corporation Asia/China AM Sales Dept.

Mail: [allnet\\_os\\_support@soj.sega.co.jp](mailto:allnet_os_support@soj.sega.co.jp)