# IA-575

ASTRO

**ASTRODESIGN CO., LTD.**

# Contents

# 1 Before Use

## 1.1. Introduction

Thank you very much for purchasing the model IA-575 DVI-to-SCART conversion adapter.
This manual contains details on the operation procedures to be followed when the IA-575 is used, the checkpoints and precautions to be observed, and so on.
Before using the IA-575, please read through these instructions.
After reading the manual, keep it in a safe place for future reference.

## 1.2. Safety precautions

Improper handling may lead to malfunctioning or accidents. Before using this adapter, be absolutely sure to read through the safety precautions listed below: they will help to ensure that you will operate the adapter correctly.

■ **Meaning of the symbols used in this manual**

| | |
|---|---|
| ⚠ **WARNING** | This indicates an aspect of the adapter, which if it is handled improperly, may result in serious bodily harm (including death or serious injury) and/or impairment of the adapter's original functions. |
| ⚠ **CAUTION** | This indicates an aspect of the adapter, which if it is handled improperly, could result in bodily injury, impairment of the adapter's original functions and/or property damage. |
| ⊘ | This indicates that an action is prohibited (that is to say, an action which must not be undertaken). Specific details are provided in the figures or text near ⊘ . |
| ❗ | This indicates an instruction which must be performed mandatorily. Specific details are provided in the figures or text near ❗. |

■ **Observe the following precautions to ensure safe operation.**

| | | |
|---|---|---|
| ⚠ **WARNING** | Do not spill liquids inside the adapter or drop inflammable objects or metal parts into it. Operating the adapter under these conditions may cause a fire, electric shocks and/or malfunctioning. | ⊘ |
| ⚠ **CAUTION** | Install the adapter in a stable location. Do not stand it on its side. Rises in temperature caused by heat generation may result in malfunctioning. | ❗ |
| | Do not subject the adapter to impact. Doing so may result in malfunctioning. Take sufficient care when moving the adapter. | ⊘ |
| | When accuracy is a priority, leave the adapter for about 10 to 15 minutes after turning on its power, and wait until its operation has stabilized before starting to use it. | ❗ |
| | In the unlikely event that trouble has occurred, disconnect the adapter's cables, and contact your dealer or an Astrodesign sales representative. | ❗ |

## 1.3. How this manual is configured

This manual contains the operating instructions for the IA-575. Information on the operating methods, precautions and other aspects are presented in the following sections. Please read through this manual to ensure that you will operate the adapter correctly.

1. **Before use**
   The safety precautions, configuration of the manual and packing details of the adapter are described in this section.
2. **Concerning the IA-575**
   A general description of the IA-575 is given in this section.
3. **Operation**
   The operation of the IA-575 is given in this section.
4. **Appendix**
   Additional information is provided in this section.

## 1.4. Packing details

The following items are included with this product. Since the use of any other accessories may lead to malfunctioning, be absolutely sure to use the accessories provided.

■ **Standard items**

- IA-575
- IA-575 instruction manual (what you are reading): 1 copy
- AC adapter S-8453: The IA-575 runs on power supplied from the AC adapter.

**Table 1-4-1 AC adapter specifications**

| SSA0515A9 specifications | |
|---|---|
| Rated output voltage (V) | 5 |
| Rated output current (A) | 2 |
| Input voltage (VAC) | 100 to 240 (rating: 100) |
| Input power line frequency (Hz) | 47 to 63 (rating: 50/60) |

**Table 1-4-2 AC adapter plug shape**

| Plug shape | |
|---|---|
| EIAJ | RC-5320A |
| Voltage classification | 2 |
| Outside diameter D1 | 4.0 |
| Inside diameter D2 | 1.7 |
| Length (L) | 9.5 |
| Polarity display symbol |  |

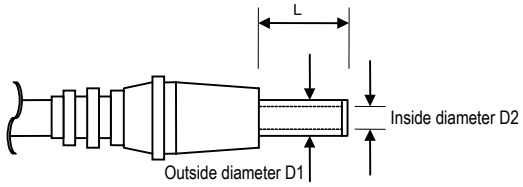


**Fig. 1-4-1 Plug shape**

# 2 Concerning the IA-575

## 2.1. Outline

The model IA-575 (DVI to SCART conversion adapter) converts DVI-D input signals into SCART output (analog) signals.

## 2.2. Features

- **Switching of various output signals of SCART connector enabled**
  This unit converts the digital DVI input signals supplied from the VG generator into analog VBS, Y/C or RGB signals and outputs them. The output signals are selected at the VG generator.

- **Internal pattern output when no signals are supplied**
  Patterns inside the IA-575 can be output when the DVI input signals from the VG generator are not TV timing signals in the PAL, SECAM or other TV format or when no signals are input.

- **Teletext output**
  When PAL signals from the VG generator are input, the IA-575 can superimpose teletext onto the output signals.

- **Wide-ranging DVI dot clock frequencies**
  Table 2-2-1 shows the specifications for the input and output dot clock frequencies.

**Table 2-2-1 Frequency specifications**

| DVI input (MHz) | DVI output (MHz) |
|---|---|
| 25 to 165 | 25 to 165 |

* DVI cable: When a 2-meter cable made by Molex is used

- **DVI HDCP outputs supported**
  The unit supports HDCP outputs provided that the VG generator used is a model that supports HDCP outputs.

## 2.3. Parts and their functions

### 2.3.1. IA-575 front panel

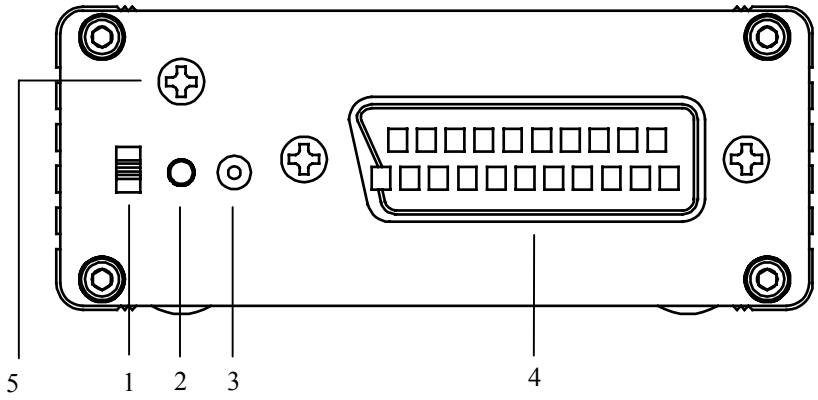


**Fig. 2-3-1 Front panel**

1 Power switch
2 LED: Lights when the power is on.
3 DC jack
4 SCART connector
5 Frame ground (FG): Connect here to share the frame ground of the equipment which is connected to the IA-575.

**CAUTION**

Always use the power switch to turn the power ON or OFF. Turning the power ON or OFF by connecting or disconnecting the cable may damage the adapter.

### 2.3.2. IA-575 rear panel

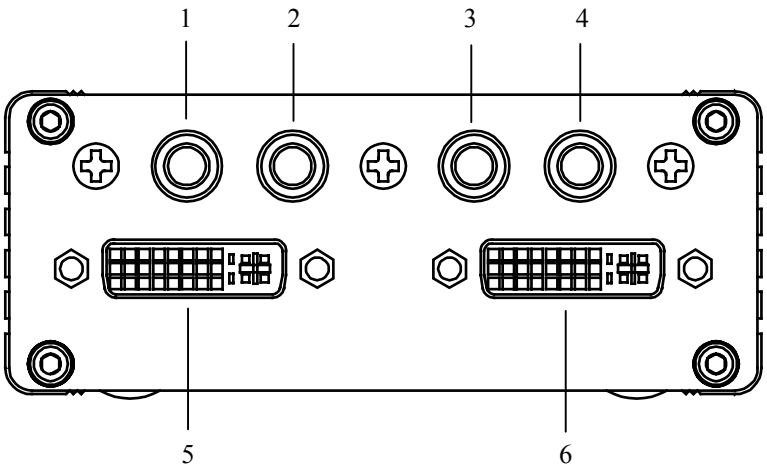


**Fig. 2-3-2 Rear panel**

1 Audio Out R
2 Audio Out L
3 Audio In R
4 Audio In L
5 DVI Out
6 DVI In

# 3 Operation

## 3.1. Connections

### 3.1.1. Connections with the VG generator

Use the DVI cable to connect the DVI IN connector on the IA-575 with the DVI connector on the VG generator. Connect the accessory AC adapter.

*1: The 2-meter cable made by Molex is recommended for use as the DVI cable used to connect the IA-575 with the VG generator.

### 3.1.2 IA-575 recognition from VG generator and check method

■ **Recognition of IA-575**

After completing the connections described in 3.1.1, turn the power of the IA-575 first, and then turn on the power of the VG generator.

* The power switch on the IA-575 has three positions.
  Top → ON
  Middle, bottom → OFF

■ **How to check the recognition**

To check whether the IA-575 has been recognized properly by the VG generator

(1) Press the [FUNC] key, [E] key and [SET] key.

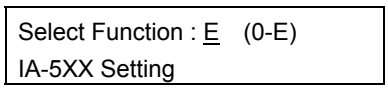


**Fig. 3-1-1 Function selection**

(2) Check that "IA-575" has appeared for the "IA-Model" item.

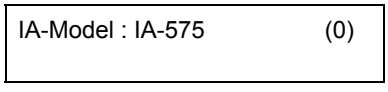


**Fig. 3-1-2 Model selection**

* The IA-575 will not be recognized if the VG generator is started before the power of the IA-575 is turned on.
* The IA-575 is recognized only when the VG generator is started.
* If the IA-575 has not been recognized by the VG generator, the Function E item cannot be selected.

# 3.2. Basic operations

## 3.2.1. Selection of supported programs

When the signals of one of the supported timing systems (see Table 3-2-1) are selected in the direct display, group display or auto display mode, signals will be output in the patterns and at the timing selected by the IA-575.

**Table 3-2-1 Supporting timing systems**

| Timing system | Numbers of programs supported by VG-848, 858 | |
|---|---|---|
| PAL (B/D/G/H/I/K) | PG1 | 969 |
| | PG2 | 853(4:3)<br>854(16:9)<br>855(LB) |
| SECAM | PG1 | 964 |
| | PG2 | 856(4:3)<br>857(16:9)<br>858(LB) |

* Signals obtained by copying any of the above timing signals onto a card or editing patterns, etc. can also be output.
* LB signals are output as the SCART VideoStatus signals with a 16:9 aspect ratio.

**Example of steps taken in direct display mode**

(1) Press the [FUNC] key, [0] key and [SET] key.

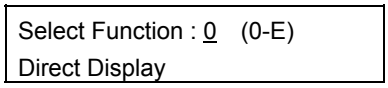


**Fig. 3-2-1 Function selection**

(2) Use the number keys to input the program number (3 digits). [Example: "969"]


**Fig. 3-2-2 Program number input**

### 3.2.2. Output switching

The IA-575 can switch its output signals to VBS output, Y/C output or RGB output signals. (See Table 3-2-2)

(1) Press the [FUNC] key, [E] key and [SET] key.

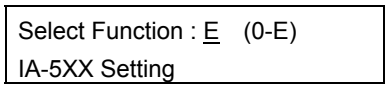


**Fig. 3-2-3 Function selection**

(2) Check that "IA-575" has appeared for the "IA-Model" item, and press the [SET] key.

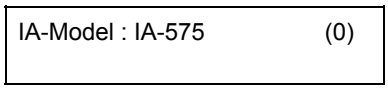


**Fig. 3-2-4 Model selection**

(3) Use the ▲ and ▼ keys to select Scart Output, select the output using 0, 1 or 2, and press the [SET] key.

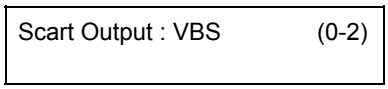


**Fig. 3-2-5 Output selection**

**Table 3-2-2 Output selection**

| No. | Output |
|---|---|
| 0 | Y/C |
| 1 | VBS |
| 2 | RGB |

* VBS, Y/C and RGB signals cannot be output simultaneously.
* The CS signal among the RGB output signals is output as a VBS output signal.
* The video level of the VBS signals during RGB output is a little low (640 mV with 100% white). The sync level is unaffected.

### 3.2.3. Selecting output signals with an unsupported timing system

When a timing system other than one supported by the IA-575 (see Table 3-1-1) has been selected, it is possible to specify the timing system (see Table 3-2-3) and pattern (see Table 3-2-4) which are to be output from the IA-575.

(1) Press the [FUNC] key, [E] key and [SET] key.

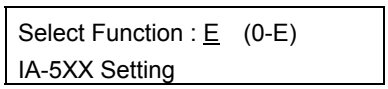


**Fig. 3-2-6 Function selection**

(2) Check that "IA-575" has appeared for the "IA-Model" item, and press the [SET] key.

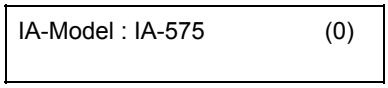


**Fig. 3-2-7 Model selection**

(3) Use the ▲ and ▼ keys to select Timing, select the timing system using 0, 1 or 2, and press the [SET] key.
Use the ► key to move to Pattern, select the pattern using 0 or 1, and press the [SET] key.

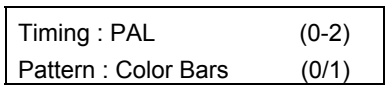


**Fig. 3-2-8 Timing system and pattern selection**

**Table 3-2-3 Timing system selection**

| No. | Output |
|---|---|
| 0 | No Signal |
| 1 | PAL |
| 2 | SECAM |

**Table 3-2-4 Pattern selection**

| No. | Output |
|---|---|
| 0 | Color Bars |
| 1 | Blue Field |

* In the case of an unsupported timing system, the output selection depends on the selection made in section 3.2.2.

### 3.2.4. Saving the settings

The outputs as well as the timing systems and patterns in the case of unsupported timing systems can be saved inside the IA-575.

(1) When the [SAVE] key is pressed during the various configuration stages, its LED starts flashing, and the following appears on the LCD display.

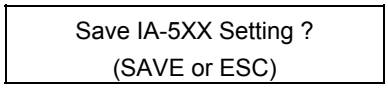


**Fig. 3-2-9 Saving the data**

(2) When the [SAVE] key is pressed again, the IA-575 setting data is saved, and the LED goes off. If the [ESC] key is pressed here instead, the data is not saved, and the display is returned to the original screen.

* Do not turn off the power of the IA-575 before the [SAVE] key LED goes off. Malfunctioning may occur if it is turned off by mistake while the [SAVE] key LED is still lighted.
* Since the saved data is shared by the outputs, timings and patterns in the stand-alone mode, it is overwritten each time data is saved.

### 3.2.5. SCART control signals

The Video Status (see Table 3-2-5) is output automatically from the status pin (see section 4.1.3) in accordance with the program when a supported timing system is selected.
The RGB Status (see Table 3-2-6) is output automatically from the status pin (see section 4.1.3) in accordance with the output selection (see section 3.2.2).

**Table 3-2-5 Video Status**

| Voltage. | Output |
|---|---|
| 0 V | No Signal |
| 5 V | 16:9, LB |
| 12 V | 4:3 |

**Table 3-2-6 RGB Status**

| Voltage | Output |
|---|---|
| 0 V | VBS, Y/C |
| 5 V | RGB |

# 3.3. Application operations

## 3.3.1. Teletext

Teletext can be executed only when the PAL timing system has been selected. It can be executed by the IA-575 only when the VG generator has a valid teletext license.

(1) Press the [FUNC] key, [2] or [3] key and [SET] key.

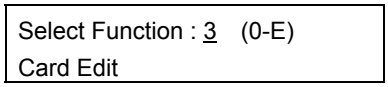


**Fig. 3-3-1 Function selection**

(2) Use the number keys to input the program number (3 digits). [Example: "969"]

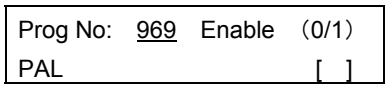


**Fig. 3-3-2 Program number input**

(3) Press the [TIMING] key, [5] key and [SET] key.

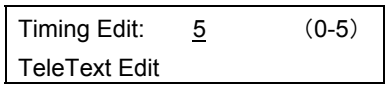


**Fig. 3-3-3 Teletext data editing**

(4) Use the ▲and ▼ keys to select Teletext, select ON or OFF using 0 or 1, and press the [SET] key.
Use the ► key to move to TeleTextLine, select the output line using 0 or 1, and press the [SET] key.

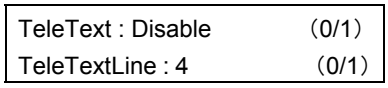


**Fig. 3-3-4 Teletext data editing**

**Table 3-3-1 Teletext output setting**

| No. | Output |
|---|---|
| 0 | Disable |
| 1 | Enable |

**Table 3-3-2 Teletext multiplexing lines**

| No. | Line | Output | |
|---|---|---|---|
| 0 | 4Line | Field 1 | 20, 21 |
| | | Field 2 | 333 ,334 |
| 1 | 8Line | Field 1 | 13, 14, 20, 21 |
| | | Field 2 | 326, 327, 333, 334 |

* TeleTextPage selected as the TeleTextEdit item setting has no effect with the IA-575.
* Teletext cannot be executed in the stand-alone mode.
* The Teletext output level is at variance from the rating. (See Fig. 3-3-1)

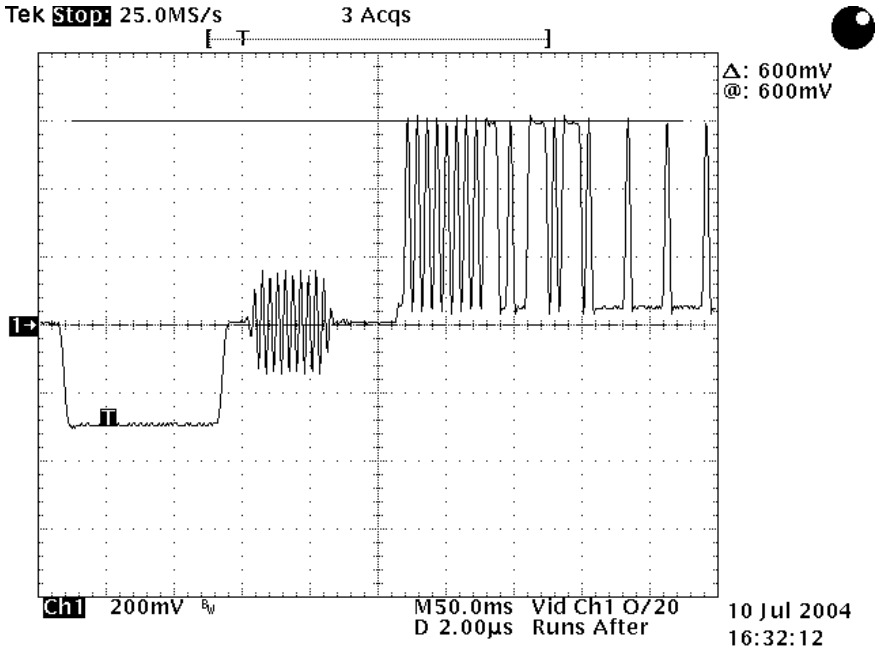


**Fig. 3-3-5 Teletext output level**

### 3.3.2. HDCP setting

(1) Press the [FUNC] key, [C] key and [SET] key.

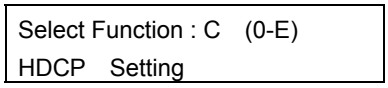


**Fig. 3-3-6 Function selection**

(2) The following appears on the LCD display.

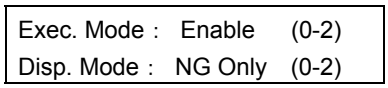


**Fig. 3-3-7 HDCP mode selection screen**

(3) Select the execution mode and display mode.

**Table 3-3-3 HDCP mode selection**

| Item | Setting | LCD display | Description |
|---|---|---|---|
| Exec. Mode | 0 | Disable | HDCP is not executed when any of the programs is run. |
| | 1 | Enable | HDCP is executed when any of the programs is run. |
| | 2 | Program | HDCP is executed only when a program for which "Enable" has been selected as the program data HDCP item setting is run. |
| Disp. Mode | 0 | NG Only | The results are shown on the monitor only when the check is NG. |
| | 1 | ALL | The check results are shown on the monitor each time. |
| | 2 | Pattern | HDCP is executed while the pattern remains displayed. |

(4) Use the ▼ key to move to the next page, and set the interval and type.

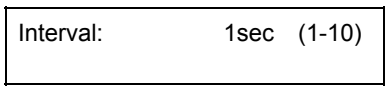


**Fig. 3-3-8 Interval and type setting screen**

**Table 3-3-4 Interval and type settings**

| Item | Setting | Description |
|---|---|---|
| Interval | 1 to 10<br>(Initial value = 1) | HDCP recognition and encryption are executed at the set interval (in increments of seconds). |

(5) Use the ▼ key to move to the next page, and set ON or OFF for reset when HDCP recognition is OK or NG.

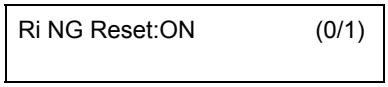


**Fig. 3-3-9 Reset ON/OFF setting screen**

**Table 3-3-5 Reset ON/OFF settings**

| Key | LCD display | Description |
|---|---|---|
| 0 | ON | Reset is initiated when HDCP recognition is NG, and the procedure is repeated from the initial recognition. |
| 1 | OFF | Recognition is not repeated even when HDCP recognition is NG. |

* "Ri" on the setting screen is an abbreviation for "Video transmitter and receiver link synchronization verification values," and it is displayed as "RI."

(6) When the [SAVE] key is pressed on any screen while editing the HDCP setting data, its LED starts flashing, and the following appears on the LCD display.

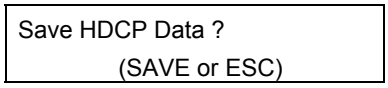


**Fig. 3-3-10 Save confirmation screen**

(7) When the [SAVE] key is pressed again, the config data is saved, and the LED goes off. If the [ESC] key is pressed here instead, the data is not saved, and the display is returned to the original screen.

### 3.3.3. HDCP settings for each program data

When "Program" has been selected as the "Exec. Mode" setting in Fig. 3-3-7, HDCP "Enable" or "Disable" must be set for each data program.
HDCP is executed only when running a program with "Enable" set for the program data HDCP item; it is not executed if "Disable" is set.

(1) Press the [FUNC] key, [3] key and [SET] key.

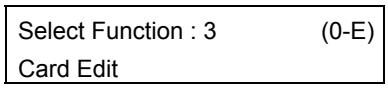


**Fig. 3-3-11 Function selection**

(2) The following appears as the initial display.

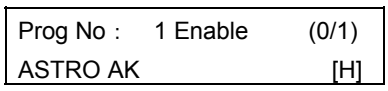


**Fig. 3-3-12 Initial display screen**

(3) When the ► key is pressed to move the cursor inside the [ ] at the bottom right, HDCP Enable or Disable is changed using the [1] key (Enable: H) and [0] key (Disable: blank).

(4) When the [SAVE] key is pressed, its LED starts flashing, and the following appears on the LCD display.

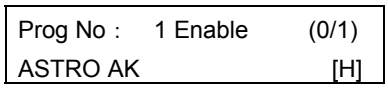


**Fig. 3-3-13 Save confirmation screen**

(5) Enter the number and name of the program whose data is to be saved here. When the [SAVE] key is pressed again, the program data is saved on the memory card. (The LED goes off after the data has been saved.)

### 3.3.4 HDCP execution

HDCP can be executed by the IA-575 only when the VG generator has a valid HDCP license. When timing and pattern data are executed in the direct display mode, HDCP is executed simultaneously.

(1) Press the [FUNC] key, [0] key and [SET] key.

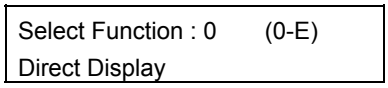


**Fig. 3-3-14 Function selection**

(2) The following appears as the initial display.

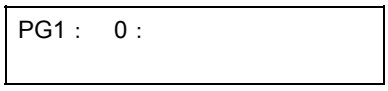


**Fig. 3-3-15 Initial display screen**

(3) Use the number keys to input the program number (3 digits). Use the ▲ and ▼ keys to switch the program number.

(4) Each time recognition and encryption are completed during HDCP execution, the character at the bottom right of the LCD changes from "*" to "-" or vice versa.

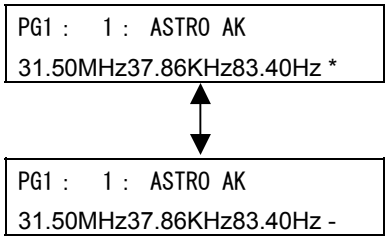


**Fig. 3-3-16 HDCP execution underway screen**

(5) When "NG Only" or "ALL" has been selected as the "Disp. Mode" setting in Fig. 3-3-7, the results are displayed on the monitor each time HDCP and encryption are completed. The figure below shows an example of what may be displayed when "ALL" is selected.

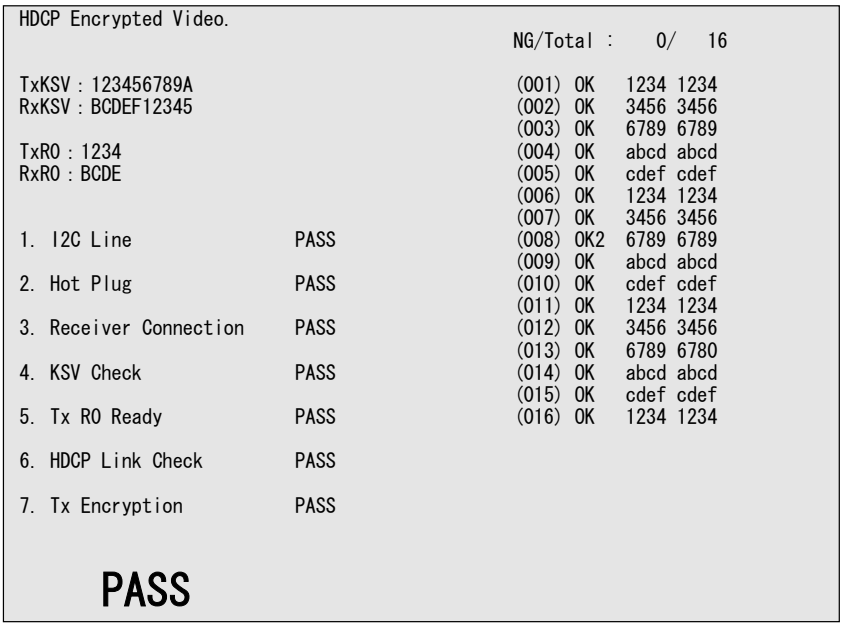


**Fig. 3-3-17 HDCP execution underway screen (monitor)**

The numbers inside the parentheses indicate whether recognition is performed for the first, second, third or other time. Since the data is read twice with recognition performed for the first time, "OK" is displayed when the value projected by the first reading matches the link check value of the receiver, and "OK2" is displayed with the recognition performed for the second time. "NG!!" is displayed if neither value matches after the two readings.
The values which have been read are displayed in the hexadecimal format. The projected values of the transmitter are shown on the left and the link check values of the receiver on the right.

(6) When "Pattern" has been selected as the "Disp. Mode" setting in Fig. 3-3-7, HDCP recognition and encryption are executed while the pattern remains displayed on the monitor. The HDCP execution underway message is displayed at the top left of the monitor screen.

(7) Once HDCP encryption has commenced, a disturbed image (as in a snowstorm: Note 1) is output if HDCP recognition has failed. If the timing system is switched when recognition has failed, the HDCP link is reset, and recognition proceeds again. Error messages are shown at the bottom of the LCD display.

The errors which may result during HDCP execution are listed below.

**Table 3-3-6 Error table**

| Code | Message | Description |
|---|---|---|
| 51H | “HDCP Not Receiver” | The repeater is connected. |
| 52H | “HDCP RiTimeout Error” | A timeout (250ms) has occurred in the Ri read allowance indication of the receiver. |
| 53H | “HDCP Tx KSV Error” | KSV of the transmitter does not contain twenty "0"s and "1"s. |
| 54H | “HDCP Rx KSV Error” | KSV of the receiver does not contain twenty "0"s and "1"s. |
| 55H | “HDCP Link Check Error” | The values did not match during recognition for the first time. |
| 56H | “HDCP Encrypt Error” | Encryption was not completed. |
| 57H | “HDCP Hot Plug Error” | The receiver is not connected to the DVI connector. (Note 2) |
| 58H | “HDCP Ri Ready Error” | The ready bit of the receiver was not set to "Hi." |
| 59H | “HDCP DVIModeDual Err” | "Dual" was selected as the DVI mode setting. |
| 5aH | “HDCP Hfp Error” | The H front porch is zero. |
| 5bH | “HDCP Hbp Error “ | The H back porch is zero. |
| 5cH | “HDCP Hblank Error” | There are fewer than 128 H blanking pulses. |
| 5dH | “HDCP Vfp Error” | The V front porch is zero. |
| 5eH | “HDCP H-TIM Error” | H timing error. |
| 5fH | “HDCP 1/2 Clock Mode” | The timing system in the 1/2 clock mode has been set. |

Note 1: This is the white noise similar to that which appears on the TV screen when a station goes off the air.

Note 2: When a hot plug error has occurred, the HDCP recognition and encryption will be resumed when the DVI connector is re-connected.

### 3.3.3. Signal output in stand-alone mode

The output, timing and pattern data to be used when the power of the IA-575 is turned on can be saved. To execute the data in the stand-alone mode, there is no need for the VG generator to be connected.

(1) Press the [FUNC] key, [E] key and [SET] key.

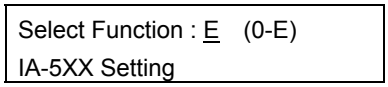


**Fig. 3-3-18 Function selection**

(2) Check that "IA-575" has appeared for the "IA-Model" item, and press the [SET] key.

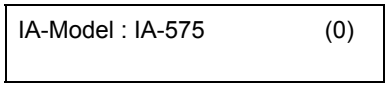


**Fig. 3-3-19 Model selection**

(3) Use the ▲ and ▼ keys to select Scart Output, select the output using 0, 1 or 2, and press the [SET] key.

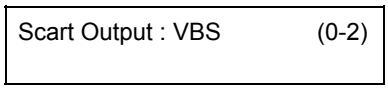


**Fig. 3-3-20 Output selection**

(4) Use the ▲ and ▼ keys to select Timing, select the timing system using 0, 1 or 2, and press the [SET] key.
Use the ► key to move to Pattern, select the pattern using 0 or 1, and press the [SET] key.

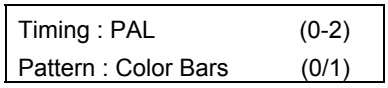


**Fig. 3-3-21 Timing system and pattern selection**

(5) When the [SAVE] key is pressed, its LED starts flashing, and the following appears on the LCD display.

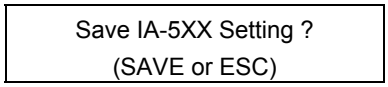


**Fig. 3-3-22 Saving the data**

(6) When the [SAVE] key is pressed again, the config data is saved, and the LED goes off. If the [ESC] key is pressed here instead, the data is not saved, and the display is returned to the original screen.

(7) Turn off the power of the IA-575, and turn it back on to restart the unit.

* Do not turn off the power of the IA-575 before the [SAVE] key LED goes off. Malfunctioning may occur if it is turned off by mistake while the [SAVE] key LED is still lighted.
* Since the saved data is shared by the outputs, timings and patterns when unsupported signals are supplied in the stand-alone mode, it is overwritten each time data is saved.

# 4 Appendix

## 4.1. Connector pin layouts

### 4.1.2 DVI digital serial input connector

- Connector: DVI-I connector
- Output: TMDS

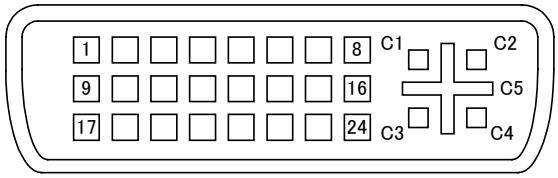


**Fig. 4-1-1 Pin layouts**

**Table 4-1-1 Pin numbers**

| Pin no. | Signal | Pin no. | Signal |
|---|---|---|---|
| 1 | TMDS DATA2- | 16 | SENSE |
| 2 | TMDS DATA2+ | 17 | TMDS DATA0- |
| 3 | TMDS DATA2/4 G | 18 | TMDS DATA0+ |
| 4 | - | 19 | TMDS DATA0 G |
| 5 | - | 20 | - |
| 6 | DDC CLK | 21 | - |
| 7 | DDC DATA | 22 | TMDS CLK G |
| 8 | - | 23 | TMDS CLK+ |
| 9 | TMDS DATA1- | 24 | TMDS CLK- |
| 10 | TMDS DATA1+ | C1 | - |
| 11 | TMDS DATA1 G | C2 | - |
| 12 | - | C3 | - |
| 13 | - | C4 | - |
| 14 | +5V | C5 | GND |
| 15 | GND | - | - |

* The maximum supply current when the +5V voltage is supplied (pin 9) is 0.5A.
For details on the DDC power supply, refer to "4.3.3 Concerning the DDC power supply."

* The DVI-I connector is used but no analog signals are output. Pins C1 to C4 are not connected.

### 4.1.2. DVI digital serial output connector

- Connector: DVI-I connector
- Output: TMDS

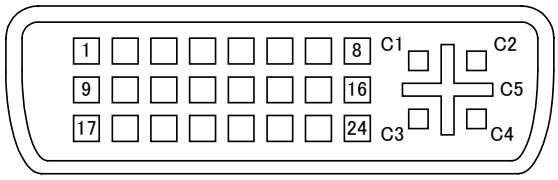


**Fig. 4-1-2 Pin layouts**

**Table 4-1-2 Pin numbers**

| Pin no. | Signal | Pin no. | Signal |
|---|---|---|---|
| 1 | TMDS DATA2- | 16 | SENSE |
| 2 | TMDS DATA2+ | 17 | TMDS DATA0－ |
| 3 | TMDS DATA2/4 G | 18 | TMDS DATA0＋ |
| 4 | - | 19 | TMDS DATA0 G |
| 5 | - | 20 | - |
| 6 | DDC CLK | 21 | - |
| 7 | DDC DATA | 22 | TMDS CLK G |
| 8 | - | 23 | TMDS CLK+ |
| 9 | TMDS DATA1- | 24 | TMDS CLK- |
| 10 | TMDS DATA1+ | C1 | - |
| 11 | TMDS DATA1 G | C2 | - |
| 12 | - | C3 | - |
| 13 | - | C4 | - |
| 14 | +5V | C5 | GND |
| 15 | GND | - | - |

* The maximum supply current when the +5V voltage is supplied (pin 9) is 0.5A.
For details on the DDC power supply, refer to "4.3.3 Concerning the DDC power supply."
* The DVI-I connector is used but no analog signals are output. Pins C1 to C4 are not connected.

### 4.1.3. SCART connector

- Connector: SCART connector
- Output: VBS, Y/C, analog RGB, analog audio, control signals

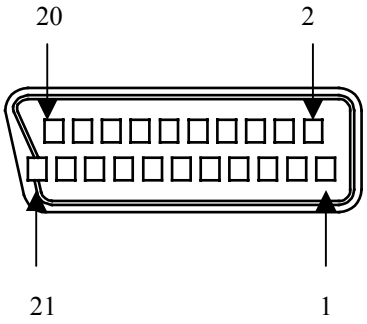


**Fig. 4-1-3 Pin layouts**

**Table 4-1-3 Pin numbers**

| Pin no. | Signal | Pin no. | Signal |
|---|---|---|---|
| 1 | Audio R Out | 11 | Green Out |
| 2 | NC | 12 | NC |
| 3 | Audio L Out | 13 | Gnd |
| 4 | Gnd | 14 | Gnd |
| 5 | Gnd | 15 | Red/C Out |
| 6 | Gnd | 16 | RGB Status |
| 7 | Blue Out | 17 | Gnd |
| 8 | Video Status | 18 | Gnd |
| 9 | Gnd | 19 | VBS /Y Out |
| 10 | NC | 20 | NC |
| | | 21 | Gnd |

# 4.2. Device input pin support

## 4.2.1. DVI transmitter device pin support

- The table below shows the correspondence between the data input pins of the DVI transmitter and the RGB data.
- DVI transmitter: SII170BCL64 [Silicon Image]

**Table 4-2-1 DVI device pin support table**

| Output pin | Data | Output pin | Data |
|---|---|---|---|
| QE0 | B0 | QE15 | G7 |
| QE1 | B1 | QE16 | R0 |
| QE2 | B2 | QE17 | R1 |
| QE3 | B3 | QE18 | R2 |
| QE4 | B4 | QE19 | R3 |
| QE5 | B5 | QE20 | R4 |
| QE6 | B6 | QE21 | R5 |
| QE7 | B7 | QE22 | R6 |
| QE8 | G0 | QE23 | R7 |
| QE9 | G1 | HSYNC | HSYNC |
| QE10 | G2 | VSYNC | VSYNC |
| QE11 | G3 | DE | DISP |
| QE12 | G4 | CTL1 | - |
| QE13 | G5 | CTL2 | - |
| QE14 | G6 | CTL3 | - |

# 4.3. IA-575 specifications

## 4.3.1. Specifications

| | | |
|---|---|---|
| Dot clock frequency | DVI input *1 | 25 to 165MHz |
| | DVI output*1 | 25 to 165MHz |
| DVI input | | Compliant with DVI1.0 standard<br>Signal format: TMDS (DVI) |
| DVI output | | Compliant with DVI1.0 and HDCP1.0 standards<br>Signal format: TMDS (DVI) |
| Video signal level | | 1P-PV ±3% (excluding chroma level) |
| Control signal output level | | 0 V to 12 V |

*1: Use of the 2-meter cable made by Molex is recommended as the DVI cable.

## 4.3.2. Ratings

| | |
|---|---|
| Supply voltage | DC5V |
| Power consumption | 8 W |
| Dimensions | 100(W)×200(H)×40(D)mm (excluding projections) |
| Weight | Approx. 0.7 kg |
| Operating temperature | 5 to 40°C |
| Storage temperature | -10 to 60°C |
| Humidity | 30 to 85%RH (no condensation) |

### 4.3.3. Concerning the DDC power supply

The DVI output of the IA-575 provides the DDC power (+5V) supply.
The maximum supply current of the DDC power supply is 0.5A.

The DDC power is output as shown below.

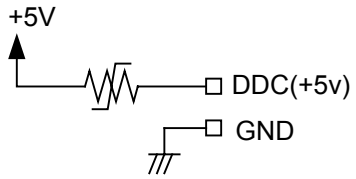


**Fig. 4-3-1 DDC power output circuit**

**CAUTION**

- Although the DDC power supply incorporates an overcurrent protection device, it should not be used at current levels exceeding the rating.
- Under no circumstances must power be supplied from the connected device to the DDC power supply. If power is connected, the IA-575 and connected device may malfunction.

### 4.3.4. Outline of product

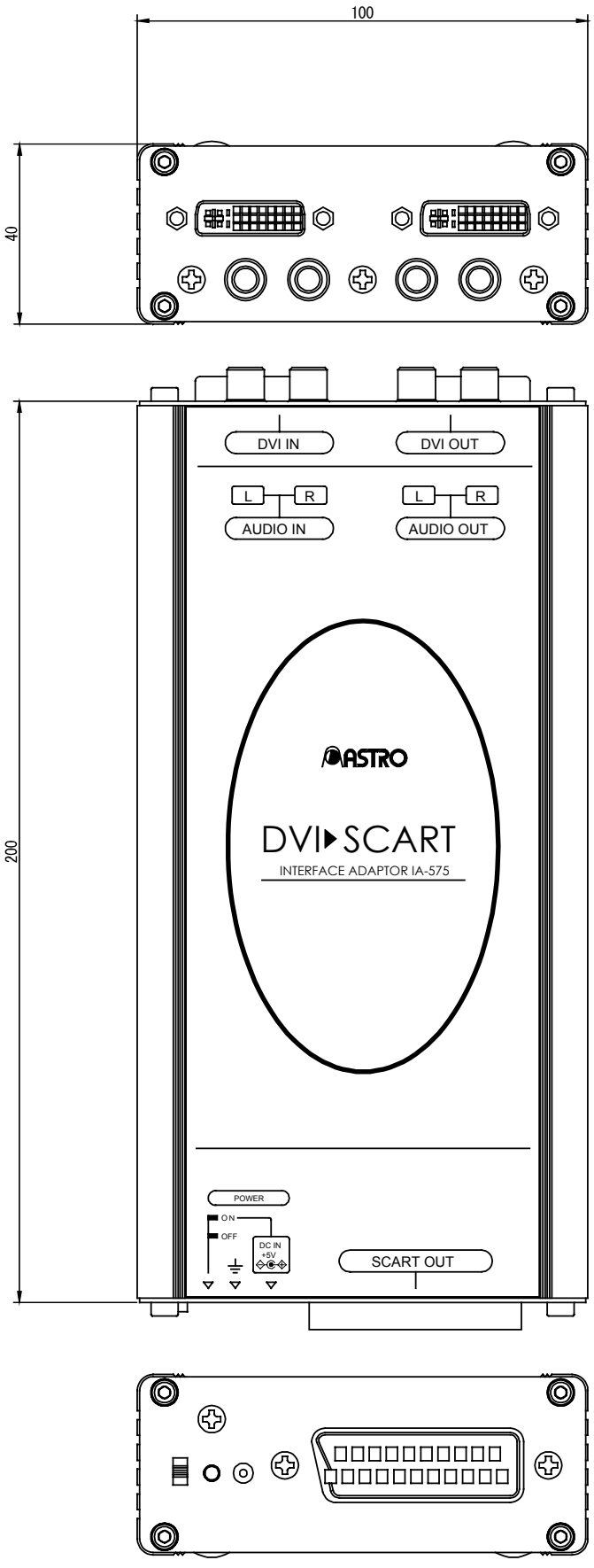


**Fig. 4-3-2 Outline diagram of product**

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Ver 1.01 2004.10.15