GPS TIME CONTROLLER

SC-08GTC

User's Manual

GPS RECEIVER

SeeEyes

GPS

SC-08GTC
GPS TIME TRANSMITTER

SC-08GTC

SeeEyes

SC-GTC
GPS TIME CONTROLLER

DATE:02-01-01
TIME:06:06:49

SAMSUNG CCTV SERVICE

SeeEyes Co., Ltd.
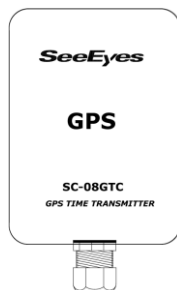
Precaution and Safety Guidelines
Please read this user's manual thoroughly prior to use the unit for its easy and convenient use.

- Please turn OFF the power of the units prior to installation.
- Do not install the product in the following places: extremely low or high temperature conditions; places exposed to rain, snow, or high humidity; places containing or exposed to oil and gas; places exposed to vibration and shock; places under direct sunlight or exposed to outdoor weather conditions; places exposed to radio waves (RF) or near to power lines. It may cause low performance or malfunction of the unit.
- Use this product under temperature conditions only between -10°C and +50°C.
- Do not disassemble the product or insert foreign objects.
- The unit is subject to electric shock hazard. Be careful not to get an electric shock while using the device.
- Do not use and/or connect any devices inappropriate to the unit. It may cause malfunction of the unit or fire hazard.
- Should be careful not to have the lines changed when connecting them.
- Prior to turn on the device, check the cable insulation condition of the data cable, connected with external devices.
- Before installing the product, check its voltage rate and then turn on the power.
- Make sure to turn off the product prior to installation.
- Do not subject the product to physical shock or exert excessive force to operate the product.
- Do not use the device when any smoke or smell is produced from the unit. It may be subject to fire or electric shock. If any smoke or smell is produced, please turn off the unit and remove the power cable immediately, and contact your distributor to check the device properly.
- Should use STP(UTP) CABLE when you connect GPS receiver with SC-08GTC.
- Since the UTP (Unshielded Twisted Pair) cable is an unshielded cable and it can be easily damaged by the surge or lighting, it is recommended to use STP (Shielded Twisted Pair) cable in case that camera is located outside.
- If the power does not turn ON, please check whether the power cable is connected correctly or not.
- If the device does not work properly, please contact your distributor.
- Signals may delay in a few seconds on the process of receiving DATA signal and updating between the devices.
- Recommend you to use STP(Shielded Twisted Pair) CABLE in order to avoid interference from outside noise and electrical signal.
- ※ Install the SC-GPS01 in open areas for receiving the GPS Data. It may not be operated or the quality of GPS Data signal might be bad when you set up the product in build-up areas.

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1. Introduction
1-1. Overview
 SC-08GTC, the GPS Time Synchronizer, receives the World's standard time information from GPS Satellite and provides this to the device such as DVR or PC which needs accurate time information through 16 external interfaces.
 Using SC-08GTC, it is possible to synchronize and keep the accurate time of several devices.
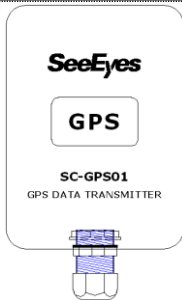
1-2. Features
• Provides the Standard time using GPS
 (Through RS- 232C and RS-485 interface)
• Possible to connect and synchronize time up to 16 devices.
 (RS-232C x 8 / RS-485 x 8)
• Easy install and easy setup
 Provides Software which can set-up the time automatically and manually in accordance with Windows based DVR/PC.
• Supports LCD Display panel for the state of receiving
 (GPS Receptions, Date Time display)
• Using RS-485, GPS receiver transmits the time information up to 1.2km over CAT.5 to the main device and receives power for its working from main device via same CAT.5
• Waterproof GPS signal receiver

2. Components
2-1. SC-08GTC
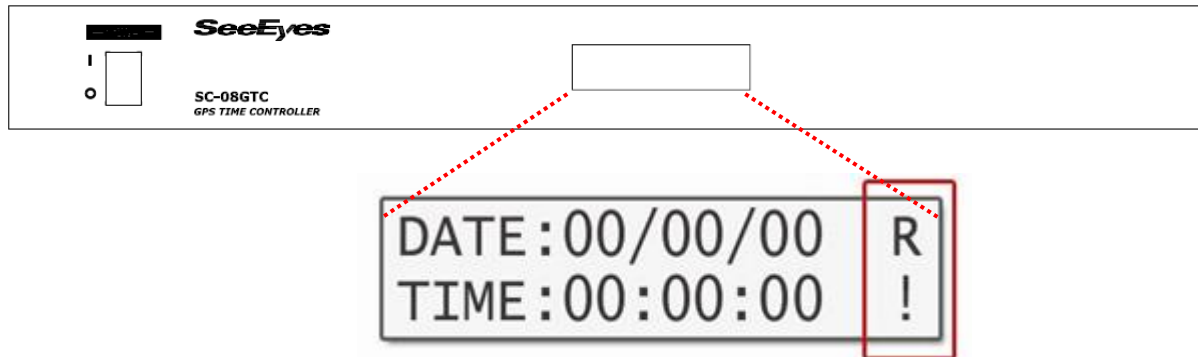
MODEL	Tx.	Rx.	UNIT	Bracket	Power cord	Manual
SC-GPS01	O		SeeEyes **GPS** SC-GPS01 GPS DATA TRANSMITTER			
SC-08GTC (Main Device)		O	SeeEyes SC-GTC			

3. Product Parts and Peripheral Device Connection

3-1. Products Name and Functions
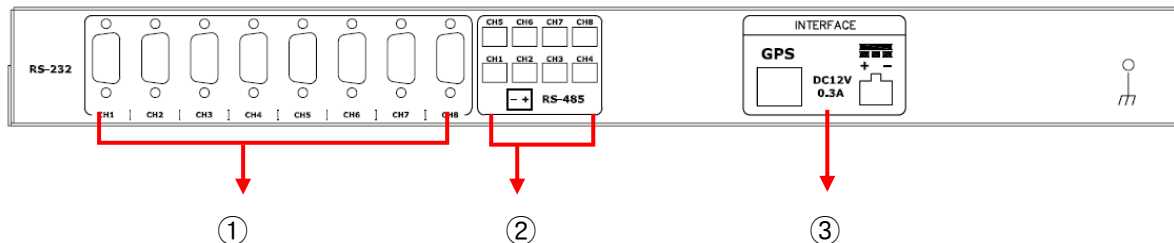
3-1-1. SC-08GTC (Front side)

- Time information received from GPS is displayed on the LCD monitor.
- Marked square line indicates the state of receiving GPS signals.

	Before the connection	After the right Connection	Normal Receiving
Displayed Characters	X	?	!

- It remains ' ? ' mark when the Data can't be received from the GPS Receiver.

3-1-2. SC-08GTC (Rear side)

① RS-232C Port X 8: Output the GPS Time Information
② RS-485 Port X 8: Output the GPS Time Information
③ GPS 1: The port which Transmitter sends the signals to.
   GPS 2: It is not used at the moment.
   DC IN: Connect to the provided adaptor (DC 12V 0.5A)

3-1-3. GPS Receiver

- This device receives the GPS signal and transmits the signal to the Main device (SC-08GTC). And the GPS receiver needs to be installed in the suitable place for receiving the Satellite signal.
- Possible to transmits signals up to 1.2km between the Main device (SC-08GTC) and the GPS Receiver.
- Use 4P STP(UTP) Cable when connecting the Main device(SC-08GTC) with the GPS Receiver.
- Connect the cable as indicated in the Cable Connection Table.
- In the place where strong interference occurs from outside noise and electrical signal, Use STP(Shielded Twisted Pair) CABLE.

How to connect the UTP cable

SC-08GTC Main

SC-GPS01
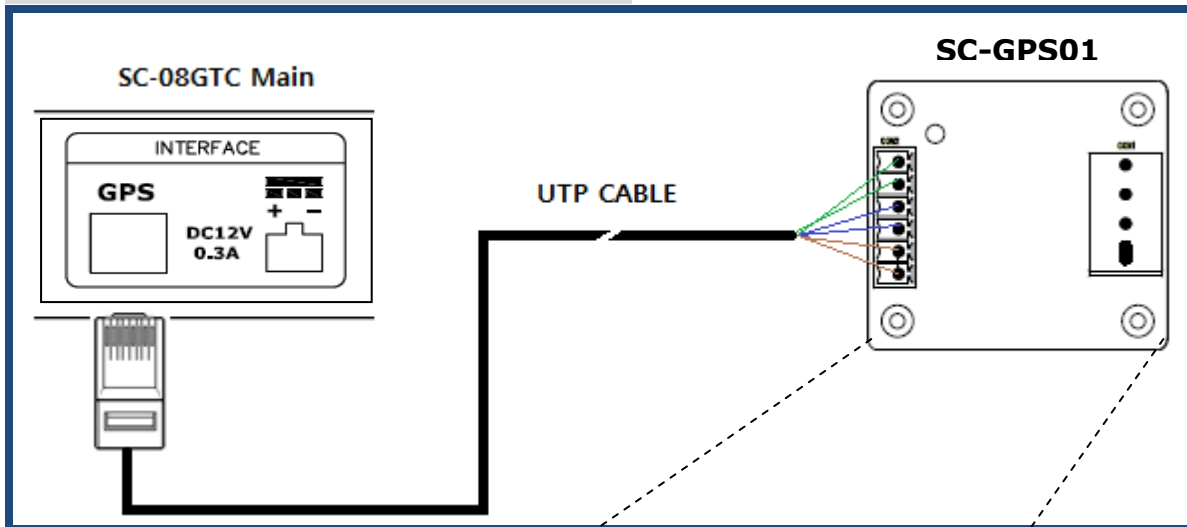
- How to connect the cables with Terminal Block inside the GPS Receiver.
  - Open the GPS Receiver cover.
  - Connect the 4P UTP Cables as shown on the below.

① RS-485 **+**
   RS-485 **-**
   DC 12V **+** Input
   DC 12V **+** Input
   GND
⑥ GND
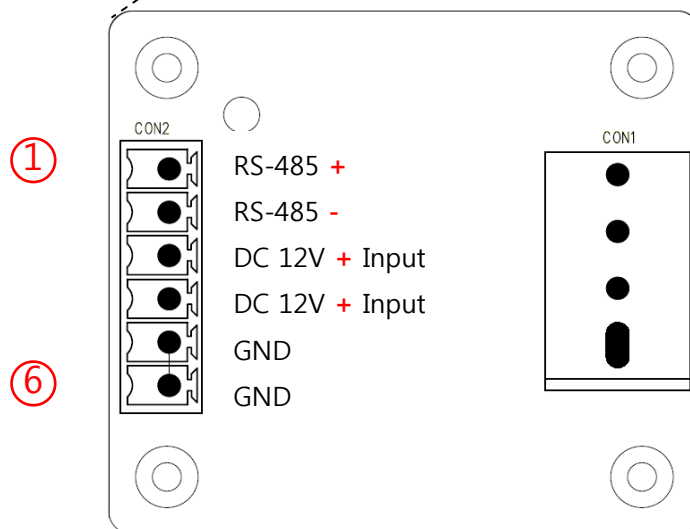
- The sequence of connecting STP(UTP) Cable with the GPS Receiver.
  - Put the STP(UTP) Cable inside the GPS receiver through the bottom of the device(Cable Gland). Connect the cables to CON2 port (6P Terminal Block) after removing the 5cm of cable cover. Refer to the table below

- Connect the cables in the way of RJ-45 Plug in case of Main device (SC-08GTC),.
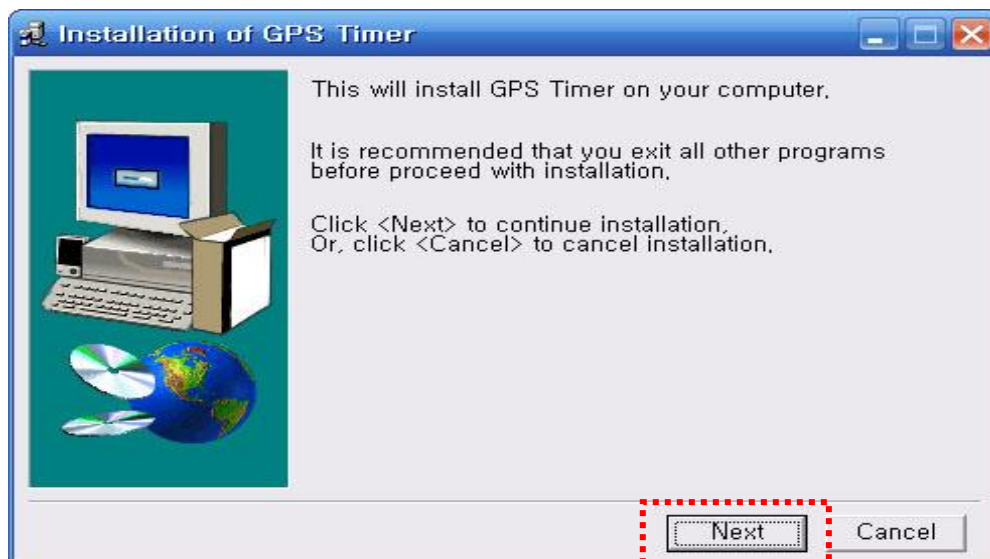
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• Please connect the UTP cable as below at the receiver side.

# of cable		Color	Functions	Receiver (CON2)
1		Orange	Do not use	Do not connect
2		Orange+White		
3		Green	RS-485 +	**1**
4		Green+White	RS-485 -	**2**
5		Blue	DC 12V +	**3**
6		Blue+White	DC 12V +	**4**
7		Brown	GND	**5**
8		Brown+White	GND	**6**

4. Installation of GPS Timer (Software)

SC-08GTC receives the time information from the satellite and provides the time with the devices such as DVR, PC. You should install the program (software) that we provide you in order to update the information from the GPS Receiver.

• Program installation Specifications
 - Windows OS installed devices
• How to install the program
 - Copy the provided program to the storeroom such as USB.
 - In case of running DVR, shut down the DVR program.
  And return to the Windows.
 - Run on "GPS_App_Setup(090727).exe" in the USB.
 - Install in the order as below

Installation of GPS Timer

GPS Timer will be installed to following folder.

Click <Install> to begin installation to following folder.

Space needed: 40KBytes

Install folder
C:₩Program Files₩GPS Timer

Browse

Install   Cancel

Installation of GPS Timer

Installing GPS Timer.

Click <Abort> to abort installation.

Installing to:
C:₩Program Files₩GPS Timer

Installing item:
System updates...

Progress:
100%

Abort

Installation of GPS Timer

Installation of GPS Timer completed.

☑ Run application.

Ok

- When the installation is finished, you can see this icon in the tray on the task bar.
- Double click the icon in order to display the screen below.

GPS Timer

GPS Time :   2000 / 01 / 01   09 : 00 : 00
Window Time : 2005 / 11 / 21   09 : 39 : 52

① Setup Comm   ② Update Now   ③ Update Auto   ④ Close

	Time information status
Good	The screen is shown as above
Bad	"**GPS Time: No Receive...**"[In case, Check the status of connection]

① Set Comm : To set the communication speed
                To start the communication with GPS
② Update Now: To receive the actual GPS time information and adjust the DVR or PC time
③ Update Auto: To set up the auto update time interval
    (Updating the DVR or PC time automatically as you set)
④ Close: To minimized the program and send to the tray(task bar).

- GPS Time: Display the time information received from GPS
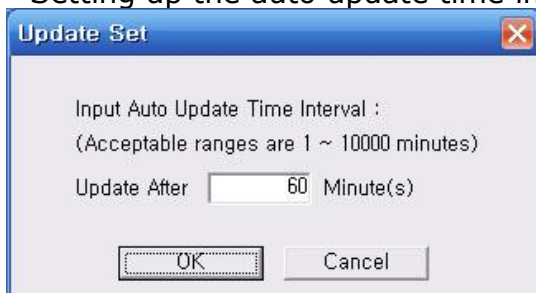- Window Time: Display the accurate time.(Actual window time)

● **Communication Set**
   -In order to operate normally, you should set the Baud as 9600bps.

Communication Set

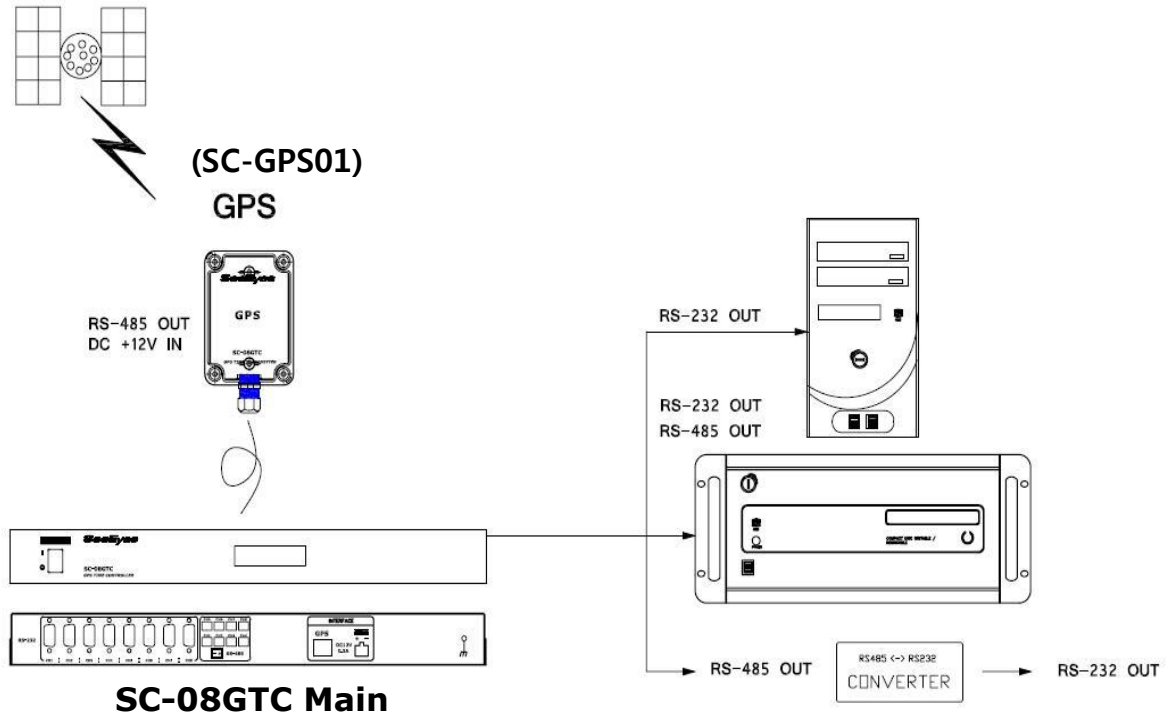Port: 1
Baud: 9600

Connect   Cancel

● **Update Set**
   - Setting up the auto update time interval.

Update Set

Input Auto Update Time Interval :
(Acceptable ranges are 1 ~ 10000 minutes)

Update After   60 Minute(s)

OK   Cancel

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5. Connection Diagram

(SC-GPS01)
GPS

RS-485 OUT
DC +12V IN

RS-232 OUT

RS-232 OUT
RS-485 OUT

SC-08GTC Main

RS-485 OUT

RS485 <-> RS232
CONVERTER

RS-232 OUT

• When providing Standard Time information to the DVR, PC, etc.

6. Specifications

MODEL	SC-08GTC	
Output Interface	RS-232 x8 , RS-485 x8	
Signal Output	Comm. Speed	9600　bps
	DATA Bit	8　bits
	STOP Bit	1　bit
	Parity Bit	None
Displayed Characters	GPS Receiving Status, Date, Time information on the LCD Screen	
Operating Circumstances	Input Power	DC 12 V 0.5 A (Provided Adaptor)
	Power Consumption	Less than 1.6 W
	Temperature	-10℃ ~ +50℃
	Humidity	0% ~ 80%
Weight	4.81Kg	
Dimensions	430(W) x 44(H) x 350(D)	

◎ Signals may delay in a few seconds on the process of receiving DATA signal and updating between the devices.

6. Warranty Certificate

This product has passed thorough quality control and test, and if this gets broken during normal use, we provide 12 months warranty service.

Model No.	
Serial No.	
Distributor	
Date you purchased	
Place you purchased	
Warranty Period	One (1) year from the date of purchase
Purchaser Name	
Purchaser Address	

- Please check this warranty indication first.
- Please contact your distributor after checking out any defect in the products.
- The standard for repairing, replacement or reimbursement follows Customer.
- Warranty content any defect under normal use within the warranty service period we give you free repair service according to the warranty certificate.
- We charge you with the fee of parts and service despite of free warranty service period. Any breakage made without care such as:
    - Breakage or trouble made by natural disaster.
    - Breakage or trouble made by breaking the product guide or manual.
    - Breakage or trouble made by wrong power voltage or frequency.
    - When you want to reassemble for full system or replace parts within warranty service period.
    - When unauthorized person modified or made damage on the product trying to repair it.
- Please note that we don't support the breakage after warranty service period is expired. If the customer wants to get it repaired, we charge them with the fee.
- The specification is subject to change without prior notice for quality improvement.

[MEMO]

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