

# GENTEX CORPORATION

A Smarter Vision®

## AVSM SYNCHRONIZATION CONTROL MODULE

UL 1971 COMPLIANT  
CAN/ULC S526-M87 COMPLIANT

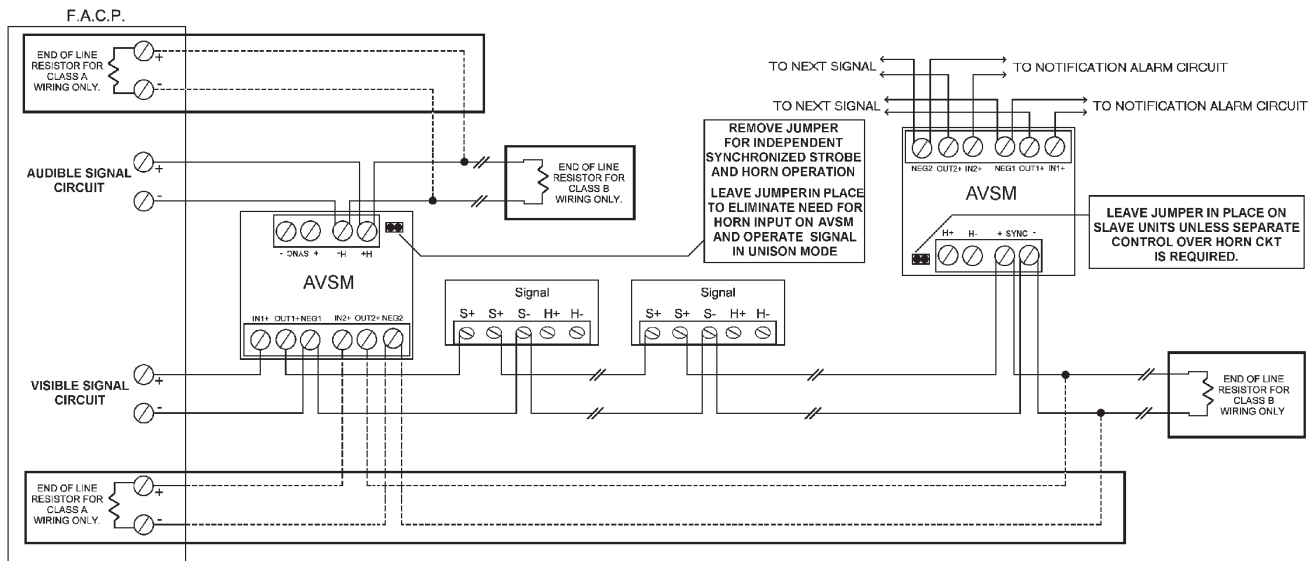
SIGNALING



### I. INTRODUCTION

The Gentex Model AVSM control module is designed to provide an easy way to synchronize multiple strobes and horn/strobes using only two wires. The AVSM is compatible with the GX93 Series, SSPK24WLP Series, SSPK24CLP Series, WSSPK Series, SSPK24 Colored Lens Series, GCS24/GCC24 Series, GCS24/GCC24 Colored Lens Series, GES24/GEC24/GEH24 Series, WGES24/WGEC24 Series, WGES24/WGEC24 Colored Lens Series, GES3-24/GEC3-24 Series, GES3-12/GEC3-12/GEH-12 Series and GES24/GEC24 Colored Lens Series. The AVSM control module must be used when synchronizing the GEC3-12/GES3-12/GEH-12 Series. The control module has the capability to synchronize multiple horn signals with a code 3 temporal pattern, along with the ability to silence the horn while allowing the strobes to continue to flash. By incorporating the control module as shown in the following drawing, the module will control the power to the units to produce the synchronized operation.

**NOTICE:** When using the AVSM control module, jumper locations J1 and J2 must be in on the signals, if so equipped. All jumpers are in these positions when shipped from the factory.



### II. FEATURES OF THE GANGABLE AVSM CONTROL MODULE

- Slave control modules' sync input is wired to the master control module's output as an ordinary signal. This allows the user to determine which module will act as the master and which module(s) will act as the slave(s).
- Electrically isolated control module sync input allows slave control modules to be connected across separate power supplies and panels.
- Wiring between sync modules to maintain synchronized operation (sync + and - terminals) is supervised.
- Sync input terminals and horn input terminals present a load of 7mA at 24 VDC to the power supply. Slave control module's sync terminals are connected to the output terminals of the master sync control module in the same manner as an ordinary signal.
- Loss of sync signal on slave module failsafe mode. If a control module set up as a slave loses the sync signal from the master, the slave module will revert to independent operation. Power must be reset to the module to reestablish slave mode operation.
- The horns on zones controlled by a slave module may be independently muted via the horn input on the slave module. If the master control module receives a mute signal, then all slave modules and their corresponding zones are placed into mute mode.
- Staggered zone power up with synchronization is possible. If any slave module receives power after the master sync module, all units will re-sync with the master module within four seconds.
- A green LED status indicator will flash once every four seconds if zone 1 is operational. The LED will flash twice every four seconds if zones 1 and 2 are operational.

**WARNING!** The master control module must be powered at the same time or prior to the slave modules for proper operation.

**WARNING!** Do not use the AVSM with ST24/HS24 Series.

**WARNING!** If only one set of input terminals are used, they must be IN1+, OUT1+, and NEG1 for the control module to operate.

**WARNING!** The master control module will not have any wiring connected to its sync input terminals establishing it as the master module. Doing so will cause all modules to operate independently.

### III. ELECTRICAL SPECIFICATIONS

	Regulated 24VDC Max. Operating Current (mA)	Unregulated 24VFWR Max. Operating Current (mA)
AVSM	45	47

	Regulated 12VDC Max. Operating Current (mA)	Unregulated 12VFWR Max. Operating Current (mA)
AVSM	31	34

**NOTICE:** - DC Voltage Range Limits: 8-17.5V and 16-33V. FWR Voltage Range Limits: 8-17.5V and 16-33V. This product was only tested to the stated voltage range(s); do not apply 80% and 110% of this range for system operation.  
- Units have been tested to 0°C, 49°C and 93% humidity and are rated 10-16VDC/VFWR and 20-30VDC/VFWR -20%, +10% per CAN/ULC S526-M87.

**CAUTION:** The AVSM is to be connected only to circuits that provide continuously applied voltage. Do not use this module on coded or interrupted circuits in which the voltage is cycled on and off.

- The AVSM has terminals which can accept wire sizes from #12 to #18AWG with two wires per terminal.
- The AVSM control module must be placed before the signals in the loop which are intended to be synchronized and/or controlled.
- The horn input terminals on the AVSM presents a load of 7mA to the NAC. When wired in the two wire configuration, the load for both the strobe and horn current are placed solely on the strobe signal circuit.

**WARNING! DO NOT USE LOOPED WIRE UNDER THE TERMINALS. BREAK WIRE RUN TO PROVIDE SUPERVISION OF CONNECTION.**

**WARNING! DO NOT EXCEED 10 OHMS OF RESISTANCE BETWEEN SIGNALS OR 20 SIGNALS PER LOOP.**

**WARNING! DO NOT EXCEED 3 AMPS CONTINUOUS OR 5 AMPS PEAK LOAD CURRENT.**

**⚠ WARNING THIS APPLIANCE WILL NOT OPERATE WITHOUT ELECTRICAL POWER. AS FIRES FREQUENTLY CAUSE POWER INTERRUPTIONS, GENTEX SUGGESTS YOU DISCUSS FURTHER SAFEGUARDS WITH YOUR LOCAL FIRE PROTECTION SPECIALIST.**

#### LIMITED WARRANTY

For a period of 24 months from the date of purchase or a maximum of 30 months from the date of manufacture, Gentex warrants to you the original purchaser that your appliance will be free from defects in workmanship, materials and construction under normal use and service. If a defect in workmanship, materials and construction should cause your appliance to become inoperative within the warranty period, Gentex will repair your appliance or furnish you with a new or rebuilt appliance without charge to you except for postage required to return the appliance to us. Gentex will not reimburse you for repairs or replacement parts provided by other parties. Your repaired or replacement appliance will be returned to you free of charge and it will be covered under the warranty for the balance of the warranty period.

The warranty is void if our inspection of your appliance shows that the damage or failure was caused by abuse, misuse, abnormal usage, faulty installation, improper maintenance or repairs other than those performed by us.

**ANY WARRANTIES IMPLIED UNDER ANY STATE LAW INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLY ONLY FOR THE WARRANTY PERIOD SPECIFIED ABOVE. PLEASE NOTE THAT SOME STATES DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS. SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. GENTEX WILL NOT BE LIABLE FOR ANY LOSS, DAMAGE, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING IN CONNECTION WITH THE SALE, USE OR REPAIR OF THIS APPLIANCE. THE MAXIMUM LIABILITY OF GENTEX SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE PAID BY YOU FOR THE APPLIANCE. PLEASE NOTE THAT SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.**

If a defect in workmanship, materials or construction should cause your appliance to become inoperable within the warranty period, you must return the appliance to Gentex postage prepaid. You must prove to the satisfaction of Gentex the date of purchase of your appliance. Warranty service may only be performed by Gentex personnel at Gentex's facilities in Zeeland, Michigan. You must also pack the appliance to minimize the risk of it being damaged in transit. You must also enclose a return address. Appliances returned for warranty service should be sent to: Gentex Corporation, 10985 Chicago Dr., Zeeland MI 49464. If we receive an appliance in a damaged condition as the result of shipping, we will notify you and you must seek a claim with the shipper.

**THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.**

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