

300 SERIES SECTOR EXPANDER INSTALLATION INSTRUCTIONS

4-Position Dip Switch Settings

1. Expansion ID Number: Each expansion device (expansion board, relay output boards, auxiliary output boards) connected to the 300 control must report a unique number to the control via the 4-wire buss. Positions 1, 2, and 3 of this 4 position dip switch located in the upper left quadrant of the p.c. board, are used to assign this number. Use the following chart to determine the appropriate dip switch setting for the 300 series expander. For example, if the 300 expander is the only expansion device connected to the 300 control, dip switch positions 1, 2, & 3 should be "OFF", whereas, if the 300 expander was the fourth expansion device connected to the control, dip switch positions 1 and 2 would be "ON", and position 3 would be "OFF". Seven is the maximum number of expansion devices that can be connected to the 300 control.

Device Number	Position #1	Position #2	Position #3
1	OFF	OFF	OFF
2	ON	OFF	OFF
3	OFF	ON	OFF
4	ON	ON	OFF
5	OFF	OFF	ON
6	ON	OFF	ON
7	OFF	ON	ON

2. A.C. Power Failure Reporting: If the on-board power supply is utilized, position 4 should be in the "ON" position to enable A.C. power failure reporting. If this feature is not enabled, the 300 expander will not report A.C. power failures.

Low Battery Detection Jumper

If a battery is utilized in conjunction with the on-board power supply, the Low Battery Detection Jumper located in the center of the p.c. board (see drawing on page 6) should be in the "ON" position to enable Low Battery Detection.

Programming The On-Board Power Supply

1. If the on-board power supply is utilized, a 16.5, 25VA transformer must be connected to terminals 32 and 33. A back-up 12VDC battery of the appropriate capacity should be connected to the RED (+) and BLACK (-) battery leads. When utilizing the on-board power supply, the 300 expander should be connected to the 300 control by THREE wires as described below:

Connect terminal 35 of the 300 expander board to terminal 45 of the 300 control.

Connect terminal 36 of the 300 expander board to terminal 42 of the 300 control.

Connect terminal 37 of the 300 expander board to terminal 43 of the 300 control.

2. If the on-board power supply is NOT to be utilized, the 300 expander will use 100 mA of the available auxiliary power from the 300 control, and all buss devices must be wired back to the control terminals (home run). When the on-board power supply is not being utilized, the 300 expander should be connected to the 300 control by FOUR wires as described below:

Connect terminal 34 of the 300 expander board to terminal 44 of the 300 control.

Connect terminal 35 of the 300 expander board to terminal 45 of the 300 control.

Connect terminal 36 of the 300 expander board to terminal 42 of the 300 control.

Connect terminal 37 of the 300 expander board to terminal 43 of the 300 control.

On-board Siren Driver

The 300 expander has a built-in siren driver. Connect an 8 OHM, 15 to 30 WATT speaker to terminals 30 and 31. This siren driver can only be utilized if the 300 expander is powered with the on-board power supply and a back-up battery.

The following programming locations of the 300 control should be reviewed and completed with the appropriate data before the 300 expander is made operational. NOTE! LOCATION 377 MUST BE PROGRAMMED FOR THE NUMBER OF DEVICES ADDED TO THE BUSS.

Location 377: Programming The Number Of Expansion Devices On The Buss Loop

This location is used to program the number of expansion devices added to the buss loop. DO NOT INCLUDE KEYPADS IN THIS COUNT! The maximum number of expansion devices that can be added to the 300 control is seven, therefore the largest number that can be programmed in this location is "7". Factory default for this location is "0".

Location 378: Communicator Code For Expansion Trouble

Location 378 contains the extended communicator code digit for **Expander Trouble**. The one digit, or sector ID of this report will be the number of the expansion device that is in trouble. The **Expander Trouble Restore** code is programmed in location 511.

Location 379: Phone Number To Report Expansion Trouble Code

Location 379 is used to select the phone number to report Expander Trouble. Program a "1" in this location to report to phone #1 only. Program a "2" to report to phone #2 only. Program a "3" to report to both phone numbers. If an "8" is programmed in this location, Expander Trouble will cause sector 32 to "open", and cause Expander Trouble take on the reporting and alarm characteristics of sector 32. Expander Trouble cannot be sent to the event log.

Locations 380-395: Programming The Sector Types For Sectors 17-32

Locations 380 through 395 contain a number identifying the **Sector Types** of sectors 17 through 32. Location 380 corresponds to sector 17 and location 395 corresponds to sector 32. Each sector 17-32 has been factory defaulted to a "6", **"Instant"** sector type. To program sector types other than the default values, program a number from "1" to "9" based on the "Available Sector Types" table on page 13 of the 300 control Installation Manual.

Locations 396-411: Assigning Special Characteristics For Sectors 17-32

Locations 396 through 411 are used to assign **Special Characteristics** for sectors 17 through 32. Location 396 corresponds to sector 17 and location 411 corresponds to sector 32. Each sector can have any or all of the following characteristics regardless of the sector type selected in locations 380-395, excluding Fire sectors which cannot have bypass capability enabled. Factory default is "12" for each of these locations, meaning that **Sector Isolate Capability & Entry-Guard** are enabled, and the other characteristics are not enabled. To include other characteristics, add the values, and program the sum in the appropriate location. See the table below for sector characteristics and their corresponding values.

VALUE	CHARACTERISTIC
1	Fast Loop Response (200mS)
2	Group Isolate Sector
4	Entry-Guard Sector
8	Sector Isolate Capability

Example 1 - To add **Group Isolate Sector (Value=2)** to **Sector Isolate Capability (Value=8)** for sector 20 (location 399), add the value of the two characteristics ($2 + 8 = "10"$), and program the sum of "10" in location 399.

Example 2 - To enable **ALL** characteristics for sector 20, add the value of all characteristics ($1 + 2 + 4 + 8 = "15"$), and program the sum of "15" in location 399 (sector 10 characteristics location).

Example 3 - To disable all characteristics and create a **Non Isolable Sector**, program a "0" in the appropriate location.

Locations 412-427: Assigning Audible Characteristics For Sectors 17-32

Locations 412-427 are used to assign the **Audible Characteristics** for sectors 17 through 32. Location 412 corresponds to sector 17, and location 427 corresponds to sector 32. Each sector can be silent (**SILENT VALUE = "0"**), or have one, or any combination of the following audible characteristics. To determine the appropriate data for these locations, refer to the chart below and add the sum of the corresponding values to arrive at the correct data for these locations. Sectors 17-32 have a factory default setting of "13" ($1 + 4 + 8 = "13"$). This means that sectors 17-32 will create a yelp siren output and a keypad sounder output when an alarm is created. To select the audible characteristics for any sector, add the values of the audible characteristics from the table below, and program the sum in the appropriate locations 412-427. NOTE: If a Fire sector type is selected in locations 380-395, standard fire sector characteristics will override any selection made for a sector in this section. If you wish for the sector to be **SILENT**, program a "0" in the appropriate location.

VALUE	AUDIBLE CHARACTERISTICS
1	Yelp Siren Audible
2	Steady Siren Audible
4	Keypad Sounder Audible
8	Chime Enable
0	Silent

Locations 428-443: Special Communicator Reporting Characteristics For Sectors 17-32

Locations 428-443 are used to assign communicator characteristics to individual sectors 17 through 32. Location 428 is for sector 17 and location 443 is for sector 32. Each sector can have one, or any combination of these characteristics. Factory default for all sectors is "11" (1 + 2 + 8 ="11"). This means that each sector has **RESTORE REPORTING (Value=1)**, **ISOLATE REPORTING (Value=2)**, and **REPORT CANCELING (Value=8)** enabled. It should be noted that these locations are used to enable individual sector report capability by sector. A reporting code must be programmed in the appropriate location to enable overall reporting capability of Restore reports (location 364), Isolate reports (location 368), and Trouble/24 Hour tamper reports (location 372).

VALUE	REPORTING CHARACTERISTICS
1	Restore Reporting
2	Isolate Reporting
4	Trouble/24 Hour Tamper Reporting
8	Report Canceling

SELECTING COMMUNICATOR CODES FOR SECTORS 17-32

All sectors and other reported features are programmed with up to four (4) programming locations. The first three (3) are used for a 1, 2, or 3, digit communicator code, according to the restraints of the selected communicator format. The fourth (4th) and last location is used to select if the code is to be sent to phone #1, phone #2, the internal log, or any combination of these three selections. Factory defaults to a three digit event (alarm) code. However, as shown on the programming worksheet, the first digit will be ignored if a 3 + 1 or a 4 + 2 format is selected.

Locations 444-446: Programming The Communicator Code For Sector 17

Locations 444-446 contain the communicator codes to be reported each time sector 17 creates an alarm. Location 444 contains the first digit, location 445 contains the second digit, and location 446 contains the third digit. Always use the correct number of digits that the selected format allows, and program in the order you wish the receiver to print the report.

Location 447: Select Phone #1, 2, Internal Log, Or Any Combination For Sector 17

If a phone number other than phone #1 is desired, a binary number must be programmed into this location. This number is derived by adding a one (1) for phone #1, a two (2) for phone #2, and a four (4) for the internal log. If you want this code to be reported to both phone numbers you must program a "3" (1+2) in this location. If you want this code to be reported to both phone numbers and the internal log you must program a "7" (1+2+4) in this location. If left in the factory default, sector 17 will only report to phone #1.

Locations 448-450: Programming The Communicator Code For Sector 18

Location 451: Select Phone #1, 2, Internal Log, Or Any Combination For Sector 18

Locations 452-454: Programming The Communicator Code For Sector 19

Location 455: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 19

Locations 456-458: Enter The 1 To 3 Digit Communicator Code For Sector 20

Location 459: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 20

Locations 460-462: Programming The Communicator Code For Sector 21
Location 463: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 21

Locations 464-466: Programming The Communicator Code For Sector 22
Location 467: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 22

Locations 468-470: Programming The Communicator Code For Sector 23
Location 471: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 23

Locations 472-474: Programming The Communicator Code For Sector 24
Location 475: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 24

Locations 476-478: Programming The Communicator Code For Sector 25
Location 479: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 25

Locations 480-482: Programming The Communicator Code For Sector 26
Location 483: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 26

Locations 484-486: Programming The Communicator Code For Sector 27
Location 487: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 27

Locations 488-490: Programming The Communicator Code For Sector 28
Location 491: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 28

Locations 492-494: Programming The Communicator Code For Sector 29
Location 495: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 29

Locations 496-498: Programming The Communicator Code For Sector 30
Location 499: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 30

Locations 500-502: Programming The Communicator Code For Sector 31
Location 503: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 31

Locations 504-506: Programming The Communicator Code For Sector 32
Location 507: Select Phone # 1, 2, Internal Log, Or Any Combination For Sector 32

Locations 508-509: Reserved

TERMINAL DRAWING

TERMINAL DESCRIPTION

<i>TERMINAL #</i>	<i>DESCRIPTION</i>
1	Connect one side of sector 17 loop. Connect other side of loop to common terminal 2. Open or short causes alarm.
2	Common (-) Terminal for sectors 17 and 18.
3	Connect one side of sector 18 loop. Connect other side of loop to common terminal 2. Open or short causes alarm.
4 - 12	See terminal drawing, and repeat the above sequence for sectors 19 through 24.
13 - 14	Auxiliary power, 12 VDC regulated 500mA Max including power from terminals 27 & 28.
15 - 26	See terminal drawing, and repeat the above sequence for sectors 25 through 32.
27 - 28	Auxiliary power, 12 VDC regulated 500mA Max including power from terminals 13 & 14.
29	Earth ground, connect to a cold water pipe or 6 to 10 foot driven rod.
30 - 31	Siren driver output to speakers. Minimum speaker rating 15 or 30 watt at 4, 6, or 8 ohms. Output is available ONLY when a transformer is connected to terminals 32 & 33.
32 - 33	AC input. When using on-board power supply, connect a 16.5V 25VA Class II U.L. approved transformer. When on-board power supply is utilized, all keypads must be homerun.
34	Connect to terminal 44 on the 300 control pc board. DO NOT connect this terminal if a transformer is connected to terminals 32 & 33 for utilizing on-board power supply.
35	Connect to terminal 45 on the 300 control pc board.
36	Connect to terminal 42 on the 300 control pc board.
37	Connect to terminal 43 on the 300 control pc board.
Battery leads	Connect to 12VDC lead acid rechargeable battery. Do not use a dry cell battery.

FUSE DESCRIPTION

<i>FUSE #</i>	<i>DESCRIPTION</i>
F1	1 AMP / Auxiliary Power.
F2	2 AMP / Siren Driver.

SPECIFICATIONS

OPERATING POWER	16.5 VAC 25 VA Transformer
AUXILIARY POWER	12 VDC 500mA
LOOP RESISTANCE	300 Ohms Maximum
BUILT-IN SIREN DRIVER	2-tone (Steady and Yelp)
ALARM CURRENT AVAILABLE	1 Amp
LOOP RESPONSE	Selectable to 500ms
OPERATING TEMPERATURE	32 to 120 degrees F
METAL ENCLOSURE DIMENSION	11.25" Wide 11.25" High 3.50" Deep
SHIPPING WEIGHT	6 lbs.

When using on-board power supply.

WARRANTY STATEMENT

DIRECT ALARM SUPPLIES GUARANTEES THIS PRODUCT AGAINST DEFECTIVE PARTS AND WORKMANSHIP FOR TWENTY-FOUR (24) MONTHS FROM DATE OF MANUFACTURING. IF ANY DEFECT APPEARS DURING THE WARRANTY PERIOD RETURN IT TO DAS, POSTAGE PREPAID. THE UNIT WILL BE REPAIRED AND RETURNED. DAS ASSUMES NO LIABILITY FOR CONSEQUENTIAL OR INDIRECT DAMAGE AND ACCEPTS NO RESPONSIBILITY FOR REPAIRING DAMAGE TO THE PRODUCT CAUSED BY MISUSE, CARELESS HANDLING, OR WHERE REPAIRS HAVE BEEN MADE BY OTHERS.

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