

## Writing Your Own iC-Net Control Code

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While most IC systems use our Display Express software to control displays, a growing number of integrator are writing their own control applications, using AMX, Crestron, RTI, or other platforms. We encourage creative solutions, and are happy to support those who take advantage of our protocol.

From our history of support activity, we are providing a few tips to help you on your way.

### Device Numbers

iC-Net devices are arranged with a zone structure, arranged in 15 groups of 256 devices. The first address in the group represents the entire zone. For example, Zone 2's group address is 512 (2\*256). When a command is sent to 256, all controllers in that group will respond as one.

The Device values reflect that structure. The first number <dh> is the zone, from 1-15. The second defines the unique address of the device, 1-255). For example, a command sent to Device 256, which triggers all the units in Zone 1, would be expressed as \$A5, 1, 0 (first zone, device zero). A command sent to 257 would be \$A5, 1, 1 (first zone, device 1 in the zone). See iC-Net Zones toward the end of this manual.

### String Format

Every software application has a different denotation for handling hex, ASCII, and decimal formats. The examples in this manual are in AMX format, which is understood by many in the control industry:

- Hex values begin with a dollar (\$) symbol
- ASCII values are enclosed in single quotes
- Decimal values are shown as normal

If you plan on using a mixed-format structure for commands, convert the symbols to the types required by your software application. For example, a Tune Channel 2-3 command to device 260 could be shown several ways:

- AMX Mixed Format = "\$A5,1,4,5,'TH',2,2,3"
- AMX Hex Format "\$A5 \$01 \$04 \$05 \$54 \$48 \$02 \$02 \$03"
- Standard Hex (no denotation) = A5 01 04 05 54 48 02 02 03
- Crestron Hex Format = \xA5\x01\x04\x05\x54\x48\x02\x02\x03
- RTI = Select port, Hex mode, enter A5 01 04 05 54 48 02 02 03

Go to [www.asciitable.com](http://www.asciitable.com) for a handy Decimal/ASCII/Hex conversion chart.