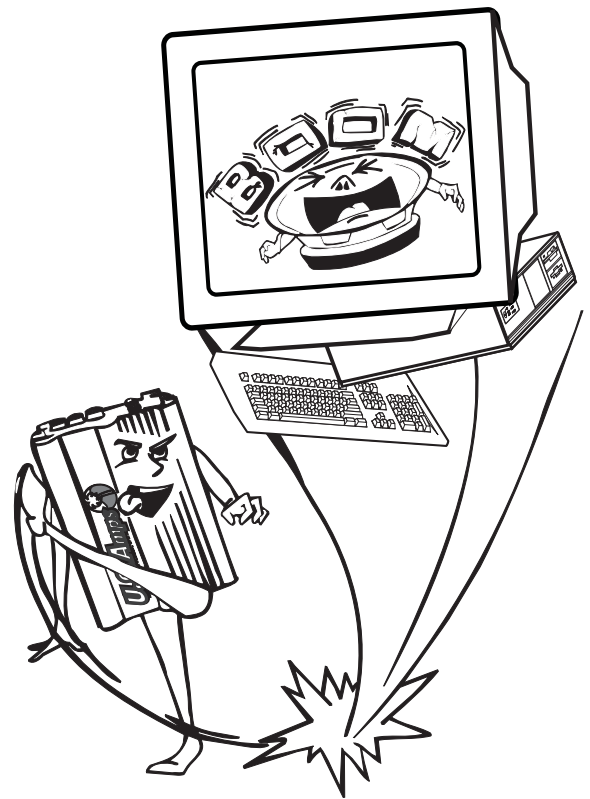## Smart Amp Technology:

If you have been with U.S. Amps a while, you have doubtlessly heard of SAT. You may have seen it demonstrated at a show or other event. In any case, here is the latest and now-shipping version.

Practical and useful, SAT is a *diagnostic and information retrieval system* that uses a programmable on-board computer to protect the amplifier from damage and permanently store vital information like:

Model and serial number.
Date of manufacture.
Total hours, minutes, and seconds the amp has ever been on.
How often an individual channel has shorted.
How often the vehicle battery has gone under or over voltage.
How often the amplifier has gone into thermal protection.

SAT provides real-time analysis for in-car diagnostics. The amp can be remotely triggered on by SAT, and at a glance the "live console" displays whether or not all amplifier systems are functional.

Even in its' technological infancy, SAT is the most sophisticated and accurate form of circuit protection in history. As the on-board computer detects and records system faults it "remembers" and automatically limits power to the "problem area" to prevent equipment damage.

AMP GUY KICKIN' BASS - ELECTRONICALLY

: What is a sales and diagnostic tool like this worth? It's priceless. Just ask Chrysler, Ford and General Motors. You can "wow" the customer in the showroom with a real-time demonstration. A SAT self-demo is being prepared that will run like a multi-frame screen-saver. It will have cool sound effects too, so get out you little multi-media speakers, and turn you counter or display monitor into a tireless ambassador of good will! Below is a screen shot of the SAT console and description of it's features:

SAT Control Module

File Read Eprom Options

Trouble Code History

Most Recent Faults

Low Voltage
Front Left
Front Left
Front Left

Front Left	03
Front Right	00
Rear Left	00
Rear Right	00
Sub Output	00
Thermal	00
High Voltage	00
Low Voltage	01

Clear Codes

Amp Status

○ Quick Protect
○ Lock Out
○ Amp Operational
○ Remote Input
○ Echo On
○ Live Mode
○ RTC Save
○ Serial # Off
○ External Off
○ Quick Off

Identification Information

Model   USA-150

Serial #   003649

Born
on Date   6-15-99

No Connection

Read All Data

Revision

Live Console

Turn Amp Off

Run Time
134:14:10

○ Left   ○ Reserved   ○ Reserved   ○ High Voltage
○ Right   ○ Reserved   ○ Thermal   ○ Low Voltage

.......And a brief run-down of how it works:

Trouble Code History

Most Recent Faults		Front Left	03
Low Voltage		Front Right	00
Front Left		Rear Left	00
Front Left		Rear Right	00
Front Left		Sub Output	00

TROUBLE CODE HISTORY BOX:

This box holds two fault counters, The one on the right keeps a permanent record of problems during the life of the amplifier. The counter on the right "Most Recent Faults" displays top to bottom in chronological order the ten most recent incidents. To provide the most complete history, a special filter (see "Lock Out" below) will consolidate repetitive faults into a single entry. Multiple entries of the same type would indicate an intermittent problem. The "Clear Codes" button resets the Recent Faults counter to start a fresh count after repairs or adjustments.

Thermal	00
High Voltage	00
Low Voltage	01

Clear Codes

Amp Status Box:

Amp Status
- ◯ Quick Protect
- ◯ Lock Out
- ◯ Amp Operational
- ◯ Remote Input
- ◯ Echo On
- ◯ Live Mode
- ◯ RTC Save
- ◯ Serial # Off
- ◯ External Off
- ◯ Quick Off

Quick Protect: *After a fault, Quick Protect guards against damage by safe-buffering the amp and immediately searching for the same problem again.* Status- Dark Green: Inactive. Light Green: Active, amp protected- see "Most Recent Faults" at top of list. Amber: Searching.

Lock Out: Prevents the posting of repetitive faults in the "Most Recent Faults" box. Status- Dark Green: Inactive. Light Green: Active, receiving signal of continuos fault from Quick Protect circuit. See top of "Most Recent Faults".

Amp Operational: *Just what it says.* Status: Dark Green: Inactive. Light Green: Active, see "Live Console" box at bottom of screen.

Remote Input: *Shows that the amplifier is receiving a turn-on signal from the computer.* Status- Dark Green: Inactive. Light Green: Active, see "Turn Amp On (Off) button in the "Live Console" box a the bottom of the screen.

Echo On: *Not used in this version of the program.*

Live Mode: *Indicates real-time input to the "Live Console" at the bottom of the screen.* Status- Dark Green: Inactive, any "Live Console" information is saved from the most recent input. Light Green: Active, real-time data.

RTC Save: *Flashes every time the Real Time Clock is updated. See the "Run Time" counter in the "Live Console" box at the bottom of the screen.*

Serial # Off: *If someone tries to "hack" the program to change the serial number of the amp, the program will shut the amp down until it is returned to the factory.* Status- Dark Green: Inactive. Light Green: Active, indicates amplifier and /or program tampering. Return to factory.

External Off: *Not used in this version of the program.*

Quick Off: *Works with "Quick Protect" at top of list to shut down amplifier if repeated and prolonged fault is detected.* Status: Dark Green: Inactive. Light Green: Active, amplifier shut down, see top of "Most Recent Faults" box.

Identification Information Box:

Identification Information

Model	USA-150
Serial #	003649
Born on Date	6-15-99

No Connection

Read All Data

Revision

Model: *The amplifier model number.*

Serial # *The amplifier serial number is installed at the factory and tracked by manufacturing, dealer, and repair history.*

Born On Date: *The date of manufacture.*

Connection / No Connection: *Indicates proper connection and data path between the amp, the data interface box, and your PC.*

Read All Data: *Push to read amp data or to refresh screen after changing amplifiers or a broken connection.*

Live Console

Turn Amp Off				
	◯ Left	● Reserved	● Reserved	◯ High Voltage
Run Time 134:14:10	◯ Right	● Reserved	◯ Thermal	◯ Low Voltage

Live Console Box:

Turn Amp On / Off: *Use to remotely activate or deactivate the amplifier independent of the system trigger. It is necessary that the amplifier be supplied with power and ground, even in the event of bench-testing.*

Run Time: *Total time of amplifier operation in hours, minutes, and seconds . The built-in clock updates every 10 second for the first 2 minutes, every 30 seconds during the first 15 minutes, and every 30 seconds there afterward.*

At a glance the amplifier and vehicle battery status can be determined. The "Reserved" spots are for additional functions like the rear and sub channels of the USA-5500x. Status: Dark Green Shorted. Light Green: Active, no problem found.

SAT CONSOLE INSTALLATION INSTRUCTIONS

Insert Disk 1 in drive 'A".

Go to "Run" on Windows Start Menu.

Browse for or type   A:setup

(Enter)

Follow the on-screen instructions.

When prompted, insert disk 2.

When installation is complete, store floppy disks in a safe place.

Note the availability of "Uninstall".

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