



By Al Pepling, LS

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Carlson Explorer II

There are other “boxes” out there with similar hardware configurations, but the Carlson Explorer II data collector platform comes with Carlson’s SurvCE software, and that is a huge plus! As the first of a two-part article, this one will cover the hardware. Part Two will cover the software.

Want the best of worlds—keypad and touch screen? Then this is the data collector platform you’ve been waiting for. Either method of input, or any combination of the two is possible. You make the choice.

In several past articles I have touted the CE platform. The expanded screen, with the ability to display more information than the two- or four-line display of the calculator devices is a worthy asset in my opinion. Over the last couple of years, I seem to move faster with a keypad than a touch screen, and it has become my preference. That is why the Carlson Explorer II and Carlson SurvCE combination is such a good one.

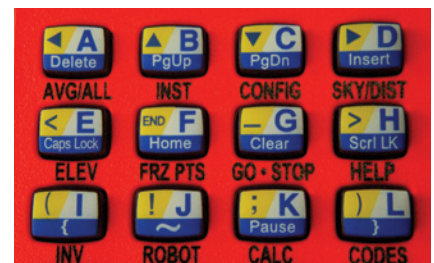
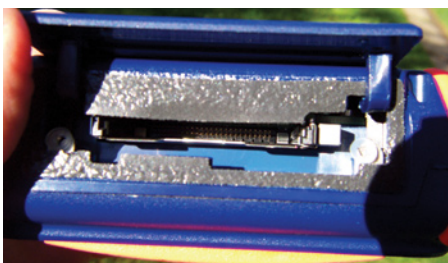
The Explorer II is made by Two Technologies, Inc. for Carlson Software. This is a tried-and-true approach to marketing a proven hardware platform for Carlson’s ever improving SurvCE data collection software. The Explorer, or JETT, is marketed widely by Two Technologies to government agencies, agri-business, security firms, or any user

that has need of a hardy yet mobile platform for data collection, distribution, service calls, etc. This provides feedback from a variety of sources and backgrounds, and in turn, a quicker improvement in the hardware and firmware. It also includes the “economy of scale” that helps keep manufacturing costs down.

Slipping my hand between the elastic strap and the body, my first impression was how securely the unit fit my hand. Most folks will use it on a tripod stand next to the instrument. Others will choose the “Bluetooth” option. If you are not driving a robotic and still do your own “pointing,” the Bluetooth option is a good alternative to snagging and stepping on cables.

The unit is 9.84 inches long, 3.78 inches wide at the handle, 4.75 inches wide at the screen, and generally 1.83 inches thick. With the rechargeable batteries aboard it weighs in at 29 ounces, and with Alkaline aboard it weighs in at 28 ounces. It can operate from -20 C° to +50 C° with humidity up to 95%.

No matter how careful you are, it only takes a moment of inattention for your data collector to hit the ground. Protective





rubber pads top and bottom serve as “shock absorbers” to prevent damage to the housing and data.

The 2.11 x 2.82 inch display is a 320 x 240 pixel QVGA color touch screen. In bright sunlight it is one of the most readable color screens I have used.

Providing the processing power and speed is a combination of an Intel PXA255 processor with Xscale technology at 400 mhz with the Windows CE.Net 4.2 professional operating system. The manufacturer also markets a 200 mhz unit; but processor speed is addictive. CE.Net is similar to the PocketPC operating system that so many PDAs use. It is fast. I found myself using the Explorer II to verify curve calculations on old highway plans in the office instead of opening the curve calculation dialog box on my desktop computer.

In similar fashion, the serial port has a gasketed cover that is also held in place with two slotted screws. A molded protrusion on the small rubber plug protects the battery charger port and allows you to remove the plug and hold it securely to keep it from getting lost.

Designed and built for harsh environments, the 45-key pad in the Explorer II is elastomeric and suitable for all environments except where petroleum-based chemicals are routinely used. I am no fan of “rubber chiclet” key pads, as they are usually mushy and the painted characters rub off over time making replacement necessary. The difference with this keypad is that it has epoxy caps.

It feels and operates like the old HP 42 CXs and the HP 48G+s or any older HP calculator keyboard. I was able to operate it with my thumb while holding it in the same hand. I would call up the curve calculator routine with the stylus, place it in the holder just below the

“The best of both worlds:
keypad and touchscreen”



For me it was more convenient to move the data collector than wrestle with the plans.

64 MB of SDRAM, an internal compact flash of 256 MB, and an external compact flash card slot provide the memory for this unit. A SanDisk 1Gigabyte Ultra II can be found on sale for under \$100.00 from some of the discount electronics stores for those of you doing large commercial or industrial sites, or for folks like me who just want all that capacity, “just in case.” The external card goes into a slot on the top of the collector. It is under a hinged door with a water- and dust-tight seal and held closed by two Phillips screws. It may not be as convenient as a spring-loaded door in field use, but consider the security of your data and you will realize the wisdom of it. Some dust or moisture or a combination thereof causing sporadic disruption of electrical current and your data is compromised or worse, lost! I’ll take data security over convenience any day, within reason of course!

screen, input numerical data with my thumb for two parameters of the curve and then write the balance of the curve information displayed on the screen with my free hand.

The battery compartment has a cam operated twist lock fastener. The lid is hinged and also “gasketed” for dust and water prevention. The NiMH battery pack is rechargeable and has a cloth tab to help in removing it. Battery life is rated at 8-12 hours depending on application and use. For those times when you forget to charge the battery or misplace the charger or power adapter, six “AA” batteries can be used in place of the battery pack.

Several options are available through Carlson for the Explorer II. A single and four position battery charger for the NiMH battery pack is one. A single and a quad charger port for the entire unit is another. You can also get a soft-carry case, cigarette lighter adapter, various cable configurations, and power supplies.

This is one fine, well thought-out data collector package with hardware device. Combined with Carlson’s SurvCE software it deserves your immediate attention and inquiry. Don’t just take my word for it, try it for yourself! *AS*