More and more wall and ceiling contractors are discovering productivity increases and greater accuracy by proper utilization of a modern laser unit.

What begins as a single, bright red dot and becomes a rotating pencil-thin beam of helium, neon laser light has resulted in a substantial time and cost savings for a growing number of LaserLevel users.

Art Painter of Modern Folding Doors, Dayton, Ohio, is one of them. Painter says there is no better way to describe why he works with lasers on the construction site than to use an old cliche, “Time is money.”

“The beam of red laser light generates a continuous horizontal reference plane” he explains, “so we don’t need to constantly check and recheck our work for possible errors and we get a better end result.”
Conventional Method

Current number of square feet (sq.m.) [lineal feet (m) for drywall/partitions]
Installed per day with conventional methods = 400 sq.ft.(sq.m)
Number of manhours to install above = 16 hrs.
Productivity sq.ft.(sq.m)
$172 (cost per day)/400 (sq.ft. installed) = $.43 sq.ft.

Interior LaserLevel Method
No. of sq.ft.(sq.m) installed per day using the laser = 480 sq.ft. (sq.m)
No. of manhours to install above = 16 hrs.
Laser productivity sq.ft.(sq.m)
$172 (cost per day)/480 (sq.ft. installed) = $36 sq.ft. (sq.m)

Laser sq.ft.(sq.m) - Conventional sq.ft.(sq.m)

30/hour - 25/hour = 20% Productivity Increase

Laser sq.ft.(sq.m)

Conventional sq.ft.(sq.m)

Number of sq.ft.(sq.m) per day increase over conventional methods using the laser
[480/day] - [400/day]
X $.43 current method Installation cost per sq.ft.(sq.m)
= $34.40 profit/day
X 250 days worked per year
= $8,600 Yearly Profit

Laser use for construction leveling has come a long way, especially for interior finishing work, according to many of its users. In the beginning, they were used mostly to put in drop ceilings.

For the past four or five years, Painter says he has used Spectra Physics’ IL1142 Laser-Level for walls, too. “Demountable partitions are our Specialty,” Painter explains. “These movable walls have become increasingly popular to creatively and easily alter space in office and other buildings.”

“. . . in the beginning, they (lasers) were used mostly to put in drop ceilings . . . and now they are used for walls, too...”

When using a laser to install permanent walls and demountable partitions, Painter first makes a mark on the floor where the walls should be, according to the specifications on the blueprint. Then, he sets up the equipment, a simple procedure that takes just minutes. The laser shoots a clear, highly visible beam of red light that rotates around the room, providing an accurate guide for placement of the bottom and top track. Later, the demountable partitions can be secured quickly, easily and, most important, accurately. Painter estimates it cuts his prep work in half while enabling the rest of his crew to continue working on their regular assignments.

Other types of installations for which Painter uses his laser include drop and acoustical soffits which fall below the plane of the ceiling such as in mall stores. Other vertical and horizontal uses include installation of raised access computer floors, sprinkler systems, knee walls and virtually any leveling project at any height.

To illustrate the improved productivity for acoustical, drywall/partitions or
raised access floor installation, the following conservative example has been provided.

Painter and his crew find the LaserLevel “user friendly” and simple to operate. It takes no more than ten minutes to train a person to set it up and use it. Once that’s done, the only question at a job site is “where” to set up the equipment to get the best reading, Painter says.

Depending upon the nature of the job, the equipment can be set up for use with all standard tripods using the tripod mount. The built-in trivet system has a foot pointer that makes vertical setup over a point quick, easy and accurate. Translucent targets are provided which attach to the fixtures or components being installed. To use them, the installer simply positions the equipment until the targets indicate correct alignment with the laser reference plane.

The 2mW helium neon laser beam itself provides a tight, bright spot with no satelliting. It is accurate to 1/16" at 100 feet.

The slope control rakes the beam into a non-level surface and the line control has a variable speed switch that controls the vertical line accurately with a total range of ±4°.

Painter and his crew like the automatic self-leveling feature best of all. If the unit gets accidently bumped off track, it rights itself in less than a minute. “You lose no time making adjustments;” Painter adds. “And, the unit shuts off if it gets out of level so you can’t make an error,” he pointed out.

A mounting clamp securely fastens the unit to ceiling moldings so the possibility of a unit falling and injuring someone or breaking is greatly reduced. Other mounting accessories are also available.

Virtually maintenance-free and requiring no special handling, the unit’s rugged design and enclosed head protect the optics and interior components in a compact package.

The padded, vertical handle makes it easy to use. One compact carrying case provides safe storage and easy transportation from one job site to another.

A small but growing company, Modern Folding Door has always gone the lease route before for large jobs.

“Until recently, this arrangement has been a cost-efficient option for us. “We’ve just rented the units and accessories we needed for a particular job,” Painter says. However, he sees sufficient future growth to warrant purchasing one soon. For his company, Painter believes a laser “...comes in handiest when used on difficult jobs while making the easier jobs even easier... and more profitable.”