

Arc Writer®

Technical Overview

A Hypertherm Training Presentation

Brief Overview

- **The ArcWriter is a dual gas, variable output power, plasma marking, scoring and punching system designed to leave temporary or permanent identification marks on metal surfaces.**
- **The system includes a power supply, torch and lead set, optional power supply mounted current control and optional arc voltage control module.**

Statistics

- **Plate marking and drill center pointing**

4 to 19 amp output

Depth: .03-.25 mm

Width: .5-1 mm

Speed: 3-7 m/min



ArcWriter

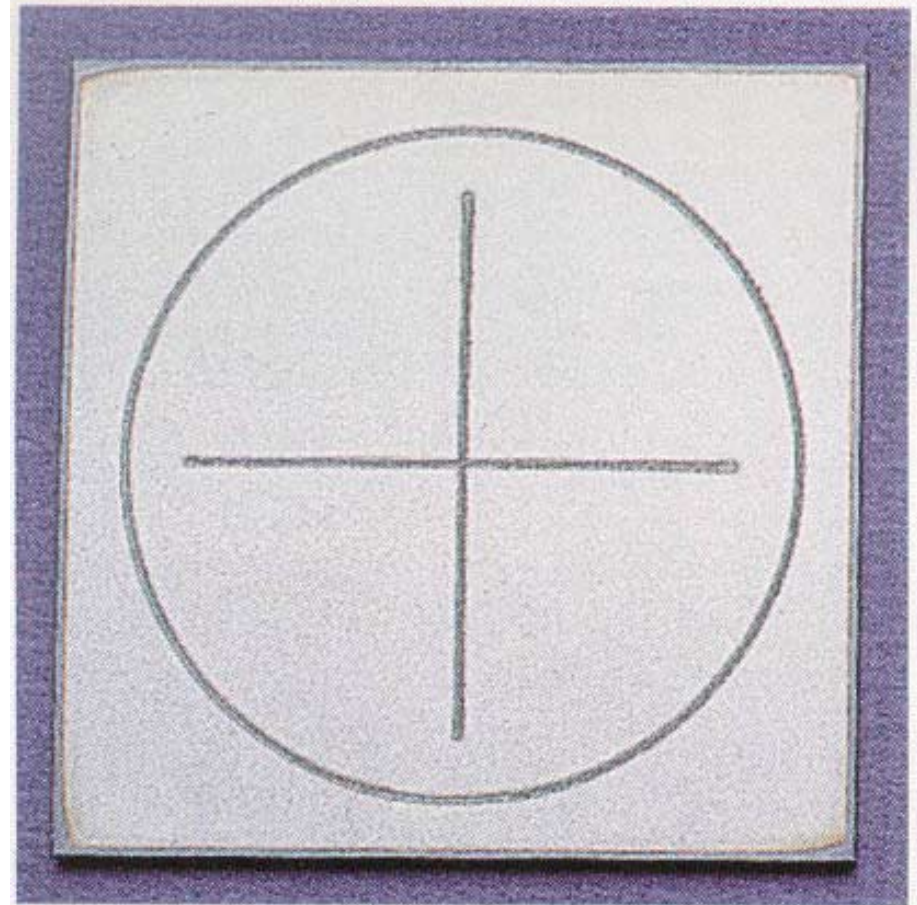
Applications

Assembly & Fit up locating
Bend Lines
Plate Identification
Drill center points
Plate Layout



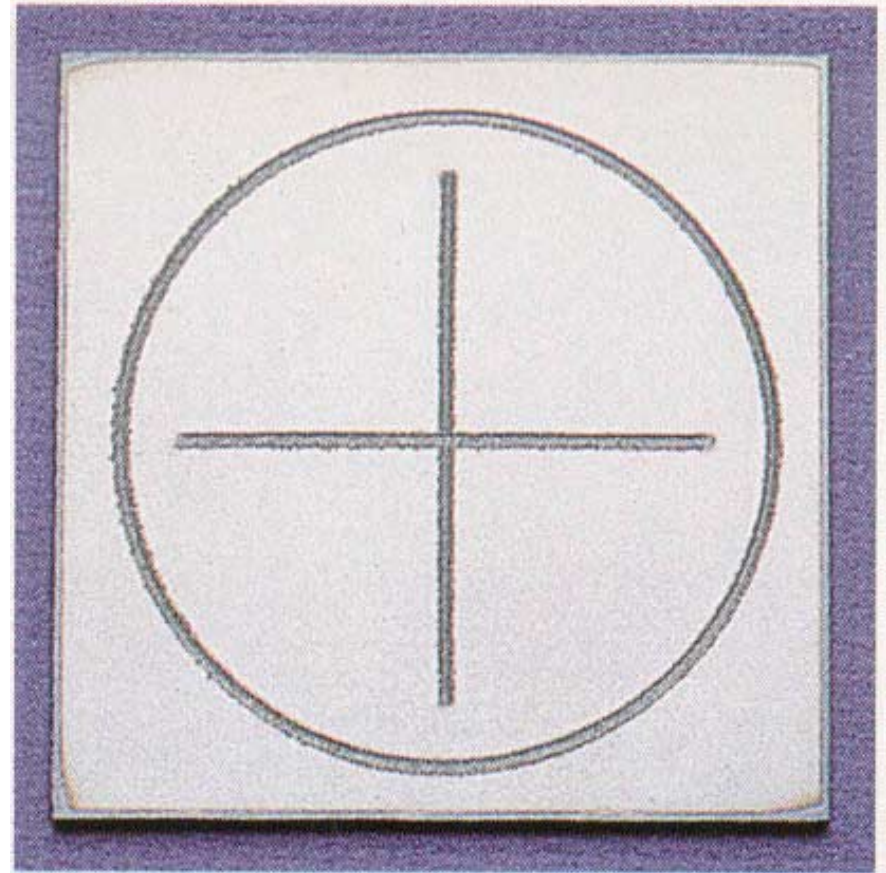
Light Scoring and Marking

- **Width: 0.020 - 0.040 inches (0.5 - 1.0 mm)**
- **Depth: Less than 0.001 inches (0.3 mm)**
- **Travel Speed: 100 - 300 inches per minute (3 - 7 m/min)**



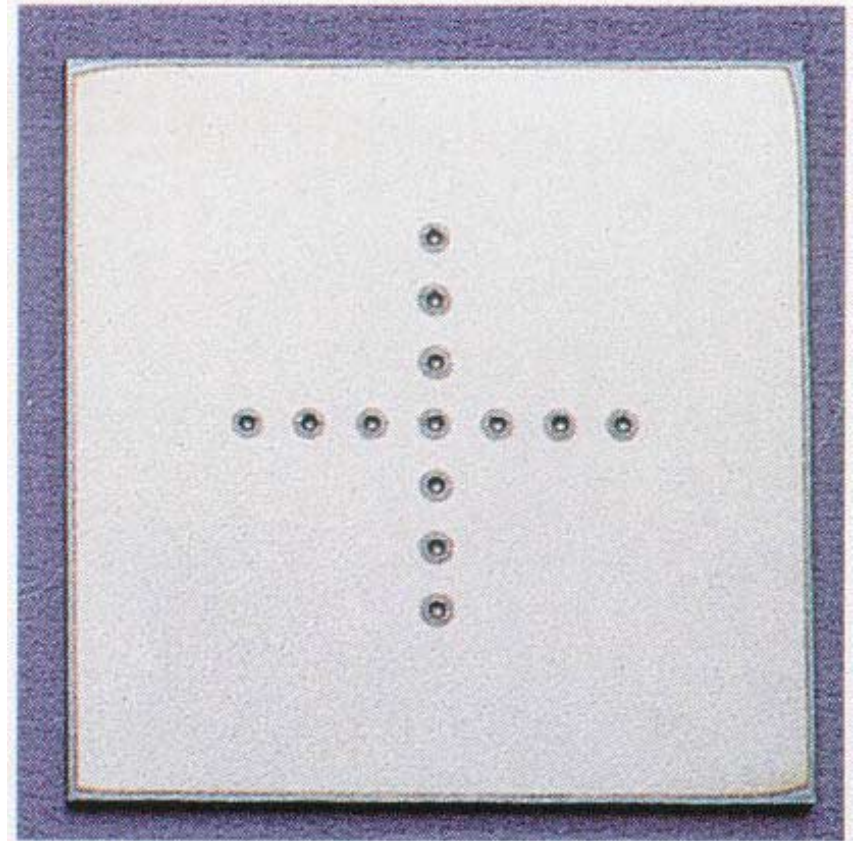
Heavy Scoring and Marking

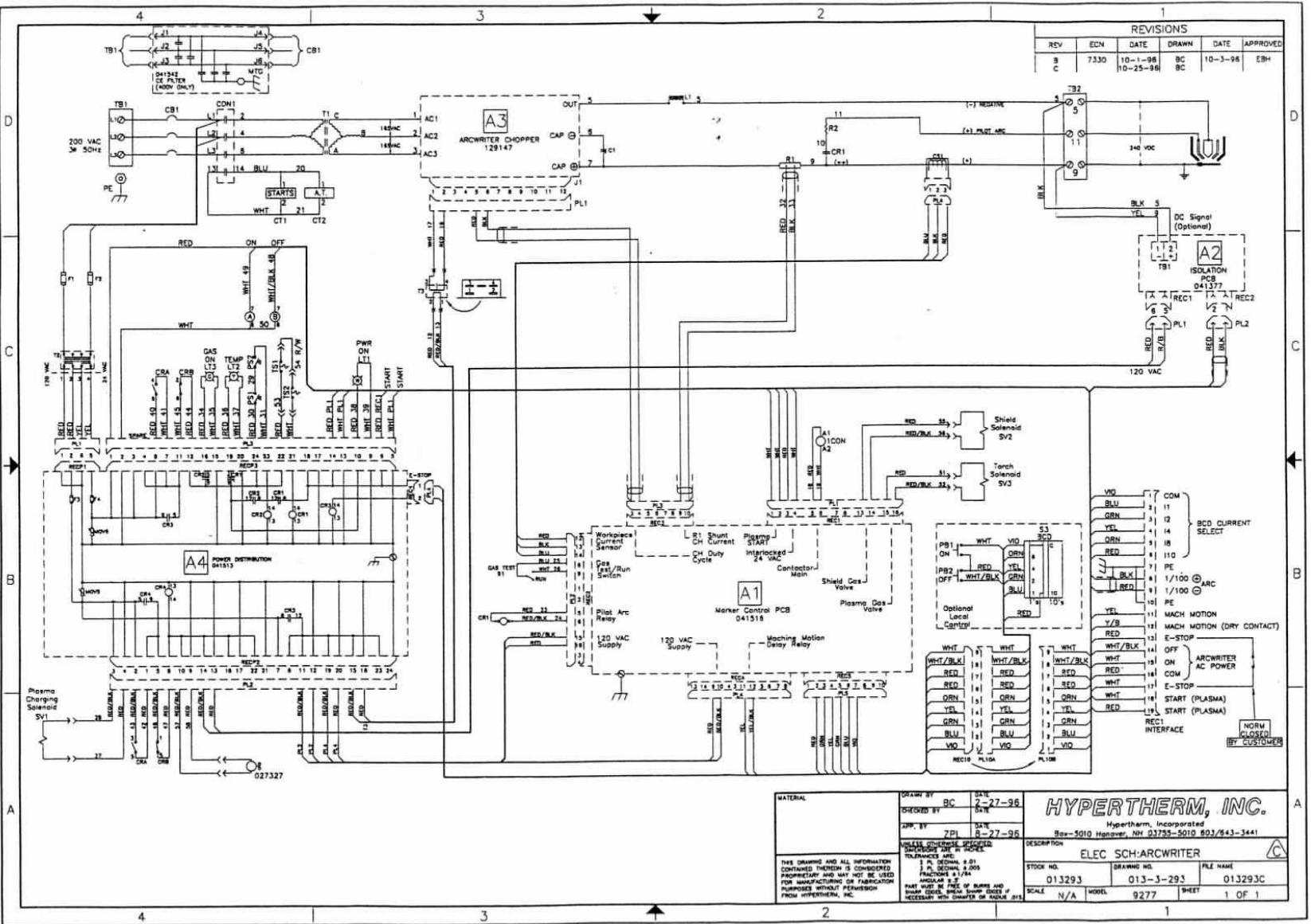
- **Width: 0.020 - 0.040 inches (0.5 - 1.0 mm)**
- **Depth: 0.003 - 0.010 inches (0.08 - 0.25 mm)**
- **Travel Speed: 100 - 300 inches per minute (3 - 7 m/min)**



Punch Mark or Dimple

- **Diameter: 0.040 - 0.060 inches (1.0 - 1.5 mm)**
- **Depth: 0.020 - 0.040 inches (0.5 - 1.0 mm)**
- **Dwell Time: 300 - 1000 milliseconds, typically less than one second.**





<p>MATERIAL</p> <p>THIS DRAWING AND ALL INFORMATION CONTAINED THEREIN IS CONSIDERED PROPRIETARY AND MAY NOT BE USED FOR MANUFACTURING OR FABRICATION PURPOSES WITHOUT PERMISSION FROM HYPERTHERM, INC.</p>	<p>DESIGNED BY: BC DATE: 2-27-98</p> <p>CHECKED BY: DATE: </p> <p>DRAWN BY: ZDL DATE: 2-27-98</p> <p>UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.</p> <p>1/8" DIMENSIONS ± 0.01 1/4" DIMENSIONS ± 0.005 FRACTIONS 1/16"</p> <p>PART MUST BE FREE OF BURRS AND SHARP EDGES. PLEASE REMOVE IF NECESSARY WITH CHAMFER OR RADIUS (R).</p>	<p style="text-align: center;">HYPERTHERM, INC.</p> <p style="text-align: center;">Hypertherm, Incorporated Box-5010 Hannover, NH 03755-5010 603/643-3441</p> <p style="text-align: center;">DESCRIPTION: ELEC SCH-ARCWTR</p> <p>STOCK NO. 013293 DRAWING NO. 013-3-293 FILE NAME 013293C</p> <p>SCALE: N/A MODEL: 9277 SHEET: 1 OF 1</p>
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Tech Details

- No High Frequency. Ignition works on the contact start, blow forward principle.
- 235 VDC OCV. Similar to CH50.
- Local control is optional- All functions are controlled remotely in standard configuration.
- Power Distribution Board- Similar to other systems, non-LVD

Troubleshooting

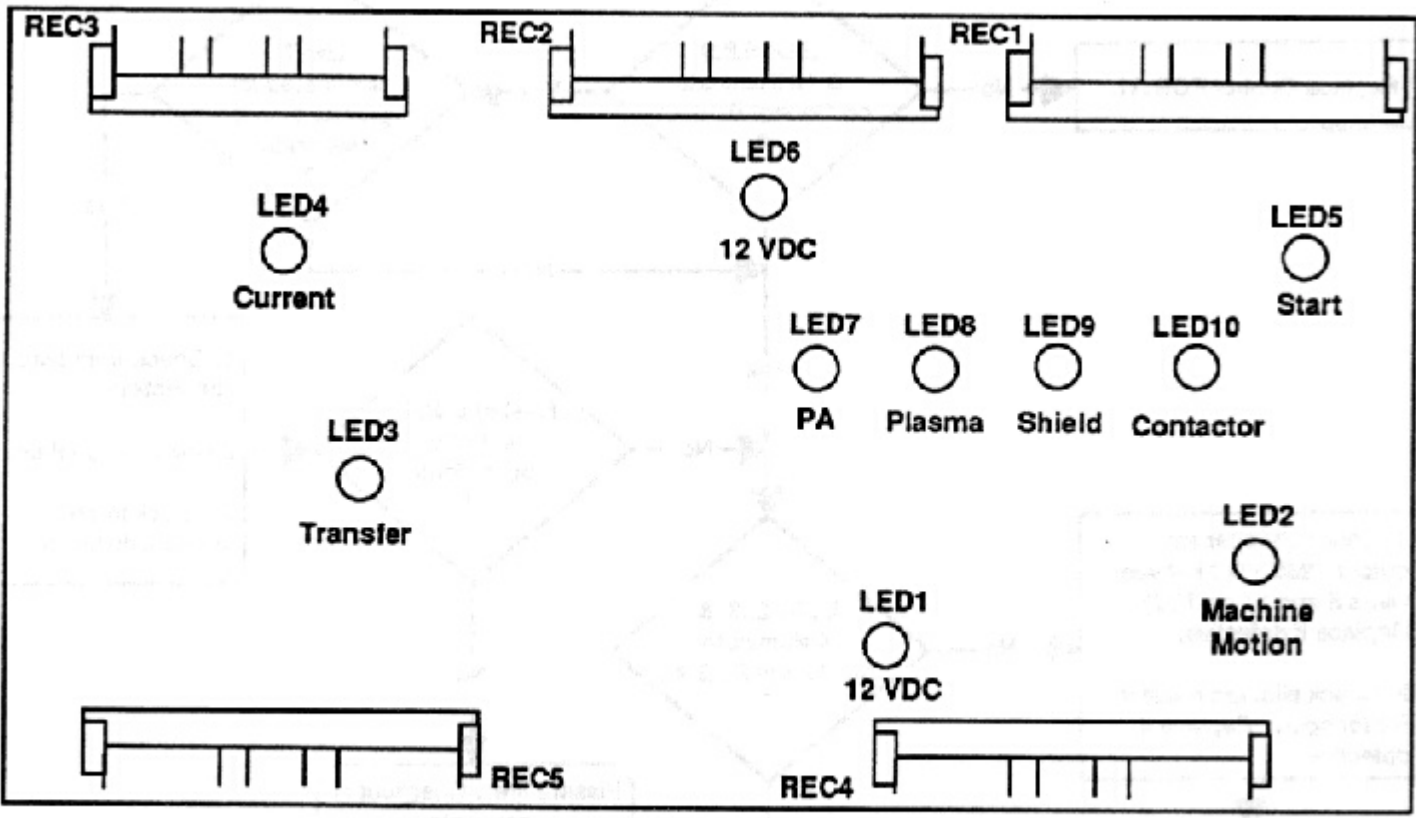


Figure 5-1 ArcWriter Control PCB A1 Assembly LED Locations

Gas Selection

- Shield Gas- Air only
- Plasma Gas- Air or H5.