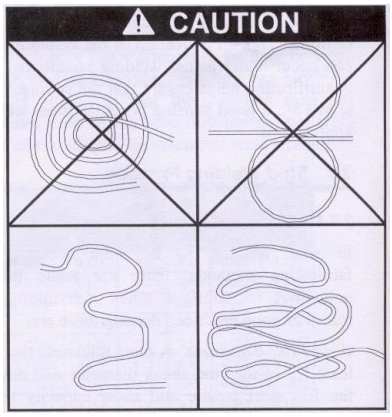
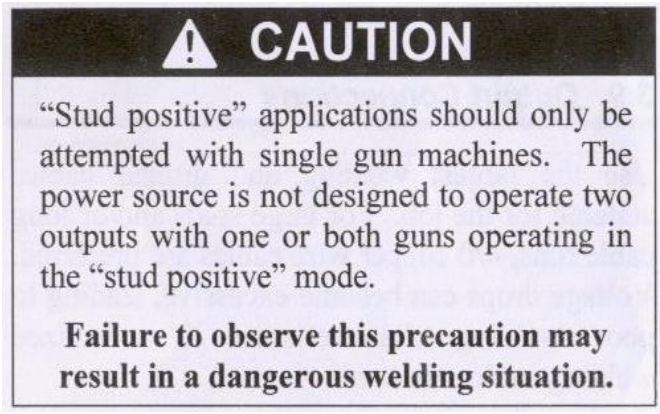
WELDING STUDS USING NELWELD STUD WELDER

WORK THIS SAFE WORK PROCEDURE IN CONJUNCTION WITH THE SAFE WORK PROCEDURE FOR WELDING AND CUTTING, FOR INFORMATION ON THE SAFE USE OF GAS CYLINDERS.

WARNING: NOT ONLY WILL THIS MACHINE KILL YOU, BUT IT WILL HURT THE WHOLE TIME IT IS DOING IT. READ THE INSTRUCTION MANUAL. IF IN DOUBT ASK.

Work involving welding, cutting and burning can increase the fire and breathing hazard on any job. Mandatory PPE (Hard Hat, Safety Boots, Safety Glasses, Hearing Protection) must be worn. In addition to mandatory PPE, (Hard Hat, Safety Boots, Safety Glasses, Hearing Protection), Flame Resistant Gauntlet Gloves (with no holes) and outer clothing to cover all exposed flesh must be worn as protection against burns, and radiation while welding.





- **Begin by visually inspecting the equipment, especially the gun but including cables, contacts and power supply for any obvious damage. If in doubt, talk to your supervisor.**
- **Ensure your work area is clean, dry and well ventilated.**
- **Ensure people around you are reasonably protected from light radiation.**
- **Ensure all the proper connections have been made, with the stud being negative in 99% of the work we do. The ground cable must be connected between the positive output panel connecter to the workpiece. It is important that the connection at the workpiece is secure.**
- **Ensure your cables are not in a circular or coiled fashion when welding, This can create dangerous electromagnetic fields that will interfere with many kinds of equipment from watches to pace makers.**
- **Turn on the main power switch and wait for the unit to complete its start up sequence.**
- **Once the startup routine is complete, the time and current settings are reported on the display.**
- **Set the desired current using the plus and minus keys next to the current display.**
- **Set the desired time duration using the plus and minus keys next to the time display.**
- **NOTE THIS STUDWELDER CAN ONLY WELD 7/8" STUDS MAX.**

- **The table below gives information on plunge and lift settings too. Read the handbook that is kept with the welder for information on what these settings mean.**

Electric Arc Stud Welding Setups for Mild and Stainless Steel Studs Welded and Base Materials

Diameter		Area	Downhand Welding				Overhead Welding				Vertical Welding			
(in)	(mm)	(in^2)	Amp	Sec	Lift	Plunge	Amp	Sec	Lift	Plunge	Amp	Sec	Lift	Plunge
3/16	4.8	0.0276	300	0.15	0.062	0.093	300	0.15	0.062	0.125	300	0.15	0.062	0.125
1/4	6.4	0.0491	450	0.20	0.062	0.093	450	0.17	0.062	0.125	450	0.17	0.062	0.125
5/16	7.9	0.0767	550	0.25	0.062	0.125	500	0.25	0.062	0.125	500	0.25	0.062	0.125
3/8	9.5	0.1105	650	0.35	0.062	0.125	550	0.33	0.062	0.125	600	0.33	0.062	0.125
7/16	11.1	0.1503	700	0.45	0.062	0.125	675	0.42	0.062	0.125	750	0.33	0.062	0.125
1/2	12.7	0.1964	850	0.55	0.062	0.125	800	0.55	0.062	0.125	875	0.47	0.062	0.125
5/8	15.9	0.3068	1200	0.70	0.062	0.187	1200	0.67	0.093	0.187	1275	0.60	0.062	0.187
3/4	19.1	0.4418	1500	0.90	0.093	0.187	1500	0.84	0.093	0.187	1700	0.73	0.093	0.187
7/8	22.2	0.6013	1750	1.10	0.125	0.250	1700	1.00	0.125	0.250	Not Recommended			
1	25.4	0.7854	2000	1.40	0.125	0.250	2050	1.40	0.125	0.250	Not Recommended			

- **The display is used to display both the desired time setting and the actual weld time. During normal operation the desired setting and the actual time will be the same in which case the display will not change during operation. If an error condition occurs, such as if a weld is aborted early, an error code will be displayed.**
- **The control panel has three LED's on the gun diagram and function as follows:**
  - **Gun Coil LED – this LED is on whenever the gun coil is energised. The LED will blink if there is no gun connected, it will blink and the fault icon will be displayed if the gun coil is shorted.**
  - **Trigger LED – This LED is on whenever the trigger is pulled or whenever the machine is welding.**
  - **Contact LED – This LED is on whenever the stud chucked in the gun is in contact with the work piece.**
- **If you see a fault code, stop working and refer to the user manual. Get help from your supervisor if you need to.**
- **This stud welder features a 'Chuck Stripper' option that by default is turned off. When turned on, after a weld is completed, the gun coil is energised a second time to pull the chuck from the welded stud. Consult the shop supervisor and the user manuals for this machine if you wish to use this feature.**
- **This model also features a 'Chuck Saver' option that requires contact with the workpiece to the broken before the next weld can be initiated. In the event that the trigger is pulled a second time after a weld is completed, the second trigger pull will be ignored. This prevents the operator accidentally welding a stud to the chuck. Consult the manual and your shop supervisor if you have any need to adjust this feature.**

- **After your work is complete, switch off the equipment and remove the power plug.**
- **Clean the work area (ferrules) and wrap up the cables.**
- **Store the unit safely.**
- **The Nelweld instruction manual will be kept in a plastic wallet on the machine.**

During welding, exposed metallic parts of the weld gun, such as the stud, chuck and all parts electrically connected to these parts, are carrying current. DO NOT TOUCH THESE PARTS WITH SKIN OR WET CLOTHES. IN ADDITION DO NOT WEAR JEWELRY such as rings or watches as this will increase the chance of electrocution.