Subject: automatic soldering robot
Posted by smartt on Sun, 15 Aug 2021 20:21:30 GMT
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I see no hand soldering in the future. The machine will get better and better.

Subject: Re: automatic soldering robot
Posted by Wayne Parham on Mon, 16 Aug 2021 14:54:45 GMT
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There are wave-soldering machines and other production-automation systems, and to be honest, that's not new technology. It has been around for years. When production exceeds a few thousand a month, component placement and soldering is completely automated. I can remember those technologies as far back as the 1970s.

Subject: Re: automatic soldering robot
Posted by smartt on Mon, 16 Aug 2021 17:30:43 GMT
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What about ultrasonic soldering and laser soldering?

Subject: Re: automatic soldering robot
Posted by Wayne Parham on Mon, 16 Aug 2021 17:50:48 GMT
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Those are two other sources of heat, so they can be used instead of resistive or inductive heaters that use current to make heat.

My point was, simply, that using robotics for component placement and production line processes for both placement and soldering is really pretty old technology that has been in use for a while - over a half century, actually. So where it counts - large production runs - we've had good technologies for a long time. They get faster and more efficient, but the use of the assembly line approach, itself, is probably the biggest factor and we've been doing that for while.

Single-unit assembly and small runs is a different matter. Here, I suppose you could computerize and do something like a CNC machine or 3D printer to automate assembly - both for placement and for soldering - but I don't see as much benefit in that. One could perhaps make a case for it, but it would be just as easy to make a case against it too. It's not as obvious an advantage to automate single-unit production as it is to automate an assembly line.

Subject: Re: automatic soldering robot
Posted by gofar99 on Tue, 17 Aug 2021 01:32:35 GMT
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Hi, Yes it has been around for a long time. I don't even use PCBs for less than 10 units.