

Hose-handle RF Transmitter family (HHRFT) Circuit Comparisons

The following table lists the RF transmitter boards used in each member of the HHRFT family of vacuum hose-handle transmitters:

HHRFT RFT Model #	Description	RF transmitter board	
	B=battery; AC=line power	Layout gerber	schematic
FB	Flextech B	PWB553	MCP553
FA	Flextech AC	PWB553	MCP553
PB	Progression B	PWB550	MCP550
PA	Progression AC	PWB550	MCP550
GB	Gas Pump B	PWB550	MCP550
GA	Gas Pump AC	PWB550	MCP550
CB	Cen-Tec B	PWB553	MCP553
AB	Alutron B	PWB553	MCP553

As can be seen there are two different circuit configurations used and these are compared as follows:

- Electronic Circuit designs MCP553 and MCP550
The schematic diagrams for these designs are essentially identical. Their respective Bills of Materials differ only in the orientation of the connectors used for in-circuit programming of the microcontroller.
- Printed Wiring Board layouts PWB 553 and PWB550
In order to accommodate the differing cavity dimensions within the various handles it was necessary to produce two different shaped boards. The orientation of the RF generation and transmission circuitry is identical between the two. The distance between the microcontroller circuitry and the RF sections of the boards is different with this being marginally larger in the case of PWB550 thereby producing a longer, narrower form factor compared to PWB553.