FIRE PORT™ For Flight Safety

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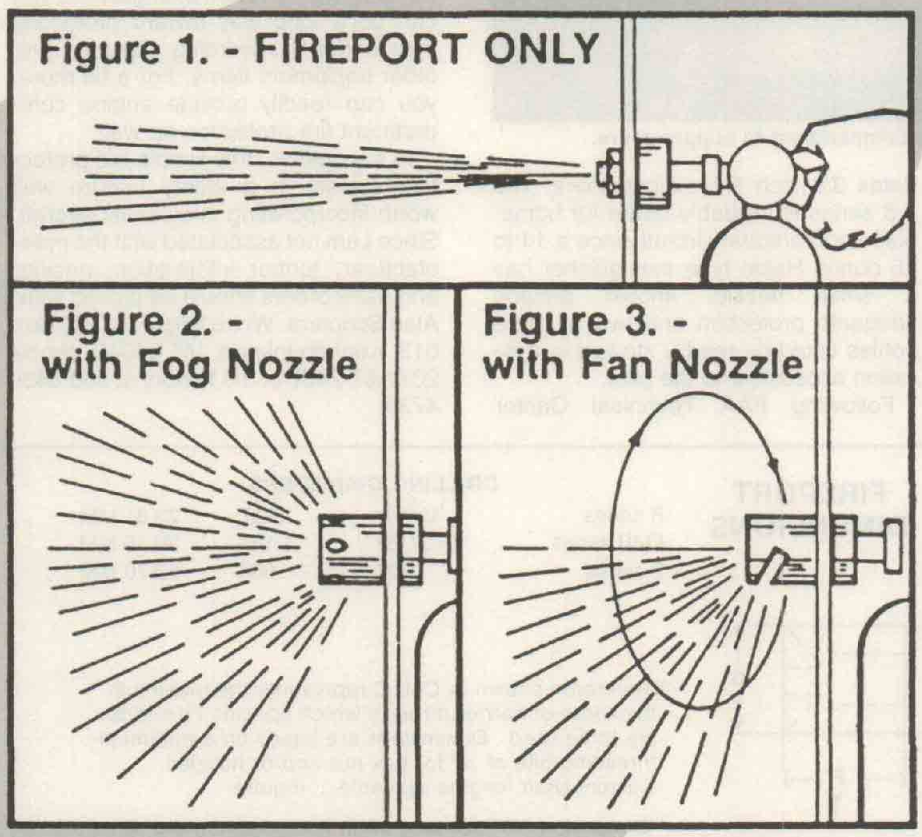
The increased number and cost of flight and navigation equipment items behind the instrument panel are, unfortunately, also accompanied by greater likelihood of fire in wiring runs and electrical components.

After some searching I have found a safety item that is relatively cheap, quite light and very effective in suppressing electrical and other relatively inaccessible fires - the patented FirePort. This must be one of aviation's best kept secrets because, although the simple, static device is rapidly becoming an item of standard fire protection equipment for airliners, I have never seen the FirePort dispersal nozzle advertised or recommended for personal aircraft use. So this is another first for SPORT AVIATION.

Basically, the FirePort nozzle is mounted on accessible structures, containers or panels enclosing remote items that could overheat or short circuit to cause an inaccessible fire; a type of fire difficult to get at and smother with a hand fire extinguisher. However, when a fire extinguisher nozzle is inserted into a FirePort, gas flow is directed into the enclosed area, expanding in volume to smother the fire.

For example, with an instrument panel mounted FirePort such as Model S10 equipped with S50 Fog Nozzle, the extinguisher nozzle would be inserted into the FirePort (Figure 1) and the suppressing gas dispersed (Figure 2) to end a fire acting behind the panel. If only a certain area was to be protected, the S60 Directional Nozzle spray (Figure 3) might be selected. All any installation requires is a mounting hole drilled in the panel to accept the FirePort.



Figures 4 and 5 show the dispersion pattern using Halon; note the effectiveness of the expanding spray cloud in smothering a contained fire. This feature can also be carried from the instrument panel area up into the powerplant section of conventional single engine tractor aircraft by installing a 3/8" diameter aluminum alloy tubing line from the FirePort opening to a firewall nozzle which then disperses extinguishing gas into the engine compartment. I understand a 2.5 pound bottle of Halon 1211/1301 will carry effectively for 14 feet; sufficient to flood a cowling enclosure from the cabin or cockpit.

In this manner, it is possible to have the safety advantages of an integral fire protection system at many points by using one fire extinguisher and a relatively inexpensive dispersal system of

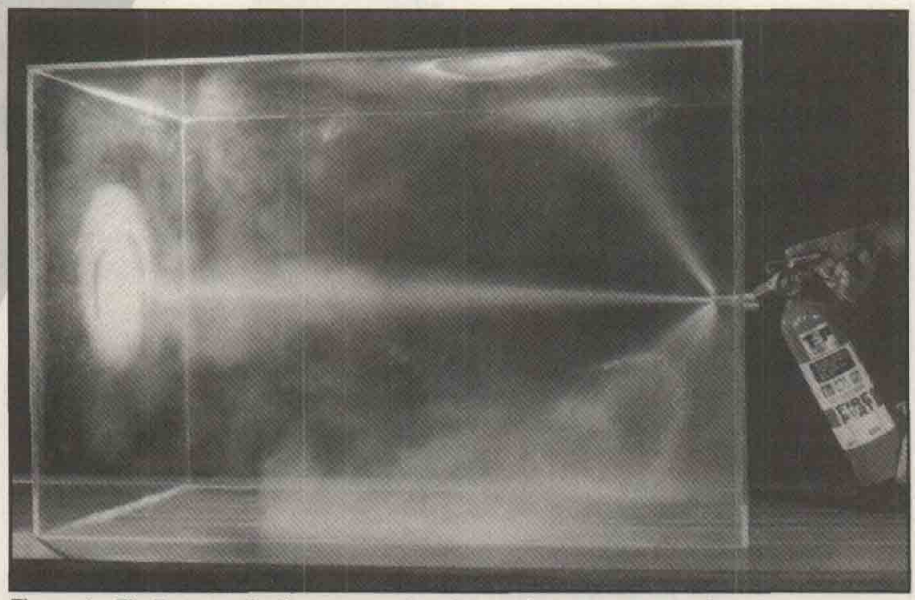


Figure 4 - FirePort nozzle disperses extinguishant throughout an enclosed compartment.

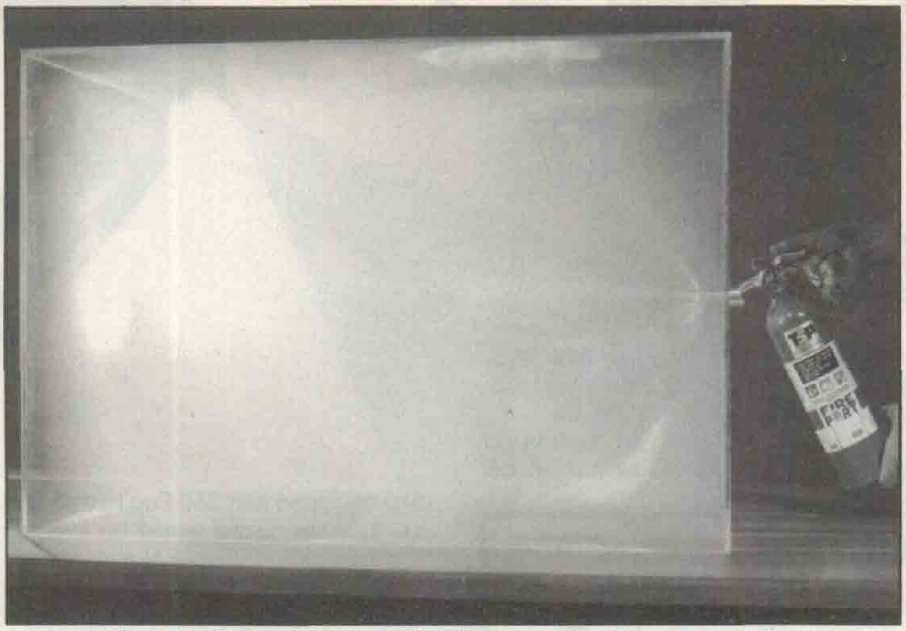


Figure 5 - Extinguishant rapidly fills compartment to suppress fire.

FirePort nozzles. The metal FirePort units are available in black, red, gold or chrome finish and weigh only a few ounces each.

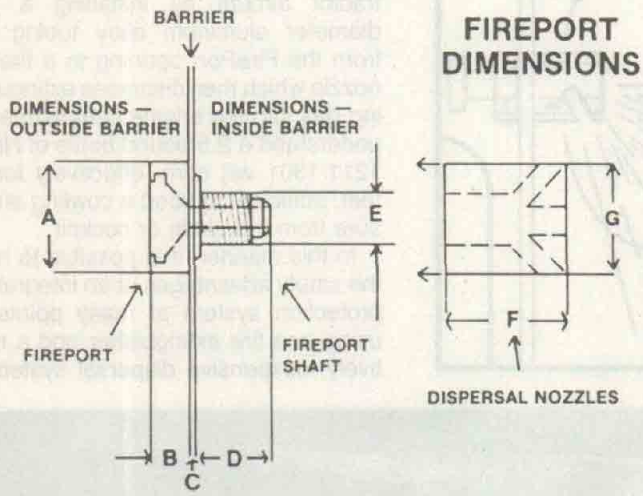
The accompanying table lists the types of FirePort nozzles available, with the R and FMR series accepting extinguisher nozzles up to 3/4 inch outside diameter, while the S series accommodates 3/8 inch fire extinguishers. The 3/8 series is probably better for homebuilt and personal aircraft since a 14 to 16 ounce Halon type extinguisher has a small nozzle, should provide adequate protection and two or three bottles could be readily stowed in a location accessible to the pilot.

Following FAA Technical Center tests of Halon extinguishers used to suppress electrical fires in the cabin area, one conclusion reached was that . . . "Hand extinguishers with Halon 1211 provided most effective distribution under (that is behind) the instrument panel when discharged through a FirePort multiport (Fog Nozzle) at the center location compared to a location on the pilot's side of the instrument panel."

The same tests also determined that . . . "Toxic Halon decomposition products resulting from fire extinguishment were low and below levels considered dangerous." So, for a few dollars invested in FirePort stations and a small bottle or two of Halon extinguisher, you can go a long way toward protecting your Loran C, recording altimeter, and other equipment items. For a bit more, you can readily provide engine compartment fire protection as well.

In my opinion, this simple fire protection system is a safety feature well worth incorporating in all small aircraft. Since I am not associated with the manufacturer, further information, pricing, and parts orders should be placed with: Alan Scripture, White Mfg., Inc., PO Box 613, Kennebunkport, ME 04046, phone 207/967-2467 or the factory at 800/843-4739.

FIREPORT DIMENSIONS



DRILLING DIAMETERS

R series	15/16"	.937	23.81 MM
FMR series	1 - 3/16"	1.187	30.16 MM
S series	1/2"	.500	12.70 MM

*Dimension shown in Col. C represents the maximum thickness of barrier through which specific FirePorts are to be used . Dimensions are based on a minimum threading bite of ¼" for hex nut and/or nozzles. Custom shaft lengths available . . . inquire.

**Dimension ABE for long shaft X models are the same as dimension ABE shown for standard models.

FIREPORT TYPES

DIMENSIONS

	R Series	A	B	*C	D	E	F	G
Model	R10 Flat FirePort	1⅛"	⅜"	¼"	½"	⅞"	-	-
	R20 Angled FirePort	1⅛"	⅞"	¼"	½"	⅞"	-	-
	R30 Deep Throat FirePort	1⅛"	⅝"	¼"	½"	⅞"	-	-
	R10X, 20X, 30X Extended Shaft	**	**	2"	2¼"	**	-	-
	R50 Fog Multi-Port Nozzle	-	-	-	-	-	1¼"	1⅛"
	R70 Fan Nozzle	-	-	-	-	-	1¼"	1⅛"
	FMR Series	**A**	**B**	***C**	**D**	**E**	**F**	**G**
Model	FMR10 Flush Mount FirePort	1⅝"	⅛"	⅜"	⅝"	1⅛"	-	-
	FMR30 Flush Deep Throat FirePort	1⅝"	⅛"	⅜"	⅝"	1⅛"	-	-
	FMR50 Fog (Multi-Port) Nozzle	-	-	-	-	-	1⅜"	1⅝"
	FMR70 Fan Nozzle	-	-	-	-	-	1⅜"	1⅝"
	S Series	**A**	**B**	***C**	**D**	**E**	**F**	**G**
Model	S10 Flat FirePort	1"	⅜"	¼"	½"	7/16"	-	-
	S20 Angled FirePort	1"	¾"	¼"	½"	7/16"	-	-
	S50 Fog Nozzle	-	-	-	-	-	1 3/16"	1"
	S60 Directional Nozzle	-	-	-	-	-	1 3/16"	1"