

TINY FOGGER TECH SHEET #2

also known as . . .

EVERYTHING YOU ALWAYS WANTED TO KNOW ABOUT TINY FOGGERS (AND THEN SOME)

The Tiny Fogger is an exceptional feat of engineering! Although you may say "big deal, it's a 4 inch battery-operated fog machine, so what?" my response would be "well you try making one yourself" :-). This machine is actually the result of about 15 years of development, from a German engineer who's been making foggers smaller and smaller and smaller. (Are you familiar with the Scotty fogger? The Tiny is designed by the same person, and is the latest incarnation in the small-fogger evolution.)

THE FOGGER

At 4" x 2" x 1-3/8" the Tiny Fogger can fit almost anywhere. And it's cool enough to hold in your hand. The Fogger contains the heater, pump and main PCB w/ microprocessor. The fluid and battery are external. Leading from the fogger are a thin fluid hose and a battery cable.

THE FLUID BOTTLE

The fluid hose attaches to a 1-1/2 oz. bottle (supplied) with a check valve so the bottle can be placed in any position, even upside down. The hose leading from the fogger is 4' long. It can easily be shortened or extended (replaced by a new longer length of silicon hose, purchased separately). The Tiny can suck fluid uphill to a maximum of 6', and horizontally to a maximum of 20'.

THE WIRED REMOTE

Also leading from the Tiny is the battery cable. First there is 6' of wire and then a small black remote box. Then coming out of the other end of the remote box is another 20" of wire, and the battery clip. The 3-1/4" x 1-3/4" x 1" remote box contains a momentary switch (used for fogging), a reset/calibration switch, and an 1/8" mini plug female socket.

THE PROGRAMMABLE DURATION

The fogger heats only as needed, but it does so practically instantly. When you press and hold the momentary switch on the remote box, fog comes out until you release the button. Additionally, the Tiny fogger memorizes the amount of fog released. So when you subsequently press and immediately release the momentary switch, fog comes out for a duration equal to the amount previously created.

In order to program a new duration into memory, wait at least 15 seconds since the last fogging, then press and hold the switch for the duration desired (must be longer than 1 second). Then, to reproduce the amount just programmed, press and immediately release the switch. You must release the switch in less than 1 second; if you hold the switch for longer than 1 second, the Tiny will think you are programming a new duration, and you'll overwrite the old memory with the amount of fog you just created. Pressing and immediately releasing the switch will always re-create the amount most recently programmed, over and over again. (The Tiny is also available in an NPD "Non Programmable Duration" model, for users who always want total manual control.)

THE BATTERY

Of course in order to fog, the rechargeable battery (supplied) must be charged up and connected to the battery clip at the end of the battery cable. The battery is a 2 amp-hour lead-acid type -- it looks like an old-style camcorder battery. The dimensions are 7-1/8" x 2-3/8" x 7/8". In order to maintain maximum storage capacity, always recharge the battery before storage or periods of disuse.

A fully charged battery contains enough power for 10 minutes of fogging. The Tiny Fogger draws only 20 milliamps in idle status, so it can remain connected to the battery for several hours without any

consequential battery drain.

THE JACK IN THE WIRED REMOTE

The female 1/8" mini jack in the remote box can be used in a number of ways. The Wireless Remote Receiver can be plugged into it - then the Wireless Remote Transmitter duplicates the actions of the momentary switch on the remote box (including programming durations), allowing you to operate the Tiny Fogger from up to 100 yards away with no control wire. The DMX Interface can be plugged into the mini jack, allowing you to control the Tiny from any DMX channel on any DMX console. The Digital Timer Interface can be plugged into the mini jack, allowing you to create fog at specified regular intervals and durations.

Additionally, you can plug a male 1/8" stereo mini plug into the remote's jack, and use conductors connected to the ring and shield to duplicate the actions of the remote box momentary switch with your own switch or relay. Use a stereo (3-conductor) plug only. Connect one wire conductor to "ring" and one wire conductor to "sleeve". Then, touching the two wires together will duplicate the action of the momentary switch. Do not attach any wire conductors to the "tip". The tip is used only to supply 12V power to the Wireless Remote, DMX and/or Digital Timer Interfaces. (To refresh your memory, the 3 conductors on the stereo plug are tip-ring-sleeve in that order, with sleeve being the body/ground and ring being the part in the middle.)

THE HEATER

The Heater in the Tiny Fogger needs to be replaced from time to time. Approximately 5,000 fogging cycles can be expected before replacement is necessary. Manual inspection is required in order to determine if the Heater needs to be replaced. When new, 5 wire strands are visible when you look in the front of the Tiny Fogger. Eventually one will break; when two are broken then the Heater needs to be replaced (part #PTFG90H). The Heater can be easily replaced by the customer - no special tools are required. Detailed instructions are included in the Tiny Fogger Manual (supplied). Important - after the heater is replaced, the Tiny must be recalibrated. In this way, the Tiny learns the resistance of the new Heater (vital for proper operation). To recalibrate the Tiny, insert a pen into the hole on the Remote Box, pressing and holding down the small recessed switch. With the switch still depressed, power up the Tiny by attaching the battery clip to the battery. Then release the switch. This calibration process is vital and must be performed every time a new Heater is installed, or even if you remove and replace the existing Heater. (BTW, in case you or your customer is curious, the Heater draws 70 watts.)

THE FLUID

Tiny Fluid is exceptionally concentrated, containing practically no water. Why waste valuable battery power converting water to steam? Use only Tiny Fluid in your Tiny Fogger. Efficiency is vital in battery-operated foggers. The Tiny's microprocessor controls all functions to give you the greatest amount of fog for the lowest power consumption. The microprocessor is expecting that Tiny Fluid only will be used in this machine. An 8 oz. bottle of Tiny Fluid is included with each fogger. 1 oz. of fluid provides about 15 minutes of fog.

THE YELLOW INDICATOR LIGHT

There is a yellow L.E.D. on the back of the Tiny Fogger. This is what it indicates:

*Flashing Slowly - normal. The battery is well charged.

*Flashing Quickly - the battery is weak and need to be recharged. (The weaker the battery, the faster the flash.)

*Not Lit - no power. The battery is disconnected or the power fuse is open. (The power fuse looks like a tiny yellow ball with two thin wire leads. It's soldered onto the PC board in the wired remote box.)

*Lit Steady - the battery is fully drained or the thermal fuse is open. (The thermal fuse is integrated into the Heater and is not replaceable - you must replace the entire Heater. A blown thermal fuse is generally caused by failure to recalibrate the Tiny after Heater replacement.)

AC POWER SUPPLY

If you wish to operate your Tiny from an AC power supply, you must cut off the battery clip and hard wire it. There is no "plug" available that will mate with the battery clip. The power supply must be well regulated and capable of supplying 100W at 12VDC. We highly recommend our #FG95 AC PSU, which is also 115/230VAC switchable. The Tiny Fogger should only be connected to an AC powered DC source by an experienced electronics technician. Read our Tiny Tech Sheet #1.

WHAT YOU GET

When you buy a #FG90 Tiny Fogger you get:

Tiny Fogger w/ fluid hose and wired remote/battery cable
1.5 oz. Fluid Bottle w/ check valve
8 oz. Tiny Fluid
Rechargeable Battery
115V AC Charger (230V chargers also available)
Carrying Case
20 Page Manual

These products are also available "a la carte", but you are strongly advised to purchase complete #FG90's only. (Unfortunately we've had many cases where customers have not ordered all of the necessary parts and have ended up blowing up their Tiny Fogger.) I can certainly appreciate your desire to save money, but please do only purchase a la carte parts if you are an experienced special effects technician.

A LA CARTE PARTS, AND ACCESSORIES

FG90A Tiny Fogger Only
FG90A-B Tiny Fogger Only, NPD (No Programmable Duration)
PTFG90C 1.5 oz. Fluid Bottle w/ check valve
PTFG90CL 8 oz. Fluid Bottle w/ check valve
PTFG90B Rechargeable Battery
PTFG90C115 Battery Charger, 115V
PTFG90C230 Battery Charger, 230V
PTFG90H Replacement Heater
FG91 Tiny Fluid, 8 oz.
FG91Q Tiny Fluid, 32 oz.
FG92 Wireless Remote Kit (Transmitter and Receiver)
FG92R Wireless Remote Receiver Only
FG93 DMX Interface
FG94 Digital Timer Interface
FG95 AC PSU
FG96 Ducting Tube Adapter
FG96T Ducting Tube, per ft.
FG96Y Y Splitter for Ducting Tube

THE TINY COMPACT

The Tiny Compact is a Tiny Fogger chassis, fluid bottle, and removable battery, all built into one tidy steel case. The dimensions are 8" x 4" x 2-7/8". This fogger is NPD, otherwise the features are the same as for the Tiny Fogger. The yellow LED and the 1/8" mini jack are on top of the fogger. The momentary switch is in the handle. This model is idiot-proof and is perfect for rentals. The retail price is \$995 (includes 8 oz. fluid, battery and charger).

That's it! We here at Theatre Effects thank you for reading this sheet, and hope you found it helpful.

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