

HOW TO USE YOUR
**ELECTRICALLY
HEATED**
FLYING CLOTHING

(Army Air Forces Type F-2)




WARMTH BY WIRE

(Much as you may want to hold onto this little booklet for keeps . . . don't be a hoarder! When you've absorbed the profound knowledge stored herein . . . pass the book along to your buddy or good friend . . . so that he, too, will learn of the comforts and delights of the F-2 heated flying suits.)

loading the batteries, don't turn suit on before take-off, but


don't wait too long after take-off or you'll ride cold. Conversely,

don't ride hot  or you'll get the "Cold sweats"




at higher altitudes. Never plug into 110 Volts .

Your suit, gloves and shoes are built to take a gentle 24 volts so

stay out of the 110 volt dept. if you don't want a hot foot 

or a blown fuse . Anyhow, it's liable to ruin the whole suit

assembly. And for pity's sake, don't attempt to make repairs

on your suit  without the proper "know how."

Get yourself a copy of the TO 13-1-8 or, better yet, if
your suit becomes damaged or inoperative, get a new one.

Go easy, though, Mister. That doesn't mean they come to you for
peanuts.

WARNING TO NAVIGATORS

Electrically heated suits will affect direct reading aircraft compasses principally because of the single-wire direct-current supply on which these suits are operated. Before taking off on a mission on which electrically heated suits will be used, the navigator should swing the aircraft compass with all electric circuits and all suits, except his own, switch on. It is essential that he turn off his own suit before reading the compass. This can be accomplished by turning the rheostat to the "off" position or by merely pulling the connector from the extension cord socket. Electrically heated suits do not affect remote reading compasses.

**Do not plug suit, gloves or shoes
into 110-volt circuit**

G-E Form No. MAQ-198, Instructions for Type F-2 Electrically Heated Flying Suit Specification No. 3160.

Prepared and Published by






GENERAL  ELECTRIC





Pioneer Products Division, Bridgeport, Connecticut




For The Army Air Forces Materiel Command, Wright Field, Dayton, Ohio

Do and Don't Dep't.

From the actual experience of countless pilots, gunners, bombardiers and navigators comes a good set of rules to follow, on the use and care of electrically heated clothing.

After you get dressed in the heated suit assembly  and are waiting to take your place in the plane, don't monkey around unnecessarily . Take it easy! Don't work up a sweat! Your suit is not built for rough use. Baseball , Football , and Track Meets  are good exercise, but not good for your F-2 Suit assembly!

Don't use the gloves for heavy work . The heated shoes are not for long hikes  and the suit is for flying, not for strolling around in  no matter how cute your girl thinks you look. Another thing, take the suit off immediately after each flight and hang it carefully  in a safe place, where it will dry out. And look, Roger.

Try to keep spots and stains off your suit.  Watch where you sit; don't use the sleeves to clean off the motor and oil lines. When you answer mess call, sit right up to the table... mind your manners and don't slobber. Get your suit cleaned  at the slightest sign of soil or similar stuff. Be sure your gloves and shoes are securely connected to your suit  at all times during operation. To prevent over-

you can do, is to give your heated flying clothing the kind of care and attention that will keep it in tip-top condition. Wear it only on flights and don't forget about regular inspections. It is not necessary to disconnect and carry with you, the six-foot extension cord used in the plane. Leave the darn thing in the plane. Its twist lock will keep it securely connected to the receptacle in the rheostat.

A Few F-2 Facts for Flyers



NOW pay attention to this: If you expect to encounter more severe temperatures beyond the -40 -degree F. upstairs mark, then you've got to *add more insulation over the electrically heated suit*. Good "insulators" are coveralls, alpaca or sheepskin jacket, and trousers, etc.

And here's another important point:

If you add insulation to the body, don't forget to add equal insulation to the hands and feet—or else your extremities will be mighty chilly. The answer is to add extra mittens over the gloves and extra wool socks on your feet.

For best results, always wear the F-2 Suit as a complete ensemble in accord with the manufacturers recommendations. Maybe it's not always possible to do this in an emergency or under certain unusual conditions. Therefore, you'll note that there are zippers on the front closures of the inner jacket and inner trousers. This makes it possible to wear the F-2 jacket insert, trouser insert (and shoe inserts, too), under various types of outer clothing other than original matching outer shells.

This . . . you will like. The F-2 Suit gives you maximum wear and service under all normal conditions. Each shoe, each glove, the jacket and the trousers are designed to operate independently. If one of these units should fail due to damage, excess wear or abuse, the rest of the suit will still operate.

For your added protection, there are two electrical circuits built into each shoe, glove, trouser and jacket so that only one half the heat is lost in any unit if one of the circuits in that unit should break.

Six Simple Steps



RIGHT

WRONG



TAKE the same care and the same pride in dressing for flight in the Type F2 Suit as you did dressing for dinner in a tux or tails. Remember?

Fact is, it's a lot easier getting into the F-2 than it is getting into a boiled shirt. No studs . . . it's a snap! Just follow these six simple steps and you're all set every time.

Step One . . . Medium-weight woolen underwear with long sleeves and legs is recommended for flights under cold conditions. Lightweight wool socks or cotton socks should be worn. Wipe off all excess perspiration and don't work up a sweat while dressing. Perspiration at extreme cold is very dangerous to the body. Put on a wool shirt.

Step Two . . . Put on electrically heated trousers and jacket.—**WARNING: BE SURE THAT SUIT IS NOT TOO SNUG. GET A SIZE THAT FITS YOU WELL.**

Step Three . . . Put on the shoes with inserts over lightweight socks. Connect the snap fastener tab on the trouser insert leg to the corresponding snaps on the shoe insert. Make certain that both pairs of snaps are properly connected. (Sketch shows right and wrong way.) (An optional method is to add a wool sock over the insert and use an outer boot about two sizes larger than the insert.)

Step Four . . . Connect the tab at the top of the trouser to the corresponding snap fasteners on the inside of the jacket at the right. Make sure both pairs of snaps are securely snapped together. Connect six-foot lead cord to jacket pigtail.

Step Five . . . Put on regulation flying helmet and auxiliary equipment. A light wool or silk

to Solid Comfort

scarf will seal junction at the neck line between helmet and suit collar.



Step Six . . . Put on lightweight rayon gloves. Snap the tabs on the jacket sleeves to the corresponding snaps on the heated gloves. Then put on the electrically heated gloves.

How to Operate the Heated Flying Suit



ACTUALLY the instructions for operating the F-2 Heated Suit Assembly are simple. All you have to do is be careful to follow 'em to the letter.

Near your position in the plane, you will find a built-in rheostat (Type Q1A) with receptacle at the left for plugging in your six-foot extension cord. The plug at the end of this extension cord should be securely and positively inserted in *the left* receptacle of the rheostat and locked into position with a simple clockwise twist.

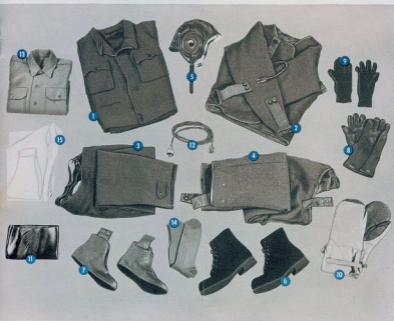
The amount of heat required can be adjusted by turning the rheostat to the correct position. For maximum comfort during a complete flight, the rheostat should be adjusted to furnish a minimum of heat, not an excess. Do not "ride hot" as perspiration produced at normal temperature levels will result in an unpleasant chill when the lower temperatures of higher altitudes are reached.

Heaters for goggles or oxygen mask may be connected to the tab at the breast pocket.

Get the habit of giving your F-2 heated suit a regular check-up and inspection. Look for excessive wear at all flexion points, where breakage of the fine cable with which the suit is wired, might occur. Best thing

Here's Your Complete High-flying Wardrobe

1. Jacket
2. Jacket Insert, Heated
3. Trouser
4. Trouser Insert, Heated
5. Helmet
6. Shoes, Felt
7. Shoe Insert, Heated
8. Glove, Heated
9. Rayon Glove Inserts
10. A-12 Mittens
11. Scarf
12. Lead Cord
13. Woolen Shirt
14. Light Socks
15. Long Underwear



THE electrically heated suit assembly is designed to maintain top body efficiency of the wearer during routine flight, training or combat flying for all temperature conditions to 40 degrees F. below zero regardless of the time duration of flight.

Enjoy That Free and Easy Feeling!



SOLID COMFORT



EASE OF MOVEMENT



**QUICK, FLEXIBLE ACTION
IN ALL DIRECTIONS**



**COMFORTABLE
AT NORMAL
OR EXTREME
TEMPERATURES**

NO BULKINESS



A NEW STYLE FLYING SUIT

THE new AAF F-2 Flying Suit Assembly represents the last word in electrically heated flying clothing. The F-2 Suit is scientifically designed and carefully styled for the flyer's *personal comfort and safety.*

Parts of the Army Air Force Electrically Heated Flying Suit manufactured by one company may be interchanged with parts of a suit manufactured by any other company. However, for best results try to use the complete suit as manufactured by one company.

This booklet contains non-technical instructions for the correct operation of the Army Air Force Type F-2 electrically heated flying suit manufactured by the General Electric Company (indicated on the label of each jacket, trouser, glove and shoe). For the straight G.I. instructions see T. O. 13-1-8.