

What is P-Static?

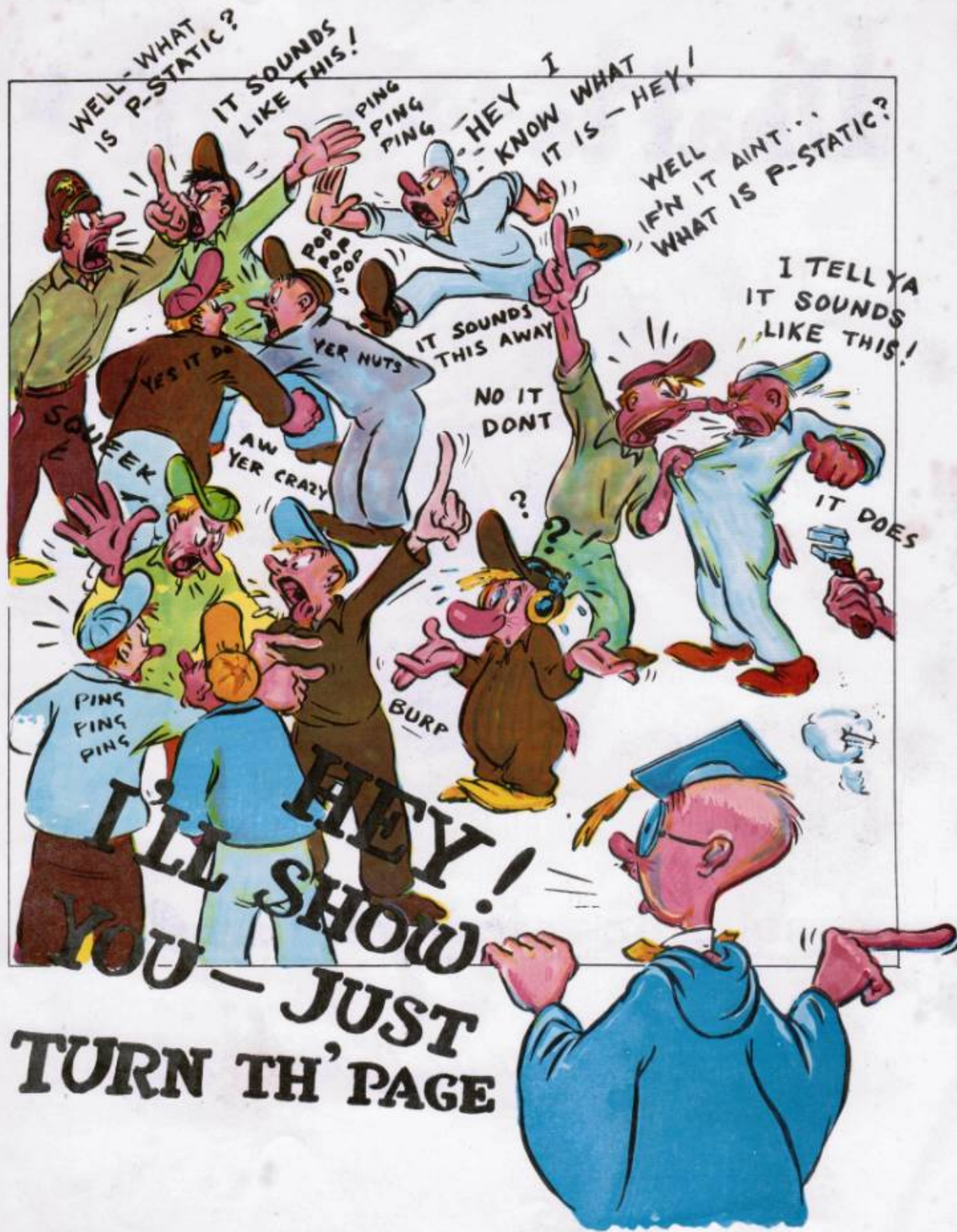


A PRIMER ON PRECIPITATION STATIC

by DAYTON AIRCRAFT PRODUCTS INC.

FORT LAUDERDALE, FLORIDA, U.S.A.

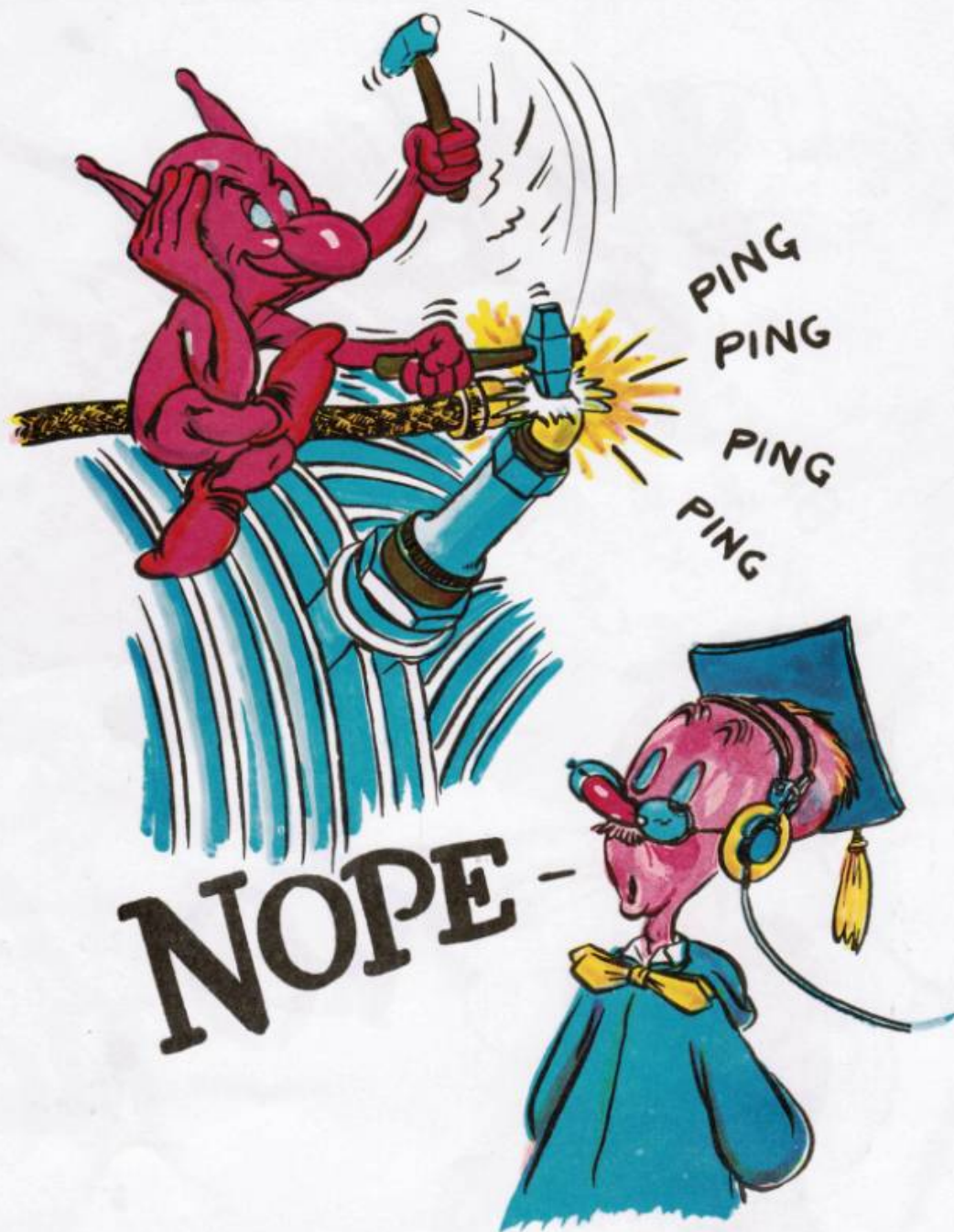




Is it ?



Or ?



Then it must be....

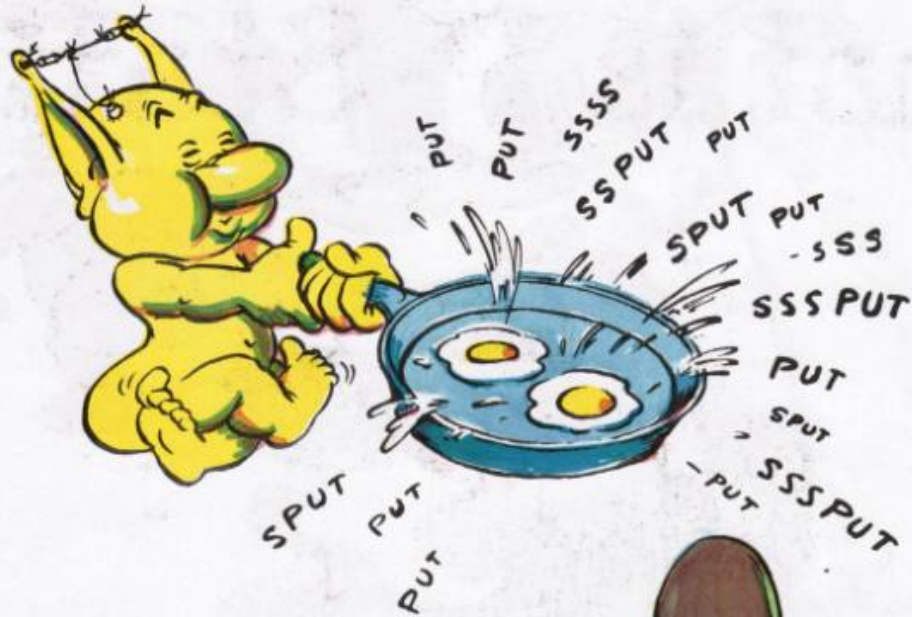


Well:—

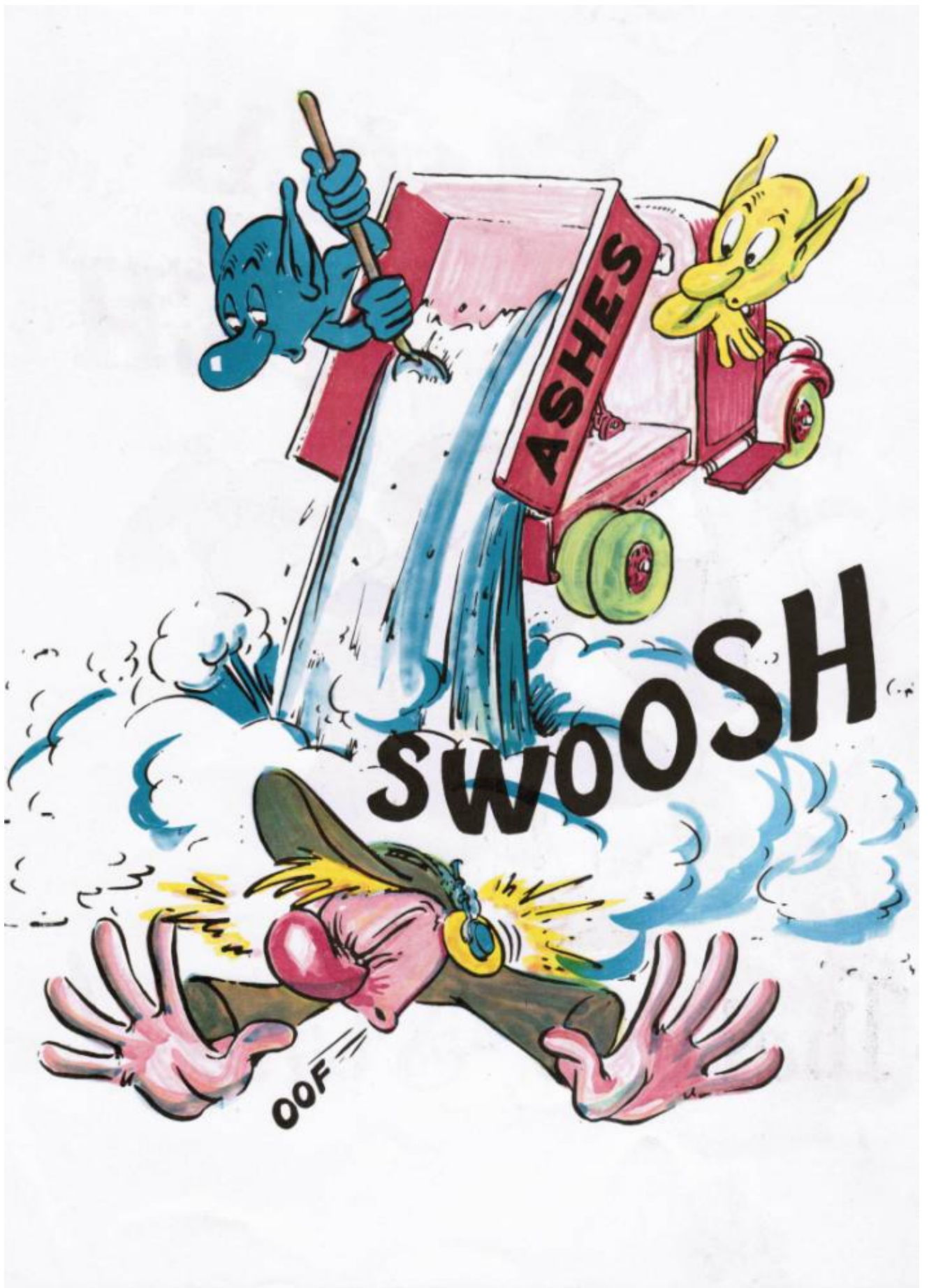
what is P-Static?



Listen:—









That's P-Static !

And here are the Guys that cause P-Static:-



dust & sand

Solid particles like these guys produce the most violent forms of P-Static - especially when they are dry!

Ice Crystals

The colder and drier this guy is - the more P-Static he can make. He is usually found in high Cirrus clouds and in cold Arctic masses.



dry Snow

The colder this guy gets
the drier he gets - And
the more trouble he can
make for you !



wet snow

This guy aint so bad - but
external electrostatic fields
may be encountered in his
vicinity.



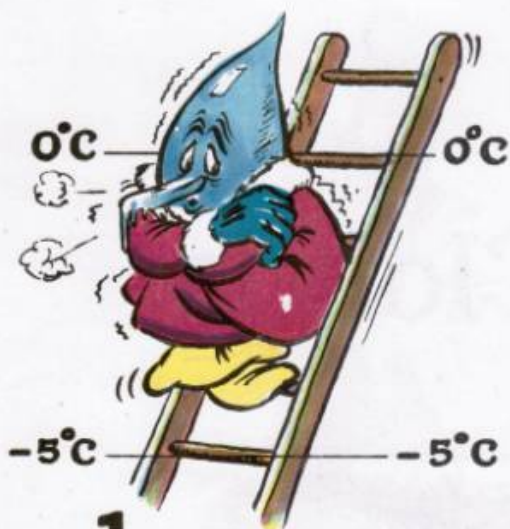
freezing rain

Maybe the icing will be
far more dangerous than
the P-Static caused by this
old gal !



THE
EXPERTS
AINT SURE





Supercooled Water drops

We don't have much
on this unstable little
character but?

large Rain drops

This guy is capable
of producing P-Static
— Also look out for
external fields in his
vicinity.



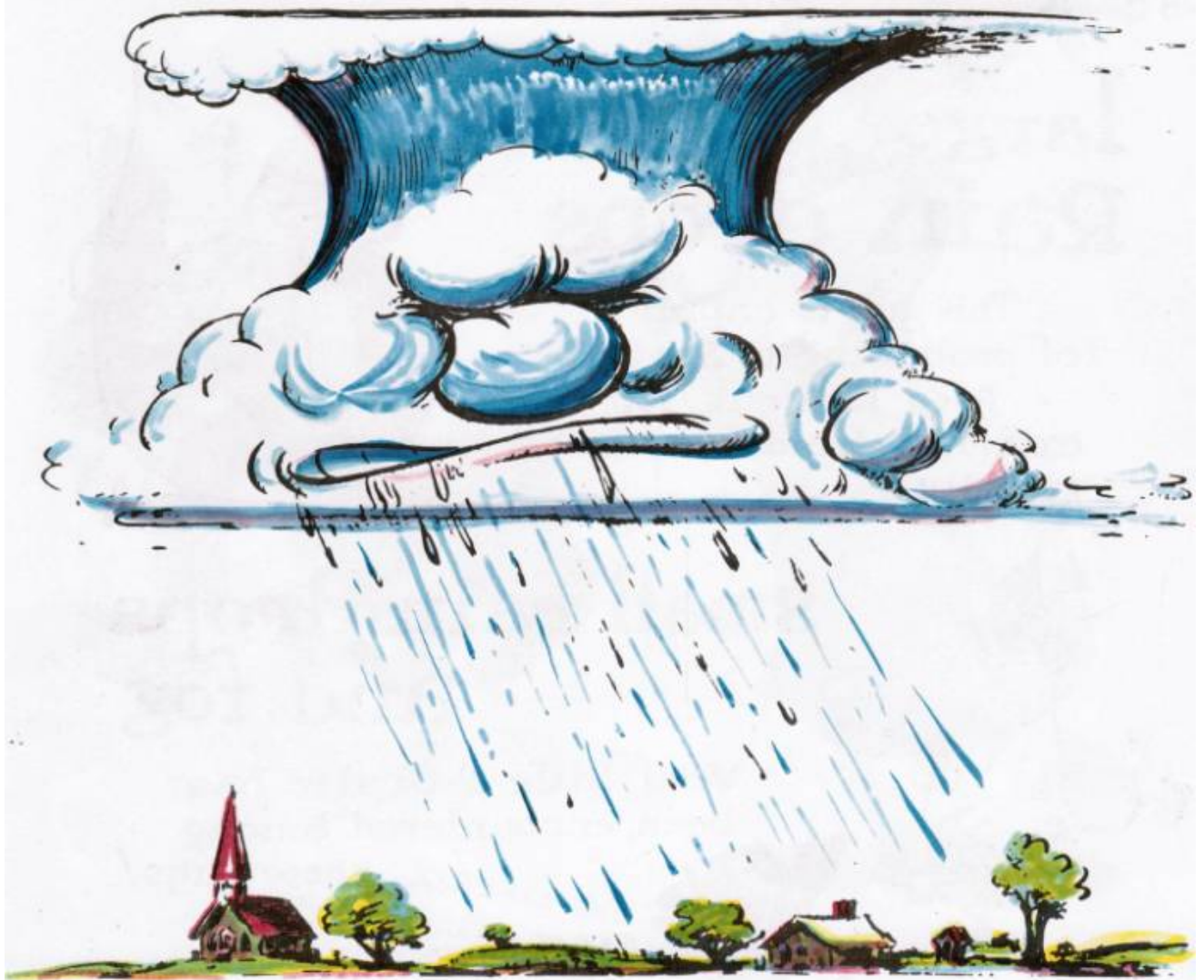
Small rain drops and fog



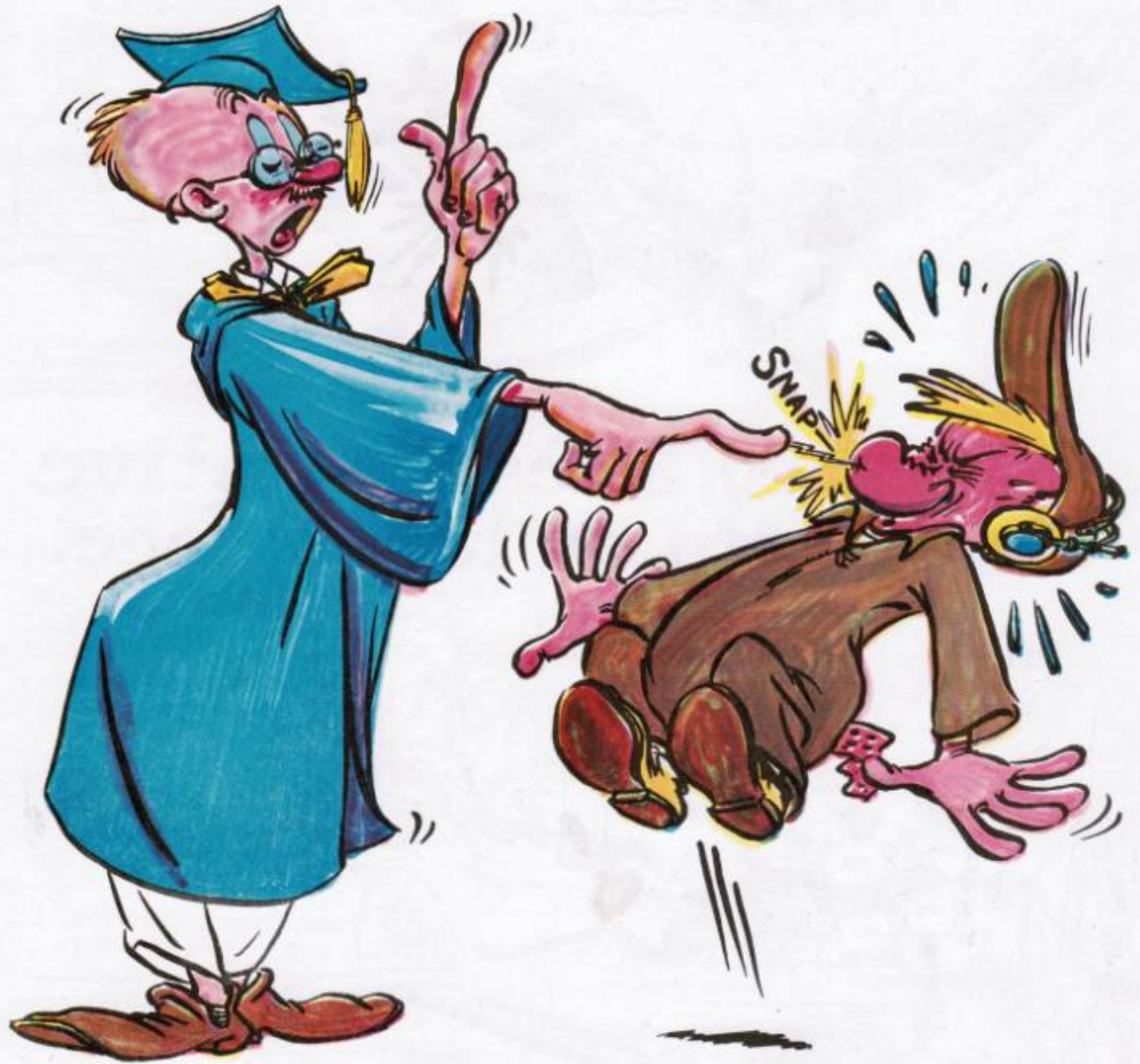
Very little P-Static has
been encountered among
these guys!

THE EXPERTS
SAY NO-----
BUT MAYBE

And Thunder Clouds



Here is how these Guys
cause P-Static :—



When they collide with
an airplane



... they smear negative
electricity on its surface.

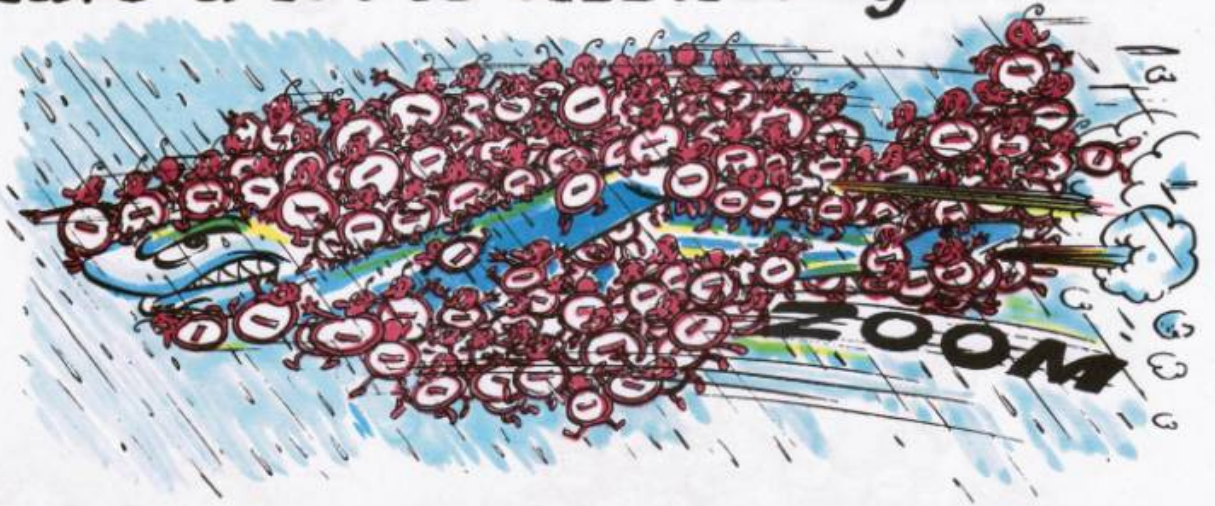


The amount of electricity
depends on how much "stuff"
the airplane encounters....



And the speed!
*The charge being proportional
to the Cube of the Speed!*

So... If you go *Fast* you
have a lot of electricity...



And - If you go Slow....



The electricity on the surface of an airplane is made up of umpteen* negative charges which tend to push each other off...



*a hell of a lot!

And you have Corona!

SOME GUYS
CALL THIS
ST. ELMO'S FIRE



.... You also have
Corona when you get in
the electrostatic fields
around this guy!



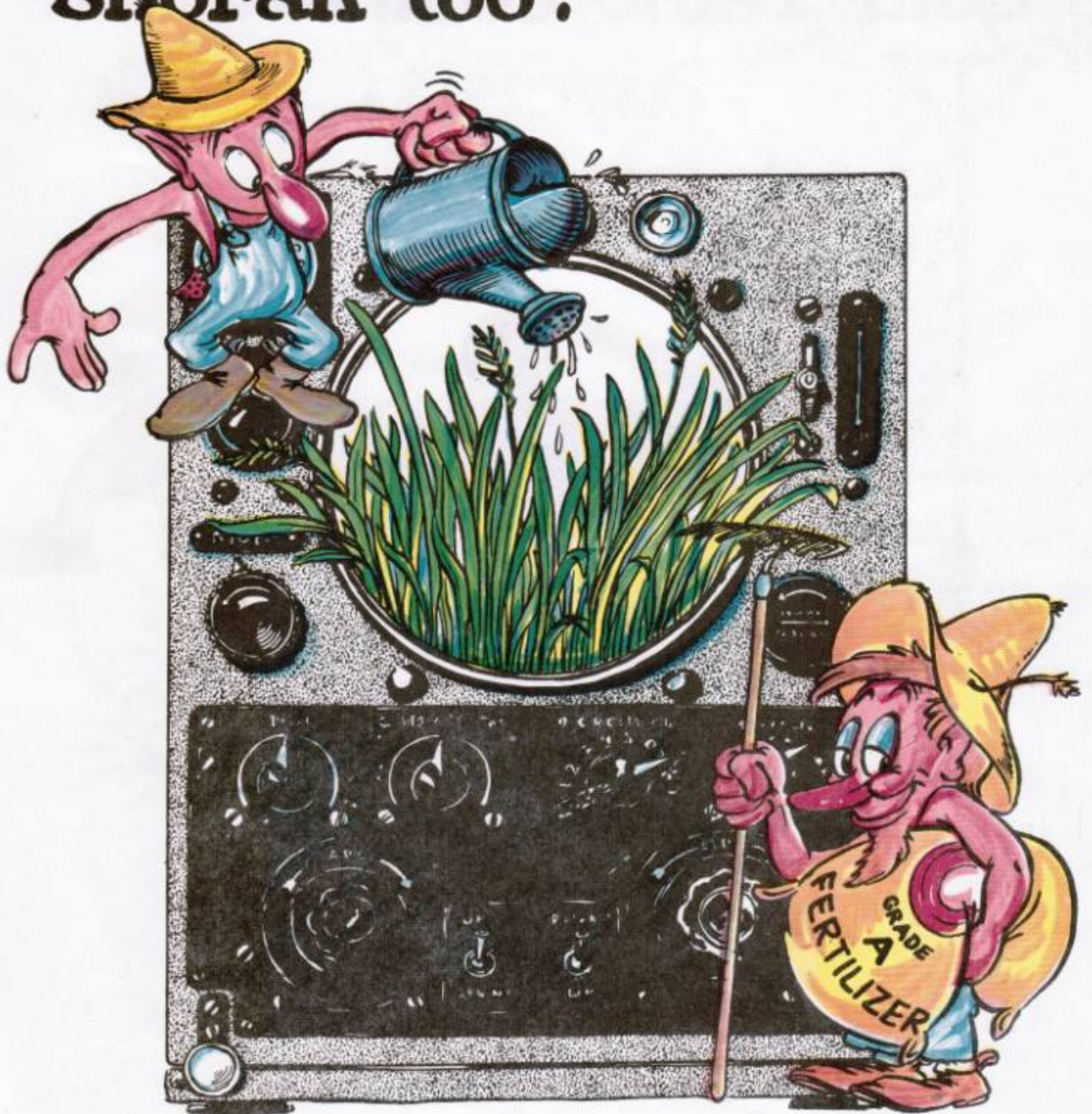
... Now Corona causes
P-Static on your
Aircraft radio
like this:—



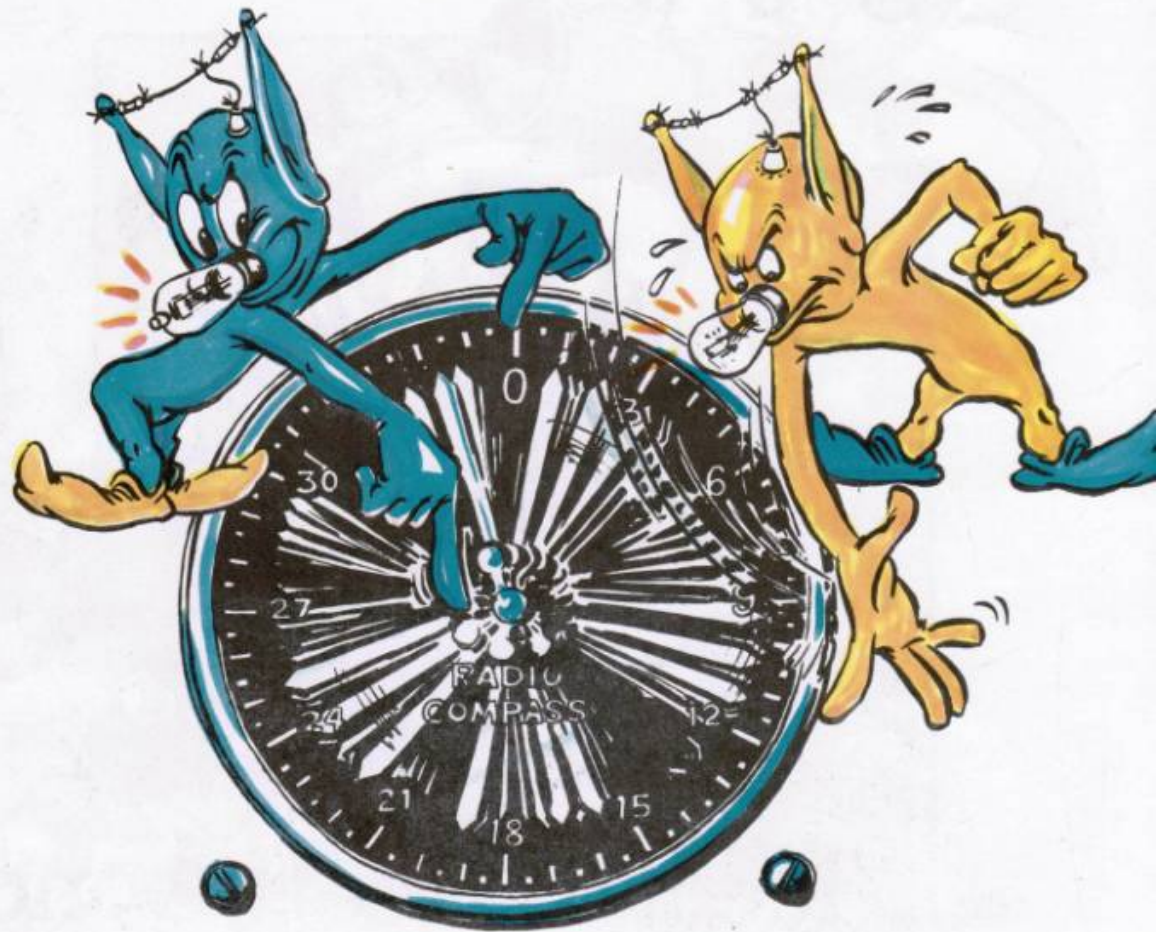
**CANT WORK
TH' TOWER!**
**CANT HEAR
TH' RANGE NOTE!**
**LIASON WONT
WORK!**



And "fouling up" Loran & Shoran too!



**Even raising h--l with
your radio compass !**



So this is what
you can do to reduce
P-Static:-



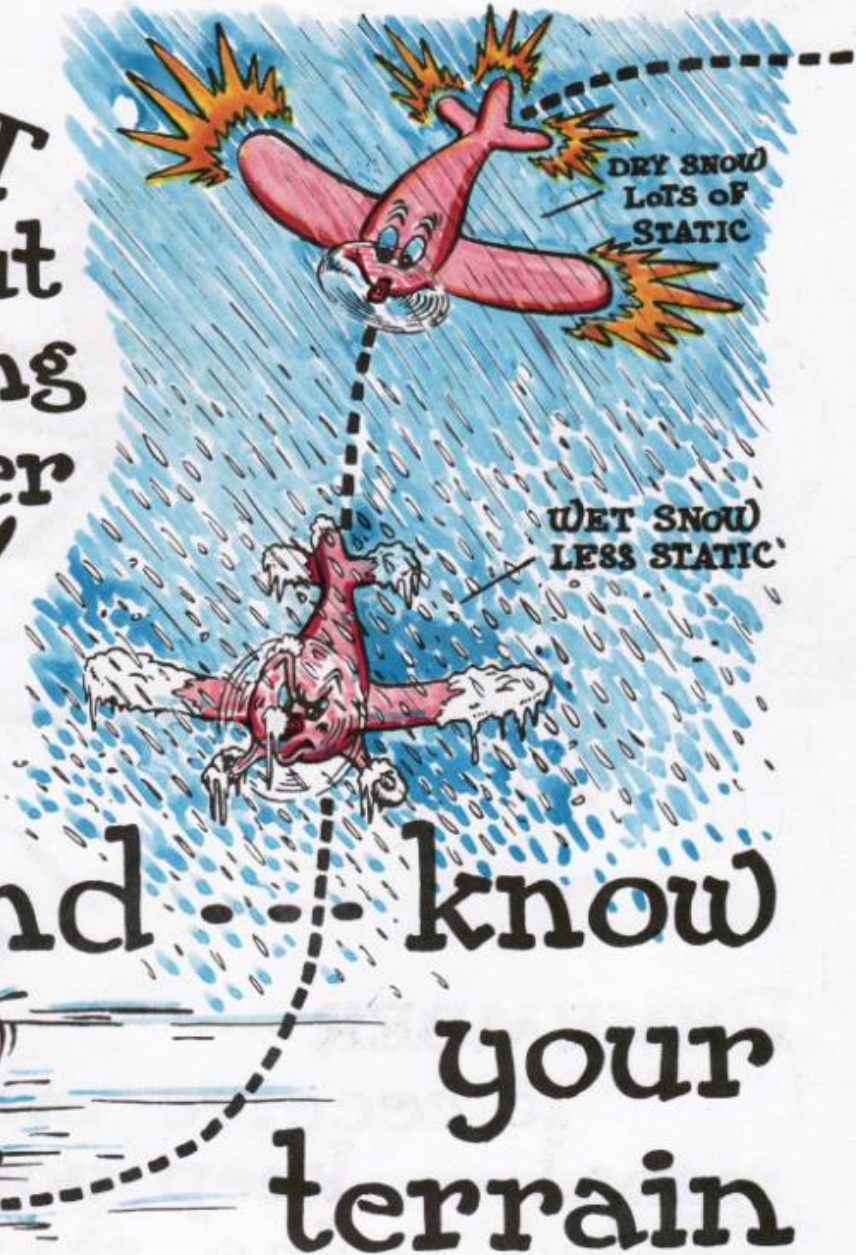
1. Remove earphones
and relieve strain.

2. Reduce Speed.



3. Change altitude

BUT
look out
for icing
at lower
levels!



And --- know
your
terrain

**4. Use your compass
loop antenna**



REMEMBER

**To receive maximum
signal — keep your loop
pointed to the station!**

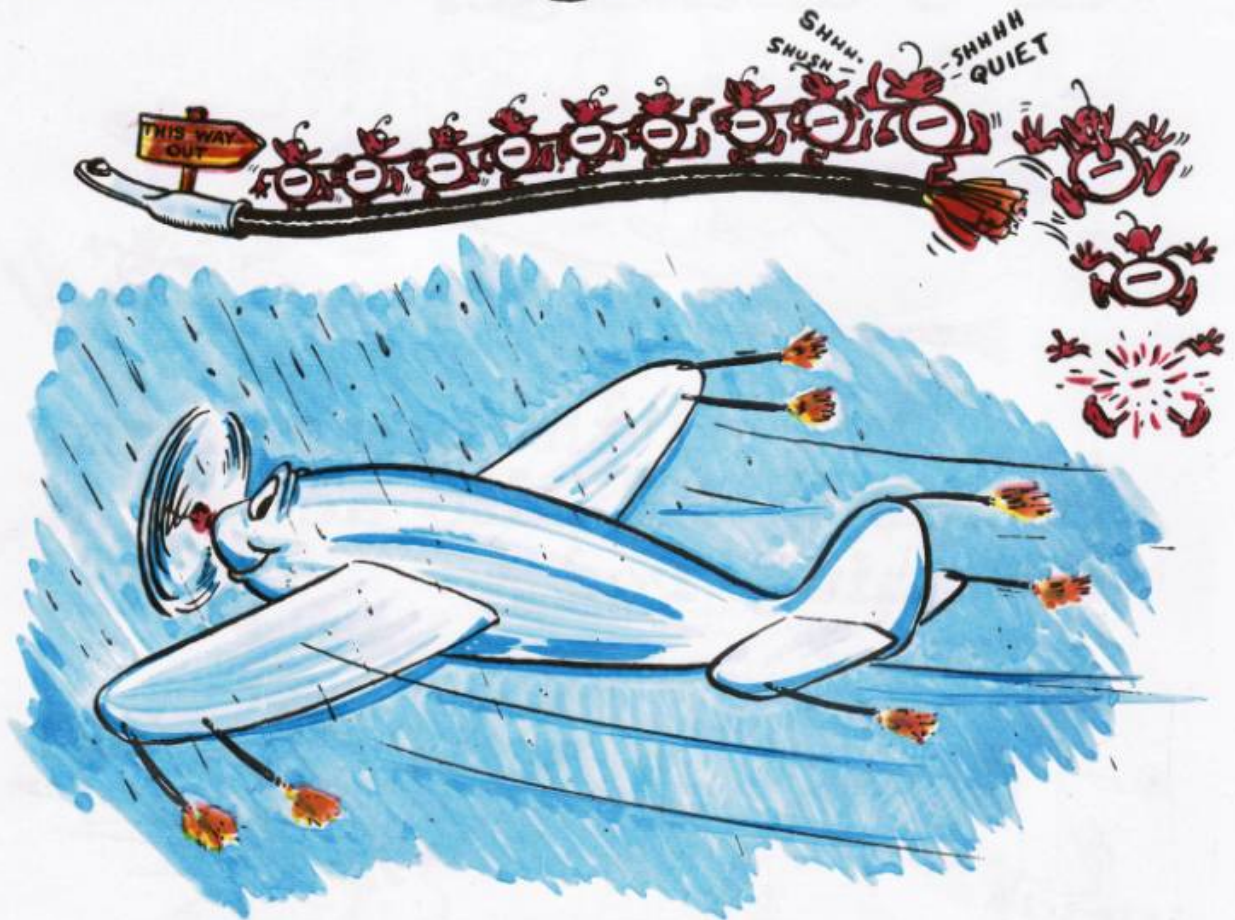
5. Your trailing Wire
Antenna will act
as a discharger.....



But in thunderstorm
areas it will also act as a
lightning rod!



Also you can reduce P-Static
by equipping your plane with
Wick dischargers:—



Which provide an easy
path for Corona discharge
without producing P-Static.

And by use of new antenna
parts - which are so designed
as to eliminate noise-producing
Corona!

Anti-P-Static Antenna fittings

MIL-A-7965A(ASG)



LEAD THRU MAST (AB-164/A)
MS25049-1A DAP P/N 14006



SUPPORT SLEEVE (MX-942/A)
MS25056-1A DAP P/N 13355
MS25056-1B DAP P/N 14371

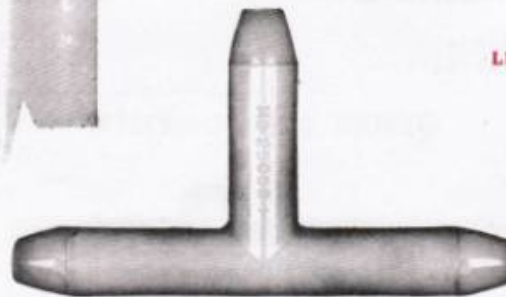


DEAD END MAST (AB-130/A)
MS25048-1A DAP P/N 14007

ELBOW (MX-941/A)
MS25055-1A DAP P/N 13357
MS25055-1B DAP P/N 14401



MAST CLAMP BLOCKS (AB-165/A)
MS25059-1A DAP P/N 14005



TEE CONNECTOR (U-67/U)
MS25053-1 DAP P/N 13843

LEAD-THRU INSULATOR ASSEMBLY*
MS25054-1A DAP P/N 14090
MS25054-1B DAP P/N 14403

* Note: Assembly consists of insulator body, support sleeve, gasket and clamping ring. Elbow must be ordered separately.



STRAIN INSULATOR (IL-7/U)
MS25052-1A DAP P/N 13842
MS25052-1B DAP P/N 14392



WIRE RETRIEVER
MS25119-1 DAP P/N 14053



TENSION TAKE UP (MX-781/A)
MS25058-1 DAP P/N 13816



TAKE UP (MX-1257/A)
MS25057-1 DAP P/N 13903

Insulated antenna system ASA-315/1 to assure "loud and clear" radio reception even in bad weather.

TENSION UNITS



IL-5/U Insulated Tension Unit (20 lb. spring) DAP P/N 12312
IL-5/U-6 Insulated Tension Unit (60 lb. spring) DAP P/N 12312-1



MX-275/AR Tension Unit (20 lb. spring, 2 inch travel) DAP P/N 12330-2



MX-274/AR Tension Unit (20 lb. spring, 3 inch travel) DAP P/N 12330-1
MX-274/AR-30 Tension Unit (40 lb. spring, 3 inch travel) DAP P/N 12330-3

STRAIN INSULATORS



MX-270/AR Strain Insulator
DAP P/N 12354-1



MX-273/AR Strain Insulator
DAP P/N 12354

OTHER COMPONENTS

MX-656/AR Shackle
DAP P/N 12251



MX-276/AR Corona Shield
DAP P/N 12346

MX-311/AR Guy Fitting
DAP P/N 12348



Cap, L-Splice
DAP P/N 12340



Cap, V-Splice
DAP P/N 12355



MIL-S-9129A(ASG)

STATIC DISCHARGERS



CARBOWICK
12764
14078

AN/ASA-3A
AN/ASA-3B

NYLO-WICK
14497
14498

"Low-drag" antenna fittings for high-speed aircraft of today ---- and tomorrow!

TERMINATION FITTING: Insulated Shackle
Similar to MX-656/AR

DAP P/N 13692D



INSULATED TENSION UNIT: Similar to IL-5/U
Similar to IL-5/U-6

DAP P/N 12312D
DAP P/N 12312-1D



INSULATED TENSION UNIT: 40 lb. Spring

DAP P/N 13623D



TENSION UNIT: Similar to MX-274/AR
Similar to MX-275/AR
Similar to MX-274/AR-30

DAP P/N 12330-1D
DAP P/N 12330-2D
DAP P/N 12330-3D



TERMINATION FITTING: Guy Fitting
Similar to MX-311/AR

DAP P/N 12348D



STRAIN INSULATOR: Similar to MX-273/AR
Similar to MX-270/AR

DAP P/N 12354D*
DAP P/N 12354-1D
DAP P/N 14019 (1)

* Available with Roll Pin



TERMINATION FITTING: Insulated Sense Antenna Hook
* Available with Roll Pin

DAP P/N 13624D*
DAP P/N 14046 (1)



INSULATED TENSION UNIT: Sense Antenna

DAP P/N 14026 (1)



(1) Specified by Douglas for DC-7, DC-6A and DC6-B.



the end

IT'S A HAPPY ENDING WHEN YOU INSTALL ^{GRANGER} DAYTON ^{DISCHARGERS} AIRCRAFT ANTI-STATIC ANTENNA FITTINGS ON YOUR AIRCRAFT--STANDARD EQUIPMENT WITH THE UNITED STATES DEPARTMENT OF DEFENSE (AIR FORCE, NAVY, ETC.); INSTALLED AS ORIGINAL EQUIPMENT WORLD-WIDE BY AIRFRAME MANUFACTURERS, AND USED THROUGHOUT THE WORLD BY COMMERCIAL AIRLINES. WRITE FOR LITERATURE.

DAYTON AIRCRAFT PRODUCTS, INC.

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. . . throughout the world's airways