



By
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PLANE TALK

How's your mike routine? If you gobble your words, then read this.

AIRCRAFT radio terminology, like the specialized lingo of doctors and lawyers, is an exact subject. Unlike the others, it is simple and concise once you get the hang of it. This you must achieve if you want to fly around busy airports.

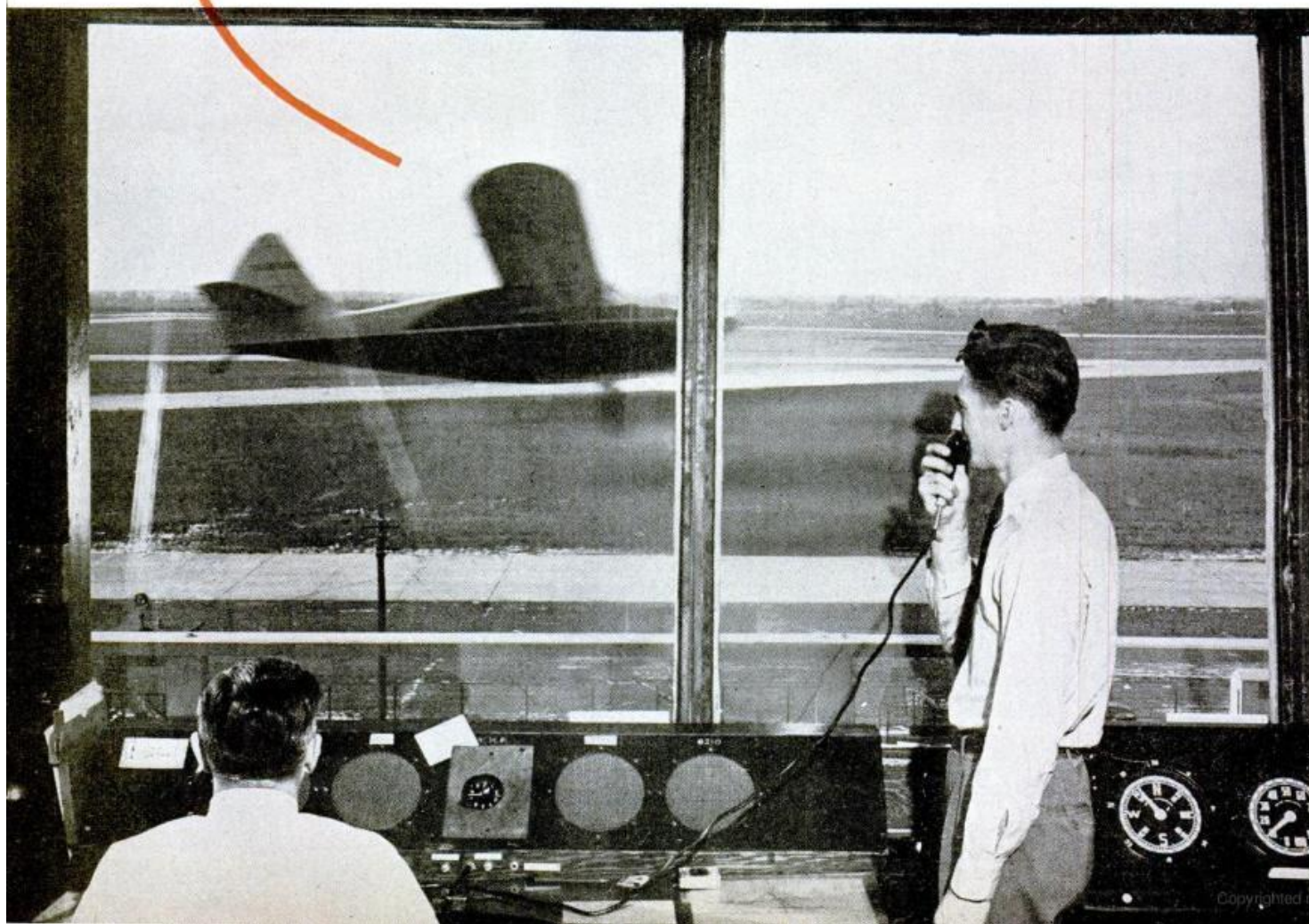
Unfortunately, the ether waves are being cluttered by the babblings of "uneducated" lightplane pilots, causing confusion and delays for everyone around the terminal.

CAA and FCC have cut red tape to the bone to promote private flying and as a result many personal plane pilots are not learning the bare fundamentals of radio procedure which are designed to speed aircraft movements efficiently at large airfields. For there are no examinations, no instructions, "no nuthin'."

The pilot needs a restricted radiotelephone permit which he can get from a CAA examiner upon presentation of his pilot's license. His plane needs an aircraft station license, obtained by filling out an application blank supplied by the radio manufacturer and submitting it to the Federal Communications Commission. That's all.

Proper procedure with aircraft two-way radio begins when the pilot

Mike talk is a two-way exchange. Here, controller at Orchard Place Airport, Chicago, directs Stinson Voyager 150 on its take-off.





MANY PILOTS DON'T KNOW HOW TO HOLD A MIKE

Pilot above has correct technique; all the variations at right are wrong. The mike is held flat against lips, in a vertical position, and slightly to one side of the midline of the lips. Talk slowly in medium pitch.



HERE'S WHAT TO SAY AND HOW TO SAY IT

Word or Phrase	Meaning
Roger	"I have received all of your last transmission."
Acknowledge	Used by originator—"Let me know that you have received and understood this message."
Wilco	"Your last message received, understood, and will be complied with."
Over	Used at end of a message and requires an answer from the recipient.
Out	Used at end of a message and no reply is expected.
Wait	By itself means "I must pause for a few seconds." If longer than a few seconds or if "wait" is used to prevent another station transmitting, it must be followed by "out."
Say again I say again "I will repeat"....	The word repeat or any phrase involving "repeat" will never be spoken in radio-telephone communications since it has a distinct military usage, unless written into text.
Verify	"Check coding, check text (subject matter) with the originator and send correct version."
Message for you...	"I wish to send a message to you."
Send your message.	"I am ready for you to transmit."
Read back	"Repeat all of this message back to me exactly as received after I have given 'over'."
That is correct....	"You are correct."
Words twice	(a) As a request—"Communication is difficult. Please send every phrase twice." (b) As information—"Since communication is difficult, every phrase in this message will be sent twice."
Correction	"An error has been made in this transmission. The correct version is ..." (from the originator).
Wrong	"What you have just said is incorrect. The correct version is ..." (from the recipient).
Break	"I hereby indicate the separation of the text from other portions of the message." To be used only when there is no clear distinction between text and the other portions of the message.

Number	Spoken as
44	FO-WER FO-WER
80	ATE ZE-RO
136	WUN THUH-REE SIX
500	FI-YIV HUN-DRED
1478	WUN FO-WER SEVEN ATE
7000	SEVEN THOW-SAND
16000	WUN SIX THOW-SAND

Feet	Expressed as
15	Field elevation one five
120	Field elevation one two zero
400	Field elevation four hundred
1758	Field elevation one seven five eight
2000	Field elevation two thousand

Natural	Spoken as	Natural	Spoken as
0	ZE-RO	5	FI-YIV
1	WUN	6	SIX
2	TOO	7	SEVEN
3	THUH-REE	8	ATE
4	FO-WER	9	NINER

Time	Spoken as
0000 (midnight)	Zero zero zero zero
0920 (9:20 AM)	Zero nine two zero
1200 (noon)	One two zero zero
1643 (4:43 PM)	One six four three
2347 (11:47 PM)	Two three four seven

A Able ..	H How	O Oboe ...	V Victor
B Baker	I Item ..	P Peter	W William ...
C Charlie	J Jig ...	Q Queen ...	X Xray
D Dog ...	K King ...	R Roger ...	Y Yoke
E Easy ..	L Love	S Sugar ...	Z Zebra
F Fox	M Mike ..	T Tare ..	
G George ...	N Nan ..	U Uncle ...	

1	3	5	7	9
2	4	6	8	0

EMERGENCY SIGNALS

Meaning	Radio-telephone	Radiotelegraph
Distress	MAYDAY	SOS
Distress (aircraft in violent maneuver)	PAN	
Urgent (aircraft)	PAN	PAN
Urgent (other)	PAN	XXX
Safety	SECURITY	TTT
Automatic alarm		Series of 12 dashes sent in one minute; duration of each dash four seconds; interval between dashes one second.

POSITION REPORT IN CORRECT SEQUENCE

Sequence	Example
1. Plane's Call	9732
2. Pilot's last name	Brown
3. Position	2 mi. E. Amarillo
4. Time over reported position	One three one five
5. Altitude	Three thousand
6. Flight conditions	Contact

understands the failings of ordinary speech, including too rapid speech, poor phrasing, sloppy enunciation, unsuitable pitch level, lack of rhythm, and poorly controlled voice level. Combine these with unstandardized procedure and you have utter chaos which no operator can hope to understand.

The radio transmitter microphone must be held properly against the lips, vertically and slightly to one side of the midline of your lips. It must not be held away from the mouth, beside your cheek, or directly in front of your mouth. Press the contact button down firmly before you start to talk and don't release it until you're finished. Remember next time a telephone operator disconnects you in the middle of a call, that's what chopped off radio transmission is like.

Talk slowly—about half the speed of ordinary conversation and similar to the radio speed of the late President Roosevelt. Talk in phrases, pausing slightly between each phrase but not between words in a phrase. Talk plainly, enunciating each syllable carefully and prolonging the vowel sounds. The voice should be strong without shouting; steady so that each syllable sounds about equally loud. The voice should be medium to medium high to get best carrying power over the plane's noise. Talk rhythmically as if in time to music. If you sit erect, your throat won't tire during the long conversations which are sometimes necessary.

On the listening end you should keep up with the message, taking time at the end to "fill in" gaps which you didn't hear. Pay attention, not allowing other things to interfere. Know your messages—those you are likely to hear; protect your ears from unnecessarily loud noises. If the message is broken up due to interference beyond the pilot's control, the pilot should ask for a repeat message until clear.

One of the first musts to learn is the following phonetic alphabet, known to every military pilot or seaman:

Numerals should be rolled (as in "tuh-ree", "fo-er", "fi-yiv", "niner"), or emphasized, as in "wun", "too", "zero" and "ate". The others are pronounced as they are spelled. Call signals such as "AB" are always said as "Able Baker".

Other than these phrases and the phonetic alphabet, it

is simply a matter of omitting "the's" and "a's", keeping matters as concise as possible, and being logical and straightforward. There are some other rules, such as saying "one three thousand" for "13,000" while you say "twelve thousand" for "12,000". This rule applies for all figures above 12,000. Time is expressed in four digits—9:30 a.m. would be "zero nine three zero", while 9:30 p.m. would be "two one three zero."

Suppose we are taking off in Ercoupe NC 94138 from Washington National Airport, destination Newark. We address "Washington Tower," naming it first to catch the attention of the tower operator who has many radios blaring away at him. If we wanted to talk to the Washington Airways Communications Station we would call "Washington Radio."

Ercoupe—"Washington Tower, this is Ercope nine four one three eight—over."

Tower—"Ercoupe nine four one three eight, this is Washington Tower, go ahead."

Ercoupe—"Washington Tower from one three eight, request taxi instructions, over."

Tower—"One three eight, Roger. Wind northwest one five. Cleared to runway three two. Altimeter three zero zero four. Time zero nine five six."

Ercoupe—"One three eight, Roger, Wilco."

While taxiing to the runway the pilot should be alert for other instructions from the tower and ask for help, if needed, at a strange field. Arriving at the runway, the pilot should wait for "Ercoupe nine four one three eight, take position and hold" or "... cleared for take-off." This clearance comes once the pilot has run up his engine and is ready for take-off.

Immediately after take-off, pilots may want their time off the ground. When requested, it is given in minutes only. "Ercoupe one three eight, off at one two" (i.e., 10:12 a.m.).

Normally the pilot will listen on the control tower frequency until outside the airport traffic zone, when he may leave the tower frequency without further contact. If he wants to leave the frequency before leaving the zone or if the tower desires to permit him to leave the tower frequency before quitting the zone, the clearance should be: "Ercoupe one three eight, this is Washington Tower. Over Mason Springs four six at two thousand, cleared to leave tower frequency."

Other than routine operations can be given as "... cleared to make right turn", "... cleared to make straight-in approach", "... cleared to practice low approach to airport", "... cleared to make touch and go landing."

On cross-country flight, the same procedure applies although the pilot can identify his aircraft as NC-94138, which sometimes eliminates the necessity of re-identification in conditions of heavy traffic.

At about 10 to 15 miles from the destination, the pilot calls the control tower for traffic instructions. It would run as follows:

Ercoupe—"Newark Tower, this is NC nine four one three eight. Over ..."

Tower—"NC nine four one three eight, this is Newark Tower, go ahead."

Ercoupe—"Newark Tower from one three eight, fifteen miles southwest at three thousand, request traffic instructions, over."

Tower—"One three eight, Roger. Fifteen southwest at three thousand, wind is west northwest, runway 27, call on downwind leg, over."

Ercoupe—"One three eight, Roger, Wilco."

Upon reaching the downwind leg, contact is again established:

Ercoupe—"Newark Tower from one three eight, on downwind leg, over."

(Continued on page 85)

satisfied came in for his first and what he still considers his best landing!

Facilities to maintain a farm airplane are imperative, Fillinger believes, if the plane is to be seriously considered a piece of farm equipment. He has constructed a hangar substantial enough to give full protection to his airplane and provide space for repair and maintenance jobs. His facilities include a fully equipped gas welding booth, a submerged gasoline storage tank and delivery pump and an air-operated lubricating oil delivery system of his own design. This equipment is used not only for the development of experimental aviation accessories which he tries out on his Prest—but does double duty in the maintenance of surface farm machinery. Fillinger insists that such farm conveniences should not be classed as luxuries.

An airplane increases the little leisure time it has been the farmer's lot to enjoy in the past, Fillinger points out. Often he takes a 10- or 15-minute hop to cool off and relax after a hot day mowing, baling or seeding his fields. And the time saved by his ancient Prest makes it possible for his airminded wife, Lorena, and their son, Darrell, to enjoy flying, too. He frequently flies to the local airport, rents a plane and returns to his ranch strip to pick up his family for an aerial tour of the desert. After the trip he leaves them at the ranch, returns the rented plane, then flies home in his Prest. This seemingly complicated procedure, Fillinger finds, is actually quicker than driving the family to the town airport. And it's a lot more fun. END

Plane Talk

(Continued from page 34)

Tower—"One three eight, this is Newark Tower, Roger, number two to land, Beechcraft turning on final, over."

Ercoupe—"One three eight, Roger, Wilco."

Later, Tower—"One three eight, this is Newark Tower, cleared to land."

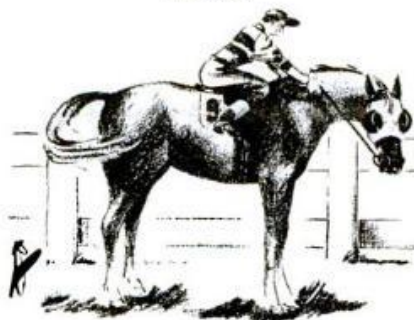
On landing, the tower clears the Ercoupe for taxiing: "One three eight cleared to gate five." Other instructions could be "make full stop landing," "hold clear of (position)," "hold on taxi strip," "make short approach," "make long approach," "make normal approach," "circle the field," "go around."

If the aircraft has only a receiver, the Tower uses such phrases as "acknowledge by moving ailerons (or rudder)" when on the ground; "acknowledge by rocking your wings" in the air; "acknowledge by blinking your landing lights" at night.

It's the job of every lightplane pilot who is flying where radio is required—municipal or major airports and many Class 3 fields—to learn these procedures. They can be obtained from the "Army, Navy, CAA Standard Airport Traffic Control Procedures" or the restricted "Communications Handbook" of the Navy, or in every issue of the "Airman's Guide." It isn't merely light reading, it's required reading and should be memorized. END

FLYING

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