

C 2124 EGD ↓ 3 < BKV → 3 EAC 1614Z H SE EGD/
ADV LKV A/C 118.5

"**B**eech Three Two Zero Papa, taxi southeast to Runway Three Two. Hold short, clearance on request." The control tower chief put down the mike, listened until he heard, "Ah—Three Two Zero Papa, Roger," and motioning one of the other men into controller's position, he turned to the new arrival in the tower.

"Hi," he said to the young man, "For your first assignment, Arden, I want you to work at flight data position."

The chief walked over to the ground controller's console and sat down. He gestured toward the flight data seat and Arden slid into the chair beside him.

"'Longhand' Moody in Three Two Zero Papa will have an IFR clearance coming through from Center soon. I want you to copy it and pass it to me." The chief lit a cigarette and sat back.

Arden adjusted a pad of paper in front of him and started to doodle. The light from Center came on. Arden picked up the phone and tightened his grip on the pencil.

The voice from Center said, "Clearance for Beech Three Two Zero Papa. Cleared to the Fort Wayne Airport via direct Muskegon omni, Victor Two Lowell intersection, Victor Two Seven Four Pullman, Victor Five Five flight plan route."

Arden finished his scribbling as soon as Center stopped talking. He glanced at his strip. It looked like this:

C 320P FWA → MUSK V2 Lowell Int V274 Pull V55 FPR

He passed it to the chief who nodded. The chief read it to Moody.

The speaker crackled. "Ah—ATC clears Beech Three Two Zero Papa to the Fort Wayne Airport via direct Muskegon omni, Ah—Victor Two Howell, Ah—Victor Two Seven Four Pullman, Ah—Victor Five Five, flight plan route. Over."

The chief didn't accept the read-back and repeated the whole clearance with emphasis on "Lowell intersection."

Again, Longhand's voice came over the speaker. "Roger tower, Roger. Ah—, ATC clears Beech Three Two Zero Papa to the Fort Wayne Airport via direct Muskegon omni, Ah—Victor Two Howell intersection, Ah—Victor Two Seven Four Pullman, Ah—Victor Five Five, flight plan route. Ah—, Ah—, Over."

Without the slightest sign of emotion, the chief picked up the mike and restated the intersection several times.

Beech 320P came back with, "Ah—Roger, Lowell intersection."

The chief said, "Beech Three Two Zero Papa, clearance correct. Stand by for departure instructions."

He looked at Arden.

"You a pilot?"

"Yes."

"How much time?"

"500 hours."

"Instrument ticket?"

"Yes."

"Ever have any trouble with clearances?"

"At first," said Arden, "They used to scare me a little."

"But not any more?" asked the chief.

"No, sir, I picked up a shorthand system and it helped a lot. With some practice, I found I could copy the stuff as fast as the tower could dish it out."

"Excuse me," said the chief as the departure clearance started to come through. It took three read-backs, but Longhand finally copied the instructions and was handed over to the tower. Beech 320P swung out on the active and took off. As it disappeared into the overcast, the chief turned to Arden.

"The manager of Skyways Aviation, across the field, asked me to send a man over there Saturday afternoon to give an hour's talk on traffic control. I think you're the man. It's at two o'clock. Use the whole hour to cover the subject of clearances, particularly how to copy them. There will be about 20 pilots there, so slant the whole thing to make it meaningful for them. You know what I mean?"

"Yes, sir," said Arden.

Saturday afternoon at two o'clock, Longhand Moody eased in the left throttle and turned his Beech slightly to the right. When he was lined up with his spot on the ramp, he moved the mixtures to ICO and everything became quiet. He went down his checklist: mags off, fuel off, radios off, reset trim. He stepped out of the bird,

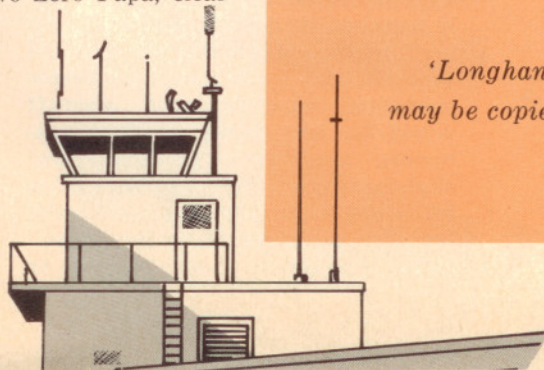
(Continued on page 80)

A Shorthand System For Pilots

by MAJ. GEORGE P. HAVILAND

AOPA 160384

*'Longhand' Moody learns ATC clearances
may be copied more quickly and accurately by
using symbols and abbreviations*



Shorthand System For Pilots

(Continued from page 37)

choked the wheels, put the control locks on, and tied down. "Better hurry," he thought, "I want to hear what this FAA man's going to say."

Longhand walked to the room in back of the hangar. The briefing was already in progress. He entered quietly by the back door, slid into one of the rear seats and started listening.

A young man was saying, ". . . and as a result of the heavy volume of IFR traffic, it is necessary for the pilot to file his flight plan carefully and fly it carefully. Before I go into the subject of clearances and how to copy them, are there any questions?"

No one spoke.

"Okay. Here are a few shortcuts you can use when you go IFR and have to copy a clearance." He went to the board and started to write. It looked like this:

↑	(Altitude)	Climb to (Alt.) immediately
↓	(Altitude)	Descend to (Alt.) immediately
X		Cross
→	(Altitude)	Maintain
>		Before
<		After
/		Until
(Alt)		Altitude restriction

(Fac.	Contact facility (center, appr.
Freq.	dep.) on (frequency)

"Most of these are obvious but don't dismiss them from your mind too quickly. You can see that what I'm writing is nothing more than a shorthand notation. If you have a system of your own, I don't suggest that you memorize these particular symbols. If you do not have a system, I strongly urge you to learn this method and practice it so that clearances will come easily to you. It's a good system and it is free of ambiguities. Question?"

Longhand could contain himself no longer. "Yes. Ah—, I have a question. Ah—, I copy clearances down Ah— slowly and you Ah— tower guys read the stuff too fast. How about slowing down a little?" A few heads nodded as Longhand sat down.

"Your question is a good one. The pilot is busy just before takeoff and maybe he's a little tense, particularly when going into weather. The tower guys, as you call them, are also tense but for a different reason. While they are reading out your clearance, Center is passing other clearances for them to copy and relay. This builds up in a man so that he unconsciously may read your clearance a little faster than you might like. We have been looking into ways to avoid complicated clearances, but in the meantime I suggest that a shorthand system will help you quite a bit."

Arden walked to the board again and wrote some more symbols. They looked like this:

ABV	Above
BLO	Below
EAC	Expected approach clearance
C	ATC clears
RR	Report reaching

RL	Report leaving
RX	Report crossing
FPR	Flight plan route
↑	Shuttle up (climb)
↓	Shuttle down (descend)

"Are there any questions?" he asked. No one spoke.

"Okay," he said, "Our time is about gone. Here's a sample you can work on if you get a chance. I'm going to write a clearance for a flight already airborne and en route to Linkville, identified by LKV. BKV is Brookville and EGD is Edgwood. See what you can do with this." Arden went to the board, took a piece of chalk and wrote:

C 2124B EGD ↓ 3 < BKV → 3 EAC
1614Z H SE EGD / ADV LKV A/C 118.5

He put down the chalk, turned to the group and said, "There are many other symbols in use today, but it wouldn't do any good to write them down now. If you want to learn the symbols I have listed, copy them down here and now. Take a few at a time and paste them up on your bathroom mirror for a few days or until you have memorized them. Start slowly and you'll be surprised how easy it becomes. After a couple of weeks, get some of the records or tapes of actual clearances recorded for training purposes. There are several excellent ones on the market. For a small investment, they will sharpen your technique to the point where you'll be ready for IFR clearances."

One of the pilots down front asked, "What does that clearance say?"

Arden said, "ATC clears Two One Two Four Bravo to Edgwood. Descend to three thousand immediately after passing Brookville. Maintain three thousand. Expect approach clearance at One Six One Four Zulu. Hold Southeast of Edgwood until advised by Linkville Approach control on One One Eight Decimal Five."

All heads were bent over the desks, hands were copying furiously. Moody was frowning as he strived to get all this down on paper.

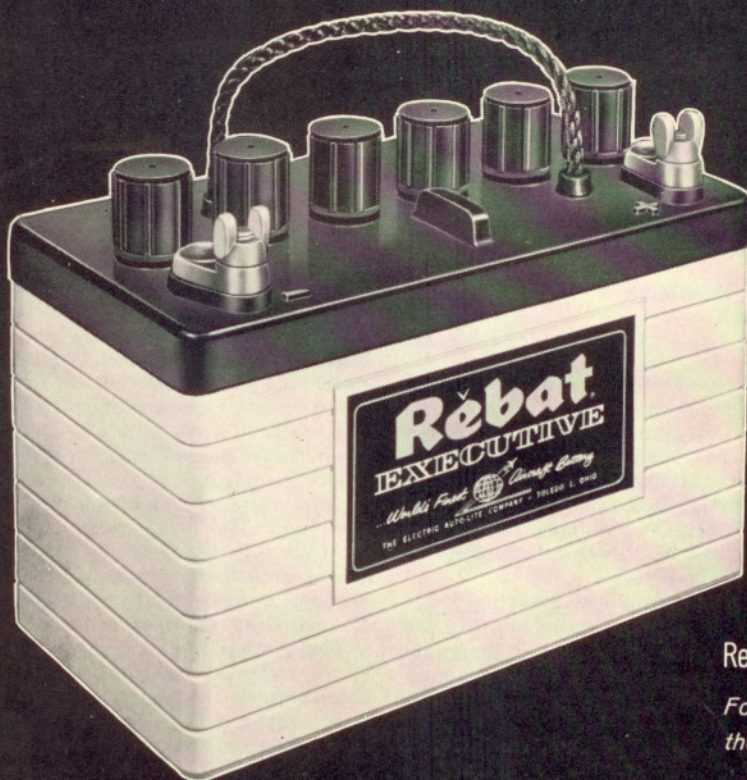
Arden was speaking again. "Before I leave, I want to summarize the purpose of this talk. Stated simply, the key point is this: *All pilots need a shorthand system.* Writing the clearance down longhand (he looked at Moody) just won't hack it anymore. Too many pilots are discovering that IFR flying increases the use they get out of their planes and this means that as time goes on, we tower guys will have more clearances to relay and you pilots will have more clearances to copy. We have to work together. Are there any questions?"

Silence reigned the classroom.

"I want to thank you for your courtesy and attention during this talk and I hope to see you all again. Come see us in the tower."

Longhand stared at the blackboard. Ignoring the others leaving the room, he started to copy the symbols. "Smart guy," he thought, "I've more time in my Beech than he has just being alive." Moody was irritated. He knew—how

THE ONLY VIBRATION-PROOF AIRCRAFT BATTERY



- NE
- capa
- longe
- NE
- attac
- insta
- NE
- and-
- dry c
- activa
- carry,

- Execu

Rebat eliminate

Four more reas
the world's lar

THE ELECTRIC AUTOLITE COMPANY • AERO/SPACE DI

Circle no. 24 on reader service card

well he knew!—that it took several read-outs before he got the word from the tower, but he also knew that he was a good pilot both on and off instruments. The name “Longhand” hurt his pride quite a bit, even more than he wanted to admit.

Then and there he decided to do something about this clearance thing. No smart young fledgling was going to show him up. He broke the lead on his pencil, muttered something under his breath and went back to his copying. Longhand wasn't irritated any more. He was mad.

One month later, Arden was on duty in the tower, working ground controller's position. The flight data man handed him a clearance. It was for Longhand in 320P.

Arden keyed the transmitter. “ATC clears Three Two Zero Papa to the Meigs Airport via direct Muskegon omni, Victor Five Five South Bend, Victor Six Coty intersection, direct Meigs, maintain eight thousand. Read back.”

Longhand's read-back was good the first time. “Roger, Three Two Zero Papa,” said Arden happily, “Stand by for departure instructions.”

The clearance started to come in for Moody's departure. It was long and involved. Arden took the clearance and as he picked up the mike, said to himself, “Wonder what Longhand will do to this one.”

Moody adjusted the gain on his receiver and started writing as the voice came over the speaker. Once, he whistled to himself. When he finished, he studied his pad. The page was almost filled and it looked like this:

C RT ↑ MUSK VOR $\frac{3}{4}$ / VOR ↓ 150R X MUSK
6 RR 3 RL 3,4,5 (MDC R MUSK 6 PULL EST →)
118.2
6 / 3 min ← MUSK ↑ 8 RR 8 DET 135.4

“Beech Three Two Zero Papa, did you copy?” asked Arden. Time was passing and he had a fistful of clearances to relay to other pilots.

“Stand by,” said Longhand. He con-



THE AUTHOR

Maj. George P. Haviland (USAF), author of “A Shorthand System For Pilots,” has been a contributor to The PILOT since 1958 and his articles have always been well received by PILOT readers. Maj. Haviland soloed in 1939 under the Civilian Pilot Training Program. He entered the U. S. Army Air Corps and was commissioned in 1942. He flew 110 missions in the China-Burma-India theater during World War II. Maj. Haviland reentered military service in 1951 after six years as a civilian. He resides at Highland, Calif.



centrated on his pad for a full minute, digesting its contents. Finally, with a deep breath, he squeezed the mike.

“This is Beech Three Two Zero Papa. Cleared right turn after take off, climb on course to Muskegon VOR not above three thousand until reaching the VOR. Shuttle climb on the One Five Zero radial to cross Muskegon at six thousand. Report reaching three thousand, report leaving three, four and five thousand to Departure Control on One One Eight decimal Two. Report over Muskegon at six thousand with a Pullman estimate. Maintain six thousand until three minutes after Muskegon, then climb to eight. Report reaching eight to Detroit Center on One Three Five decimal Four. Ah—Over.”

It was Arden's turn to whistle. “Clearance correct,” he said respectfully. But somehow he felt that just those two words were not enough for this particular occasion. Longhand had come a long way and Arden felt the need to say something more. He pressed the switch. “Nice work —Ah—Ed.”

As Ed Moody took the active, his face was covered with a broad, ear-to-ear grin. END