RESTRICTED

FM 1–46

WAR DEPARTMENT

ARMY AIR FORCES FIELD MANUAL

FIGHTER RADIOTELEPHONE PROCEDURES AND CODE

May 15, 1943

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(For explanation of symbols see FM 21–6.)

TABLE OF CONTENTS

FOREWORD

This manual extends the basic radiotelephone procedures of FM 24–9 to provide necessary procedures, codes, and fighter vocabularies for proficient fighter operations. Radio-controlled interception is essential for fighting in the air. Radio training employing these systems has already paid dividends in combat operations. Each pilot, controller, and intercept officer should be familiar with this established fighter radiotelephone procedure.

A section on maintaining radio telephone security (sec. III) is included. Communication is necessary to help a fellow pilot or to report useful data to one's base before it becomes valueless. However, unnecessary conversational radio interchanges in battle have cost lives. Radio circuits must be kept cleared and ready for essential intercommunication. Radio silence is preferable to any unnecessary use of radio in order to keep alert for combat information.

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ARMY AIR FORCES FIELD MANUAL

FIGHTER RADIOTELEPHONE PROCEDURES AND CODE

SECTION I

DESCRIPTION OF PROCEDURES AND CODE

■ 1. PURPOSE.—This radiotelephone procedure (R/T) and code will be standard for all fighter operations in order to insure uniformity, and will become effective April 15, 1943.

■ 2. GENERAL.—*a.* This procedure conforms to the provisions of FM 24–9.

b. The fighter directive vocabulary is reproduced in full, for convenience, in paragraph 24.

c. The assignment of tactical radiotelephone call signs will comply with the provisions of Signal Operations Instructions No. 10–1, dated January 15, 1943, reproduced in paragraph 25.

■ 3. PROCEDURE FOR GROUND-TO-AIR AND AIR-TO-GROUND COMMUNICATION.—*a. Component parts.*—The component parts of any radio message in all fighter operations will *always* consist of three parts: the call, including precedence (priority), if any; the subject matter; the ending.

(1) *The call.*—The call of a radio message consists of the call sign of the receiving station followed by the call sign of the transmitting station.

(*a*) *Calling procedure.*—The following calling procedure will be used at all times: the word "Hello" (optional), followed by the call sign of the receiving station, then the words

"this is", followed by the call sign of the transmitting station. Example: "Hello Dragon Red—This is Daisy—Acknowledge—Over."

(*b*) *Call signs.*—These signs are allocated as follows:

Type of station	*Type of call*	*Example of call*
Ground	Single word	Daisy
Relay stations or stations controlling same unit.	Same as parent station followed by numeral.	Daisy 2
Homing D/F	Single word	Mecca
Control officer	Same as ground station	Daisy
Airdrome control	Ground station call followed by the word "control".	Daisy control
Squadrons	Single word	Dragon
Flights within squadrons.	Squadron call followed by color of flight.	Dragon red
Individual aircraft	Squadron call followed by number 19 and upwards, allotted to the individual pilots of a squadron.	Dragon 19

(2) *Subject matter.*—The following procedure words will be used as subject matter. These words must *always* be followed by one of the listed procedure endings.

(*a*) Words such as "read back", "acknowledge", etc., may be used in the text of the message, but not as an ending. "Over" must end the message when a response is expected.

(*b*) In transmission of orders and information, the code words as given in C. S. P. 1291 (A) (par. 24) will be used whenever possible.

NOTES

1. Degrees must be given in three-figure groups; e. g., "Vector zero six zero", *not* "Vector six zero."

2. The word "degrees" must *not* be used with SCRAMBLE, VECTOR, or STEER and the word "feet" must *not* be used with ANGELS or DEVILS.

3. When giving large changes of course the direction of turn should be given; e. g., "Vector port two eight zero."

4. Never say "climb to angels sixteen"—say "Angels sixteen", *not* "one six." It is permissible, however, to ask a pilot, "What are your angels."

5. Height of *enemy* aircraft must be given in thousands of feet, *not as angels;* e. g., "Six bandits fifteen thousand three o'clock."

6. When desired, air speeds are given and acknowledged in plain language, e. g., 250—"two fifty", *not* "two five zero", which indicates a Vector.

7. Scramble instructions should be passed before aircraft are airborne, for security reasons and to avoid use of R/T, e. g., "Scramble two eight zero angels ten."

8. The word "Base" for shore-based aircraft means the "home aerodrome", but for shipborne fighters it means "Carrier."

(3) *The ending.*—Every transmission will end with one of the following procedure words:

(*a*) "OVER", signifying my transmission is ended and I expect a response from you.

(*b*) "OUT", signifying this conversation is ended and no response is expected.

b. Acknowledgment of messages.—(1) When acknowledging operational orders, the text of the message will be repeated. Example: "Hello Dragon Red—This is Daisy—Vector one eight zero—Angels 15—Over." *Acknowledgment:* "Hello Daisy—this is Dragon Red—Vector one eight zero—Angels 15—Out." When this method is used, it is unnecessary for the originator of the message to answer if the repeated message is correct.

(2) When acknowledging informal messages or other than operational orders, repetition is unnecessary unless specified. Example: "Hello Dragon Red—This is Daisy—Bandits at ten thousand feet three o'clock." *Acknowledgement:* "Hello Daisy—This is Dragon Red—Roger out."

c. Repetition of messages.—If it is necessary to request repetition of a message, the procedure phrase used is "Say again." Example: "Hello Daisy—This is Dragon Red—Say again—Over." And the text of the answer will be prefaced with the words "I say again." Example: "Hello Dragon Red—This is Daisy—I say again—Pancake—Over." And Dragon Red will then answer, "Hello Daisy—This is Dragon Red—Pancake—Out."

d. Correction of messages.—(1) *Correction during transmission.*—When a mistake has been made by the transmitting operator, the procedure word "Correction" will be spoken, and the correct version then transmitted, e. g., "Hello Dragon Red—This is Daisy—Vector one five zero—Correction—Vector one four zero, etc."

(2) *Correction of a message being repeated back.*—When part of a message is read back incorrectly, the procedure word "Wrong" is spoken followed by the identified correct version, e. g., "Hello Dragon Red—This is Daisy read back—Convoy has arrived—Time 1630—Over." "Hello Daisy—This is Dragon Red—Convoy has arrived—Time 1640—Out." "Hello Dragon Red—This is Daisy—Wrong—Word after ar-

rived—Time 1630—Over." "Hello Daisy—This is Dragon Red—Time 1630—Out."

■ 4. PROCEDURE FOR CONTACTOR ZERO.—*a.* The controller will choose the quarter minute during which he requires the formation in question to transmit on the "fixer" frequency, and will call the leader of the formation some 15 seconds before the second hand reaches the quadrant. On receiving zero, all pilots in the formation will start the clocks in their cockpits and the pilot detailed to the contactor will stand by for "contactor in." If the controller wishes the "contactor aircraft" to switch his contactor in, he will add the words "contactor in" after giving the zero. The aircraft detailed to switch contactor in will acknowledge the message. Example:

"Hello Dragon Red—This is Daisy—Stand by for zero in 15 seconds (pause of 5 seconds)—ten (pause of 5 seconds)—five, four, three, two, one, zero (contactor in)—Over."

"Hello Daisy—This is Dragon 19—Zero received (contactor in)—Out."

b. If the controller wishes to give zero without "contactor in", he should make a separate message of the latter. In this case zero will still be acknowledged by the contactor aircraft.

c. If the controller wishes an aircraft to switch his contactor out, he will pass the message "contactor out."

■ 5. PROCEDURE FOR AIR-TO-AIR COMMUNICATION.—*a.* In giving air commands, formation leaders will use a shortened form of the usual procedure. This consists of:

(1) The call made once.

(2) The detail of maneuver to be carried out, made twice.

(3) The command of execution, "Execute", upon which the desired action is taken. Example: "Dragon Red—echelon left, echelon left—execute."

b. Call signs.

Type of station	*Type of call*	*Example of call*
Squadron leader.	Squadron call, followed by word "leader."	Dragon leader.
Flight leader____	Flight call, followed by word "leader."	Dragon red leader.
Flight member___	Flight call, followed by "Number in flight."	Dragon red 2

■ 6. PROCEDURE FOR HOMING.—If any single aircraft leaves its formation and requires homing, the procedure below will be adopted. This also applies when it is necessary or desirable to use the homer to home any formation.

The pilot calls the ground station with the signal "request homing." The controller acknowledges this message and tells the pilot to change to the appropriate channel. At the same time he warns D/F homing station to stand by.* The procedure is as follows:

Aircraft: "Hello Daisy—This is Dragon two nine—Request homing—Over."

Ground station: "Hello Dragon two nine.—This is Daisy—Change to channel B for Baker and call Woodlands—Over."

Aircraft: "Hello Daisy—This is Dragon two nine—changing to channel B for Baker—Out." (The pilot changes frequency.)

Aircraft: "Hello Woodlands—This is Dragon two nine—Request homing—Over."

Ground station: "Hello Dragon two nine—This is Woodlands—Transmit for fix—Over."

Aircraft: "Hello Woodlands—This is Dragon two nine—Transmitting for fix (pause of 5 seconds with carrier on)—This is Dragon two nine—Over."

Ground station: "Hello Dragon two nine—This is Woodlands—Steer one seven zero—Over."

Aircraft: "Hello Woodlands—This is Dragon two nine—Steer one seven zero—Out."

The D/F homing station will request transmission at frequent intervals until the pilot can see his base. The pilot will then call the D/F homing station:

Aircraft: "Hello Woodlands—This is Dragon two nine—Over base—Over." (He will not switch off until he receives an acknowledgment from the D/F homing station.)

■ 7. PROCEDURE FOR TRANSMISSION OF WEATHER INFORMATION.—*a.* Meteorological information will not be transmitted by radiotelephone except at the request of the controller or intercept officer. When the controller or intercept officer

*If controller knows location of aircraft, he gives pilot an initial "steer" for base before turning him over to the homing station.

wishes to request a weather report, he will call the pilot by his call sign and add the following text:

"What is your D/R position?" (meaning, "what is your weather?"). The pilot will be supplied with a code word for the period which will give him the order in which the four permissible pieces of information are to be transmitted. This code word will consist of the four code symbols, V, A, B, and T, in any order. These symbols represent:

V—visibility in miles.
A—amount of cloud coverage in tenths.
B—height of cloud base in thousands of feet.
T—height of cloud top in thousands of feet.

b. Should the code word for the period be ABTV, the pilot will first give amount of cloud, then height of cloud base, then height of cloud top, and finally visibility. The answer will be in the form: 8, 12, 14, 20. When decoded this message reads: eight tenths cloud coverage with a base at 12,000 feet, top at 14,000 feet, and visibility of 20 miles.

c. If any of the four elements are missing or unknown to the pilot, the word "zero" will be placed in the message in the appropriate sequence. This code is to be used only in case of necessity. In normal circumstances, pilots are to make their reports upon landing.

■ 8. PROCEDURE AND CODE RELATING TO I. F. F.—I. F. F. must always be referred to in radio communication as "Cockerel." The Cockerel (I. F. F.) can be made to "crow" (to operate), can be "checked" (seen), or "strangled" (turned off). Controllers and intercept officers are reminded that although I. F. F. is displayed visually at radar stations, they should remember to "hear" the cockerel "crow" and not "see" it. Example:

Controller: "Hello Dragon Red—This is Daisy—Is your cockerel crowing—Over."

Pilot: "Hello Daisy—This is Dragon Red—My cockerel is crowing—Over."

Controller: "Hello Dragon Red—This is Daisy—I cannot hear it—Check your cockerel—Over."

Pilot: "Hello Daisy—This is Dragon Red—sorry my cockerel was strangled—now crowing—can you hear it—Over."

Controller: "Dragon Red—Can hear your cockerel now—Out."

■ 9. PROCEDURE FOR G. C. I. CONTROL AND A. I. INTERCEPTIONS.—This specialized procedure is at present applicable to night fighters only and will be published at a later date.

■ 10. BREVITY.—*a.* When communication is good, it is essential that transmission be as short as possible.

b. In cases where communication is difficult, all parts of any message may be made twice except that the ending word will be given only at the end of the repetition.

■ 11. REPORT OF POSITION.—The position of aircraft will not be reported by reference to geographical names. The standard air defense grid system or prearranged code words will be used.

SECTION II

RADIOTELEPHONE TECHNIQUE

■ 12. GENERAL.—With the exception of the essential call, do not repeat messages or words twice unless communication is extremely difficult. Message forms based on the above procedure and examples will be as concise as possible, and should be standardized when they are normal messages.

■ 13. SPEECH.—Radiotelephone messages must be spoken in a way which will insure maximum intelligibility at the receiving end. To achieve this result, the following factors are important:

a. Speed.—The rate of speech should be as constant as possible, neither too fast nor too slow.

b. Pitch.—Experience shows that, with the equipment in use, high-pitched voices transmit more successfully than low and therefore an effort on the part of the speaker to pitch his voice up is desirable.

c. Intensity.—For maximum intelligibility, it is essential that the intensity of the speech transmitted should be as constant as possible. The type of speech in which some syllables are very loud and others very soft is always very diffi-

cult to understand; therefore, keep your speech at a constant level as far as possible.

d. Rhythm.—Any phrase spoken in ordinary conversation has a natural rhythm. You should not change your rhythm when using radiotelephone. The two commonest failings in this respect are—

(1) A tendency to send out messages word by word instead of phrase by phrase.

(2) The inclination to add the syllable "er" to the ends of words and to insert it between phrases.

SECTION III

RADIOTELEPHONE SECURITY

■ 14. INTERCEPTION.—The enemy can establish a widespread and comprehensive radio listening system comprising both ground and airborne stations. Consequently, every radio message, whether from ground or aircraft, is capable of being intercepted by him, duly recorded and analyzed, and its source definitely located. The information that may be divulged to the enemy in this manner may be of vital strategical importance (e. g., the strength, type and disposition of our squadrons), or it may be of a tactical nature (e. g., the strength, type, and movement of aircraft on patrol or interception), in which case it is immediately transmitted back to his own formations, thereby enabling them to take evasive or other action.

■ 15. NECESSITY OF CODE.—It is essential that no information of value to the enemy should be passed by radio except in strict code. The mere fact that a transmitter is operating

may give away valuable data; therefore, radio silence should not be broken except when absolutely necessary. When it is broken, the procedure laid down in Section I must be strictly adhered to, and the length of transmissions kept down to the barest minimum. The time available to voice-fix the transmission is thereby reduced.

■ 16. INSTRUCTIONS.—Section I contains instructions on the method of passing orders and information by means of code. No departure must be made from these instructions, otherwise the code words will be compromised.

■ 17. OPERATIONAL ORDERS.—In order to reduce to a minimum the passing of operational orders by radio, initial orders for aircraft to patrol or intercept should be given in detail where possible and time permits, by land-line to dispersal points.

■ 18. HEIGHT CODE.—Heights at which friendly aircraft are to operate are always to be given in "masquerade", i. e., as ANGELS in thousands of feet above "masquerade" datum, and as DEVILS in thousands of feet below it. The word "masquerade" is a changeable, predesignated altitude above sea level from which ANGELS and DEVILS are computed. The word "masquerade" must never be passed by radio either by controllers or pilots. All other heights, e. g., of unidentified or enemy aircraft, cloud, balloons, etc., are to be given in plain language; i. e., as so many thousands of feet and not as "bandits angels." The height of clouds must not be reported singly, but only as part of the weather code (see par. 7).

■ 19. WEATHER REPORTS.—The need for passing meteorological information should seldom arise; weather reports can generally be communicated after landing. When passed by radio, the code in paragraph 7 must invariably be used.

■ 20. PLACE NAMES.—Place names and positions must never be reported by radio in plain language. All reference thereto must be made in terms of the gridded maps or prearranged code words.

■ 21. AIR-TO-AIR RADIO.—All the considerations detailed above apply with equal importance to air-to-air radio as they do to ground-to-air, and are at all times essential.

■ 22. INTERCOMMUNICATION.—In order to insure that information valuable to the enemy is not accidentally broadcast, care must be taken that intercommunication in multiseater fighters does not take place when the transmitter is switched on.

■ 23. GROUND-TO-AIR RADIO.—Controllers must remember not to ask pilots questions which cannot be answered without compromising the various codes or disclosing vital information.

APPENDIX I

FIGHTER DIRECTOR VOCABULARY

R/T CODE AND VOCABULARY USED FOR THE DAY CONTROL OF FIGHTER AIRCRAFT, EITHER UNDER SHORE OR SHIP CONTROL.

NOTE.—When shore-based fighters are under ship control this is known as "CONSHIP."

W/T	*R/T*	*Meaning*
AB	Above	Aircraft above you.
AM-MN	Ammo minus	Have less than half ammunition left.
AM-PS	Ammo plus	Have more than half ammunition left.
AM-O	Ammo zero	Have no ammunition left.
AK	Anchored	Am orbiting a visible orbit point.
AG	*Angels	Altitude in thousands of feet above "Masquerade".
AW	Away	Aircraft is flying away from directing ship.
BT	Bandit	Identified enemy aircraft (number may be indicated).
AS	Base	Home airfield. (With ship-based aircraft this means "carrier".)
BE	Below	Aircraft below you.
BG	Bogey	Unidentified aircraft (Implies "investigate with caution—may be friendly".)
BS	Bombers	High level bombers.
UR	Burst	Am about to fire H. E. shell to burst at estimated height of and in direction of enemy.
BU	Buster	Fly at normal full speed. (Indicated air speeds will normally be used by shore controllers.)
CT	Center	Center of unit or indicated part of unit. (See Clock Code, App. IV, par. 9.)
CN	Chickens	Friendly fighters.
CA	Clara	R. D. F. screen in clear.
CL	Close	Keep near directing ship.
DV	*Devils	Altitude in thousands of feet *below* "Masquerade."
FS	Fishes	Torpedo aircraft.
FD	Freddie	Fighter directing ship.
FD FD FD.	Freddie indicating.	Am identifying myself as fighter directing ship by making puffs of smoke and/or some other prearranged signal.

* U. S. Definition.

W/T	*R/T*	*Meaning*
FY	Friendly	Aircraft is/are friendly.
FL	Fuel	Quantity of fuel remaining (number of gallons, e. g., "Fuel forty-two").
GA	Gate	Fly at maximum possible speed (not to be maintained for more than five minutes).
GR	Grand slam	Enemy aircraft shot down.
HS	Hawks	Dive bombers.
HU	Heads up	Enemy got through (part or all).
RC	Hey rube	Rendezvous over directing ship. Report when on station.
LF	Left (port)	Alter course to left (aircraft normally alters course 30°).
LT	Lights	Identify yourself now.
LI	Liner	Fly at economical cruising speed. (Indicated air speeds will normally be used by shore controllers.)
MQ	*Masquerade	A prearranged arbitrary altitude above and below which "Angels" and "Devils" are calculated. It may be changed daily.
MT	Mattress	Below cloud.
Q	. . . o'clock	Aircraft in clock code sector indicated. (See Clock Code, App. IV, par. 9.)
OR	Orbit	Circle and search.
OP	Orbit left (port).	Circle and search to left (port).
OS	Orbit right (starboard).	Circle and search to right (starboard).
PK	Pancake	Land, refuel and re-arm.
PK-AM	Pancake ammo	Returning short of ammunition. Wish to land.
PK-FL	Pancake fuel	Returning short of fuel. Wish to land.
PK-HU	Pancake hurt	Returning wounded or damaged. Wish to land.
	Pip-squeak	Contactor.
PY	Popeye	In cloud.
QL	Quilt	Above cloud.
RS	Rats	Identified enemy fighters.
RE	Rear	Rear of unit or indicated part of unit. (See Clock Code, App. IV, par. 9.)
RM	Resume	Resume patrol.
RH	Request homing	Request course to steer for "home".
R/T	Right (starboard)	Alter course to right (aircraft normally alters course 30°).
SV	Salvos	Am about to open fire (magnetic bearing may be indicated). Keep clear.
SA	Saunter	Fly at lowest speed possible without losing height.
SC	Scramble	Take off, get course and climb, e. g., "Scramble zero four zero, angels ten".

* U. S. Definition.

W/T	*R/T*	*Meaning*
CU	See you	Fleet in sight.
SD	Shad	Shadower.
SP	Snooper	Low shadower (below 2,000 feet).
SR	Steer	Set course. . . (magnetic course indicated) for "home".
TL	Tallyho	Enemy aircraft sighted. (Number, type, and height of enemy aircraft sighted should be reported.)
TH	Touch	In touch on homing beacon.
TO	Towards	Aircraft is flying towards directing ship.
TR	Tramlines	Beam approach.
VN	Van	Front of unit or indicated part of unit. (See Clock Code, App. IV, par. 9.)
VC	Vector	Alter course to. . . magnetic course indicated. (Like SCRAMBLE, must be used with three-figure group, e. g., "Vector zero six zero" NOT "Vector six zero", or "Vector sixty". For homing courses "STEER" is used.)
VC–PO	Vector left (port).	Alter course to. . . magnetic course indicated, turning to left (PORT).
VC–ST	Vector right (starboard)	Alter course to. . . magnetic course indicated, turning to right (STARBOARD).
WT	What state	Report fuel and ammunition remaining.

APPENDIX II

INFORMATIVE R/T CODE AND VOCABULARY USED BY SHIPS WITH SHORE-BASED FIGHTERS UNDER SHORE CONTROL

NOTES

1. This procedure is known as "CONSHORE".
2. This list is an extract from Appendix I and contains the only words which may be used with shore-based fighters under shore control. The words are informative only and not directive.

W/T	*R/T*	*Meaning*
AB	Above	Aircraft is above you.
AW	Away	Aircraft is flying away from directing ship.
BE	Below	Aircraft is below you.
BG	Bogey	Unidentified aircraft (implies "Investigate with caution—may be friendly").
BS	Bombers	High level bombers.
UR	Burst	Am about to fire H. E. shell to burst at estimated height of and in direction of enemy.
CT	Center	Center of unit or indicated part of unit. (See Clock Code, App. IV, par. 9.)
CL	Close	Keep near directing ship.
FS	Fishes	Torpedo aircraft.
FD	Freddie	Fighter directing ship.
FD FD FD	Freddie Indicating	Am identifying myself as fighter directing ship by making puffs of smoke or some other prearranged signal.
FY	Friendly	Aircraft is/are friendly.
HS	Hawks	Dive bombers.
LF	Left (port)	Alter course to left (port) (aircraft normally alters course 30°).
LT	Lights	Identify yourself now.
MT	Mattress	Below cloud.
Q	. . . o'clock	Aircraft in clock code sector.
PY	Popeye	In cloud.
QL	Quilt	Above cloud.
RE	Rear	Rear of unit, or indicated part of unit (see Clock Code).
RM	Resume	Resume patrol.
RT	Right (starboard)	Alter course to right (starboard). (Aircraft normally alters course 30°.)
SV	Salvos	Am about to open fire (magnetic bearing may be indicated). Keep clear.

W/T	*R/T*	*Meaning*
SD	Shad	Shadower.
SP	Snooper	Low shadower (below 2000 feet).
TO	Toward	Aircraft is flying towards directing ship.
VN	Van	Front of unit or indicated part of unit. (See Clock Code, App. IV, par. 9.)

APPENDIX III

R/T CODE AND VOCABULARY USED WITH NIGHT FIGHTERS UNDER SHORE OR SHIP CONTROL

The following code words and phrases are used in addition to those in Section I:

G. C. I. Control

Weapon	A. I. "Flash your WEAPON" means "Switch on your A. I." "My WEAPON is flashing" means "My A. I. is switched on." "My WEAPON is bent" means "My A. I. is unserviceable."
Contact	"I have an indication on my A. I."
Contact Lost	"The indication on my A. I. has faded."
Punch	"You should very soon be obtaining a CONTACT on the aircraft that is being intercepted."
Judy	"Take over (or "am taking over") the interception."
Mother Grannie	Homing beacons.
Cousin Maud Cousin Jim	Patrol beacons.
Father Uncle	Beam approach beacons (old).
Baby	Beam approach beacon system (new).

Searchlight-aided sector control

Candles	"Searchlight beams."
Douse	"Extinguish searchlights."
Trade	"Enemy raiders are in the offing." (This is a warning message, followed by the general direction of the approach of the raiders, e. g., "Trade South.")

Smack_____ "Cease orbiting (if "Trade" has not been given) and proceed in direction indicated."
Crackers_____ "Attack any enemy aircraft within your box."
Freelance_____ "Attack any enemy aircraft anywhere without restriction."
Re-orbit_____ "Abandon chase and return to orbit beacon."
Gauntlet_____ "Am leaving orbit to attempt an interception."
Normal_____ "Do not adopt gauntlet procedure."
No Joy_____ "Cannot find the raid allotted to me."

APPENDIX IV

SIGNAL OPERATION INSTRUCTIONS—TACTICAL RADIOTELEPHONE CALL SIGNS NO. 10-1, 15 JANUARY 1943

■ 1. EFFECTIVE DATE.—The following system of tactical radiotelephone call signs for fighter airplanes is effective 1 March 1943.

■ 2. COMPOSITION.—The call signs of fighter airplanes consist of a call word, a color name, and a position number or name. The call word identifies the squadron, the color name the flight, and the position number or name the flight position of the airplane.

■ 3. CALL WORDS.—*a*. The desired characeristics of the words employed as call words are ease of pronunciation and phonetic clarity. Inclosure No. 1 to this S. O. I. contains a list of words which have shown a high degree of intelligibility against a background of noise. The words listed in the inclosure are available for use as call words. Similar words may likewise be used with the exception of those expressing geographic locations.

b. The call words are selected by the fighter commands (or wings) and are allocated by them to groups and ground stations. Groups, in turn, assign these call words to the squadrons in their commands. Copies of assignments should be furnished direct to the Directorate of Communications, Headquarters, Army Air Forces, to reach same prior to effective date.

c. For security reasons call words in tactical areas should be changed at frequent and irregular intervals. Commanding officers of units using call words are responsible for determining the interval between changes. Ordinarily these changes should be made weekly, or at least monthly, depending upon the frequency of use. In nontactical areas changes in call words are not required except for training purposes.

■ 4. COLOR NAMES.—Color names designating flights will be assigned as follows:

Flight A—red
Flight B—yellow
Flight C—blue
Flight D—green

■ 5. POSITION NUMBERS OR NAMES.—Position numbers designate the actual position of the ship within the flight, i. e., the flight leader is number 1 and the other members of the flight are numbered consecutively from front to rear, or right to left, according to the type of formation flown. The leader is usually designated "Leader" instead of "One"; in small flights of two or three airplanes, the position name, such as "Wing" and "Tail" may be used instead of the position number.

■ 6. EXAMPLES.—*a*. The leader of Flight C of a squadron assigned the call word "DRAGON" uses the call sign "DRAGON BLUE LEADER."

b. When Flight C consists of six airplanes of two elements in three-ship "V" formation, the call signs will be as follows:

Flight leader	DRAGON BLUE LEADER
Right wing man	DRAGON BLUE TWO
Left wing man	DRAGON BLUE THREE
Second element leader	DRAGON BLUE FOUR
Right wing man	DRAGON BLUE FIVE
Left wing man	DRAGON BLUE SIX

c. When Flight C consists of six airplanes of three elements in two-ship formation, the call signs will be as follows:

Flight leader	DRAGON BLUE LEADER
Wing man	DRAGON BLUE TWO
Second element leader	DRAGON BLUE THREE
Wing man	DRAGON BLUE FOUR
Third element leader	DRAGON BLUE FIVE
Wing man	DRAGON BLUE SIX

■ 7. PILOT NUMBERS.—In addition to the position number, squadron commanders assign individual pilot numbers, selected arbitrarily from number 19 up, without regard to numbers assigned in other squadrons of the group, for individual pilot identification. Thus, a pilot of the squadron assigned the call word "DRAGON" may identify himself by giving the squadron call word plus his number, i. e., "DRAGON 43." The pilot number is used by the ground station when calling an individual pilot and by a pilot when he is not in formation. Pilot numbers change every 6 months or at the discretion of the commanding officer.

■ 8. GROUND STATIONS.—When a ground station maintains radio telephone communication with a fighter unit on intercept or patrol missions, it is assigned a call word of its own.

■ 9. CLOCK CODE.—In all cases the center of the unit or indicated part of the unit will represent the center of the clock face, and the course of the unit or indicated part of the unit will represent 12 o'clock. If, however, the circumstances of the operation make this arrangement impossible, 12 o'clock will be represented by magnetic north and every signal indicating a clock code bearing must be followed by the word "magnetic." The center of the clock will remain the center of the unit or indicated part of the unit.