

Task Force Russia 294 Report

[Editorial Note: The Task Force Russia 294 Report (hereafter TFR 294) consists of pages torn out of a Soviet officer's personal journal. The pages held handwritten notes taken down during interrogations of American airmen who had been shot down over North Vietnam on 4 February and 17 February 1967. They were flying EB-66C and F-105D [sic] aircraft.

The pages are presented almost verbatim with two exceptions. Explanatory footnotes have been added, and the pages have been rearranged slightly to put them in what appears to be a more logical order.]

[**TFR 294-5**] [This page handwritten in pencil in its entirety]

7 February 1967

Statement by the prisoners whose RB-66 was shot down on 3 [sic] February 1967

The crew consisted of six, 2 Majors, 3 Captains, and one Junior Lieutenant [1st Lt.]. They flew at an altitude of 8500 [meters – 29,887 feet] with a speed of 889 kilometers per hour [554 miles/hour]. Five minutes before they were hit by surface to air missiles, they could direction find [DF] Soviet Army transmissions (radio impulses) [meaning radar signals from Soviet-made radar transmitters] on a frequency of 2945 at a distance of 110 [kilometers]. After that, four minutes before [they were hit], [they DFed radar transmitters] on a frequency of 3005 at a distance of 96 [kilometers]. The third time, 3.5 minutes before [being hit], [they DFed radar transmitters] on a frequency of 2985 at a distance of 77 [kilometers].

There are 26 stations (transmitters or receivers) on an RB-66B while there are 28 stations on an RB-66C.

So far active jammers are only installed on A-4s or F-4Bs, i.e. deck-landing aircraft.

[**TFR 294-6**] [This page handwritten in its entirety]

There they have ALQ-51 equipment.¹

The jammer's power is 300 watts

The monitoring receiver's [abbreviation, probably "frequency"] range is 6 MHZ

The transmitter's bandwidth is 100

The jammer's [abbreviation, possibly "range"] is 6 MHZ

[It can] [abbreviation, probably "jam"] plus or minus 150 (a total of 300)

We know the bandwidth where the Soviet Army works, that is 2900-3050

The 6th [crossed out]

¹ The above information was accurate. At that time only U.S. Navy combat aircraft such as the A-4 and F-4B had active jamming equipment permanently installed on the aircraft – and the equipment was in fact the ALQ-51 false-target jammer

Methodology for checking the [illegible abbreviation] as [illegible, possibly "Regimental"] groups in conjunction with [abbreviation, possibly "specialists"].²

[formula written in pen at bottom of page]

"P'sub Chs' = * */8 245* *" [P'sub Chs' could be bandwidth]

[**TFR 294-7**] [This page handwritten in its entirety]

Upon receipt of these frequencies, they are immediately required to warn other aircraft

154 – 18 [18 crossed out] 83 – 175

From 30 – 1000 KHZ

PRV 2500-2600

EB [EB-66] creates interference, active jamming, by modulating sound frequencies [radio frequencies]

EB-66 does not have equipment for [abbreviation, probably "impulse"] jamming. It is installed on B-58. Noise jamming is better than [abbreviation, probably "impulse"] jamming

R'sub avg' = 300 W r'sub tot' = 400 W.³

The receiving antenna is omnidirectional, sized for its search frequencies, while the jamming antenna is

[**TFR 294-8**] [This page handwritten in its entirety]

unidirectional and is located in the rear of the aircraft.

Equipment:

32 components

4 ALA-5's for analysis of impulses.⁴

4 APR-14s for frequency analysis.⁵

4 ALA-6s for DF [direction finding].⁶

Jammers:

2 ALT-10s.⁷

1 ALT-17 (16) 500-1000 Mhz.⁸

2 ALT-13s, 2500-2800 Mhz.⁹

5 ALT-22s, 2800-10750 Mhz (didn't find any ALT-22s).¹⁰

² Possibly referring to checking with North Vietnamese surface-to-air missile regiments and their assigned Soviet advisors, who were referred to as Soviet "specialists."

³ "Noise jamming" is the transmission of continuous jamming signal to overpower and obscure the radar return signal of the target aircraft while "impulse jamming" is the transmission of a number of brief electronic signals on the ground radar station's transmitter frequency to create multiple "false" target returns in addition to the actual aircraft's radar return signal on the ground station's radar screen

⁴ USAF pulse analyzer, used in EB-66.

⁵ USAF panoramic radar receiver, used in EB-66

⁶ USAF direction finding receiver, used in EB-66

⁷ USAF broad-band multi-signal receiver.

⁸ USAF VHF radar and communications jammer.

⁹ USAF D & E band noise jammer, used in EB-66

¹⁰ USAF continuous wave jamming transmitter, used in EB-66

2 ALE for passive jamming.¹¹

4 AJC-10 signal receivers

AVN-2 tape recorders.¹² [Note: The entry was originally “4 AVN-2” but the 4 was crossed out] [in ink] QRC-100, 4 assemblies.

-cycle of operation for the ALA-5? [sic] – 15 sec

-cycle of operation for the APR-14

[**TFR 294-3**] [This page handwritten in its entirety]

V.S. Belyaev Expert [Name crossed out]

Yu. L. Belyaev 1 [Name crossed out]

Nodya Beloslav 1 [Name crossed out]

Karas' [Name crossed out]

Timchenko Expert [Name Crossed out]

14 February 1967

(Get Mikhajlov from Kachanov)

Second statement by the airmen taken prisoner from the RB-66 (EB-66C) shot down on 3 August 1967 by the 89th [abbreviation, possibly “Division”].¹³ The EB-66 was hit at an altitude of 8500-9000 at a speed of 889 kilometers/hour while in a turn north of Bak-Ka.¹⁴ The aircraft had nine positions

[Drawing of the front end of the aircraft with seven positions, one in front for the “Commander, a Captain,” one on the front right for the “Navigator, a Major,” one on the front left for “2 airmen (who were not there)”, and four near the rear, three of which have “x”s in them for the “Operators”]

[**TFR 294-4**] [This page handwritten in pencil in its entirety]

The following were taken prisoner

The Pilot, a Captain

The Navigator, a Major

An Operator

[symbol indicating those positions on the previous page that were x-ed out] were killed.¹⁵

Thailand – Laos – Bak-Ka

Length 74 kilometers

Width 9.2 – 10 kilometers

¹¹ USAF chaff dispenser.

¹² This description appears to be incorrect. The AVN-2 was a “Star Tracker,” used by the aircraft’s navigator to plot the aircraft’s position using the stars.

¹³ Vietnamese official records reveal that the EB-66 was shot down by 89th Battalion/274th Missile Regiment.

¹⁴ “Ba-Ka” is reference to Bac Kan city, capital of Bac Kan Province, where the EB-66 went down.

¹⁵ The information on the fate of the crew is accurate: The pilot, Captain John Fer; the navigator, Major Jack Bomar; and one of the Electronic Systems Operators, 1st Lt. John Davies, were captured. The other three crewmen, Major Woodrow Wilburn, Captain Herb Doby, and Captain Russell Poor, were killed.

[Drawing of an oval, probably an orbit, with the above dimension, and with the nearest point of approach being “200 kilometers from Hanoi”]

There were two aircraft: EB [EB-66] 9 kilometers [probably altitude], RB [RB-66] 8.1 kilometers [probably altitude]

They were escorted by 4 F-4Cs, 9.2 – 14.8 kilometers away and 900 meters above
[Drawing, probably showing an interval [separation] of 1.8 [kilometers]

[**TFR 294-1**] [This page is handwritten in pencil in its entirety]

F-4C [abbreviation, probably “higher”] 300 meters above EB-66

Work Points

-Turned on radio receivers at the 18th Parallel and began to locate (by [direction] finding) SRTs [Russian abbreviation meaning “search/early warning and target designation radars]

-At the Laos-Vietnam border, began a search of signals received from SNR [missile guidance radars] (or SON [anti-aircraft artillery (AAA) fire control radars]

-Within five minutes they found three ZRV [surface-to-air missile] sites

North of Noj-Baj [Noi Bai]

1 minute northwest of Tkh Ig [?]

30 seconds west of the village of Tkxatuek”

Possibly more!

May have found one site in the central field 30 seconds to 1 minute. If all sites began to transmit they can better determine the bearings in a straight flight, but he was shot down

[**TFR 294-2**] [This page handwritten in pencil in its entirety]

in a turn

These points were taken at 15 second intervals

[Drawing of a triangle with three points along its base]

Distance 110-150 kilometers

SRTs [search/early warning radars] – 460-550 kilometers

SONs [AAA fire control radars] – 160-200 kilometers

PRV [probably missile sites] – 74-92

Three types of interference [electronic jamming]

-Targeted interference with a bandwidth of plus or minus 3 Mhz (6)

-Sweeping [abbreviation, possibly “targeted”] interference at a frequency of 2975-3050 where [abbreviation, possibly “targeting data”] sweeps across

-Wide-band jamming, the best of the [abbreviation, probably “variants”] (in their opinion) which is capable of jamming 2900-3050 Mhz. At launch time they work on the 712-850 range

[**TFR 294-11**] [This page handwritten in pencil in its entirety]

-ALA-6

[A drawing of an orbit labeled “I” with an arrow pointing towards “Hanoi” 120-150 [kilometers] away. In addition, there are three smaller orbits, all labeled “II,” all of which are nearer to Hanoi]

I – Area of frequent reconnaissance

II – Area for jamming when escorting bombers

?

))?) [These markings probably continued from opposite page]

Jamming usually starts 5 minutes before the appearance of fighters and bombers

F-4C cover draws attention of the SNRs [missile guidance radars] (i.e., like decoys)

-They use a voice color warning system – white, green, yellow, red

[**TFR 294-12**] [This page handwritten in its entirety]

White – normal

Green – RTV up [radar transmitting]

Yellow – SNR up [missile guidance radar transmitting]

Red – Missile launch or frequency 718-850 active

The accuracy of detecting Soviet Army [units] is not high, but while returning they work [illegible] and can pinpoint them

APD-4 12 [abbreviation, possibly “centimeter” antenna]¹⁶

ALT-6B [abbreviation possibly “source” generator]¹⁷

Ivan Vasil’evich

[**TFR 294-9**] [This page handwritten in its entirety]¹⁸

2 We had 40 F-105F pilots in the USA. They were trained [illegible, crossed out] in the launching of Shrike missiles before they left for Vietnam. They would make 10 launches – 3 into the air, 6 against targets but without radar, and 1 against a radar station.¹⁹

In practice, 50% were launched from 200-300 meters, and 50% from 300-500 meters. This was using the new zoom launch.

[**TFR 294-13**] [This page handwritten in its entirety. Top of page missing]

Further statements by the prisoner.

¹⁶ USAF D/E/F band radar direction finder, used in EB-66s.

¹⁷ USAF Multi-band jammer transmitter, used in EB-66s

¹⁸ This page is start of notes taken from interrogation of crew of F-105F downed on 17 Feb 67.

¹⁹ In his book Jay Jensen discussed one-month of F-105 “Wild Weasel” training at Ellis AFB, Nevada: “...we had thirteen familiarization and combat simulation flights.” Jay Jensen, *Six Years in Hell*, 1.

He was shot down by the 82nd.²⁰ He felt that it was exceedingly difficult to detect our [Radar] station, [illegible], launched the Shrike, again there was no signal.

In the USA it was very easy to hit [abbreviation, possibly “assigned” or “ground”] targets in training, and they fired on [abbreviation, possibly “assigned” or “ground”] Radar stations [illegible abbreviation]. Here they run into difficulties, sometimes a signal exists, sometimes it doesn't.

[TFR 294-15] [This page handwritten in ink in its entirety]

Con [sic] the prisoner interrogation

[“QRC” handwritten in pencil over above [sic]]

There are different types of Shrikes

Type 1 antenna angle [Greek letter “Theta”]= 70 degrees

Type 1A Theta = 8 deg

Launch [abbreviation, probably “fragmentary”] warhead on a ballistic trajectory, and launch a second with a white phosphorous smoke warhead. That way the resulting smoke cloud is less thick. The smoke stands out as though it were an incendiary device. The launch distance is 24-28 kilometers in order to stay out of range of ZRV [surface-to-air missiles]. Launch altitude 1.5 kilometers [Diagram of attack trajectory showing an altitude of 1.5 [kilometers] and a speed of 990 [km/hr], going into a 55 degree climb, then dropping toward the target]

Launch distance is about 24 kilometers.

Launch angle is 35-40 degrees.

Launch speed is 900-950 kilometers per hour. .²¹

It is possible to launch as far away as 45 kilometers, but then you need to climb

[TFR 294-16] [This page handwritten in its entirety]

to an altitude of 10.1 kilometers and an airspeed of Mach 1.0-1.2.

Battle Order

[Diagram showing two four-aircraft formations, one echelon left, one echelon right, with two measurements, possibly spacing, 1.5-1.8 and 150-450]

It is easy to break into pairs in order to hit objectives

F-105Fs have two shrikes and two spherical bombs [cluster bombs, which are filled with small round HE bomblets]. The shrikes are mounted on the wings - both wings - but are loaded closer to the fuselage.

When conducting aerial combat, or when there is a likelihood of one, they mount one shrike and one sidewinder [missile].

[TFR 294-17] [This page handwritten in its entirety]

²⁰ 82nd Missile Battalion/238th Missile Regiment.

²¹ The launch range and launch parameters given for the Shrike are correct.

There will soon be a raid on the Kho-La area [sic]. 18 Feb 67 is the weather is good [sic]. And on ZRV sites [surface-to-air missile sites].

[Diagram showing two two-aircraft formations. The right two are numbered 1 and 2, with the numbers "F" and "D" below them, respectively [F-105F and F-105D]. The left two are numbered 3 and 4, also with the letters "F" and "D" respectively below them]

One and Three F-105F [indicating the aircraft numbered 1 and 3 in the above diagram] armed with 2 shrikes, one of which is the normal fragmentary type, while the second is a smoke type for marking the position. They also carry spherical [cluster] bombs. Each aircraft has one QRC-160.²² F-105Fs also have, besides jamming capability, 6 750 lb (450 kilogram) bombs.

The shrike is [abbreviation, probably "held in reserve"] in case they

TFR 294-18] [This page handwritten in its entirety]

lock onto any RLS sites [radar sites]

They drop the spherical [cluster] bombs on the place where the smoke shrike explodes.²³

New target-marker versions of Shrike, Sidewinder, and Sparrow missiles will possibly be arriving in March

PVO Commander in Chief Order No. 0113 hrs dated 28 January 1967²⁴

[Illegible]

Nikolaj Ivanovich Kostko

Igor' Aleksandrovich Koksharov

I'm meeting with Khuen [probably Russian pronunciation of Vietnamese name]

Send to 62 [Possibly 62nd Missile Battalion/236th Missile Regiment].

Get to know more about [abbreviation, possibly "shrike" or a name].

[**TFR 294-19**] [This page handwritten in ink in its entirety]

After launch, they make a 90 degree turn in order to destroy ZRV [surface-to-air missile] positions. If they see a [SAM] launch, they drop to an altitude of 1.3 kilometers and from there bomb rocket positions. Lower, they would be susceptible to ground fire. They have apparently broken [figured out] our SAM [firing] parameters, and while returning, aircraft are forbidden to descend lower than they need to, thus avoiding anti-aircraft fire. It is difficult to estimate the accuracy of our missiles.

²² QRC-160 is USAF detachable electronic jamming pod carried on a pylon under the wing.

²³ The description of F-105 "Wild Weasel" formations, armament, and tactics generally matches description given of formations, armament, and tactics provided by Jensen on pages 6 and 7 of Jay Jensen's memoir, "Six Years in Hell."

²⁴ "PVO" is Russian abbreviation for "Air Defense Command"

They believe just one fragmentary [bomb] hit is enough to disable a Soviet Army [site] but find it strange [are surprised] that after a Shrike hit, the SNRs [missile guidance radars] continue to work [to operate].

[**TFR 294-20**] [This page handwritten entirely in ink]

They find it strange [are surprised] that after launch, while the Shrike is still in flight, SRs [search radars] switch over to an equivalent.²⁵ That is why they have switched to this new method, i.e., after launching a Shrike, they continue to hit the site with [HE] bombs and spherical [cluster] bombs.

We also still don't know what the Theta = 70 degrees means, but from [missile] fragments [we have recovered], we have come to the conclusion that there is a new Shrike variant. **Vie Shrike** was written on the fragments
[Drawing of a Shrike missile]

[**TFR 294-21**] [This page handwritten in its entirety]

F-105D has

F-105F has a 3rd variant

1 Shrike and one QRC jammer instead of a Shrike

[Diagram showing a formation of four aircraft, one of which is configured with a QRC-160]

The QRC jams the 2600-3100 Mhz range.

It has four units, one for targeted jamming and three for wide-band jamming.

[**TFR 294-22**] [This page handwritten in its entirety]

There is a switch

[Diagram of a switch, left position: "Jam"; center position: "Off"; right position: "On"]

Upon entering ZRV [surface-to-air missile] zone, turn on the antenna

1.-Jamming will begin immediately after SNR [missile guidance radar] noted active

2.-Turn on jamming after missile launch.

F-105Ds have QRC-160 jammers mounted under the wing.

Missile launch sequence: Whichever aircraft, Aircraft No. 1 or Aircraft No. 3,²⁶ is first to note an active SNR [missile guidance radar] will launch a Shrike at it.

²⁵ "Equivalent" [tương đương in Vietnamese] is a term used by the Soviets and the Vietnamese to refer to switching the radar to the "stand-by" position, with the entire system operating at full power but with the transmitter switched off.

²⁶ This refers to the two F-105F aircraft in the four-aircraft Wild Weasel formation described on pages TFR 294-16 and TFR 294-17 above.

NOTE: **TFR 294** contains two pages that apparently are not related to interrogation of the American POWs. These are pages **TFR 294-10** and **TFR 294-14**. Following are those two pages:

[**TFR 294-10**] [This page handwritten in its entirety]

-Up until just before launch work on a scale of 120
-Try to see if it is possible to have a scale of 30.²⁷

[The following is all in ink and barely legible

For 26

61 + 6 10 3 and 4 PCh lacking [illeg] Eliminated 7 00
67 + 5-9 30 SRT's [illeg] SRT's from 21 to 24 [illeg] is broken
89 + 8 10-10 30 PA receiver [illegible] [abbreviations, possibly "frequency generator"] is missing
93 Loss of air
66-68 From 0600 hrs to 1700 hrs loss of communications
72 + chased [illeg] PA
78 antenna selector on E + ? [illegible] is supposedly above [illegible]

[Editorial Note: This listing is probably from a daily status report on problems with individual North Vietnamese missile battalions. The numbers at the beginning of each line all correspond to NVA missile battalions: 61 = 61st Battalion/236th Regiment; 67 = 67th Battalion/275th Regiment; 89 = 89th Battalion/274th Regiment; 93 = 93rd Battalion/278th Regiment; 66-68 = 66th, 67th, and 68th Battalions/275th Regiment; 72 = 72nd Battalion/285th Regiment; and 78 = 78th Battalion/275th Regiment (the individual missile battalions were sometimes reassigned to different regiments)]

[**TFR 294-14**] [Top of page missing]

[A small schematic diagram marked with capacitive values of 1 micro Farad and 320 pico Farads, and resistive values of 1,00 and 470,000 Ohms, handwritten in pencil].

²⁷ This probably refers to range scale settings on missile battalion radar screens