



Felderito Uso Gepkosci

FUG (OT)-65

by David R. Haugh



Czechoslovakian
OT-65A, turret is
covered with canvas.

DEVELOPMENT

Driven by the desire to expand their home based industries, and reduce dependence on Soviet supplies of armored vehicles, the Hungarian State Arsenal designed and introduced the Felderito Uso Gepkosei (FUG) in the early '60s.

Of a conventional design, the FUG was intended to fulfill much the same role as the more numerous M-1 amphibious scout car. Leaving an acceptable if not winning performance, the FUG entered service with the Hungarian Army in 1964, and two years later, with the Polish and Czechoslovakian armies in 1966.

The Czechs call their version the *Obrneny Transporter* (OT) 65A, and have made some changes unique to their own needs which will be described later.

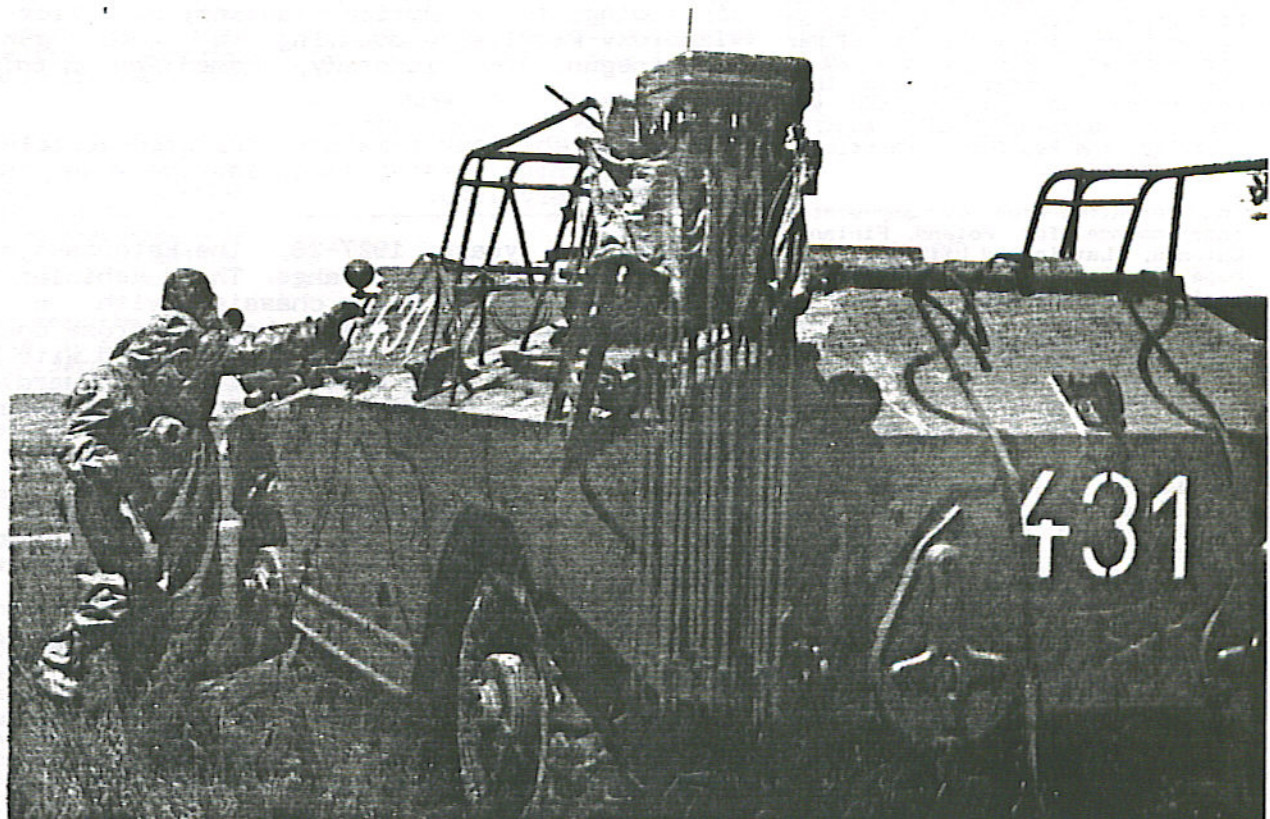
DESCRIPTION

The watertight hull of the FUG is of welded steel construction, with the driver on the left front and the commander on the right. Two forward hatch covers are provided for direct vision. These covers are equipped with an integral vision block for operations with the hatches closed.

The crew compartment itself, is behind the driver and commander, with the only means of entry being the hatch in the roof. This hatch opens to either side of the vehicle, and can be locked in the vertical position to give some protection when the machinegun is being used.

Along with the large front armored windshields, a vision slit is provided to the left of the driver and on the right of the commander. Six circular firing ports are also present, four on each side and two in the rear.

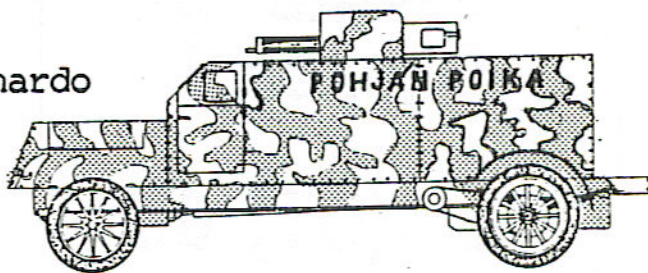
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FUG (OT)-65
with chemical
lane markers in
place.

Armored Cars in the Baltic States 1918-40

by Edward Bernardo



Baltic Perspective

During the period 6-7 November 1917, the Bolsheviks seized power in Petrograd (later to be renamed Leningrad) from Imperial Russian forces, and the Russian Civil War was underway. More interested in their own internal affairs than continuing to pursue the war against Germany and Austria-Hungary, the Red forces negotiated for a ceasefire.

In the Baltic area, Germany wanted independence for Poland, Finland, Estonia, Latvia and Lithuania. The hope being that these new countries would act as a buffer against the Soviet state. On 3 March 1918 the Soviets reluctantly agreed in principle to the proposed new arrangements.

Not waiting for a formal agreement between Germany and the Soviets, Latvia was the first of the Baltic States to declare independence on 18 November 1917. This move was soon followed by Estonia ten days later on the 28th, and Lithuania some three months later on the 16th of February 1918.

For its efforts, Latvia was promptly invaded by Red forces who took Riga on 4 January 1918, only to be driven out by a combined German and Latvian force in March of the same year. A short lived peace ensued but was soon broken by a three way fight as the Germans attempted to establish a German

Taking advantage of the disintegrating Russian Empire, Estonia, declared independence on 28 November 1917. Bloody fighting took place in 1918-19, the more so when the German occupation forces left. During these desperate early days a coastal ship Captain, Johan Pitka, who later made Admiral and Commander of the Estonian Navy, created the Estonian Armored Force. Besides equipping the first three armored trains, he created the first Estonian armored cars during the winter of 1918-19.

Built on a 5-ton truck chassis, these armored cars used the shields from Russian machineguns for armor. They had a crew of 8-9 members and used three machineguns and a 37mm cannon in a fully rotating turret. Five cars were completed, and each received a name; *Estonia*, *Kalevipoeg*, *Toonela*, *Wahur*, and *Vibuane*. These vehicles remained in service until 1940.

Another car, named *Tasuja*, was built using a lighter chassis. This vehicle was lost during the fighting in 1919.

The Estonians also used captured Bolshevik armored cars, including three Putilov-Austins, a Putilov-Garford, and an Izhorsky-Peerless mounting a 40mm gun and one Maxim machinegun. The Izhorsky, named *Pohjan poika*, was lost in 1919.

Including the four remaining captured vehicles, the Estonian Army had nine cars still in service when peace was declared on 2 February 1920.

During the years 1927-28, the Estonians built 12 armored cars in the 5 to 6-ton range. These vehicles were based on a 4x2 Crossley truck chassis with a 45 hp engine. Underpowered, these cars had no cross country ability to speak of. Three 6-ton vehicles armed with a 37-mm cannon, were given to the *Kaitseliit* (Civic Guard). The remaining nine 5-ton cars were built for the Estonian Army and came armed with 7.7mm Madsen machineguns. All the cars had a crew of five.

At least a few Landsverk L-180 were used by the Estonian police in Tallin during a communist uprising in 1936. These cars were armed with a 20mm Madsen cannon and two machineguns.

By 1939-40, the Estonian armored forces were organised into three armored companies:

1st Company was stationed in Tallin, and had the nine 1918-19 pattern armored cars.

...continued on page 3

2d Company was stationed in Dorpat, and had three FT-17 tanks and the nine Crossley based armored cars.

3rd Company was also stationed in Tallin, but was only equipped with tanks.

On 17 June 1940, Estonia was again annexed by the Soviet Union and the Estonian Army along with it's equipment was absorbed into the Soviet forces, becoming the 22d Territorial Guard.

LATVIA

On 18 November 1917, Latvia proclaimed independence from Imperial Russia. In response, a short time later the country was occupied by Bolshevik troops. Owing to Russia having formed many military units from the Latvian area during World War I, there was no infrastructure left to form a real Latvian Army. With the aid of German exoccupation troops, and the Estonian Army, Latvia managed to push the Bolsheviks back from the western part of the country in 1919.

The Latvian National Army's first armored cars were three vehicles captured from the Bolsheviks in May of 1919. These consisted of a Putilov-Garford and two Austin armored cars. In addition the German Volunteer forces had seven Ehrhardt/Daimler Panzerwagens, a former Russian Pierce-Arrow, and an Izhorsky-Fiat. By November of 1919 1 of these vehicles had been captured by the Latvians, but only five of the original seven Ehrhardt/Daimlers were still useable.

(Sources refer to these vehicles and those used in Lithuania as Daimlers, but it is far more likely that they were actually Ehrhardts, the two machines looking very much alike)

When the war ended in 1920, the Latvian Army had five armored cars still operational: two Austins named *Zengaleetis* and *Imanta*, one Izhorsky-Fiat named *Staburags*, one Putilov-Garford, *Lacplešis* and the Pierce-Arrow, now named *Viestors*.

During that same year the Latvian Auto Club presented to the Army an armored car called *Sargs* which was built on a Fiat chassis. With the addition of the Fiat, all six of these cars were still in service in 1940 and were absorbed into the Soviet Army as part of the 24th Territorial Guard after annexation.

LITHUANIA

Also part of the Imperial Russian Empire, Lithuania, declared it's independence on 16 February 1918. A short time later German forces withdrew from the country, their positions being occupied by Bolshevik units. A force of German Volunteer troops returned and halted the rapidly advancing Red forces, but only after the Reds had captured two-thirds of the country.

At the same time, the Lithuanian capital of Vilna was occupied by Polish forces, forcing the choosing of Kaunas as the new capital. In the end, the Lithuanian Army ended up fighting both the German Volunteers as well as the Poles, and Bolsheviks. Peace was finally declared in July of 1920.

The first Lithuanian armored car was a Izhorsky-Fiat captured in May of 1919. It was armed with two machineguns and named *Zaibas*. *Zaibas* was later lost in 1939 when German forces occupied Memel.

After the Germans were defeated in November of 1919, Lithuania was given five Ehrhardt/Daimler armored cars as war booty from the French and English via Latvia. Each car was armed with four Maxim machineguns. These cars were named *Savanoris*, *Perkunas*, *Aras*, *Sarunas*, and *Pragaras*. All of these cars were used in the fighting with the Poles in and around Vilna in 1920, and were still in service in 1940.

In 1934 six Landsverk armored cars were bought. These machines were armed with two Maxim machineguns and one 20mm cannon. Organized into one company, there were three platoons of two cars each.

On 17 June 1940, the Lithuanian Army along with it's equipment, was absorbed into the Soviet Army, and became the 29th Territorial Guard.

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Pansar Magazine, Baltiskst Pansar 1918-1940, Pt 1 Estland, Pt 2 Lettland and Pt 3 Litauen, by J.C.M. Probst
Illustrated Encyclopedia of Military Vehicles. Hogg & Weeks, Prentice-Hall Inc., 1980.
Soviet Tanks and Combat Vehicles of World War Two. Zaloga & Grandsen, 1984.

...Baltic Perspective continued from page 2...

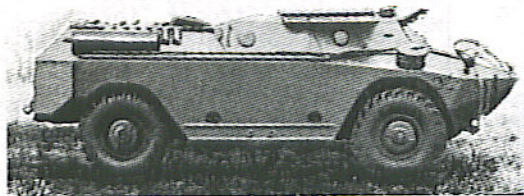
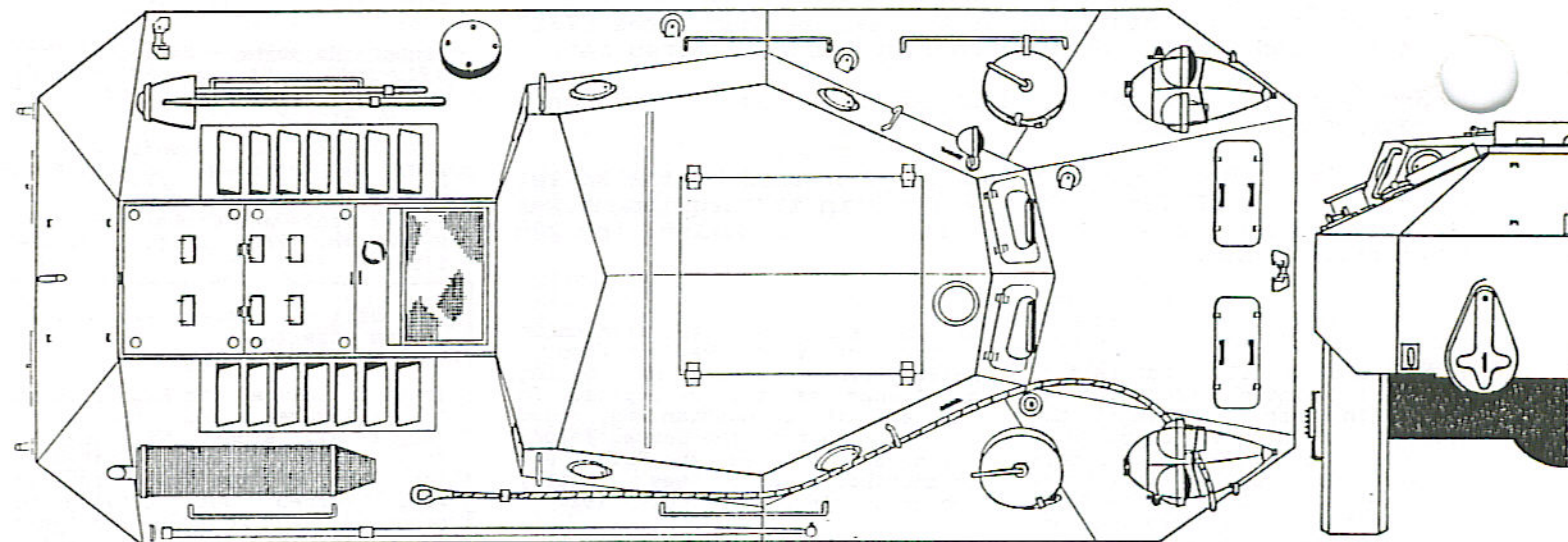
state in Latvia; the Reds attempted to invade; and the Latvians fought all sides. Fighting continued until January of 1920 when the last of the Bolshevik troops were forced out. Latvian independence was formally recognized six months later with the Treaty of Riga signed on 11 August 1920.

Estonia had much the same trouble, with Soviet troops invading soon after their declaration of independence. Supported by British and White Russian forces, the Estonians were able to clear the Soviet forces from the country by October of 1919. The treaty of Dorpat, recognizing Estonian independence was signed on 2 February 1920.

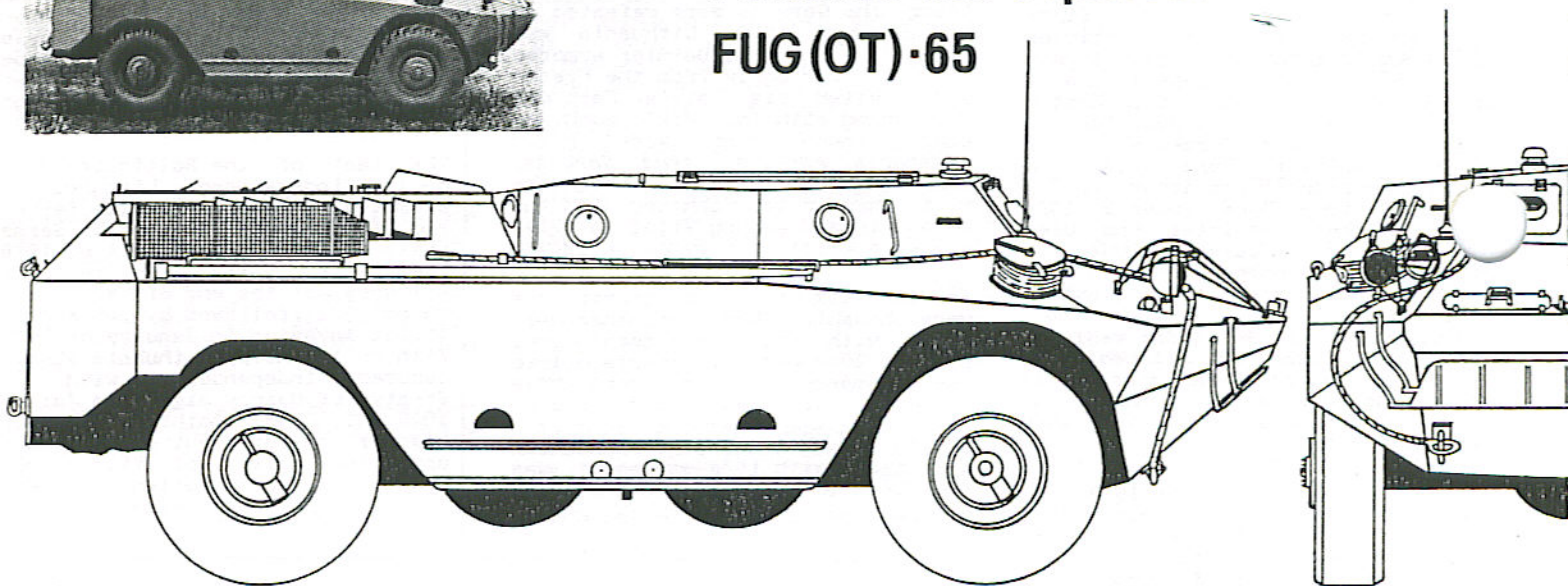
The last of the Baltic States to declare independence; Lithuania was promptly invaded by Soviet forces, and then counter-invaded by German units in the early part of 1918. The German units were forced to withdraw at the end of WWI, a move which was followed by yet another Soviet invasion in January of 1919. With Polish help, Lithuania finally secured independence with the Treaty of Moscow signed in July of 1920. It was another seven years however, before southern Lithuania and the city of Vilnyus were returned from Polish control.
 -David R. Haugh

VEHICLE USAGE CHART

COUNTRY	VEHICLE	NUMBER	DATES
ESTONIA	Putilov-Austin	3	1918-1940
	Putilov-Garford	1	1918-1940
	Izhorsky-Peerless	1	1918-1919
	Tasuja (local built)	1	1918-1919
	5-ton AC (local built)	5	1919-1940
	5-ton Crossley (Police) (local built)	5	1927-1940
	6-ton Crossley (Army) (local built)	9	1927-1940
	Landsverk L-180 (Police)	?	1935-1940
	LATVIA	Austin	2
Ehrhardt/Daimler		5	1919-1940
Izhorsky-Fiat		1	1919-1940
Pierce-Arrow		1	1919-1940
Putilov-Garford		1	1919-1940
Fiat (local built)		1	1920-1940
LITHUANIA	Ehrhardt/Daimler	5	1919-1940
	Izhorsky-Fiat	1	1919-1939
	Landsverk L-180 (Army)	6	1934-1940



Felderito Uso Gepkosci FUG (OT)-65



The engine compartment is at the very rear of the hull with the air-intake on the upper rear deck. The exhaust exits on the right side into an external muffler.

Like the BRDM series, two belly wheels are provided for improved cross-country ability. These wheels can be lowered by the driver from inside the vehicle, and are driven by a power take off. When the belly wheels are lowered the vehicle is driven in first gear.

Fully amphibious, the FUG is propelled in the water by two water jets (instead of the one seen on the BRDM), at the rear of the hull.

Standard driving equipment includes infrared driving lights, and on some models an infrared searchlight.

A central tire inflation system has also been fitted. This system allows the driver to adjust the tire pressure while on the move, to suit the type of ground being crossed. A central NBC system can also be fitted.

Main armament (on the FUG/OT-65 version) comprises a pintle-mounted 7.62mm LMG machinegun with limited traverse.

Power for the vehicle is supplied by the Hungarian Cespel D-414 diesel engine providing 100 horsepower.

VARIANTS

Ambulance

The FUG has been used as an armored frontline ambulance by the Hun-

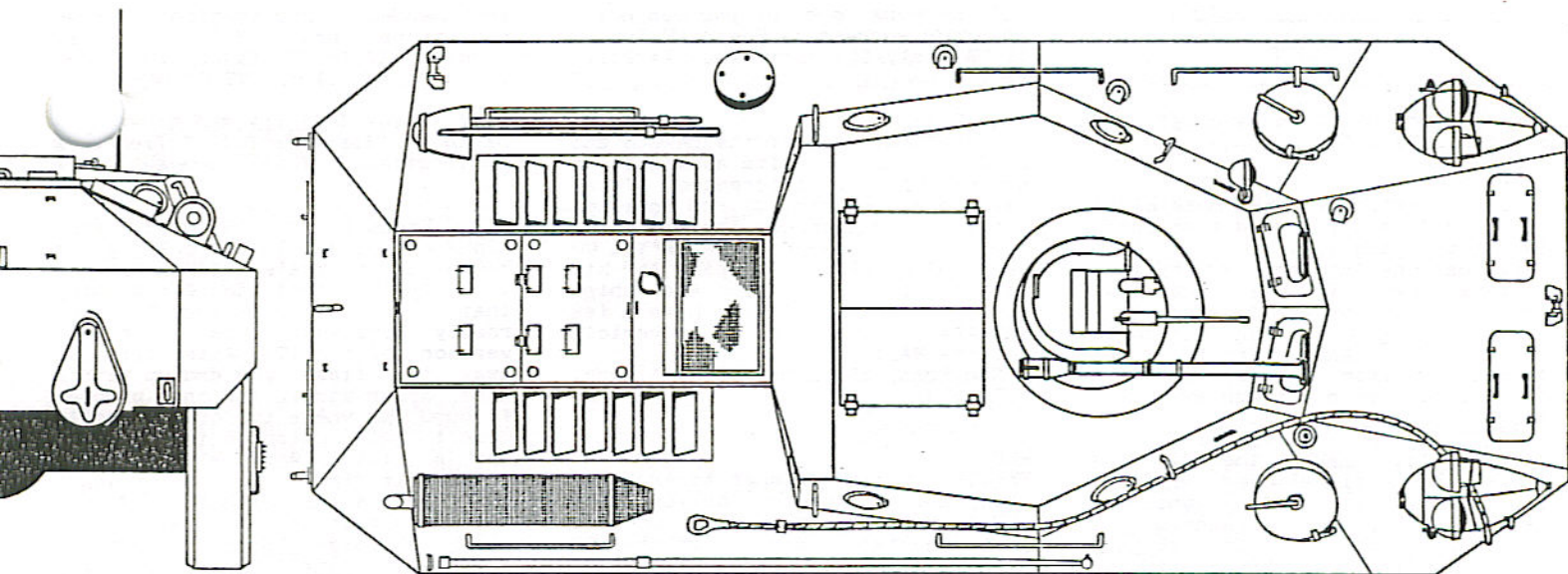
garian Army, but with the only entrance being located on the top of the vehicle, it isn't suited to the role.

Radiological Chemical Reconnaissance

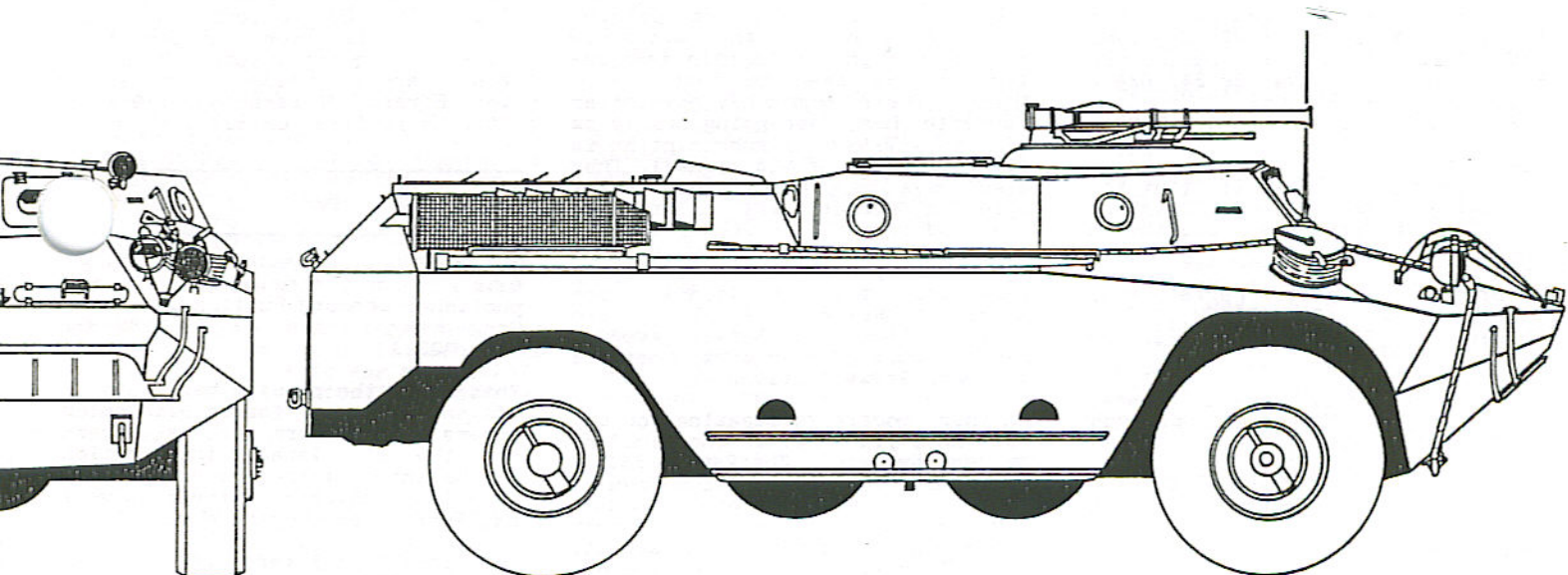
This version performs a similar role to the Soviet BRDM-1 rkh and is used to mark lanes through contaminated areas. For this purpose, racks carrying marker flags are mounted on either side at the hull rear. When required the racks are swung vertically through 90 degrees so that they are over the rear of the hull. The flags can be placed from inside the vehicle.

OT-65A

A Czech modification, this version mounts the turret of the OT-62B tracked APC, mounted on the roof. The turret is armed with a 7.62mm



OT-65A



Scale 1/35th

M59T machinegun with an elevation of +20 degrees and a depression of -10 degrees. The turret is manually rotated through 360 degrees. Mounted externally to the right of the turret is an 82mm T-21 Tarasnice recoilless rifle which can be aimed and fired from inside the turret. The rifle is good for only one shot, when it must be re-loaded from the outside.

MARKINGS

Standard color for the FUG (OT)-65 seems to be the Eastern Block field green, with water soluble over-painting being applied to match ether and terrain conditions.

MODELING NOTES

This would appear to be a scratch building project, although it might be possible to adapt parts from a BRDM-2 kit.

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Jane's World Armoured Fighting Vehicles by Christopher F. Foss. St Martin's Press, 1976.

The New Observer's Book of Tanks & Other Armoured Vehicles by Charles Messenger. Frederick Warne Publishers, 1984.

Wozy Bojowe LWP 1943-1983 by Janusz Magnuski. Wydawnictwo Ministerstwa Obrony Narodowej, 1985.

SPECIFICATIONS

Crew: 5
 Armament: (OT-65) (1) 7.62mm LMG
 Basic load: 1250 rds of 7.62mm
 Length: 5.82m (19' 1")
 Width: 2.31m (7' 6")
 Height: 1.9m (6' 3")
 Weight: 6,100kg (13,444 lbs)
 Engine: One (1) Cespel D-414, 4cyl, Diesel, developing 100 bhp @ 2,300 rpm

Fuel cap: 140 liters (37 gallons)
 Max road speed: 87 km/hr (54 mph)
 Max water speed: 9 km/hr (5 1/2 mph)

Range: 500 km (310 miles)
 Tire size: 12.00x18
 Vertical obstacle: .4m (13")
 Armor: 10mm max
 Maker: Hungarian State Arsenal

Status: Production complete. In service with Bulgaria, Czechoslovakia, Hungary and Poland.

Letters

More on the BA-64 in Issue #1, and other good stuff...

Dear Dave,
There are at least three more BA-64 kits available than you mentioned. In 1/35th scale there are two versions. One from *Karo As* (resin - Germany) bad kit that runs about \$30, and one from *Des Kits* (resin - France) a good version that costs about \$35. And finally *AL-BY Miniatures* from France, (makes a 1/72d scale resin kit) an excellent model.

AL-BY also makes the following 1/72d scale resin armored car kits: Staghound, M20, MB Greyhound, AMD Panhard 178, AMD Panhard 178 (Panzerdraisine), Sd Kfz 231, Sd Kfz 222 Type III, AMD Panhard 178 (Vichy - w/2x7.5mm MGs), AMD Panhard 178 (post 1945), Automitragliatrice AS43. Two other 1/35th scale vehicles are the Adler Kfz 13 in resin, and the AMD Panhard 178 (in plastic).

Addresses for *DES* and *AL-BY* are: Des Kits, 27 rue des HAUTS de BONNE EAU, 94500 CHAMPIGNY SUR SEINE, FRANCE and *AL-BY* Kits, BP 34, 82400 VALENCE D'AGEN, FRANCE.
-Patrice DeBucquoy, Lannoy, France

Dear Dave,
The rumor mill has it that the following armored car kits are going to be released sometime in the future:

Sovereign: Daimler Ferret, Mk1, Mk2, and Mk 1/2. AEC Mk II/III. Humber Mk I/II, Mk II, Mk III, and Mk IV.

Dartmoor Military Models: Saracen (This was confirmed by John Perry of Dartmoor - ed).

Leadsled: GM (Canada) Otter - Doug Somers, Arlington Heights, IL

...More rumors and a couple of requests...

Dear Dave,
...there is a rumor that *Sovereign* will be introducing a Sd Kfz 221, and hopefully this car is of the same good quality as their Sd Kfz 231 (6-Rad). I am strictly interested in German artillery, softskins, armored cars, tanks and selfpropelled weapons from 1933-45. I am also looking for photos from Aberdeen or Fort Knox. (Heiner included an extensive list of vehicles he has photographed in trade for those that might be interested in writing -ed)

-Heiner F. Duske, Nikolaus-Otto Str-10, 2350 Neumunster 2, Germany.

Howard Troup wrote asking about the details of the mounting of the KwK 38 (2cm) cannon in the Sd Kfz 222 /234-1 turret. I don't have any decent information on the subject,

but perhaps one of you can help? Howard's address is Howard H Troup, 16 Bickel Ct, Sterling VA 22170 -ed.

Dear Dave,
I have nine each of the BA-64B and BA-20 (Tondavac) kits available to anyone who is interested. These have english history and instructions, very good quality drawings, and solid wheels. Price is \$11.00 each plus \$2.00 shipping per kit for the first two kits; free shipping thereafter. I also have a few GAZ-AAA trucks, the basic vehicle for the BA-10.
-Dan Egan, 659 Hudson Ave, Albany, NY 12203.

PENPAL
English modeler wishes to exchange kits and books etc., or just talk about military modeling. Contact post haste! Tony Surridge, 97 Shelly Rd, Chelmsford, Essex, CM2 6ES, GREAT BRITIAN

Plugs

For those that haven't yet joined, or heard about the *Miniature Armoured Fighting Vehicle Association* you've been missing a good thing. Their bimonthly newsletter *Tankette* has been going nearly as long as *AFV-News*. A subscription is \$10 surface, or \$14 airmail. They also have many back issues available. A recent list of articles that had appeared on armoured cars, carriers and 1/2 tracks had more than fifty entries. I highly recommend this publication for modelers. Write: M.A.F.V.A., c/o Gary Williams, 15 Berwick Avenue, Heaton Mersey, Stockport, Cheshire SK4 3AA, Great Britain.

Another modeler's magazine you may not have yet seen, is the bimonthly review zine, *The Review International*. The last issue ran 44 pages of model, and product reviews, as well as an in depth piece on accurizing the ESCI LAV kit. This is the place to find out what's new in the model industry, particularly those "cottage" or limited production manufacturers. Another recommended publication, a six issue subscription is \$15 bulk rate, \$20 first class. Write: The Review International, 17525 SW Alexander, Aloha, OR 97006. (and yes, I do contribute to *The Review* -ed)

And for the modelers out there, yet another publication/group, the *Parts Depot*. This group has an interesting concept, besides carrying information on kits available (both aircraft and armor), they coordinate a parts exchange program, where members exchange bits and pieces, as well as complete kits. This organization is more for the builder than the straight kit collector. I know there have been times I sure wished I could get another piece I needed for a conversion, without having to go out and buy a complete kit. another

recommended publication. Subscriptions are \$7.00 for six issues. Write: Parts Depot, PO Box 977, Morrisville, VT 05661-0097

Next issue I'll try and cover... of the *Military Vehicle Collector's* publications that are available -ed

D.J. Trengove of *US Casts* sent along one of his latest castings in resin 1/72d scale. A Panhard AMD 178, (price \$10) the first thing that I can say, is that D.J. has really improved. This is a good version of the 178. After trimming away the flash, you end up with a nice, crisp model. The only problem I found was where two of the wheels didn't quite match up in the mold. But a little work with a file cleaned it right up. This kit isn't yet perhaps the match of an *AL-BY*, but he's getting there fast. Write for his latest price list, which includes some very off-beat vehicles. *US Casts*, PO Box 3229, Santa Cruz, CA 95063.

For those that are new, or may have missed it last time, one of our members has a nifty catalog of *Tonda Mateika* models he has available. Of vacuform and in some cases resin construction, these kits average \$10 each, which is a real bargain. Send for a catalog to: Edward J. Bernardo, 719 W 7th St., Marysville, OH 43040.

Reviews

Battleground Lebanon, by Samuel M. Katz, color plates by Ron Volstad, publisher Concord Publications Co., Hong Kong, price \$7.95, ISBN 962-361-003-3

This is in the popular horizontal 8 1/2 x 11 inch format with color covers and uniform inserts. Covering the 1982 Israeli intervention in Lebanon, there are some really excellent photos of Israeli as well as Syrian and Lebanese vehicles.

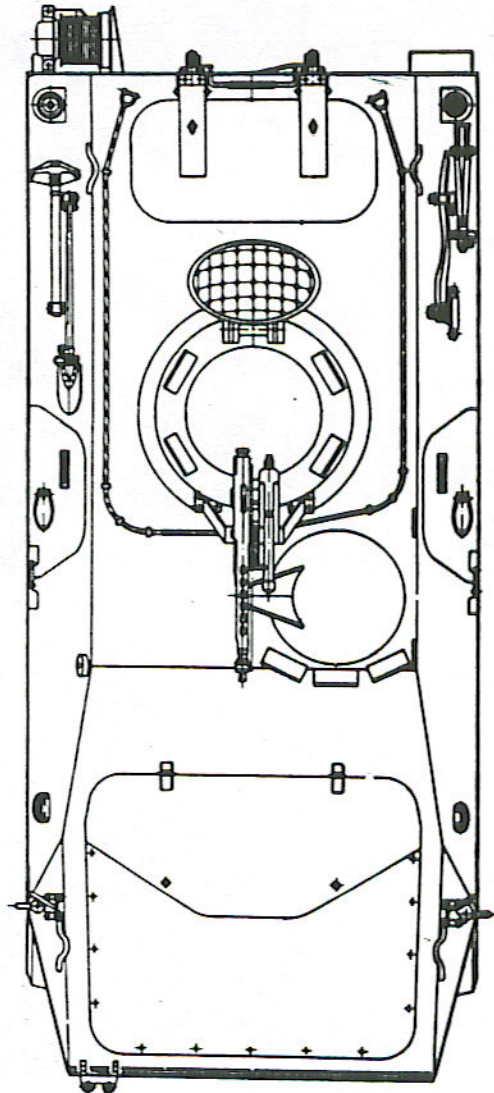
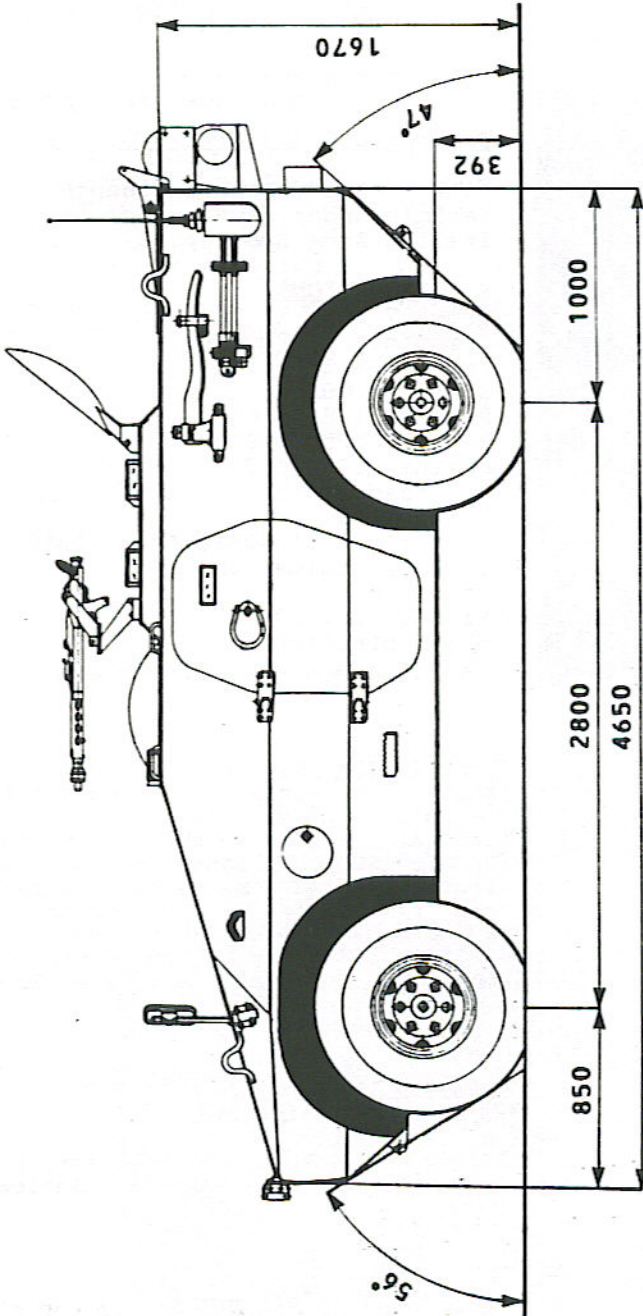
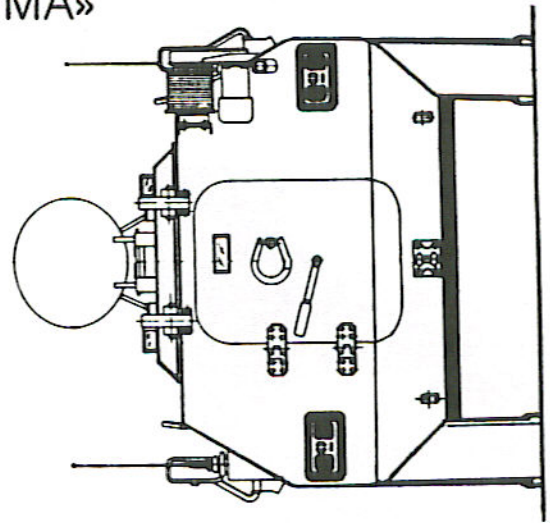
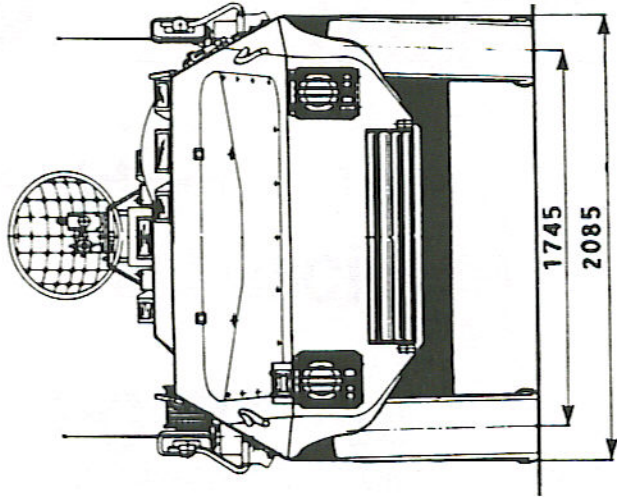
Among the most interesting are some very sophisticated "home built" armored cars produced by the various Lebanese factions in small workshops. These vehicles were purpose built and designed for urban combat, against determined smallarms fire. *This booklet is well worth the price.* You can probably find a copy at a well stocked bookstore or hobby shop.

Soviet Wheeled Armored Vehicles, by Steve Zaloga. Published by Concord Publications Co., Hong Kong, price \$7.95, ISBN 962-361-013-0.

Aside from the introduction, this is a picture book, but what a picture book... every wheeled fighting vehicle buff has to have a copy. This is one of the single best picture references on the BTR family of vehicles you like to find. The interior photos alone are worth the cost. *Buy this one!* For the nit pickers, yes the captions for the front and rear covers are reversed.

Consorzio Iveco Fiat - Oto Melara

APC «PUMA»



Scale 1/35th

.....continued on page 8

Drawing Iveco Fiat-Oto Melara



...continued from page 7

Consorzio Iveco Fiat - Oto Melara

PUMA, APC and Reconnaissance Vehicle under development for the Italian Army and export.

SPECIFICATIONS

Crew: 7
 Armament: 7.62mm LMG
 Length: 4.65m
 Width: 2.08m
 Height: 1.67m
 Weight: 5.5 tons
 Engine: 180 hp @ 3000 rpm
 Max road speed: 105 kmh
 Range: 800 km
 Tire size: 11.00x16 (run flat)
 Turning radius: 6m
 Grade: 60%
 Side slope: 30%
 NBC Protection

Photo: Iveco Fiat-Oto Melara



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