



## The PT-76 Concept...Firepower That Floats

*Introduced by the Soviet Army in 1952, the PT-76 light tank is very lightly armored, with a large hull because of the volume required to maintain its buoyancy. Two water jets at the rear propel the vehicle during amphibious operations, which only require that a trim vane be erected at the front of the hull and that the hull bilge pumps be turned on before entering the water. Opening and closing the water jet ports on either side allow the vehicle to change direction while afloat. The crew of three includes a driver in the hull center front, and a loader and vehicle commander in the turret, where the TC also acts as gunner. The 76mm main gun dates back to the early T-34 cannon of WWII, but similar tanks built in China utilized a different turret and mount 85mm guns. The tank has been employed by the Soviet Army and marines and about 25 other countries.*

This battle-worn PT-76, which has been used for instructional purposes at the NTC, is seen with its trim vane up and turret hatches open, at left. The rear view, at right, clearly shows the two paddle-shaped water jet vents at the rear of the hull and the boxy configuration of the hull itself, needed to provide sufficient flotation.

# The PT-76 Light Tank In the India-Pakistan Wars:

## The Amphibious Armor Advantage

by Adam Geibel

Sharp-eyed readers might have noticed the venerable PT-76 amphibious light tank during the 1999/2000 news coverage of the battle of Grozny. At about the same time, the PT-76 was also active half a world away, during Indonesia's period of civil unrest, as Indonesian Marines patrolled the streets of Ambon in four of the amphibious tanks.

While still useful as a patrol vehicle some fifty years after its introduction, the PT-76's heyday was at the peak of the Cold War. It saw action during the Vietnam and Arab-Israeli Wars, but it

was during the 1971 India-Pakistani conflict that the PT-76 came closest to being employed as the Soviets had foreseen.

### Setting The Stage — The 1965 War

The Indian 7th Light Cavalry was the first Indian Army unit to receive PT-76s, in late August 1965. The 7th had turned in ancient Stuart M-3 light tanks. By the beginning of September, conversion training for the crews had started, supervised by three regimental officers who had been taught in the Soviet Union.

On the day the regiment was to take their new tanks to the range to zero the main guns, they were ordered to confront the Pakistanis crossing the border. Without enough familiarization and without properly boresighted main guns, the Indians went to war. The sudden introduction of the new tank also caused considerable confusion among other Indian units that had not even seen the PT-76 and mistook them for Patton tanks.

As 'C' Squadron was advancing on Chattanwala on September 17th, seven PT-76s (including the tank of the

squadron commander, Major Chopra) became bogged down in deceptively solid-looking ground. The recovery operation took all day and Chopra's tank had to be left behind. A patrol destroyed the tank with demolition charges at 0200 hrs the next morning. (The Pakistani East Bengal Rifles recovered the hulk and kept it as a souvenir at their training center. The 7th recovered it at Chittagong in the '71 War and took it back to their cantonment after the fighting. Later, the Indian Ordnance Corps came to collect it, so all that remains is the Pakistani's brass capture plaque, now in the 7th's Officer's Mess.)

On September 21st, 'C' Squadron skirmished with a troop of Shermans and another of Pattons near Thatti Jaimal Singh, until a troop of Indian Centurions came up to chase off the Pakistanis. Despite exchanging rounds at 600m, only one Sherman, one Patton, and one PT-76 were damaged by gunfire that day.

After the 1965 conflict, the Indian army stationed two PT-76 regiments and two armored car squadrons under XXXIII Corps control in the Nagaland-Mozoram area for COIN operations.

In 1969, they concentrated all three PT-76 regiments in the east (45th Cav, 63rd Cav, and 69th Armor) and by the first week of August, 1970, they were under the control of the newly-raised HQ 3rd Independent Light Armored Brigade.

After that, the 69th was converted to T-55s and its PT-76s were passed on to two armored car squadrons.

### The 1971 War

In 1971, relations between Pakistan and India deteriorated again. In East Pakistan (Bangladesh), bordered on three sides by Indian states and divided by three large rivers, the land was particularly marshy and impassable from May to October. This strongly favored the defense.

The Pakistanis' strategy was to withdraw into prepared defenses and fortresses, stocked with 45 days rations and 60 days ammunition, to delay the Indians as long as possible. Dug-in units were not to pull out unless they had suffered 75 percent casualties, and fortresses were to be defended to the last man. The Pakistani theory was that the Indians would have to devote so many resources to reducing the fortresses that they wouldn't have anything left to make a decisive move.

The East Pakistanis were primarily equipped with M24 Chaffees; one squadron was attached to the 9th ID, three squadrons of the 29th Cavalry Regiment to the 16th ID, and one *ad hoc* squadron of two troops to the 36th. Both the 39th ID and 56th Infantry Brigade had *ad hoc* squadrons (two troops). The 27th Infantry Brigade had a troop of PT-76s that had been raised from four captured from India in 1965 and the 39th ID had an *ad hoc* squadron of two troops.

vided armor support. The town was defended by the Pakistani 12th Field Force battalion (27th Inf Bde) supported by one troop of PT-76s, two companies of EPCAF irregulars, and a field artillery battery.

On the night of 1-2 December, a diversionary attack of eight PT-76s bogged down in a small marsh and were attacked by Pakistani aircraft the next day, but the planes scored no hits and the tanks were self-recovered by



This Indian Army PT-76 is typical of those used in the fighting against Pakistan.

For the invasion of East Pakistan that began on 4 December 1971, the Indian Army had hoped to use their PT-76s. The Indian II Corps had the 45th Cavalry and 'B' Squadron, 63rd Cavalry. XXXIII Corps had the rest of the 63rd, along with the 69th Armored Regiment. The 63rd had T-55s, while both the 45th and 69th had PT-76s. This combination would prove extremely useful in overwhelming the Pakistani defenses.

IV Corps had the 1st and 5th Independent Armored Squadrons. The 5th had a HQ, three troops, each with 11 PT-76s, and four troops, each with 14 Ferret armored cars. The PT-76 troops of the 5th were to support the 57th Mountain Division. The entire 1st Squadron was PT-76-equipped and assigned to the 23rd Mountain Division. Its critical supplies had arrived just in time, including HEAT rounds for the 76mm guns. The track links of the PT-76 fleet had worn out and had just been replaced as well.

### Fighting Begins in East Pakistan

As the 57th Mountain Division advanced on Ahkaura, 5th Squadron pro-

vided armor support. The town was defended by the Pakistani 12th Field Force battalion (27th Inf Bde) supported by one troop of PT-76s, two companies of EPCAF irregulars, and a field artillery battery. On the night of 2-3 December. The squadron then attempted to support the attack on the town, but had trouble crossing the Titas River. Two Pakistani PT-76s were added to the squadron stable and the advance continued. As the 27th Pak Infantry Brigade was withdrawing, the 57th attempted to cut them off. On the night of 8-9 December, the 5th was ordered up to support the pinned-down 18th Rajputs, outside of Ashuganj. Stopped by an impassable nala (washout), they fired at maximum range and allowed the Rajputs to withdraw. Two Indian PT-76s were hit by RCL fire before the gun was knocked out. Other fire destroyed a third, and a fourth was abandoned when it became bogged down. The Pakistani actions allowed their 27th Brigade to cross the Meghna relatively intact.

By the 9th, the 14th Pakistani Division had withdrawn to the dead end at Bhairab Bazar. The bulk of the 57th Mountain Division was heli-lifted across the Mengha River, but armor support was needed to face the two troops of M24s. The PT-76 squadron

Like Soviet ground troops during World War II, these Indian infantrymen sometimes rode into combat on the decks of their tanks, although this photo looks like it portrays a quieter moment after the battle.



was ordered to attempt a river crossing and extensive reconnaissance commenced, but during the crossing on the 12th, the tanks' hull seals were found to be defective. Only two tanks had crossed by the time the operation was cancelled. The squadron moved overland and linked up late on the 14th.

#### **With the 21st Mountain Division**

On 4 December, 1st Squadron supported the 301st Mountain Brigade's advance on the Lalgah-Bangalmuri-Mian Bazar area. This was defended by elements of the 25th Pakistani Field Force Regiment. When infantry got hung up on the Pakistani defenses at Lalgah, 1st Squadron was ordered to take Mian Bazar, which was held by a rifle company and the 25th FF HQ.

Despite shelling and direct fire from 500m, the Pakistani troops hung on to their position. Then the four troops rushed the defenses at 1130 and by 1200 the Pakistanis had been overwhelmed. By 1205 the Indian forces had secured the town. Four tanks were knocked out by recoilless rifle fire and mines. Personnel losses were four wounded, one killed.

As a result of the squadron's actions, the defenders retreated right into a roadblock that had been set up by the 1/11th Gurkhas. The Pakistani commander, six officers, and 202 soldiers surrendered.

Along with their recoilless rifles, the Pakistanis had laid 250 AT mines. Until the arrival of the tanks, the Pakistani commander had been confident that his men could delay the Indians for 48 hours.

By the 6th, the 1st Squadron was on the road again, carrying 'D' Company, 1/11th Gurkha on their rear decks. One

of the most interesting engagements of this war occurred on the 9th, as the 1st Squadron approached the docks at Chandpur. Three Pakistani gunboats with 450 troops on board were sailing down the Megha towards Dacca when the squadron opened fire. All three boats were sunk and 180 survivors were taken prisoner, but the Pakistani 39th Division's HQ did escape in a gunboat.

On the 11th, another gunboat foolishly opened fire with machine guns on a PT-76. It took 54 rounds to ground the gunboat on an islet 1,000 yards away. Then a platoon of 'D' Co., 1/11th Gurkha Rifles went out to take their surrender, but the Pakistanis opened fire. Between the fire of the Gurkhas and the tanks' 76mm fire, 83 Pakistani infantrymen were killed and 33 captured.

#### **In the Northwest**

By 10 December, XXXIII Corps sat across the Karatoya River from Gombindganj, which was defended by a Pakistani infantry battalion (32nd Baluch, less two companies, one company 30th Punjab, and one engineer company) with a 105mm field battery and three tanks in support. The Indian plan was to cross the river to the east and flank 55km around to take the town.

Elements of the 340th Mountain Brigade (69th Armored less one squadron, with 'A' Squadron, 63rd added and 5/11th Gurkhas, less one company riding the PT-76 decks) were committed to take the town. As the Indians approached their objective around 1500 hrs, a squadron of PT-76s with a company of Gurkhas peeled off to form a block behind the town.

The main body assaulted through the objective after artillery preparation, overran the Pak cannon, and forced the defenders to retreat — right into the blocking force. One Chaffee tank and two RCL guns were destroyed, and 55 three-ton trucks captured.

The advance continued on to Bogra, launching a similar attack on the town during the night of 11 December. The results were similar — Bogra fell by mid-morning of the 12th.

#### **In the West**

Prior to the start of the war, the Indians crossed the Kabadak river and moved their 42nd Brigade up to Garibpur in order to overwatch the Chaugacha-Jessore road.

On 20 November, the 14th Punjab and 'C' Squadron, 45th Cavalry were in position, though one tank was positioned too far forward. The Pakistanis started their response around 0000 hrs, 21 November. Two companies of the 6th Punjab (Pak) started from one direction, two companies of the 21st Punjab (Pak) with a tank squadron from another.

The 21st was within earshot of the Indians by 0400, but heavy fog limited visibility to 30m. Pakistani artillery support fell wide and the Indians waited until the Pakistanis were at point blank range. Two troops were leading. At ranges of 30 to 50m, six Chaffees and one PT-76 were destroyed. After hesitating, the remaining two troops and eight tanks of the squadron headquarters continued their assault. The Indians engaged them again.

By morning light, there were nine damaged tanks and two abandoned, apparently the squadron HQ tanks. In the days that followed, there were more

---

engagements, though none of consequence.

### Tank Ambush at Kushtia

On 9 December, the 7th Brigade was advancing on Kushtia. The vanguard of the advance was 'A' Company, 22 Rajput, with two troops of 'A' Squadron, 45th Cavalry attached.

The 57th Pakistani Brigade had left a delaying force — an infantry company equipped with recoilless rifles and two tank troops, along with a small unit of irregulars ("Razakars"). Pakistani Majors Zahid (18 Punjab) and Sher ur Rahman (29 Cavalry) set up an ambush in or just beyond Kushtia where a road passed over a high embankment flanked by a marshy area. Beyond the open spaces were trees and buildings. To retreat, an Indian force would have to skyline itself.

Before the Indians had cleared the town, a helicopter landed near the 22 Rajput Battalion HQ. Generals Raina and Brar dismounted, then chided the commanders for their caution as the Pakistanis were obviously on the run.

The Indian advance continued, far less vigilant than before. Six tanks entered the Pak killing zone only 30m apart, and the infantry walked alongside with slung arms. The first shot from an M24 took out the fifth PT-76 in line and every Pakistani weapon joined in. The last tank neutral steered about and exited the kill zone at high speed. The two leading tanks returned fire and destroyed a Chaffee before being hit themselves.

The retreating tank and heavy fire panicked the following companies of the 22 Rajput. Within minutes the battalion ceased to be a viable fighting force. Apparently, the two remaining tanks — though trapped — kept up a sharp and effective fire for a while, but later that day, the crews were found shot, with their arms and legs bound.

All that the Indian 7 Brigade commander could do was to organize a defensive position with his second battalion behind a canal close to Kushtia. At last light, the Pakistanis blew up the canal bridge and withdrew to Paksay (under the beginning of a two-day strafing by the Indian Air Force). The ambush created a minor panic in the Indian command and the 4th Mountain Division's advance came to a halt.

Valuable time was lost while elaborate plans were laid to assault the now

abandoned town with two brigades, who were forced to backtrack. However, the town was found to be clear on 11 December.

### The Advance Continues

It wasn't until the 12th that 'A' Squadron reached the Hardinge bridge over the Ganges River. The Pakistanis had abandoned their elaborate defense works, many vehicles, and even an M24 on the bridge itself.

When the 9th (Indian) Division prepared to assault Daulatpur, they forced a crossing of the Bhairab River on 13-14 December. One objective was to take the ferry at Syamganj. The 45 Cavalry's tanks floated down the river and engaged targets while other tanks supported the infantry on the river banks. The town was captured by that afternoon. The 107th Paki Brigade surrendered with 3,700 men on the 15th.

By the 13th, an ad hoc force from the 9th Pakistani Division was defending a line along the 400m wide Madhumati River. On the night of 14-15, two troops of 'A' Squadron, 45th Cavalry crossed to the north of the Pakistanis (securing the Kumarkhali ferry site by first light). The two troops crossing to the south had trouble with the river approaches, so that only two tanks were across by 1030 the next morning.

However, the tanks — along with the infantry carried on their decks — set up roadblocks north and south of the Pakistani positions. This eventually forced the surrender of 50 officers and 343 soldiers.

### Lessons Learned

Though the India-Pakistan War of '71 was one of the Cold War's underreported conflicts, the Indian Army light armor squadrons executed many of their missions with surprising ingenuity. It was a 'war on a budget,' but the Indians made textbook ideals and theories work for them. The poor logistical standing of the PT-76 units at the beginning of hostility would come back to haunt the Indians time and again during that short war, but they persevered with aggressive tactics.

The Indian PT-76s were usually deployed in squadron strength (the Pakistanis were usually deployed only by troops of three) and engaged targets at ranges under 1,000m. While this brought the Indians dangerously close to Pakistani AT weapons, the threat was less than it seemed: the WWII-era

M24 Chaffee gun tubes were worn out, so that accuracy beyond 1,000 meters was impossible. The 106mm recoilless rifle's maximum range against stationary targets at the time was 800m, the M20 bazooka under 300.

While the M24's obsolete 75mm made short work of the PT-76, the Pakistani 106mm RCL HEAT rounds didn't cause the havoc that might have been expected, probably due to poor Pakistani handling. There were also rumors that these guns were delivered without manuals. Another factor was that the war was fought in the era before wide-spread Pakistani issue of the RPG-7. While Pakistan had U.S.-made 3.5-inch M20 bazookas, these appeared to have not been used much.

The Indians married their infantry closely with their tanks, which allowed rapid exploitation of any gaps they punched in Pakistani lines. The wide deck of the 76 could easily accommodate a 12-man squad, and even a platoon could be crammed aboard if the crossing was uncontested. This allowed foot-mobile infantry companies to be piggy-backed on ten-tank squadrons.

The Indian Army's repeated use of their amphibious capability allowed them to bypass soft ground and water obstacles that would have checkmated T-55-equipped armor units. Even in 1971, the PT-76 was approaching technological obsolescence but, "In the land of the blind, the one-eyed man is king."

### References

*I SERVE, The Eighteenth Cavalry*, MG Gurharn Singh Sandhu, Lancer International, 1991.

*7th Light Cavalry 1784-1990*, LTC C.L. Proudfoot (Ret'd), Lancer International.

*The Indian Armour, History of the Indian Armoured Corps (1941-1971)*, MG Gurharn Singh Sandhu, PVSM (Ret'd), Vision Books.

Maj. (Ret'd) Agha Humayun Amin, *Defence Journal*, November 2000.

"TNI Chief Orders Troops in Ambon to be Neutral," *Bali Post*, 11 Jan 00.

(Thanks to Professor Paul Walsh, for the loan of his personal library.)

---

CPT Adam Geibel is the S2, 5/117th Cavalry, 421D (NJARNG). In civilian life, he is the Associate Editor of the *Journal of Military Ordnance* and a freelance writer.