

# TACTICAL DATA

## VISIBILITY RANGES (day, good weather)

U-boat sees enemy units with:

- 6 observers - under 7 NM
- 5 observers - under 6 NM
- 4 observers - under 5 NM
- 3 observers - under 4 NM
- 2 observers - under 3 NM
- 1 observer - under 2 NM
- Periscope - under 4 NM

Merchants see surfaced U-boat - under 2,4 NM  
 Escorts see surfaced U-boat - under 2,6 NM  
 Enemy sees periscope - under 0,5 NM

## ATTACK RANGES

### Torpedoes:

Minimum firing range - 300 meters  
 Maximum firing range - 2 NM

### Firing arc:

tubes 1-4: between 330 and 30 degrees  
 tube 5: between 150 and 210 degrees

88mm gun range - 2000 meters

## HYDROPHONE

U-boat hydrophone max effective range: 54 NM

Escort hydrophone can detect submerged U-boat:

- U-boat noise meter beyond acceptable threshold - under 1600 m
- U-boat at full ahead - under 1000 m
- U-boat at half ahead - under 350 m
- U-boat at slow ahead - under 50 m

## NIGHT AND WEATHER MODIFIERS

Sunrise - 08:00

Sunset - 20:00

### Night

U-boat - minus 35% to range of vision

Enemy - minus 80% to range of vision

Weather (same for both U-boat and enemy)

Overcast - minus 5% to range of vision

Rain - minus 10% to range of vision

Fog - minus 25% to range of vision

Storm - minus 20% to range of vision, NO ATTACKS POSSIBLE

## U-BOAT SPEEDS

### Surfaced:

slow ahead - 4 kn  
 half ahead - 8 kn  
 full ahead - 17 kn  
 full astern - 8 kn

### Submerged:

slow ahead - 2 kn  
 half ahead - 4 kn  
 full ahead - 8 kn  
 full astern - 4 kn

## TORPEDO CHANCE TO HIT:



90%



60%



15%

**Geheim!**