

ENR-3.2.6 "T" ROUTES

1. NAVIGATION SPECIFICATION

RNAV routes in Republic of Kazakhstan require RNAV 5 capability. Supported sensors are VOR/DME, INS/IRS, GNSS or their combination.

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
T522 (RNAV 5)						
▲ ARKALYK DVOR/ DME (ARK)	501904N 0670118E					
	346° 164°	126.6 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}
△ LATKO	522508N 0664427E KTU 229.0° 118.6 NM (900 FT)					
	354° 173°	53.5 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.8 MHZ {C}
▲ BAVAG	531819N 0665235E KTU 256.0° 98.6 NM (900 FT)					
	347° 166°	88.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.8 MHZ {C}
▲ BEBLU (FIR BDRY)	544630N 0665030E PSK 256.0° 82.6 NM (500 FT)					For continuation, see AIP Russia

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
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T523 (RNAV 5)						
▲ KARAGANDA DVOR/DME (KRG)	494114N 0732226E					

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	299° 117°	53.7 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ KARAGANDA TOWER 122.0 MHZ {C}
▲ BEDKA	501318N 0721545E KRG 297.0° 53.7 NM (1800 FT)					
	298° 117°	53.7 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.8 MHZ ASTANA APPROACH 124.6 MHZ {C}
△ LIGMO	504539N 0710837E AST 207.0° 18.2 NM (1200 FT)					
	296° 116°	17.7 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.8 MHZ ASTANA APPROACH 124.6 MHZ {C}
△ APTUS	505558N 0704601E AST 251.0° 25.6 NM (1200 FT)					
	294° 113°	37.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.8 MHZ ASTANA APPROACH 124.6 MHZ {C}
△ KODOL	511638N 0695651E AST 276.0° 58.5 NM (1200 FT)					
	296° 114°	72.5 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.8 MHZ {C}
▲ ATBAN	515824N 0682152E KTU 197.0° 94.6 NM (900 FT)					

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
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T524 (RNAV 5)						

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
▲ USUGA	433600N 0761934E ATA 287.3° 35.8 NM (2200 FT)					
	289° 108°	31.5 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 131.4 MHZ ALMATY APPROACH 124.8 MHZ {C}
△ BEKRO	434850N 0753952E ATA 288.4° 67.3 NM (2200 FT)					
	288° 107°	45.2 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 131.4 MHZ {C}
▲ BOBRO (FIR BDRY)	440648N 0744228E ATA 288.9° 112.5 NM (2200 FT)					
	287° 107°	33.9 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 132.7 MHZ In case of possible VHF radio communication failure at FL120– FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Approach” on frequencies 4744 kHz. - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ ALAKO	441958N 0735903E ATA 289.1° 146.4 NM (2200 FT)					
	287° 103°	150.3 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 132.7 MHZ {C}
▲ PABRI (FIR BDRY)	451455N 0704239E TAR 344.0° 144.8 NM (2200 FT)					

Route designator		[Route Usage Notes]					
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks	
				↓	↑		
T586 (RNAV 5)							
▲ ALABA		481845N 0553938E AKB 196.0° 131.5 NM (700 FT)					
	049° 229°	25.4 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 129.6 MHZ In case of possible VHF radio communication failure at FL 120–FL 190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Ambarchik” on frequencies 4656 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}	
△ LOGTO		483204N 0561202E AKB 189.0° 110.7 NM (700 FT)					
	048° 229°	96.1 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 129.6 MHZ {C}	
△ KEKUN		492143N 0581653E AKB 131.0° 69.0 NM (700 FT)					
	050° 230°	41.4 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 129.6 MHZ {C}	
△ ENETO		494223N 0591154E AKB 103.0° 84.9 NM (700 FT)					
	050° 231°	38.5 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 129.6 MHZ {C}	
△ KESOT		500111N 0600343E AKB 088.0° 112.1 NM (700 FT)					
	051° 231°	45.4 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 129.6 MHZ {C}	
△ BESOL		502254N 0610548E AKB 078.0° 150.7 NM (700 FT)					
	051° 232°	37.8 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 129.6 MHZ {C}	

Route designator		[Route Usage Notes]						
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks		
				↓	↑			
▲ RAVNI (FIR BDRY)	504030N 0615807E KST 188.0° 162.1 NM (600 FT)							
	047° 228°	52.1 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 133.1 MHZ {C}		
△ GUMGA	510752N 0630806E KST 175.0° 124.7 NM (600 FT)							
	047° 228°	46.5 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 133.1 MHZ {C}		
△ NARUR	513200N 0641130E KST 155.0° 102.0 NM (600 FT)							
	049° 230°	25.1 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 133.1 MHZ {C}		
△ KUSUM	514420N 0644639E KST 141.0° 97.8 NM (600 FT)							
	049° 230°	83.4 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 133.1 MHZ {C}		
△ LATKO	522508N 0664427E KTU 229.0° 118.6 NM (900 FT)							
	050° 230°	23.9 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 133.1 MHZ {C}		
▲ MONEG	523627N 0671849E KTU 229.0° 94.7 NM (900 FT)							
	050° 231°	50.2 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ {C}		
△ LALKA	530017N 0683140E KTU 230.0° 44.5 NM (900 FT)							
	050° 231°	44.5 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ KOKSHETAU TOWER 127.9 MHZ {C}		
▲ KOKSHETAU VOR/DME (KTU)	532103N 0693701E							
	052° 233°	41.9 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ KOKSHETAU TOWER 127.9 MHZ {C}		

Route designator		[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
△ ADEBA	533925N 0704004E KTU 053.0° 41.9 NM (900 FT)					
	052° 233°	34.0 NM	<div>FL 510 FL 120</div>	Odd	Even	ASTANA ACC 132.8 MHZ {C}
△ PETOR	535420N 0713136E KTU 053.0° 75.9 NM (900 FT)					
	052° 233°	34.6 NM	<div>FL 510 FL 120</div>	Odd	Even	ASTANA ACC 132.8 MHZ {C}
▲ DAKIN (FIR BDRY)	540930N 0722418E KTU 053.0° 110.5 NM (900 FT)					For continuation, see AIP Russia

Route designator		[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
T649 (RNAV 5)						
▲ KARAGANDA DVOR/DME (KRG)		494114N 0732226E				
	049° 230°	43.3 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 124.1 MHZ KARAGANDA TOWER 122.0 MHZ {C}
△ GOLTU		500404N 0741911E KRG 050.0° 43.2 NM (1800 FT)				
	049° 230°	37.7 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 124.1 MHZ {C}
△ BODNU		502346N 0750918E KRG 050.0° 81.0 NM (1800 FT)				
	051° 231°	19.2 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 124.1 MHZ {C}

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
▲ ODAMA	503331N 0753513E KRG 051.0° 100.2 NM (1800 FT)					
	051° 232°	44.0 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ {C}
△ GOBSO	505523N 0763521E PVL 184.0° 79.6 NM (500 FT)					
	052° 232°	31.1 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ {C}
△ GALKI	511035N 0771814E PVL 164.0° 62.6 NM (500 FT)					
	052° 233°	42.1 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ {C}
△ ABDAM	513051N 0781707E PVL 125.0° 60.9 NM (500 FT)					
	053° 234°	40.8 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ {C}
▲ LAGMO (FIR BDRY)	514954N 0791500E PVL 098.0° 83.0 NM (500 FT)					For continuation, see AIP Russia

Route designator		[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit	FL series		Controlling unit {Airspace class} Remarks
			Lower limit	↓	↑	
T916 (RNAV 5)						
▲ BALUN (FIR BDRY)		420100N 0512742E AKT 163.0° 112.7 NM (100 FT)				
	050°	111.6 NM	FL 510 FL 250	Odd		AKTOBE ACC 119.8 MHZ {C}

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
△ ARNUS	430052N 0533509E AKT 107.0° 121.6 NM (100 FT)				
	077°	106.5 NM	FL 510 FL 250	Odd	AKTOBE ACC 119.8 MHZ {C}
▲ KUNAS (FIR BDRY)	430923N 0560000E BNU 156.0° 136.4 NM (0 FT)				

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
T916 (RNAV 5)					
▲ AKALI (FIR BDRY)	440829N 0611937E ARL 175.0° 161.5 NM (300 FT)				
	078°	12.9 NM	FL 510 FL 250	Odd	SHYMKENT ACC 127.3 MHZ {C}
△ FAZUL	440916N 0613731E ARL 171.0° 160.3 NM (300 FT)				
	079°	29.4 NM	FL 510 FL 250	Odd	SHYMKENT ACC 127.3 MHZ {C}
△ TOZLI	441054N 0621817E KZO 251.0° 143.4 NM (500 FT)				
	080°	37.4 NM	FL 510 FL 250	Odd	SHYMKENT ACC 127.3 MHZ {C}
△ ZURGO	441233N 0631012E KZO 248.0° 106.9 NM (500 FT)				
	081°	43.2 NM	FL 510 FL 250	Odd	SHYMKENT ACC 127.3 MHZ {C}
△ ERTUZ	441307N 0641019E KZO 238.0° 66.3 NM (500 FT)				

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
	079°	28.0 NM	FL 510 FL 120	Odd	SHYMKENT ACC 127.3 MHZ {C}
△ DILNA	441450N 0644911E KZO 222.0° 41.8 NM (500 FT)				
	080°	69.4 NM	FL 510 FL 150	Odd	SHYMKENT ACC 127.3 MHZ {C}
△ GITIM	441752N 0662540E KZO 116.0° 44.1 NM (500 FT)				
	082°	47.3 NM	FL 510 FL 120	Odd	SHYMKENT ACC 127.3 MHZ {C}
△ BIMDO	441809N 0673135E TRK 315.0° 74.3 NM (1000 FT)				
	078°	59.9 NM	FL 510 FL 120	Odd	SHYMKENT ACC 127.3 MHZ {C}
▲ TUROK	442214N 0685447E TRK 007.0° 64.3 NM (1000 FT)				
	087°	60.8 NM	FL 510 FL 120	Odd	SHYMKENT ACC 132.7 MHZ {C}
△ INLIG	441743N 0701919E TAR 328.0° 94.9 NM (2200 FT)				
	088°	46.4 NM	FL 510 FL 120	Odd	SHYMKENT ACC 132.7 MHZ {C}
△ MIHOS	441332N 0712336E TAR 358.0° 81.4 NM (2200 FT)				
	089°	68.4 NM	FL 510 FL 120	Odd	SHYMKENT ACC 132.7 MHZ {C}
△ INDAG	440635N 0725812E TAR 038.0° 104.8 NM (2200 FT)				

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
	090°	67.0 NM	FL 510 FL 120	Odd	SHYMKENT ACC 132.7 MHZ In case of possible VHF radio communication failure at FL 120–FL 190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Approach” on frequencies 4744 kHz. - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ LONSI (FIR BDRY)	435826N 0743022E ATA 284.0° 117.9 NM (2200 FT)				
	091°	65.5 NM	FL 510 FL 250	Odd	ALMATY ACC 131.4 MHZ {C}
△ REGMU	435005N 0760012E ATA 295.6° 54.6 NM (2200 FT)				
	094°	52.3 NM	FL 510 FL 250	Odd	ALMATY ACC 131.4 MHZ {C}
△ NIGET	434124N 0771126E ATA 008.5° 19.5 NM (2200 FT)				
	095°	38.8 NM	FL 510 FL 250	Odd	ALMATY ACC 131.4 MHZ {C}
△ PIGAL	433428N 0780356E ATA 068.9° 44.5 NM (2200 FT)				