

**STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO**

**TRANSITION ALTITUDE  
6000**

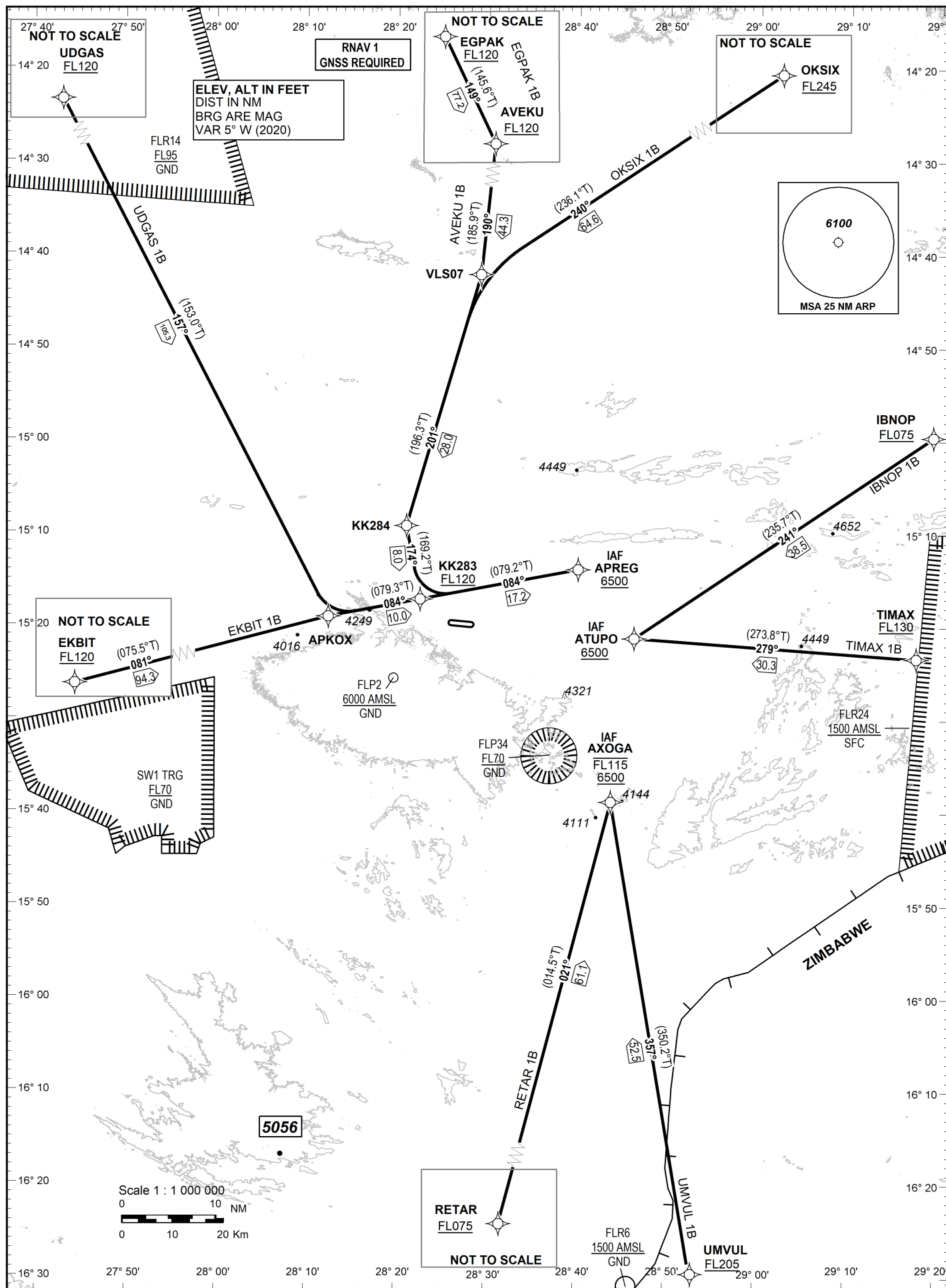
APP 121.300  
120.100  
TWR 118.100

**KENNETH KAUNDA INTL/Lusaka**

**(FLKK)**

**RNAV STAR RWY 28**

AVEKU 1B, EGPAK 1B, EKBIT 1B, IBNOP 1B, OKSIX 1B, RETAR 1B, TIMAX 1B, UDGAS 1B, UMVUL 1B



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TABULAR DESCRIPTION

RNAV STAR RWY 28  
AVEKU 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	IF	AVEKU	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	VLS07	-	190 (185.9)	-	44.3	-	-	-	-	-	RNAV 1
030	TF	KK284	-	201 (196.3)	-	28.0	-	-	-	-	-	RNAV 1
040	TF	KK283	-	174 (169.2)	-	8.0	-	+FL120	-	-	-	RNAV 1
050	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

EGPAK 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
10	IF	EGPAK	-	-	-	-	-	+FL120	-	-	-	RNAV 1
20	TF	AVEKU	-	149 (145.6)	-	77.2	-	-	-	-	-	RNAV 1
30	TF	VLS07	-	190 (185.9)	-	44.3	-	-	-	-	-	RNAV 1
40	TF	KK284	-	201 (196.3)	-	28.0	-	-	-	-	-	RNAV 1
50	TF	KK283	-	174 (169.2)	-	7.3	-	-	-	-	-	RNAV 1
60	TF	APREG	-	084 (079.2)	-	16.5	-	+6500	-	-	-	RNAV 1

EKBIT 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	IF	EKBIT	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	APKOX	-	081 (075.5)	-	94.3	-	-	-	-	-	RNAV 1
030	TF	KK283	-	084 (079.3)	-	10.0	-	+FL120	-	-	-	RNAV 1
040	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

IBNOP 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	IF	IBNOP	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	ATUPO	-	241 (235.7)	-	38.5	-	+6500	-	-	-	RNAV 1

OKSIX 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	IF	OKSIX	-	-	-	-	-	+FL245	-	-	-	RNAV 1
020	TF	VLS07	-	240 (236.1)	-	64.6	-	-	-	-	-	RNAV 1
030	TF	KK284	-	201 (196.3)	-	28.0	-	-	-	-	-	RNAV 1
040	TF	KK283	-	174 (169.2)	-	8.0	-	+FL120	-	-	-	RNAV 1
050	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

RETAR 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	IF	RETAR	-	-	-	-	-	+FL075	-	-	-	RNAV 1
020	TF	AXOGA	-	021 (014.5)	-	61.1	-	-FL115 +6500	-	-	-	RNAV 1

TIMAX 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	IF	TIMAX	-	-	-	-	-	+FL130	-	-	-	RNAV 1
020	TF	ATUPO	-	279 (273.8)	-	30.3	-	+6500	-	-	-	RNAV 1

UDGAS 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	IF	UDGAS	-	-	-	-	-	+FL120	-	-	-	RNAV 1
020	TF	APKOX	-	157 (153.0)	-	105.3	-	-	-	-	-	RNAV 1
030	TF	KK283	-	084 (079.3)	-	10.0	-	+FL120	-	-	-	RNAV 1
040	TF	APREG	-	084 (079.2)	-	17.2	-	+6500	-	-	-	RNAV 1

UMVUL 1B

Serial Number	Path Descriptor	Waypoint Identifier	Fly-over	Course M°(T°)	Magnetic Variation (°)	Distance (NM) / Duration	Turn Direction	Altitude (FT)	Speed Limit (KT)	VPA (%)	Rec Nav aids	Navigation Specification
010	IF	UMVUL	-	-	-	-	-	+FL205	-	-	-	RNAV 1
020	TF	AXOGA	-	357 (350.2)	-	52.5	-	-FL115 +6500	-	-	-	RNAV 1

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WAYPOINT LIST  
RNAV STAR RWY 28

WaypointIdentifier	Coordinates		WaypointIdentifier	Coordinates	
APKOX	S 15 19 05.0	E 028 12 26.6	TIMAX	S 15 23 24.0	E 029 17 36.0
APREG	S 15 13 58.0	E 028 40 05.4	UDGAS	S 13 44 59.6	E 027 22 58.5
ATUPO	S 15 21 21.7	E 028 46 20.0	UMVUL	S 16 30 52.0	E 028 53 08.0
AVEKU	S 13 57 60.0	E 028 33 54.0	VLS07	S 14 42 17.0	E 028 29 11.0
AXOGA	S 15 38 57.6	E 028 43 50.8			
EGPAK	S 12 54 06.0	E 027 49 06.0			
EKBIT	S 15 43 05.0	E 026 37 59.0			
IBNOP	S 14 59 36.0	E 029 19 18.0			
KK283	S 15 17 12.6	E 028 22 36.5			
KK284	S 15 09 19.0	E 028 21 03.7			
OKSIX	S 14 06 12.0	E 029 24 30.0			
RETAR	S 16 37 46.8	E 028 28 18.0			

ROUTING

NAME	TEXT
AVEKU 1B	From AVEKU track 190° to VLS07, track 201° to KK284, track 174° to KK283, track 084° to APREG. MEL/MEA: AVEKU AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
EGPAK 1B	From EGPAK track 149° to AVEKU, track 190° to VLS07, track 201° to KK284, track 174° to KK283, track 084° to APREG. MEL/MEA: EGPAK AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
EKBIT 1B	From EKBIT track 081° to APKOX, track 084° to KK283, track 084° to APREG. MEL/MEA: EKBIT AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
IBNOP 1B	From IBNOP track 241° to ATUPO. MEL/MEA: IBNOP AT or ABOVE FL075, ATUPO AT or ABOVE 6500'.
OKSIX 1B	From OKSIX track 240° to VLS07, track 201° to KK284, track 174° to KK283, track 084° to APREG. MEL/MEA: OKSIX AT or ABOVE FL245, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
RETAR 1B	From RETAR track 021° to AXOGA. MEL/MEA: RETAR AT or ABOVE FL075, AXOGA BETWEEN FL115 and 6500'.
TIMAX 1B	From TIMAX track 241° to ATUPO. MEL/MEA: TIMAX AT or ABOVE FL130, ATUPO AT or ABOVE 6500'.
UDGAS 1B	From UDGAS track 157° to APKOX, track 084° to KK283, track 084° to APREG. MEL/MEA: UDGAS AT or ABOVE FL120, KK283 AT or ABOVE FL120, APREG AT or ABOVE 6500'.
UMVUL 1B	From UMVUL track 357° to AXOGA. MEL/MEA: UMVUL AT or ABOVE FL205, AXOGA BETWEEN FL115 and 6500'.