

STANDARD DEPARTURE CHART
RNAV (GNSS) -
INSTRUMENT (SID)

TWR 118.6 / 118.25
APP 120.3
124.05
ACC 134.2

TRANSITION ALTITUDE
11 000ft

D-ATIS AP ID-WSSS
128.6

SINGAPORE/Singapore Changi
RWY 20L
TOMAN DEPARTURES
TOMAN 1D

GENERAL INFORMATION

INITIAL CLIMB
3000FT

CAUTION: RWY 02R/20L NOT AVAILABLE FOR CIVIL USE UNTIL
FURTHER ADVISED

NOTE: RADAR REQUIRED

NOTE: RNAV-1 NAVIGATION SPECIFICATION GNSS REQUIRED

NOTE: ACFT UNABLE TO FLY THE SID PROFILE
SHALL INFORM ATC PRIOR TO DEPARTURE AND
EXPECT RADAR VECTORING IF NECESSARY

NOTE: WHEN TAKEN OFF THE SID, AS INSTRUCTED BY ATC,
REFER TO ENR 1.5, SECTION 3, PARAGRAPH 3.4.3
- FOR RWY 20L MINIMUM CLIMB GRADIENT

NOTE: REFER TO BACK PAGE FOR
- FORMAL AND TABULAR DESCRIPTIONS
- RADIO COM FAILURE PROCEDURES

PROCEDURE INFORMATION

SID SHALL NOT EXCEED IAS 230KTS UNTIL
PASSING 4000FT AMSL AND NOT EXCEED
IAS 250KTS UNTIL PASSING 10000FT AMSL.

CRUISING LEVELS WILL BE ISSUED AFTER TAKE-OFF
BY SINGAPORE RADAR.

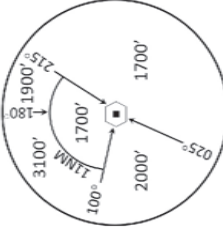
SID SHALL BE ON A MINIMUM CLIMB GRADIENT OF 9%
UNTIL REACHING OR PASSING 2500FT, THEREAFTER 3.3%.

GND SPEED - KNOTS	75	100	150	200	250	300
9% V/V (fpm)	684	911	1367	1823	2279	2734
3.3% V/V (fpm)	251	334	501	668	835	1003

ELEV, ALT IN FEET

BEARINGS, TRACKS AND
RADIALS ARE MAGNETIC
VAR 0°23'E (2020)

DISTANCES IN NM



MSA 25 NM
from TEKONG DVOR

TEKONG
DVOR/DME 116.5
VTK ---
01° 24' 55"N
104° 01' 20" E
60m

DER(RWY 20L)
01° 19' 19"N
103° 59' 59"E

UKIBO
01° 17' 58"N
103° 59' 24"E

DUBOI
01° 08' 46"N
104° 01' 03"E
A040

ERVIV
01° 04' 45"N
104° 10' 13"E
A060

MUMDU
01° 05' 21"N
104° 27' 14"E

SEBVO
01° 12' 58"N
104° 34' 48"E
A090

GOIGA
01° 20' 13"N
104° 42' 00"E

VEBMA
01° 20' 30"N
104° 53' 32"E

TOMAN
01° 21' 47"N
105° 47' 17"E

TOMAN 1D (SID) RNAV GNSS RWY 20L - DESCRIPTIONS

Formal & Abbreviated Descriptions

Formal Description	Abbreviated Description	Path Terminator	Fly-Over required
To UKIBO on course 203°, turn left.	UKIBO [M203; L] -	CF	N
To DUBOT at or above 4000ft, turn left.	DUBOT [A040+; L] -	TF	N
To ERVIV at 6000ft, turn left.	ERVIV [@A060; L] -	TF	N
To MUMDU, turn left.	MUMDU [L] -	TF	N
To SEBVO at or below 9000ft.	SEBVO [A090-] -	TF	N
To GOTGA, turn right.	GOTGA [R] -	TF	N
To VEBMA.	VEBMA -	TF	N
To TOMAN.	TOMAN	TF	N

Tabular Descriptions

Path Term	Waypoint Name	Fly-Over	Course °M(°T)	Distance (NM)	Turn Direction	Altitude	Speed Limit	Navigation Spec
CF	UKIBO	Y	203(203.4)	1.5	L	-	-	RNAV1
TF	DUBOT	-	169(169.4)	9.0	L	A040+	-	RNAV1
TF	ERVIV	-	113(113.4)	10.0	L	@A060	-	RNAV1
TF	MUMDU	-	088(088.4)	17.0	L	-	-	RNAV1
TF	SEBVO	-	045(045.4)	11.0	-	A090-	-	RNAV1
TF	GOTGA	-	045(045.4)	10.0	R	-	-	RNAV1
TF	VEBMA	-	088(088.4)	12.0	-	-	-	RNAV1
TF	TOMAN	-	088(088.4)	54.0	-	-	-	RNAV1

Radio Communications Failure Procedure

1	SET TRANSPONDER TO MODE A/C CODE 7600
2	COMMUNICATIONS FAILURE OCCURS IMMEDIATELY AFTER DEPARTURE: PROCEED DIRECT TO SAMKO HOLDING AREA (SHA) CLIMBING TO THE LAST ASSIGNED ALTITUDE, THEREAFTER REFER TO SINGAPORE AIP ON RADIO COMMUNICATIONS FAILURE PROCEDURE.