ZPPP AD 2.1 机场地名代码和名称 Aerodrome location indicator and name

ZPPP- 昆明 / 长水 KUNMING/Changshui

ZPPP AD 2.2 机场地理位置和管理资料 Aerodrome geographical and administrative data

1	机场基准点坐标及其在机场的位置 ARP coordinates and site at AD	N25° 06.3' E102° 56.5' On RWY04/22, 2000m from THR04
2	方向、距离 Direction and distance from city	073° GEO, 23.9km from the city center(Dongfeng square)
3	标高 / 参考气温 Elevation/Reference temperature	2104m/ 25.6° C (JUN)
4	机场标高位置 / 高程异常 AD ELEV PSN/ geoid undulation	930m inside the threshold of RWY03/-
5	磁差 / 年变率 MAG VAR/Annual change	1° W/-
6	机场管理部门、地址、电话、传真、AFS、电子邮箱、网址 AD administration, address, telephone, telefax, AFS, E-mail, website	Kunming Changshui International Airport CO.LTD Kunming Changshui International Airport, GuanDu district, Kunming 650211, Yunnan province, China TEL: 86-871-67091111 FAX: 86-871-67092222 AFS: ZPPPYDYX Website: www.ynairport.com
7	允许飞行种类 Types of traffic permitted(IFR/VFR)	IFR/VFR
8	机场性质 / 飞行区指标 Military or civil airport & Reference code	Civil/4F
9	备注 Remarks	Nil

ZPPP AD 2.3 工作时间 Operational hours

1	机场当局 (机场开放时间) AD Administration (AD operational hours)	H24
2	海关和移民 Customs and immigration	HS or O/R
3	卫生健康部门 Health and sanitation	HS or O/R
4	航行情报服务讲解室 AIS Briefing Office	H24
5	空中交通服务报告室 ATS Reporting Office (ARO)	H24
6	气象讲解室 MET Briefing Office	H24
7	空中交通服务 ATS	H24
8	加油 Fuelling	H24
9	地勤服务 Handling	H24
10	保安 Security	H24
11	除冰 De-icing	HO
12	备注 Remarks	Nil

ZPPP AD 2.4 地勤服务和设施 Handling services and facilities

1	货物装卸设施 Cargo-handling facilities	Lift platform car (Max:14 tonnes), conveyor vehicle, forklift truck (Max:5 tonnes), longitudinal lifting composition platform
2	燃油 / 滑油牌号 Fuel/oil types	Nr.3 jet fuel/lubricating oil.254. И 2197.2389
3	加油设施 / 能力 Fuelling facilities/capacity	Fueling vehicle (65000liters and 47000liters), tank truck (30000liters), line gas truck, multi-function vehicle. Fuelling capacity: 278 litres/ sec Apron pipeline gas well: bolt, high exhaust, low drainage.
4	除冰设施 De-icing facilities	De-icing fluid (FCY-1A)
5	过站航空器机库 Hangar space for visiting aircraft	Nil
6	过站航空器的维修设施 Repair facilities for visiting aircraft	Line maintenance available for various types of aircraft on request, capable of supplying spare parts and other maintenance service after pre-arrangement.
7	备注 Remarks	Nil

ZPPP AD 2.5 旅客设施 Passenger facilities

1	宾馆 Hotels	At AD and near AD
2	餐馆 Restaurants	At AD
3	交通工具 Transportation	Passenger's coaches, buses, taxis, subways
4	医疗设施 Medical facilities	First aid at AD, hospital near AD
5	银行和邮局 Bank and Post Office	At AD
6	旅行社 Tourist Office	At AD
7	备注 Remarks	Nil

ZPPP AD 2.6 援救与消防服务 Rescue and fire fighting services

1	机场消防等级 AD category for fire fighting	CAT 9
2	援救设备 Rescue equipment	Fire fighting facilities: primary foam tender, heavy water tank, rapid intervention vehicle, heavy foam tender, dry-chemical tender, fire fighting command car, illumination truck, medicament supply truck, rescue tender; Rescue equipments: rescue cushion, rescue rod (hydraulic), manual hydraulic expander, electric hydraulic expander, cutter, oxygen cutter, chain saw, smoke ventilator, combustible gas detector.
3	搬移受损航空器的能力 Capability for removal of disabled aircraft	MTWA up to 120 tonnes Mobile surface, traier, hoisting gasbag, fork truck, steel wire rope, rack, emergency flatbed
4	备注 Remarks	Nil

ZPPP AD 2.7 可用季节 - 扫雪 Seasonal availability-clearing

1	扫雪设备类型 Types of clearing equipment	Large multi-functional snow ploughs
2	扫雪顺序 Clearance priorities	RWY, TWY, Apron
3	备注 Remarks	Nil

ZPPP AD 2.8 停机坪、滑行道及校正位置数据 Aprons, taxiways and check locations data

1	停机坪道面和强度 Apron surface and strength	Surface:	Cement concrete
		Strength:	PCN 106/R/B/W/T (Stands Nr. 105-107, 129, 134, 135, 140, 163, 164, 312, 313, 322, 323, 329, 702, 708, 709, 720, 721) PCN 85/R/B/W/T (Stands Nr. 101, 103, 104, 108-110, 112-116, 126, 128, 130-133, 136-139, 141, 142, 153-162, 165-167, 311, 314, 318, 321, 705, 706, 722-724) PCN 75/R/B/W/T (Stands Nr. 102, 111, 117-125, 127, 143-152, 168, 315-317, 324-328, 701, 703, 704, 707, 710-719, 722A, 722B)
2	滑行道宽度、道面和强度 Taxiway width, surface and strength	Width:	25m: TWY C, D, S, H1(north of S), R&Q(east of H1), U&D6(east of D), J, D3, D4, D7-D9, C1-C10 23m: TWY E, F, H2-H4, H1(south of S), R&Q(west of H1), U&D6(west of D), W, E3-E6, F1-F10
		Surface:	Cement concrete
		Strength:	PCN106/R/B/W/T(C, C1, C2, C9, C10, D, D3-D4, D6-D9, E, E3-E6, F, F1, F2, F9, F10, H1-H4, J, Q, R, S, U, W) PCN75/R/B/W/T(C3-C8, F3-F8)
3	高度表校正点的位置及其标高 ACL location and elevation	Nil	
4	VOR/INS 校正点 VOR/INS checkpoints	Nil	
5	备注 Remarks	Nil	

ZPPP AD 2.9 地面活动引导和管制系统与标识

Surface movement guidance and control system and markings

1	航空器机位号码标记牌、滑行道引导线、航空器目视停靠 / 停放位置引导系统的使用 Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Aircraft stand identification sign board at apron, Taxiing guide lines at all intersections of TWY and RWY, Automatic docking guidance system refer to AD1.1 'Pilot Instructions for Visual Docking Guidance System'.	
2	跑道和滑行道标志及灯光 RWY and TWY marking and LGT	RWY markings	RWY designation, THR, TDZ, center circle, center line, edge line, aiming point
		RWY lights	THR, center line, edge line, RWY end, wing bar,TDZL(for RWY22)
		TWY markings	Center line, enhancement center line, edge line, taxi holding positions, RWY holding positions, intermediate holding positions, anti-blast pad signs
		TWY lights	Center line, edge line, RWY guard lights, reflect strikes, rapid exit taxiway indicator, TWY intermediate holding position lights
3	停止排灯 Stop bars	Stop bars at C1 for RWY22	
4	备注 Remarks	Service vehicle lane edge line for crossing TWY, service vehicle lane line, service vehicle orientation arrow, give-way line.	

ZPPP AD 2.10 机场障碍物 Aerodrome obstacles

Obstacles within a circle with a radius of 15km centered on ARP					
序号 Serial Nr.	障碍物类型 (* 代表有灯光) Obstacle type (*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation (m)	影响的飞行程序及起飞航径区 Flight procedure/take-off flight path area affected
1	MT	005	4774	2130.6	RWY 03/Take-off flight path
2	MT	008	4642	2122.8	RWY 03/Take-off flight path
3	MT	063	14838	2257	
4	MT	070	13308	2427	
5	MT	075	7171	2231	
6	MT	076	13108	2569	
7	MT	078	6516	2226	
8	MT	080	12993	2520	
9	MT	081	8883	2300	
10	MT	085	13740	2480	
11	MT	089	10086	2440	
12	MT	094	6452	2440.8	
13	MT	097	4003	2251.9	
14	MT	097	9665	2520	
15	MT	104	7314	2400	
16	MT	105	9425	2520	

Obstacles within a circle with a radius of 15km centered on ARP					
序号 Serial Nr.	障碍物类型 (* 代表有灯光) Obstacle type (*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation (m)	影响的飞行程序及起飞航径区 Flight procedure/take-off flight path area affected
17	MT	113	6311	2520	
18	MT	116	6104	2581.3	
19	MT	121	7373	2540	
20	MT	125	6029	2560	
21	MT	127	6034	2580	
22	MT	130	6998	2648	
23	MT	136	10217	2680	
24	MT	138	6863	2540	
25	MT	138	10501	2730.1	
26	MT	141	5842	2460	
27	MT	145	5967	2500	
28	MT	145	11000	2640	
29	MT	148	6324	2480	
30	MT	151	6617	2460	
31	MT	151	3674	2174.6	
32	Iron tower	155	3508	2235.6	
33	Iron tower	158	3816	2254	
34	MT	161	13405	2440	
35	MT	162	5389	2420	
36	Iron tower	164	5148	2451.8	
37	MT	165	7863	2460	
38	MT	165	13704	2520	
39	MT	173	5971	2334	
40	MT	175	14084	2460	
41	MT	178	9461	2360	
42	MT	179	6115	2240	
43	MT	180	12256	2400	
44	MT	186	12743	2380	
45	MT	192	13583	2340	
46	MT	205	10678	2265	
47	MT	207	8164	2147	
48	MT	208	9332	2194.4	
49	MT	242	13451	2215.5	
50	MT	263	10139	2300	
51	*Chimney	266	3944	2153.6	
52	MT	268	9778	2280	
53	MT	275	11859	2300	
54	MT	285	14895	2300	

Obstacles within a circle with a radius of 15km centered on ARP					
序号 Serial Nr.	障碍物类型 (* 代表有灯光) Obstacle type (*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation (m)	影响的飞行程序及起飞航径区 Flight procedure/take-off flight path area affected
55	MT	291	11879	2300	
56	*Control TWR	293	1065	2208.2	
57	Iron tower	295	3597	2161.5	
58	MT	300	5008	2280	
59	*Station	309	5345	2376.5	
60	MT	310	4527	2260	
61	Grassland	315	4876	2280	
62	MT	318	4649	2240	
63	MT	322	7827	2320	
64	MT	324	6884	2280	
65	MT	326	4547	2200	
66	MT	327	6803	2276	
67	MT	327	9007	2374	
68	MT	338	8990	2300	
69	MT	342	13334	2522.2	
70	MT	343	8749	2280	
71	MT	345	5528	2186	
72	MT	346	13241	2476	
73	MT	352	13878	2420	

Obstacles between two circles with the radius of 15km and 50km centered on ARP					
序号 Serial Nr.	障碍物类型 (* 代表有灯光) Obstacle type (*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation (m)	影响的飞行程序及起飞航径区 Flight procedure/take-off flight path area affected
1	MT	003	46863	2801	
2	MT	006	49254	2881	
3	MT	011	28994	2328	
4	MT	011	36912	2820	
5	MT	016	40393	2740	
6	MT	044	35617	2627	
7	MT	063	16881	2344	
8	MT	069	15106	2340	
9	MT	084	16478	2400	
10	MT	086	15452	2320	
11	MT	090	16493	2480	
12	MT	094	15143	2300	
13	MT	099	16735	2420	
14	MT	106	16302	2400	

Obstacles between two circles with the radius of 15km and 50km centered on ARP					
序号 Serial Nr.	障碍物类型 (* 代表有灯光) Obstacle type (*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation (m)	影响的飞行程序及起飞航径区 Flight procedure/take-off flight path area affected
15	MT	114	16401	2300	
16	MT	117	19686	2400	
17	MT	119	19619	2400	
18	MT	120	17333	2340	
19	MT	181	38015	2741	
20	MT	188	38001	2801	
21	MT	194	46857	2620	
22	MT	196	44856	2440	
23	MT	234	40263	2421	
24	MT	241	35949	2501	
25	MT	262	37239	2480	
26	MT	263	42374	2501	
27	MT	275	46851	2581	
28	MT	279	47957	2600	
29	MT	290	33475	2481	
30	MT	294	34248	2581	
31	MT	295	23989	2501	
32	MT	301	22700	2521	
33	MT	302	18823	2320	
34	MT	304	44641	2641	
35	MT	304	23020	2581	
36	MT	308	44107	2660	
37	MT	311	19192	2340	
38	MT	311	28598	2440	
39	MT	313	18440	2380	
40	MT	318	19600	2340	
41	MT	326	39184	2580	
42	MT	329	40113	2640	
43	MT	342	15222	2360	
44	MT	345	38387	2501	
45	MT	352	27939	2678	
46	MT	353	30980	2780	
47	MT	356	28815	2821	
48	MT	359	28918	2821	
49	MT	360	30627	2670	
50	MT	360	32749	2773	

Remark:
1. Other obstacles refer to AD OBST chart.
2. No significant obstacles in the RWY 04/22 take-off flight path area.

ZPPP AD 2.11 提供的气象信息、机场观测与报告

Meteorological information provided & aerodrome observations and reports

1	相关气象室的名称 Associated MET Office	Yunnan MET center Office of CAAC
2	气象服务时间、服务时间以外的责任气象室 Hours of service, MET Office outside hours	H24 --
3	负责编发 TAF 的办公室 ; 有效期 Office responsible for TAF preparation, Periods of validity	Yunnan MET center Office of CAAC 9 HR, 24 HR
4	着陆预报类型、发布间隔 Type of landing forecast, Interval of issuance	Trend 1 HR
5	所提供的讲解 / 咨询服务 Briefing/consultation provided	P, T
6	飞行文件及其使用语言 Flight documentation, Languages used	Chart, International MET Codes, Abbreviated Plain Language Text Ch, En
7	讲解 / 咨询服务时可利用的图表和其它信息 Charts and other information available for briefing or consultation	Synoptic charts, significant weather charts, upper W/T Charts, satellite and radar material, AWOS real-time data
8	提供信息的辅助设备 Supplementary equipment available for providing information	Fax, MET Service Terminal
9	接收气象信息的空中交通服务单位 ATS units provided with information	ACC, APP, TWR
10	观测类型与频率 / 自动观测设备 Type & frequency of observation/ Automatic observation equipment	Hourly plus special observation/Yes
11	气象报告类型及所包含的补充资料 Type of MET Report & supplementary information included	METAR, SPECI, TEND
12	观测系统及位置 Observation System & Site(s)	RVR EQPT: A: 115m W of RCL,350m inward THR03; B: 115m W of RCL, 2000m inward THR21; C: 115m W of RCL,330m inward THR21;D: 115m E of RCL,350m inward THR04; E: 115m E of RCL, 2250m inward THR04; F: 115m E of RCL,330m inward DTHR22. SFC Wind sensors: RWY03: 120m W of RCL, 340m inward THR03; RWY03/21 center: 120m W of RCL, 2000m inward THR21; RWY21: 120m W of RCL, 350m inward THR21; RWY04: 120m E of RCL, 340m inward THR04; RWY04/22 center: 120m E of RCL, 2250m inward THR04; RWY22: 120m E of RCL, 350m inward DTHR22.
13	气象观测系统的工作时间 Hours of operation for meteorological observation system	HO
14	气候资料 Climatological information	Climatological tables AVBL
15	其他信息 Additional information	Nil

ZPPP AD 2.12 跑道物理特征 Runway physical characteristics

跑道号码 Designations RWY NR	真方位和磁方位 TRUE & MAG BRG	跑道长宽 Dimensions of RWY (m)	跑道强度 (PCN), 跑道道面 / 停止道道面 RWY strength (PCN), RWY surface/SWY surface	着陆入口坐标及高程异常 THR coordinates and geoid undulation	跑道着陆入口标高, 精密进近跑道接地地带最高标高 THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
03	038° GEO 039° MAG	4000 × 45	106/R/B/W/T (0-295m inward THR and RWY end) Concrete; 133/F/B/W/T (295-1000m inward THR and RWY end) Asphalt; 113/F/B/W/T (central part) Asphalt	Nil	THR 2100.5m TDZ 2103.5m
21	218° GEO 219° MAG	4000 × 45	106/R/B/W/T (0-295m inward THR and RWY end) Concrete; 133/F/B/W/T (295-1000m inward THR and RWY end) Asphalt; 113/F/B/W/T (central part) Asphalt	Nil	THR 2098.3m TDZ 2099.7m
04	038° GEO 039° MAG	4500 × 60	106/R/B/W/T (0-295m FM THR04, 3705-4500m FM THR04) Concrete; 133/F/B/W/T (295-1000m FM THR04, 3000-3705m FM THR04) Asphalt; 113/F/B/W/T (central part) Asphalt	Nil	THR 2098.7m TDZ 2101.7m
22	218° GEO 219° MAG	4500 × 60	106/R/B/W/T (0-295m FM THR04, 3705-4500m FM THR04) Concrete; 133/F/B/W/T (295-1000m FM THR04, 3000-3705m FM THR04) Asphalt; 113/F/B/W/T (central part) Asphalt	Nil	THR 2096.2m DTHR 2096.7m TDZ 2098.3m
跑道 - 停止道坡度 Slope of RWY-SWY	停止道长宽 SWY dimensions (m)	净空道长宽 CWY dimensions (m)	升降带长宽 Strip dimensions (m)	无障碍物地带 OFZ	跑道端安全区长宽 RWY end safety area dimensions (m)
7	8	9	10	11	12

跑道 - 停止道坡度 Slope of RWY-SWY	停止道长宽 SWY dimensions (m)	净空道长宽 CWY dimensions (m)	升降带长宽 Strip dimensions (m)	无障碍物地带 OFZ	跑道端安全区长宽 RWY end safety area dimensions (m)
See AOC	Nil	Nil	4120 × 300	Nil	240 × 150
See AOC	Nil	Nil	4120 × 300	Nil	240 × 150
RWY04-22: -0.4% (695m); +0.16% (160m); -0.1% (700m); -0.174% (90m); -0.26% (355m); -0.15% (2115m); -0.24% (385m)	Nil	Nil	4620 × 300	Nil	240 × 150
RWY04-22: -0.4% (695m); +0.16% (160m); -0.1% (700m); -0.174% (90m); -0.26% (355m); -0.15% (2115m); -0.24% (385m)	Nil	Nil	4620 × 300	Nil	240 × 150

Remarks:
1. RWY shoulder: 7.5m on each side.
2. THR22 displaced 500m.
3. Distance between RCL of RWY03/21 and RCL of RWY04/22 is 1950m; RWY03 THR is 230m north of RWY04 THR.

ZPPP AD 2.13 公布距离 Declared distances

跑道代号 RWY Designator	可用起飞滑跑距离 TORA (m)	可用起飞距离 TODA (m)	可用加速停止距离 ASDA (m)	可用着陆距离 LDA (m)	备注 Remarks
1	2	3	4	5	6
03	4000	4000	4000	4000	Nil
03	3780	3780	3780	4000	FM F9
21	4000	4000	4000	4000	Nil
21	3780	3780	3780	4000	FM F2
04	4500	4500	4500	4500	Nil
04	4280	4280	4280	4500	FM C9
22	4500	4500	4500	4000	THR displaced 500m
22	4000	4000	4000	4000	FM J
22	3780	3780	3780	4000	FM C2

ZPPP AD 2.14 进近和跑道灯光 Approach and runway lighting

跑道代号 RWY Desig-nator	进近灯类型、长度、强度 APCH LGT type LEN INTST	入口灯颜色、翼排灯 THR LGT colour WBAR	目视进近坡度指示系统 (跑道入口最低眼高), 精密进近航道指示器 VASIS (MEHT) PAPI	接地地带灯长度 TDZ LGT LEN	跑道中心线灯长度、间隔、颜色、强度 RWY Center line LGT LEN, spacing, colour, INTST	跑道边灯长度、间隔、颜色、强度 RWY edge LGT LEN, spacing, colour, INTST	跑道末端灯颜色 RWY end LGT colour	停止道灯长度、颜色 SWY LGT LEN, colour
1	2	3	4	5	6	7	8	9
03	CAT I 900m* VRB LIH	Green Yes	PAPI Left/3°	Nil	4000m** spacing 15m	4000m**** spacing 60m	Red	Nil
21	CAT I 900m* VRB LIH	Green Yes	PAPI Left/3°	Nil	4000m** spacing 15m	4000m**** spacing 60m	Red	Nil
04	CAT I 900m* VRB LIH	Green Yes	PAPI Left/3°	Nil	4500m*** spacing 15m	4500m***** spacing 60m	Red	Nil
22	CAT II 900m* VRB LIH	Green Yes	PAPI Left/3°	900m	4500m*** spacing 15m	4500m***** spacing 60m	Red	Nil

Remarks:
* SFL
** up to 3100m White VRB LIH,3100-3700m Red/White VRB LIH,3700-4000m Red VRB LIH
*** up to 3600m White VRB LIH,3600-4200m Red/White VRB LIH,4200-4500m Red VRB LIH
**** up to 3400m White VRB LIH,3400-4000m Yellow VRB LIH
***** up to 3900m White VRB LIH,3900-4500m Yellow VRB LIH

ZPPP AD 2.15 其它灯光 , 备份电源 Other lighting, secondary power supply

1	机场灯标 / 识别灯标位置、特性和工作时间 ABN/IBN location, characteristics and hours of operation	Nil
2	着陆方向指示器位置和灯光 ; 风速表位置和灯光 LDI location and LGT, Anemometer location and LGT	Nil
3	滑行道边灯和中心线灯光 TWY edge and center line lighting	All TWYs TWY intermediate holding positon lights and rapid exit TWY indicator in yellow;reflect strikes in blue.
4	备份电源 / 转换时间 Secondary power supply/switch-over time	CAT I operation: Secondary power supply main available and diesel engine driven generator standby available/ 15 sec; CAT II operation: diesel engine driven generator main available and secondary power supply standby available/ 1sec
5	备注 Remarks	Nil

ZPPP AD 2.16 直升机着陆区域 Helicopter landing area

1	TLOF 坐标或 FATO 入口坐标及高程异常 Coordinates TLOF or THR of FATO Geoid undulation	Nil
2	TLOF 和 / 或 FATO 标高 (m) TLOF and/or FATO elevation (m)	Nil
3	TLOF 和 FATO 区域范围、道面、强度和标志 TLOF and FATO area dimensions, surface, strength, marking	Nil
4	FATO 的真方位和磁方位 True and MAG BRG of FATO	Nil
5	公布距离 Declared distance available	Nil
6	进近灯光和 FATO 灯光 APP and FATO lighting	Nil
7	备注 Remarks	Nil

ZPPP AD 2.17 空中交通服务空域 ATS airspace

名称 Designation	横向界限 Lateral limits	垂直界限 Vertical limits	备注 Remarks
Kunming tower control area	A circuit, 4 arcs with radius 13km centered at centers of all RWY THRs and 4 lines tangential to the adjacent 2 arcs.	SFC-3000m	
Fuel Dumping Area	N2407E10113- N2333E10007- N2300E10007- N2338E10118- N2407E10113	Above 4000m	
Altimeter setting region and TL/TA	Same as Kunming APP area.	TL 6000m TA 5400m 5700m(QNH ⩾ 1031hPa) 5100m(QNH ⩽ 979hPa)	

ZPPP AD 2.18 空中交通服务通信设施 ATS communication facilities

服务名称 Service Designation	呼号 Call sign	频率 Frequency (MHz)	工作时间 Hours of operation	备注 Remarks
1	2	3	4	5
ATIS		128.45	H24	D-ATIS available
APP	Kunming Approach	AP01:119.0(125.55)	0030-1600	Contact AP03 when AP01 U/S
APP	Kunming Approach	AP02:123.8(125.55)	By ATC	Contact AP03 when AP02 U/S
APP	Kunming Approach	AP03:120.35(127.9) RWY 03/04 in use	H24	Nil
APP	Kunming Approach	AP03:124.25(127.9) RWY 21/22 in use	H24	Nil
APP	Kunming Approach	AP04:121.15(126.55)	By ATC	Contact AP03 when AP04 U/S
APP	Kunming Approach	AP05:124.25(127.9) RWY 03/04 in use	0200-1500	Contact AP03 when AP05 U/S
APP	Kunming Approach	AP05:120.35(127.9) RWY 21/22 in use	0200-1500	Contact AP03 when AP05 U/S
TWR	Kunming Tower	118.1(118.85) (E)	H24	For RWY 04/22
TWR	Kunming Tower	130.6(118.85) (W)	H24	For RWY 03/21
GND	Kunming Ground	121.65 (121.85) (E)	H24	Nil
GND	Kunming Ground	121.95(121.85) (W)	HO	Nil
GND	Kunming Delivery	121.7(121.85)	HO	DCL available
EMG		121.5	H24	

ZPPP AD 2.19 无线电导航和着陆设施 Radio navigation and landing aids

设施名称和类型 Name and type of aid	识别 ID	频率 Frequency	发射天线位置、坐标 Antenna site coordinates	DME 发射天线标高 Elevation of DME transmitting antenna	备注 Remarks
1	2	3	4	5	6
Malong VOR/DME	DJT	114.6 MHz CH93X	N25° 31.9' E103° 36.3'	2314m	047° MAG/81800m FM ARP
Jinning VOR/DME	XSJ	108.2 MHz CH19X	N24° 41.0' E102° 48.1'	2383m	198° MAG/48800m FM ARP
Xishan VOR/DME	SGM	110.6 MHz CH43X	N25° 04.9' E102° 31.2'	2312m	260° MAG/42800m FM ARP
Panlong VOR/DME	XFA	110.8 MHz CH45X	N25° 24.1' E102° 56.0'	2788m	359° MAG/33200m FM ARP
ILS 03 LOC	IZL	111.3 MHz	039° MAG/ 285m FM RWY 21 end		
GP 03		332.3 MHz	130m W of RCL, 310m FM THR03		RDH 16m
DME 03	IZL	CH50X (111.3 MHz)		2111m	Co-located with GP03
ILS 04 LOC	IFY	109.3 MHz	039° MAG/ 300m FM RWY 22 end		
GP 04		332.0 MHz	130m E of RCL, 310m FM THR04		RDH 16m
DME 04	IFY	CH30X (109.3 MHz)		2109m	Co-located with GP04
ILS 21 LOC	IBH	110.1 MHz	219° MAG/ 285m FM RWY 03 end		
GP 21		334.4 MHz	130m W of RCL, 320m FM THR21		RDH 16m
DME 21	IBH	CH38X (110.1 MHz)		2109m	Co-located with GP21
ILS 22 LOC	IKM	108.5 MHz	219° MAG/ 285m FM RWY 04 end		
GP 22		329.9 MHz	130m E of RCL, 320m FM THR22		RDH 16m
DME 22	IKM	CH22X (108.5 MHz)		2106m	Co-located with GP22
Remark:Nil					

ZPPP AD 2.20 本场飞行规定

1. 机场使用规定

1.1 除经空中交通管制部门许可外,禁止未安装二次雷达应答机的航空器起降;

1.2 所有技术试飞需事先申请,并在得到空中交通管制部门批准后方可进行。

2. 跑道和滑行道的使用

2.1 禁止航空器在滑行道上做180°转弯;

2.2 使用21号、22号跑道落地的航空器应使用快滑脱离跑道后尽早联系地面管制索取滑行指令,否则应在F滑行道或C滑行道上机头向南等待管制指令;

2.3 为规范跑道占用时间,提高跑道容量,做出以下规定(湿跑道或污染跑道除外):

2.3.1 起飞航空器从收到进入跑道指令到对正跑道应不超过60秒。航空器在运行中不能满足以上要求的,应在到达等待位置前通知塔台;

2.3.2 落地航空器从接地到完全脱离跑道应不超过50秒.如航空器无法在上述时间内完成,须通知进近管制员(最晚不迟于三转弯或建立航道之前);

2.4 当转换使用跑道方向过程中,使用跑道顺风分量大于3米/秒但不大于5米/秒时,管制员通知航空器驾驶员地面风向、风速后,指挥航空器短时顺风起飞或顺风着陆,如果航空器不执行该操作,离场航空器应在推出前(不需要推出的航空器在开车前)告知塔台管制员;进场航空器应及时通知进近管制员。

ZPPP AD 2.20 Local traffic regulations

1. Airport operations regulations

1.1 Take-off/landing of aircraft without SSR transponder are forbidden without ATC clearance;

1.2 Each and every technical test flight or exhibition flight shall be filed in advance and conducted only after clearance has been obtained from ATC.

2. Use of runways and taxiways

2.1 180° turnaround on TWY is strictly forbidden for all aircraft;

2.2 When RWY21 and RWY22 in use, arrival aircraft vacating runway via rapid exit taxiway shall contact the GND control ASAP, hold on TWY F or TWY C nose to south before obtaining taxiing instructions from GND control;

2.3 Except for wet RWY or contaminated RWY, requirement as follows to increase RWY operation capacity:

2.3.1 Departure aircraft shall finish RWY alignment within 60 seconds after receiving ATC instructions of entering RWY. If aircraft can not execute such operation requirement, flight crew shall inform ATC before reaching the holding positions;

2.3.2 Landing aircraft shall fully vacate RWY within 50 seconds after touch down.If aircraft can not fulfill the process within the required time, flight crew shall inform APP(No later than base turn or the localizer is established);

2.4 During changing the direction of RWY in use, if downwind speed is more than 3m/s and not exceeding 5m/s, ATC shall inform ACFT the ground wind direction and speed, instruct downwind take-off or downwind landing for short time. If pilot decide not to take-off or land on downwind RWY, departure aircraft shall inform ATC prior push-out or engine start-up; arrival aircraft shall inform APP immediately.

2.5 滑行道使用限制 /TWYs limits:

滑行道 /TWYs	航空器翼展限制 / Wing span limits for aircraft
C, C1-C4, C7-C10, D, D3-D4, D6-D9, S, D3, H1(north of S), J, Q(east of H1), R, U(east of D)	<80m
Others	<65m

D4(west of D)	<36m

3. 机坪和机位的使用

3. Use of aprons and parking stands

3.1 停机位对停放航空器的限制 / limits for aircraft parking on the following stands:

停机位 /Stands	航空器翼展限制 / Wing span limits for aircraft	滑出方式 /Exit by
Nr. 105, 129, 140	<80	Taxi-in and push-out
Nr. 329	<80	Push-in and taxi-out
Nr. 106-107, 134-135, 163-164, 312-313, 322-323, 708-709, 720-721	<65	Taxi-in and push-out
Nr. 705, 722, 723	<61	Taxi-in and push-out
Nr. 103, 108-110, 112-113, 115-116, 126, 128, 130-133, 136-139, 141-142, 153, 155-156, 158-162, 166-167, 311, 314, 321	<52	Taxi-in and push-out
Nr. 101, 104, 114, 154, 157, 165, 318	<48	Taxi-in and push-out
Nr. 102, 111, 117-125, 127, 143-152, 168, 315-317, 324-328, 701-704, 706, 707, 710-719, 722A, 722B, 724	<36	Taxi-in and push-out

3.2可以通过机场运行管理中心(133.3 MHZ),申请引导车和拖车服务。

3.2 Follow-me vehicle service and towing service are available via Operation Control Center of Aerodrome on 133.3MHZ.

4. 进、离场管制规定

4. Air traffic control regulations

无

Nil

5. 机场的 II/III 类运行

5. CAT II/III operations at AD

昆明 / 长水机场 22 号跑道装有 II 类仪表着陆系统。

RWY22 of Kunming/Changshui Airport is equipped with ILS CAT II.

6. 除冰规则

6. Rules for deicing

无

Nil

7. 平行跑道同时仪表运行

7. Simultaneous operations on parallel runways

无

Nil

8. 警告

8. Warning

无

Nil

9. 直升机飞行限制 , 直升机停靠区

9. Helicopter operation restrictions and helicopter parking/ docking area

无

Nil

ZPPP AD 2.21 噪音限制规定及减噪程序

ZPPP AD 2.21 Noise restrictions and Noise abatement procedures

无

Nil

ZPPP AD 2.22 飞行程序

ZPPP AD 2.22 Flight procedures

1. 总则

1. General

无

Nil

2. 起落航线

2. Traffic circuits

无

Nil

3. 仪表飞行程序

3. IFR flight procedures

严格按照航图中公布的进、离场程序飞行。

Strict adherence is required to the relevant arrival/departure procedures published in the aeronautical charts.

4. 雷达程序和 / 或 ADS-B 程序

4. Radar procedures and/or ADS-B procedures

4.1 昆明进近、塔台管制区域内实施雷达管制。航空器最小水平间隔为 6 千米 , 最小垂直间隔为 300 米。

4.1 Radar control within Kunming APP and TWR has been implemented. The minimum horizontal radar separation is 6km; the minimum vertical radar separation is 300m.

4.2 雷达引导

4.2 Radar vectoring

根据航空器性能或管制规定，发布雷达引导、上升或下降高度及速度调整的指令，使航空器之间保持规定的雷达间隔或尾流间隔；

Instructions about radar vectors, ascent/descent altitudes or speed adjustment will be issued for spacing and separating the aircraft so that stipulated radar intervals and wake intervals are maintained, taking into account aircraft characteristics or control regulations;

5. 无线电通信失效程序

无

5. Radio communication failure procedures

Nil

6. 目视飞行程序

无

6. Procedures for VFR flights

Nil

7. 目视飞行航线

无

7. VFR route

Nil

8. 目视参考点

无

8. Visual reference point

Nil

9. 其它规定

9.1 对机组的要求

a. 机组应听清并复诵地面管制员指令，发现疑问及时证实；

b. 从停机位推出时,向地面管制员证实使用跑道、推出方向；

c. 在脱离跑道首次与地面管制联系时，尤其在低能见度情况下，必须向地面管制报告脱离的跑道和所使用的滑行道；

d. 专机滑行路线以管制员通知为准。

9. Other regulations

9.1 Requirements for pilots:

a. Readback Grond instructions and verify any questions:

b. While pushed back from parking stand, verify the pushing direction and the approved RWY designation to GND Control;

c. After vacating RWY, especially under conditions of low visibility, report the RWY designation and TWY designation on initial contact with GND;

d. Taxiing routes of special flight will be instructed by ATC.

10. 区域导航飞行程序相关数据

10. Data for RNAV flight procedures

Waypoint list

ID	COORDINATES(WGS-84)	ID	COORDINATES(WGS-84)

CI 03	N245343 E1024410	PP514	N253228 E1032846
CI 04	N245258 E1024459	PP516	N253631 E1032308
CI 21	N252014 E1030722	PP517	N254322 E1031335
CI 22	N251929 E1030812	PP518	N250205 E1030445
PP401	N245830 E1031036	PP519	N253710 E1032214
PP402	N252946 E1024700	PP521	N252428 E1031105
PP403	N254714 E1024834	PP522	N252349 E1031200
PP404	N244942 E1015930	PP523	N251154 E1024632
PP406	N251342 E1032222	ATOLO	N244724 E1030200
PP407	N245804 E1024301	DADOL	N263003 E1031739
PP408	N245538 E1024719	ELASU	N235913 El014722
PP409	N251944 E1023333	GULOT	N243724 El013351
PP411	N252552 E1030506	IGRID	N243310 E1031108
PP501	N255503 E1032412	IDPUG	N244008 E1023406
PP502	N255242 E1034435	KIBES	N255106 E1040048
PP503	N244740 E1023853	MEBNA	N261048 E1033900
PP504	N244701 E1023947	XISLI	N255829 E1035357
PP506	N243936 E1022136	DJT	N253154 E1033618
PP507	N245250 E1023141	LXI	N243230 E1034436
PP511	N251518 E1024913	SGM	N250454 E1023112
PP512	N251917 E1031819	XFA	N252406 E1025600
PP513	N253050 E1030212	XSJ	N244100 E1024800

Waypoint sequence for RWY 03 arrival

MEB-1W	MEBNA	PP501	XFA	PP523	PP507 ↑ 3600	PP503	CI 03 3000
XIS-1W	XISLI	PP502	PP518	XSJ ↑ 3600	PP503	CI 03 3000	
XIS-2W	XISLI	PP502	XFA	PP523	PP507 ↑ 3600	PP503	CI 03 3000
LXI-1W	LXI	IGRID	XSJ ↑ 3600	PP503	CI 03 3000		
ELA-2W	ELASU	IDPUG ↑ 3600	PP503	CI 03 3000			
GUL-1W	GULOT	IDPUG ↑ 3600	PP503	CI 03 3000			
GUL-2W	GULOT	PP506	PP507 ↑ 3600	PP503	CI 03 3000		

Waypoint sequence for RWY 04 arrival

MEB-1X	MEBNA	PP501	XFA	PP523	PP507 ↑ 3600	PP504	CI 04 3300
XIS-1X	XISLI	PP502	PP518	XSJ ↑ 3600	PP504	CI 04 3300	

XIS-2X	XISLI	PP502	XFA	PP523	PP507 ↑ 3600	PP504	CI 04 3300
LXI-1X	LXI	IGRID	XSJ ↑ 3600	PP504	CI 04 3300		
ELA-2X	ELASU	IDPUG ↑ 3600	PP504	CI 04 3300			
GUL-1X	GULOT	IDPUG ↑ 3600	PP504	CI 04 3300			
GUL-2X	GULOT	PP506	PP507 ↑ 3600	PP504	CI 04 3300		

Waypoint sequence for RWY 21 arrival

MEB-1Y	MEBNA	PP501	PP513 ↑ 3600	PP521 3600	CI 21 3300		
MEB-2Y	MEBNA	PP501	PP517	PP519	PP521 3600	CI 21 3300	
XIS-1Y	XISLI	PP502	PP512 ↑ 3600	PP521 3600	CI 21 3300		
XIS-2Y	XISLI	PP502	PP514	PP519	PP521 3600	CI 21 3300	
LXI-1Y	LXI	IGRID	XSJ	PP518	PP512 ↑ 3600	PP521 3600	CI 21 3300
LXI-2Y	LXI	IGRID	XSJ	PP507	PP511	XFA	PP513 ↑ 3600
	PP521 3600	CI 21 3300					
ELA-3Y	ELASU	IDPUG	XSJ	PP518	PP512 ↑ 3600	PP521 3600	CI 21 3300
ELA-4Y	ELASU	IDPUG	PP507	PP511	XFA	PP513 ↑ 3600	PP521 3600
	CI 21 3300						
GUL-1Y	GULOT	XSJ	PP518	PP512 ↑ 3600	PP521 3600	CI 21 3300	
GUL-2Y	GULOT	PP506	PP511	XFA	PP513 ↑ 3600	PP521 3600	CI 21 3300

Waypoint sequence for RWY 22 arrival

MEB-1Z	MEBNA	PP501	PP513 ↑ 3600	PP522 3300	CI 22 3000		
MEB-2Z	MEBNA	PP501	PP517	PP516	PP522 3300	CI 22 3000	
XIS-1Z	XISLI	PP502	PP512 ↑ 3600	PP522 3300	CI 22 3000		
XIS-2Z	XISLI	PP502	PP514	PP516	PP522 3300	CI 22 3000	
LXI-1Z	LXI	IGRID	XSJ	PP518	PP512 ↑ 3600	PP522 3300	CI 22 3000

LXI-2Z	LXI	IGRID	XSJ	PP507	PP511	XFA	PP513 ↑ 3600
	PP522 3300	CI 22 3000					
ELA-3Z	ELASU	IDPUG	XSJ	PP518	PP512 ↑ 3600	PP522 3300	CI 22 3000
ELA-4Z	ELASU	IDPUG	PP507	PP511	XFA	PP513 ↑ 3600	PP522 3300
	CI 22 3000						
GUL-1Z	GULOT	XSJ	PP518	PP512 ↑ 3600	PP522 3300	CI 22 3000	
GUL-2Z	GULOT	PP506	PP511	XFA	PP513 ↑ 3600	PP522 3300	CI 22 3000

Waypoint sequence for RWY 03 departure

KIB-7W (by ATC)	(DF)PP411	DJT	KIBES				
KIB-8W	(VA)3000 IAS ⩽ 425kmH	(DF)DJT	KIBES				
KIB-9W	(VA)3000 IAS ⩽ 425kmH	(DF)PP406	DJT	KIBES			
LXI-8W	(VA)3000 IAS ⩽ 425kmH	(DF)XFA	PP402 ↑ 3600	SGM	ATOLO	LXI	
LXI-9W	(VA)3000 IAS ⩽ 425kmH	(DF)PP401	ATOLO	LXI			
ELA-8W	(VA)3000 IAS ⩽ 425kmH	(DF)XFA	PP402 ↑ 3600	SGM	PP404	ELASU	
ELA-9W	(VA)3000 IAS ⩽ 425kmH	(DF)XFA	PP402 ↑ 3600	SGM	ELASU		
GUL-9W	(VA)3000 IAS ⩽ 425kmH	(DF)XFA	PP402 ↑ 3600	SGM	GULOT		
DAD-8W	(VA)3000 IAS ⩽ 425kmH	(DF)XFA	PP403	DADOL			
DAD-9W	(VA)3000 IAS ⩽ 425kmH	(DF)XFA	DADOL				

Waypoint sequence for RWY 04 departure

KIB-7X (by ATC)	(VA)2700 IAS ⩽ 425kmH	(DF)PP401	ATOLO	SGM	XFA	DJT	KIBES
KIB-8X	(VA)2700 IAS ⩽ 425kmH	(DF)DJT	KIBES				
KIB-9X	(VA)2700 IAS ⩽ 425kmH	(DF)PP406	DJT	KIBES			
LXI-9X	(VA)2700 IAS ⩽ 425kmH	(DF)PP401	ATOLO	LXI			
ELA-6X	(VA)2700 IAS ⩽ 425kmH	(DF)PP401	ATOLO	SGM	PP404	ELASU	
ELA-7X	(VA)2700 IAS ⩽ 425kmH	(DF)PP401	ATOLO	SGM	ELASU		

ELA-8X	(VA)2700 IAS ⩽ 425kmH	(DF)XFA	PP402 ↑ 3600	SGM	PP404	ELASU	
ELA-9X	(VA)2700 IAS ⩽ 425kmH	(DF)XFA	PP402 ↑ 3600	SGM	ELASU		
GUL-8X	(VA)2700 IAS ⩽ 425kmH	(DF)PP401	ATOLO	SGM	GULOT		
GUL-9X	(VA)2700 IAS ⩽ 425kmH	(DF)XFA	PP402 ↑ 3600	SGM	GULOT		
DAD-8X	(VA)2700 IAS ⩽ 425kmH	(DF)XFA	PP403	DADOL			
DAD-9X	(VA)2700 IAS ⩽ 425kmH	(DF)XFA	DADOL				

Waypoint sequence for RWY 21 departure

KIB-8Y (by ATC)	(VA)2250	(DF)PP407 IAS ⩽ 425kmH	SGM	PP409	XFA	DJT	KIBES
KIB-9Y	(VA)2250	(DF)PP407 IAS ⩽ 425kmH	ATOLO	DJT	KIBES		
LXI-9Y	(VA)2250	(DF)PP407 IAS ⩽ 425kmH	ATOLO	LXI			
ELA-8Y	(VA)2250	(DF)PP407 IAS ⩽ 425kmH	SGM	PP404	ELASU		
ELA-9Y	(VA)2250	(DF)PP407 IAS ⩽ 425kmH	SGM	ELASU			
GUL-9Y	(VA)2250	(DF)PP407 IAS ⩽ 425kmH	SGM	GULOT			
DAD-9Y	(VA)2250	(DF)PP407 IAS ⩽ 425kmH	SGM	PP409	PP403	DADOL	

Waypoint sequence for RWY 22 departure

KIB-8Z (by ATC)	(DF)PP408 IAS ⩽ 425kmH	SGM	PP409	XFA	DJT	KIBES	
KIB-9Z	(DF)PP408 IAS ⩽ 425kmH	ATOLO	DJT	KIBES			
LXI-9Z	(DF)PP408 IAS ⩽ 425kmH	ATOLO	LXI				
ELA-8Z	(DF)PP408 IAS ⩽ 425kmH	SGM	PP404	ELASU			
ELA-9Z	(DF)PP408 IAS ⩽ 425kmH	SGM	ELASU				
GUL-9Z	(DF)PP408 IAS ⩽ 425kmH	SGM	GULOT				
DAD-9Z	(DF)PP408 IAS ⩽ 425kmH	SGM	PP409	PP403	DADOL		

Notes: The path code is TF except special explanation.('VA': heading to an altitude; 'DF': Direct to fix.)

ZPPP AD 2.23 其它资料

1.机场区域范围内,有少量麻雀、白头翁、黑头翁和斑鸠等小型鸟类活动;

2.机场安装4台激光驱鸟设备,具体位置如下:
一号机:距RWY04中心线东侧186米,RWY04跑道入口以北700米;
二号机:距RWY04中心线东侧186米,RWY04跑道入口以北2700米;
三号机:距RWY03中心线西侧181米,RWY03跑道入口以北600米;
四号机:距RWY03中心线西侧181米,RWY03跑道入口以北2600米;
设备运行时间为每日10:50至次日00:05,设备运行时发出绿色激光束,请机组注意。

ZPPP AD 2.23 Other information

1. Activities of bird flocks such as sparrow , light-vented bulbul, black-headed bulbul and turtledove are found at the airport.;

2. Four laser bird dispersal equipment erected at PSN:
Nr.1: 186m E of RWY04 centerline, 700m N of THR04;
Nr.2: 186m E of RWY04 centerline, 2700m N of THR04;
Nr.3: 181m W of RWY03 centerline, 600m N of THR03;
Nr.4: 181m W of RWY03 centerline, 2600m N of THR03;
Operation time is 10:50-00:05(next day), emitting green laser light, cabin crew shall pay more attention.