

The Japanese System: A Closer Look at the Details



**SECOND INTERNATIONAL WORKSHOP ON MRA
FOR CONFORMITY ASSESSMENT
OF EMC AND TELECOMMUNICATIONS REGULATIONS**

6 May 2009

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JVLATE

(Japan Voluntary Laboratories Association for R&TTE)

A Closer Look at the Details

1. Epilogue of MRA International Workshop in Tokyo.
2. Japanese Conformity Assessment History.
3. Scope of Japanese Accreditation & Detail Options.
4. Case study for Japanese Certification Procedure.

1. Epilogue of MRA International Workshop in Tokyo.



- Date: 3rd Tuesday – 4th Wednesday
March 2009
- Place: Chiyoda Hoso
Kaikan Tokyo
- 120 people had attended
 - Include 10 US visitors
& 12 EU/others visitors



Day-1 Tue. March 3, 2009		Day-2 Wed. March 4, 2009	
09:15	Opening of the "Day-1" of the workshop	09:15	Opening of the "Day-2" of the workshop
09:20	Welcome Address	09:20	4. "Case Studies of Certification for Telecommunications Equipment in Japan" presented by <u>Mr. Yoshinori ONUKI</u> <i>Senior manager of Type Certifications Department, Telecom Engineering Center (TELEC)</i> by <u>Mr. Yasushi SAIDA</u> <i>Manager of Equipment Approvals Department, Japan Approvals institute for Telecommunications Equipments (JATE)</i> by <u>Mr. Nob NAKANISHI</u> <i>Vice-Chairman, Japan Voluntary Laboratory Association for Telecommunication Equipment (JVLATE)</i>
09:30	1. "Certification System for Telecommunications Equipment in Japan" presented by <u>Mr. Takao NITTA</u> <i>Director of the Certification Promotion Office, Electromagnetic Environment Division, Telecommunications Bureau Ministry of Internal Affairs and Communications (MIC)</i>		
10:30	Break		
11:00	(continuation of 1)		
12:00	Break	10:30	Break
13:30	2. "Technical Standards for Telecommunications Equipment in Japan" presented by <u>Mr. Takao NITTA</u> <i>Director of the Certification Promotion Office, Electromagnetic Environment Division, Telecommunications Bureau Ministry of Internal Affairs and Communications (MIC)</i>	11:00	(continuation of 4)
		12:15	Break
		13:15	5. "New issues related to the operation of the R&TTE Directive" presented by <u>Mr. Jan Coenraads</u> <i>Chairman of R&TTE-CA</i>
15:00	Break	14:15	6. "Overview of the relevant FCC Rules" presented by <u>Mr. George Tannahill</u> <i>Electronics Engineer, OET, Federal Communications Commission (FCC)</i>
15:30	3. "Evaluation for CAB based on the Japan's MRA legislation" presented by <u>Mr. Koichi SAZANAMI</u> <i>Director of Designated Accreditation Assessment Division. The Japan Accreditation Board for Conformity Assessment (JAB)</i>	15:15	Break
		15:45	7. "Overview of TCB Program Requirements" presented by <u>Mr. Kenneth Nichols</u> <i>Technical assessor for the TCB Accreditation Program American National Standards Institute (ANSI)</i>
16:40	Closing of the "Day-1" of the workshop	16:40	Closing of the "Day-2" and end of the workshop

2. Japanese Conformity Assessment History.

59 years passed since the regulation was established in Japan.

Old & New generation CABs have been combined now.



RF division, MIC

Telecom Business division, MIC

Specified Radio Equipment
(Radio Law)

Terminal Equipment
(Telecommunications Business Law)

-Land Mobile Radio,
-Amateur Radio,
etc.

- Cellular phone
- PHS
- Wireless LAN
etc.

-Telephone,
-Facsimile,
-Modem,
-PBX,
etc.



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History(1950-2001/Regulated Stage)

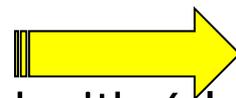
1950: MPT(former MIC) conducted RF & Telecom Equipment Certification

1981: RF Div, MPT had **Exclusively** appointed to MKK(former TELEC) as **RF Equipment Testing & Certification Agency.**

1985: NTT was established, some officers had transferred to NTT from MPT. New private Company was able to be telephone carriers.

Telecom Business Div, MPT had **Exclusively** appointed to JATE as **Telecommunication Equipment Certification Agency.**

1999: MPT had announced that RF & Telecommunication **Laboratory Accreditation System** was started.



1st Phase of Deregulation

JVLATE has been established with 6 laboratories.

2001: **EU & Japan MRA** has been released.

History(2002-2003/First Deregulated Stage)

2002: MIC had abolished the exclusive rights to both TELEC & JATE.



MIC had appointed the first Private Laboratory as CAB for both RF & Telecom Equipment.



2nd Phase of Deregulation

2003: MIC had participated in NIST International MRA Workshop in Gaithersburg on May at First time.

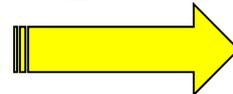
History(2004-2006/2nd Stage)

2004: Registered Certification Body Program was started. **Appointed Certification Body Program** was abolished. **Laboratory Accreditation System** was abolished & restructured.



First EU CAB was designated as Japanese CAB under EU/Japan MRA.

Radio CABs Council was established as RCBR-Council.(10 Japanese CABs joined) Telecommunication CABs Council was established, but it is not activated now.



3rd Phase of Deregulation

2005: MIC had joined NIST International MRA Workshop in Gaithersburg on October at 2nd time.

2006: 1st MRA International Workshop in Tokyo on December, was sponsored by JVLATE & CIAJ and co-sponsored by MIC, EU commission, FCC, NIST, ANSI & TCB-Council.

History(2008-Now/3rd Stage)

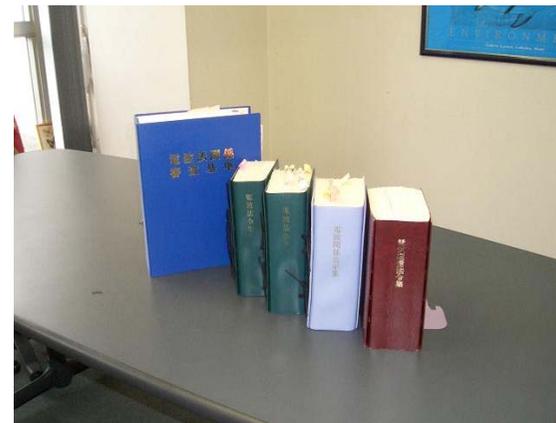
2008: US & Japan MRA was released on January.

MIC had joined TCB Council Workshop in Baltimore on October at first time.

2009: MIC has hosted 2nd MRA International Workshop in Tokyo on March.

Now, 2 ex-government controlled CABs(TELEC & JARD) & 8 Japanese private CABs under RF Law, 1 ex-government controlled CAB(JATE) & 4 Japanese private CABs under Telecommunication Business Law, and 6 EU CABs for both RF & Telecommunication Equipment under MRA Law.

3. Scope of Japanese Accreditation & Detail Options.



■ Related ACT(Law) & Ordinance Name

	Radio equipment	Terminal equipment
Acts	•Radio Act(Law)	• Telecommunications Business Act(Law)
Ordinances for Technical Criteria (OT for 17025)	•Ordinance Regulating Radio Equipment (Radio Regulatory Commission Regulations No. 18, 1950)	•Ordinance Concerning Terminal Facilities etc. (MPT Ordinance No.31, 1985)
Ordinances for Conformity Assessment Procedures (OC for Guide65)	•Ordinance concerning Technical Regulations Conformity Certification etc. of Specified Radio Equipment (MPT Ordinance No.37, 1981.)	•Rules Concerning the Technical Conditions Compliance Approval for Terminal Equipment (MIC Ordinance No.15, 2004.)

Scope of Radio Equipment (Radio Act Article 38.2)

● B1(Category 1)

Unlicensed station : 17 items (OC Article 2)

(Specified Radio Equipment specified in Article 38-2, paragraph 1, item 1 of the Radio Act)

● B2(Category 2)

Licensed station (Blanket License) : 38 items (OC Article 2)

(Specified Radio Equipment specified in Article 38-2, paragraph 1, item 2 of the Radio Act)

● B3(Category 3)

Licensed station (Others) : 75 items (OC Article 2)

(subject to simplified licensing procedure or registration)

(Specified Radio Equipment specified in Article 38-2, paragraph 1, item 3 of the Radio Act)

Scope of Terminal Equipment (Telecommunication Business Act Article 50.1)

● A1(Category 1)

Terminal equipment for the purpose of speech & Audio communication (OC Article 3.1.1)

(Article 4 item 1 of Ordinance concerning Terminal Facilities etc.)

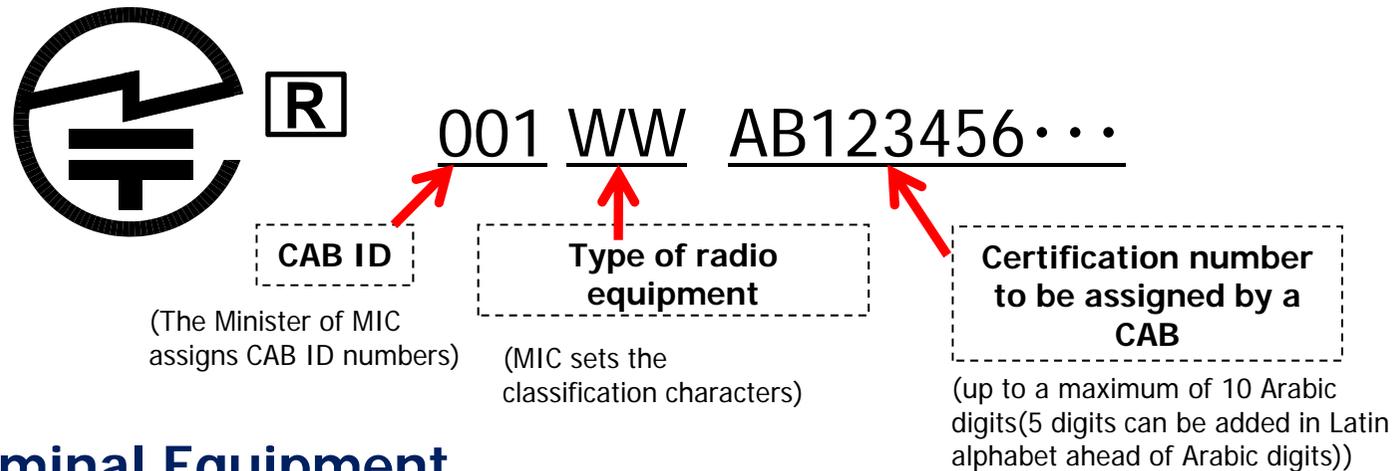
● A2(Category 2)

Other Terminal equipment (OC Article 3.1.2-4)

(Article 4 item 2 of Ordinance concerning Terminal Facilities etc.)

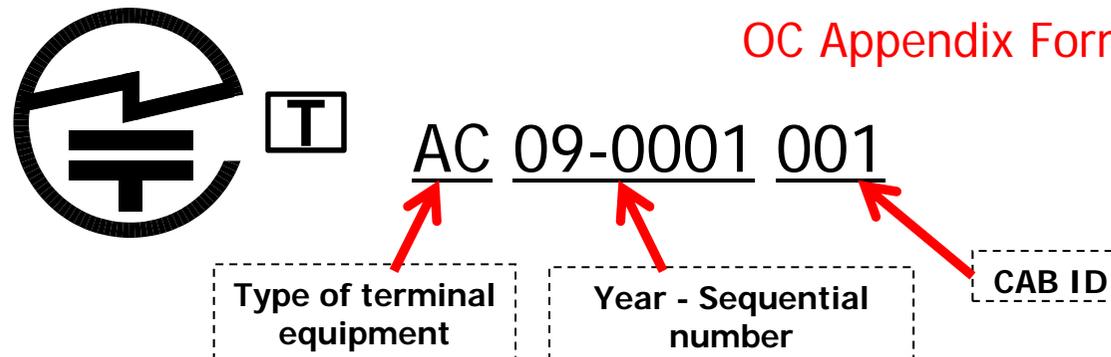
1. Specified Radio Equipment

OC Appendix Form No.7



2. Terminal Equipment

OC Appendix Form No.7



Reference:

Form No.7 of Ordinance concerning Technical Regulations Conformity Certification etc. of Specified Radio Equipment
Form No.7 of Rules Concerning the Technical Conditions Compliance Approval for Terminal Equipment

As an example technical criteria for W-CDMA Land mobile station, under Ordinance Regulating Radio Equipment (OT)

1. Frequency Range Article 49.6.4

(800MHz band) 815MHz to 850MHz

(1.5GHz band) 1,427.9MHz to 1,452.9MHz

(1.7GHz band) 1,749.9MHz to 1,784.9MHz

(2GHz band) 1,920MHz to 1,980MHz

2. Tolerance of frequency (Hz) Article 5

$\pm(0.1 \times f \times 10^{-6} + 10)\text{Hz}$

* f : transmission frequency (Hz)

3. Occupied bandwidth Article 6

within 5.0 MHz

4. Antenna power

Designated value : 0.25W or less **Article 49.6.4**

Tolerance : 21dBm or less : +87%, -47% **Article 14**
Over 21dBm : +48%, -58%

5. Adjacent channel leakage power **Article 49.6.4**

5MHz detuning :

32.2dB / 3.84MHz below antenna power or -50dBm / 3.84MHz,
and

10MHz detuning:

42.2dB / 3.84MHz below antenna power or -50dBm / 3.84MHz

6. Leakage power at no-carrier transmission **Article 49.6.4**

-55dBm / 3.84MHz or less in the transmission frequency range

7. Transmission rate of modulation signal **Article 49.6.4**

Circuit exchange system : 64kbit/s or less

Packet communication system : 2Mbit/s or less

8. Unwanted emission intensity * in 2GHz band (Article 7)

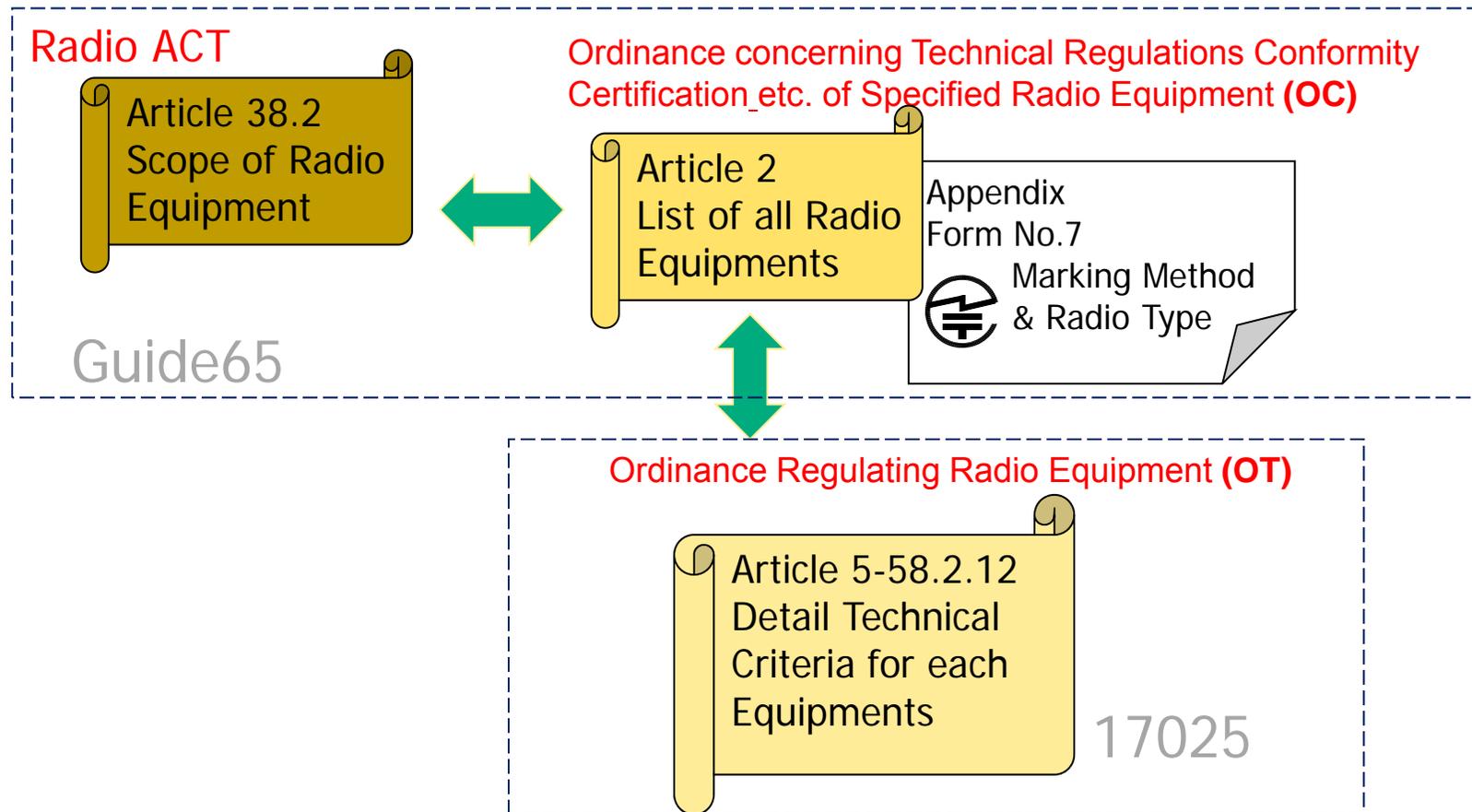
" Δf " shows the difference (unit : MHz) between the carrier frequency and the frequency nearest to the carrier in measuring band. (Same applies to the followings.)

Detuning frequency 2.5MHz - 3.5MHz	-48.5dBm / 3.84MHz, or $-(33.5+15 \times (\Delta f -2.5))$ dBc / 30kHz
Detuning frequency 3.5MHz - 7.5MHz	-48.5dBm / 3.84MHz, or $-(33.5+1 \times (\Delta f -3.5))$ dBc / 1MHz
Detuning frequency 7.5MHz - 8.5MHz	-48.5dBm / 3.84MHz, or $-(37.5+10 \times (\Delta f -7.5))$ dBc / 1MHz
Detuning frequency 8.5MHz - 12.5MHz	-48.5dBm / 3.84MHz, or -47.5dBc / 1MHz
Detuning frequency 12.5MHz or more	
9kHz - 150kHz	-36dBm / 1kHz
150kHz - 30MHz	-36dBm / 10kHz
30MHz - 1,000MHz (excluding 925 - 960MHz)	-36dBm / 100kHz
925MHz - 935MHz	-67dBm / 100kHz for 51 frequencies of 200kHz separation in 925 - 935MHz -36dBm / 100kHz for arbitrary five (5) frequencies among 51 frequencies
935MHz - 960MHz	-79dBm / 100kHz for 125 frequencies of 200kHz separation in 935.2 - 960MHz -36dBm / 100kHz for arbitrary five (5) frequencies among 125 frequencies
1,000MHz - 12.75GHz (excluding 1,805 - 1,880MHz and 1,884.5 - 1,919.6MHz)	-30dBm / 1MHz
1,805MHz - 1,880MHz	-71dBm / 100kHz for 376 frequencies of 200kHz separation in 1805 - 1880MHz -30dBm / 1MHz for arbitrary five (5) frequencies among 376 frequencies
1,884.5MHz - 1,919.6MHz	-41dBm / 300kHz

9. Limit of secondary radiated emissions * in 2GHz band(Article 24)

1,920MHz – 1,980MHz and 2,110MHz – 2,170MHz	-60dBm / 3.84MHz
30 – 1,000MHz	-57dBm / 100kHz
1,000MHz - 12.75GHz (excluding 1,920 – 1,980MHz and 2,110 – 2,170MHz)	-47dBm / 1MHz

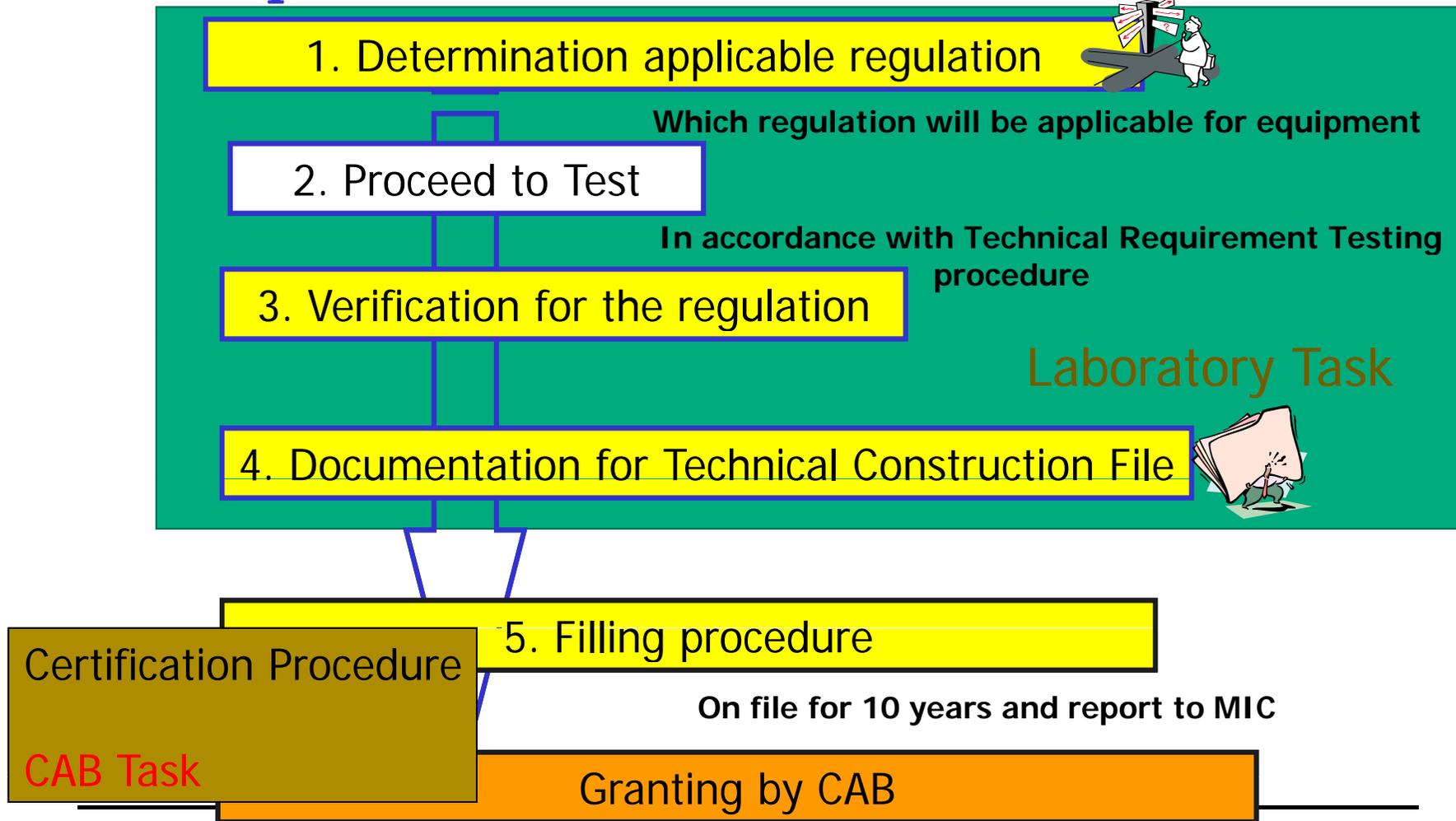
How to relate to each Act & Ordinances



4. Case study for Japanese Certification Procedure.



How to proceed Certification Procedure



Determination for applicable regulation

Most Popular Problem Samples

2.4GHz Baby Monitor



USA

OK

Japan

NG

2.4GHz band must be used only
with Digital Modulation.

900MHz Codeless Phone



OK

NG

900MHz can not be used with
Codeless Phone.

Japanese RF Equipment Certification System DATA BASE Tool(example)

The screenshot shows the 'Japanese Certification System Data Base' application. The search interface includes filters for License Category (Un-Licensed Device(Act 38-21.1)), Usage 1 (All), Frequency (MHz), Device Code, and Usage 2 (All). A 'RESET' and 'SEARCH' button are present. Below the search area is a table listing various radio equipment entries.

	Act38-21.	OC A2-1.	Code	Name	Usage	Power	Specified	Basic	Frequency List
1	Un-Licensed	3	O	Citizen radio/	Private Land Mobile Radio Ser	0.5W	54-2	+9-4	26.9-27.2
2	Un-Licensed	7	L	Cordless telephone/	Public Telecommunication Ser	10mW	49-8	+9-4	253.8625-254.9625, 380.2125-381.3125
3	Un-Licensed	8	Y	Specified Id	Low power data communications system in the 2.4GHz band/				
4	Un-Licensed	8	Y	Specified Id					
5	Un-Licensed	8	Y	Specified Id					
6	Un-Licensed	8	Y	Specified Id					
7	Un-Licensed	8	Y	Specified Id					
8	Un-Licensed	8	Y	Specified Id					
9	Un-Licensed	8	Y	Specified Id					
10	Un-Licensed	8	Y	Specified Id					
11	Un-Licensed	8	Y	Specified Id					
12	Un-Licensed	8	Y	Specified Id					
13	Un-Licensed	8	Y	Specified Id					
14	Un-Licensed	8	Y	Specified Id					
15	Un-Licensed	8	Y	Specified Id					
16	Un-Licensed	8	Y	Specified Id					
17	Un-Licensed	13	AZ	Low power					
18	Un-Licensed	19	WW	Low power					
19	Un-Licensed	19-2	GZ	Low power					
20	Un-Licensed	19-2-2	UV	Low power					
21	Un-Licensed	19-2-3	VV	Low power					
22	Un-Licensed	19-3	XW	Low power					
23	Un-Licensed	19-3-2	YW	Low power					
24	Un-Licensed	19-4	HX	Low power					
25	Un-Licensed	19-11	FV	Land mobile					

The detailed view window shows the following information for the selected entry:

- RF Act:** Article 38-21.1 Un-Licensed Device
- Radio Equipment Name:** Low power data communications system in the 2.4GHz band/
- Usage:** Private Land Mobile Radio Services/for Data Communication/Wireless LAN,Bluetooth,ZigBee,Digital Codeless Phone
- Ordinance concerning Technical Regulations Conformity Certification etc. of Specified Radio Equipment(OC):** Article 2-1.19, Category Code (Appendix Form No.7) WW, and a logo.
- Ordinance Regulating Radio Equipment(OT):**
 - Basic Criteria:** Article 5 Tolerance of frequency, Article 6 Occupied bandwidth, Article 7 Unwanted emission intensity, Article 14 Tolerance of Antenna power, Article 24 Limit of secondary radiated emissions, Article 9-4
 - Specific Criteria:** Article 49-20
 - Output Power:** 3mW/MHz(FH,FH+DS,FH+OFDM),10mW/MHz(DS,OFDM26M),5mW/MHz(OFDM40M),10mW
 - Frequency List(MHz):** 2400-24835

Thank you!

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Please Contact to JVLATE Secretariat.
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