List VIII

List of International Monitoring Stations

2022 edition





List of International Monitoring Stations (List VIII)

Drawn up by the INTERNATIONAL TELECOMMUNICATION UNION

Edition of 2022 GENEVA This edition of the List of International Monitoring Stations (List VIII) supersedes all previous editions.

Publisher's Note

The Radiocommunication Bureau (BR) informs users that:

1. List of International Monitoring stations (List VIII) webpage is accessible from:

www.itu.int/go/ITU-R/ListVIII

2. A link to the relevant notification forms is available on the ITU website:

www.itu.int/go/ITU-R/ListVIII/notification-forms

3. All notifications, sent via post, email or fax, should be addressed:

To the attention of: "The Director of the Radiocommunication Bureau-ITU" Postal address: Place des Nations, CH-1211 Geneva 20, Switzerland

Direct telefax: +41 22 730 5785
Direct email: brmail@itu.int

DISCLAIMER

This List is published by the International Telecommunication Union, based on information provided by the administrations of its Member States.

The ITU expressly disclaims any responsibility, with respect to this List, for the accuracy of the information it contains, including any defects or failures of the stations described, or for any damage or loss related to use of this List.

PREFACE

1 General

The List of International Monitoring Stations (List VIII) is a service publication prepared by the Radiocommunication Bureau, in accordance with provision Nos. **16.1**, **16.2** and **16.3** of the Radio Regulations (**RR**) and issued in application of provision No. **20.12** of the **RR**.

List VIII is a necessary document for operating in the international monitoring system, as the information it contains enables rapid contact to be made between centralizing offices, particularly in the case of harmful interference. It is therefore important for administrations to carefully update the information and notify the Bureau immediately of any significant changes. List VIII includes information about the different functions that each monitoring station is able to perform, both in the terrestrial and in the space radiocommunication services.

It is essential that those administrations already having terrestrial and/or space monitoring facilities, which participate in the international monitoring system, notify the Bureau of the particulars of their monitoring stations for inclusion in List VIII.

The present edition contains the information received by the Union from administrations. Amendments are published regularly in the ITU Operational Bulletin and also on the ITU website: (www.itu.int/go/ITU-R/ListVIII).

The international monitoring system comprises only those monitoring stations that are designated as such by administrations. These stations may be operated by an administration, a public or private agency, a monitoring service established jointly by several countries or by an international organization. The administrations responsible determine whether the technical standards observed by stations are in accordance with the ITU-R Recommendations and communicate the information to the ITU. It is to be noted in this respect that administrations may authorize the participation of stations observing lower technical standards in order to meet some particular need for monitoring data.

2 Information provided in the List

2.1 Summary Listings

- Table 1A List of administrations and their monitoring stations in the terrestrial radiocommunication services.
- Table 1B List of administrations and their monitoring stations in the space radiocommunication services.
- Table 2 Contact point for the Bureau concerning International Monitoring issues.
- **2.2 Part I** Information concerning the monitoring stations carrying out measurements related to stations of Terrestrial Radiocommunication services, under their respective administration.
- **2.3 Part II** Information concerning the monitoring stations carrying out measurements related to stations of Space Radiocommunication services, under their respective administration.
- 2.4 Part III Map of monitoring stations and geographical zones for HF broadcasting (CIRAF zones).

2.5 References

- Table 3 A list of ITU-R Recommendations, of the SM Series, relating to spectrum monitoring.
- Table 4 A list of ITU-R Reports, of the SM Series, relating to spectrum monitoring.
- Table 5 List of ITU Member States (in alphabetical order of symbol).
- ITU-R Resolution 23 Extension of the International Monitoring System to a worldwide scale.

3 Part I – Information concerning the monitoring stations carrying out measurements related to stations of Terrestrial Radiocommunication services, under their respective administration

3.1 Contact information of the Centralizing office(s)

A centralizing office must be designated by each administration, by a group of administrations in cases where a joint monitoring service has been set up, or by an international organization participating in international monitoring. Requests for monitoring information must be sent to the centralizing office, which then assembles the monitoring results for transmission to the Radiocommunication Bureau or other centralizing offices. The information is presented as follows:

Centralizing office Postal address	Telephone, Telefax, Electronic-mail	Remarks
------------------------------------	--	---------

- Centralizing Office The name, postal address, telephone, facsimile, email, URL and other contact information;
- Remarks May contain other pertinent information.

Example:

D - Germany			
Centralizing office	Postal address	Telephone, Telefax, Electronic-mail	Remarks
Bundesnetzagentur Referat 511	Postfach 80 01 55003 Mainz	TF: +49 6131 185419 FAX: +49 6131 185602 EMAIL: 511.postfach@bnetza.de	

3.2 Contact information concerning a monitoring station carrying out measurements related to stations of Terrestrial Radiocommunication Services

The information is presented as follows:

Stations in the Terrestrial radiocommunication services

me of the station Postal address	Telephone, Telefax, Electronic-mail
----------------------------------	-------------------------------------

- Stations are arranged in the alphabetical order of their names and those stations participating in the international monitoring system are suffixed with the symbol "IMS".
- Name of the station, postal address and other contact information of the monitoring station.

Example:

Name of the station	Postal address	Telephone, Telefax, Electronic-mail
Berlin (IMS)		TF: +49 30 43741305 FAX: +49 30 43741184 EMAIL: berl8.postfach@bnetza.de

3.3 Presentation of the information concerning a monitoring station carrying out measurements related to stations of Terrestrial Radiocommunication Services

The information is presented as follows:

Geographical coordinates	Types of measurements	Ranges of frequencies for each measurement	Hours of service	Remarks
--------------------------	-----------------------	--	---------------------	---------

- Geographical coordinates: In degrees, minutes and seconds, followed by the appropriate cardinal point symbols:
 - o Latitude: DD.MM.SSx where "x" is "N" or "S" (e.g. 31°25'26"S);
 - o Longitude: DDD.MM.SSx where "x" is "E" or "W" (e.g. 064°07'54''W).
- Types of measurements carried out by a station, are:
 - o Frequency measurements.
 - o Field strength or power-flux density measurements.
 - o Direction-finding measurements.
 - o Bandwidth measurements.
 - o Automatic spectrum occupancy surveys.
- Ranges of frequencies for each measurement: Frequencies are uniformly indicated by means of the abbreviations Hz, kHz, MHz or GHz as appropriate.
- Hours of service: This information is given in a time-scale expressed in Coordinated Universal Time (UTC) from 0000 to 2359 h. In addition, the following symbols may also be used:
 - H24 = continuous service throughout the twenty-four hours.
 - **o** HX = intermittent service throughout the twenty-four hours, or station having no specific working hours.
- Remarks: Notes, as notified by an administration, pertaining to a particular type of measurement.

Example:

Geographical coordinates	Types of measurements	Ranges of frequencies for each measurement	Hours of service	Remarks
				Crossed loop antenna.
31°25'26''S 064°07'54''W	Direction-finding measurements	10 kHz - 300 MHz		The hours of service are subject to modification. At least one radio monitoring station is available at anytime.

4 Part II – Information concerning the monitoring stations carrying out measurements related to stations of Space Radiocommunication services, under their respective administration

4.1 Contact information of the Centralizing office(s)

A centralizing office must be designated by each administration, by a group of administrations in cases where a joint monitoring service has been set up, or by an international organization participating in international monitoring. Requests for monitoring information must be sent to the centralizing office, which then assembles the monitoring results for transmission to the Radiocommunication Bureau or other centralizing offices. The information is presented as follows:

Centralizing office Post	al address	Telephone, Telefax, Electronic-mail	Remarks
--------------------------	------------	--	---------

- Centralizing Office The name, postal address, telephone, facsimile, email, URL and other contact information;
- Remarks May contain other pertinent information.

Example:

D - Germany			
Centralizing office	Postal address	Telephone, Telefax, Electronic-mail	Remarks
Bundesnetzagentur Referat 511	Postfach 80 01 55003 Mainz	TF: +49 6131 185419 FAX: +49 6131 185602 EMAIL: 511.postfach@bnetza.de	

4.2 Contact information concerning a monitoring station carrying out measurements related to stations of Space Radiocommunication Services

The information is presented as follows:

Stations in the Space radiocommunication services

Name of the station	Postal address	Telephone, Telefax, Electronic-mail
Leeheim	Satellitenmessstelle 64560 Riedstadt-Leeheim Germany	TF: +49 6158 9400 FAX: +49 6158 940180 EMAIL: esch16.postfach@bnetza.de

- Stations are arranged in the alphabetical order of their names and those stations participating in the international monitoring system are suffixed with the symbol "IMS".
- Name of the station, postal address and other contact information of the monitoring station.

4.3 Presentation of the information concerning a monitoring station carrying out measurements related to stations of Space Radiocommunication Services

The information is presented as follows:

- Geographical coordinates;
- Hours of service;
- Information on antennas in use;

- Range of azimuth and elevation angles;
- Maximum attainable accuracy in determining orbital positions of space stations;
- Information on system polarization;
- System noise temperature;
- Ranges of frequencies with the maximum attainable accuracy of frequency measurement for each frequency range;
- Ranges of frequencies in which field strength or power flux-density measurements can be performed;
- Minimum value of measurable field strength or power flux-density with indication of attainable accuracy of measurement;
- Information available for bandwidth measurements;
- Information available for spectrum occupancy measurements;
- Information available for orbit occupancy measurements.

Example:

1. Geographical coordinates

31°25'26''S 064°07'54''W

2. Hours of service

April to October:0500-1400 h from Monday to Friday

...

3. Information on antennas in use

Dipole antenna array for frequency range ...

4. Range of azimuth and elevation angles

360°, 90°

5. Maximum attainable accuracy in determining orbital positions of space stations

0.2/f[GHz] [no orbital position measurements within frequency range (a)].

6. Information on system polarization

Linear polarization (horizontal and vertical) in all frequency ranges. Additional ...

7. System noise temperature

```
(a)130 MHz - 1000 MHz: 650 K
(b)1500 MHz - 1800 MHz:380 K
```

8. Ranges of frequencies with the maximum attainable accuracy of frequency measurement for each frequency range

```
(a)130 MHz - 1000 MHz: 1 \times 10^{-12}
(b)1500 MHz - 1800 MHz:1 \times 10^{-12}
```

...

Ranges of frequencies in which field strength or power flux-density measurements can be performed

(a)130 MHz - 1000 MHz (b)1500 MHz - 1800 MHz

10. Minimum value of measurable field strength or power flux-density with indication of attainable accuracy of measurement

(a)-159... -151 dBW/m² ± 2.5 dB (b)-175 dBW/m² ± 1.5 dB ...

11. Information available for bandwidth measurements

Bandwidth measurements in accordance with the methods described in the Spectrum Monitoring Handbook.

12. Information available for spectrum occupancy measurements

Computer controlled receiving system using directional antennas for frequency ranges (a) to (i) or omnidirectional antennas for frequencies < 2500 MHz. Up to 4 independent ...

13. Information available for orbit occupancy measurements

Automatic orbit occupancy measurements are carried out in the frequency ranges (a) to (i).



TABLE 1A

ADMINISTRATIONS AND THEIR MONITORING STATIONS IN THE TERRESTRIAL RADIOCOMMUNICATION SERVICES

(IN ALPHABETICAL ORDER OF SYMBOLS)

Symbol	Name of the Station
AFS	Panorama (Johannesburg) (IMS)
	Klerefontein
ALG	Centre technique Annaba (IMS)
	Centre technique Oran (IMS)
ARG	Altamira (IMS)
	Avellaneda (IMS)
	Bahía Blanca (IMS)
	Buenos Aires (IMS)
	Comodoro Rivadavia (IMS)
	Concordia (IMS)
	Córdoba (IMS)
	La Plata (IMS)
	Mar del Plata (IMS)
	Mendoza (IMS)
	Mobile stations
	Neuquén (IMS)
	Parana (IMS)
	Posadas (IMS)
	Resistencia (IMS)
	Río Grande (IMS)
	Río IV (IMS)
	Rosario (IMS)
	S. Fé (IMS)
	S. Juan (IMS)
	S. Luis (IMS)
	S. Martín (IMS)
	S. Rosa (IMS)
	Salta (IMS)
	Trelew (IMS)
	Tucumán (IMS)
	Ushuaia (IMS)

Symbol	Name of the Station
AUS	Quoin Ridge (Tasmania)
AUT	Wien (IMS)
В	ERM Araçatuba
	ERM Barueri
	ERM Campos dos Goytacases
	ERM Foz do Iguaçu
	ERM Goiânia
	ERM Guarulhos
	ERM Niteroi
	ERM Piracicaba
	ERM Rio de Janeiro - CNEN
	ERM Rio de Janeiro - Galeão
	ERM São Paulo - Congonhas
	ERM São Paulo - Interlagos
	ERM Taubaté
	MIAer Belém
	MIAer Belo Horizonte
	MIAer Curitiba
	MIAer Fortaleza
	MIAer Manaus (IMS)
	MIAer Recife
	MIAer Vitória
BEL	Anderlecht
	Antwerpen
	Gent
	Liège
	Mobile stations
	Ophain
	Peutie
BFA	Bobo

Symbol	Name of the Station
BFA (cont.)	Gnimdi
BGD	Dacca
ВІН	Banja Luka (FMS)
	Banja Luka (RMS)
	Bijeljina (RMS)
	Brcko (RMS)
	Cazin (RMS)
	Derventa (RMS)
	Doboj (RMS)
	Mostar (FMS)
	Mostar (RMS)
	Sarajevo (FMS)
	Sarajevo (RMS)
BLR	Minsk (IMS)
BOL	Hamacas
	Quillacollo
	Satisabel
	Victoria
BUL	Blagoevgrad
	Botevo
	Burgas
	Chernogorovo
	Pleven
	Plovdiv
	Razgrad
	Sofia-1
	Sofia-2
	Sofia-3
	Stalevo
	Varna
	Veliko Tarnovo
	Vidin
	Vratza
CHN	Beijing (IMS)

Symbol	Name of the Station	
CHN	Chengdu	
(cont.)	Fujian	
	Guangzhou Huangshanlu	
	Harbin	
	Heihe	
	Huoerguosi	
	Jiu Quan New District	
	Kunming Dianchi	
	Lingang	
	Manzhouli	
	Shanghai	
	Shanxi	
	Shenzhen	
	Urumqi	
	Wantong	
	Yadong (Rikaze)	
	Yanbian Prefecture Radio - Jilin Province	
	Yunnan	
CLM	El Caribe (Barranquilla-Atlántico)	
	El Cerrito (Funza-Cundinamarca)	
	El Mirador (Cúcuta-N. Santander)	
	La Sultana (Candelaria-Valle)	
	Llano Grande (Rionegro-Antioquia)	
	Los Comuneros (Bucaramanga- Santander)	
CLN	Kadirana	
CME	Douala-Bonaberi	
COD	Kasangulu	
	Kinshasa	
СТІ	Abidjan	
CUB	Cuatro Caminos (IMS)	
CZE	Brno	
	Ceske Budejovice	
	Hradec Králové	
	Jihlava	

Symbol	Name of the Station
CZE	Karlovice
(cont.)	Karlovy Vary
	Liberec
	Ostrava
	Plzen
	Praha
	Tehov
	Usti nad Labem
D	Berlin (IMS)
	Darmstadt (IMS)
	Itzehoe (IMS)
	Konstanz (IMS)
	Krefeld (IMS)
	Leipzig (IMS)
	München (IMS)
E	El Casar (IMS)
	La Esperanza (IMS)
EGY	Giza
EQA	Calderón
	Quito
	Riobamba
	Taura
	Turi
EST	Kohtla-Järve
	Kuressaare
	Pärnu
	Suurpalu
	Tallinn
	Tallinn DF1
	Tallinn DF2
	Tartu
F	Favières (IMS)
	Rambouillet (IMS)
FIN	Helsinki

Symbol	Name of the Station
G	Baldock (IMS)
	Fife
GRC	Athens, Aegina (IMS)
	Athens, Airport (IMS)
	Athens, Aspra Chomata (IMS)
	Athens, Marousi (IMS)
	Athens, Penteli (IMS)
	Heraklion, Airport (IMS)
	Mobile station
	Rhodes, Paradisi (IMS)
	Thessaloniki, Psili Korifi (IMS)
	Thessaloniki, Water Tower (IMS)
HND	Miraflores (IMS)
HNG	Debrecen (IMS)
	Dobogóko
	Gosztola
	Hosszúhetény
	Hörmann-forrás
	Katymár
	Kisvárda
	Pécel
	Péterimajor
	Piszkésteto
	Szántód-Gyugypuszta
	Szolnok
	Tárnok (IMS)
	Tótkomlós
HOL	Amersfoort (AT_EZ-Nera) (IMS)
I	CNCER - Roma (IMS)
	Monza (IMS)
	Sorrento (IMS)
IND	Chennai (IMS)
	Kolkata (IMS)
	Mumbai (IMS)
	Nagpur (IMS)

Symbol	Name of the Station
IND (cont.)	New Delhi (IMS)
INS	MSCK-Tangerang
	MSKH-Kupang
	MSPA-Samarinda
	MSTM-Medan
	MSWR-Merauke
IRN	Ali Abad
	Mashhad
	Shiraz
ISR	Tel Aviv
J	Aso
	Chitose
	Ishigaki
	Suzu
	Tokyo (IMS)
KEN	Eldoret
	Garissa
	Kabete
	Kahawa
	Kisumu
	Kitale
	Mazeras
	Mobile station
	Mombasa City
	Nakuru
	Railways
KGZ	Bishkek
	Osh
KOR	Dangjin (IMS)
	Gangneung
	Jeju
	Ulsan
KWT	Doha

Symbol	Name of the Station	
BY	Tripoli	
ИDA	Chisinau	
ΛEX	Acapulco	
	Aguascalientes	
	Campeche	
	Cancún	
	Cerrillo (IMS)	
	Chihuahua	
	Chilpancingo	
	Chimalhuacan	
	Colima	
	Cuajimalpa	
	Cuernavaca	
	Culiacán	
	Durango	
	Guadalajara	
	Hermosillo (IMS)	
	Jalapa	
	La Paz	
	León	
	Libertad	
	Mazatlán	
	Mexicali	
	Mérida (IMS)	
	México	
	Monterrey	
	Morelia	
	Nuevo Laredo	
	Oaxaca	
	Pachuca	
	Puebla	
	S. Luis Potosi	
	Saltillo	
	Taboada	

Symbol	Name of the Station	Symbol	Name of the Station
MEX	Tapachula (IMS)	PAK	Peshawar (IMS)
(cont.)	Tepic	(cont.)	Quetta (IMS)
	Tijuana		Tarnol (IMS)
	Tlalnepantla		Wani-I (IMS)
	Tlalpan	PHL	Fort Bonifacio (Makati)
	Tlaquepaque		Iloilo (Region VI)
	Tlaxcala		Quezon City (Manila)
	Torreón	PNG	Laloki
	Tuxtla Gutiérrez	PNR	Panamá
	Veracruz	POL	Warszawa
	Zacatecas	POR	Açores (Ponta Delgada)
	Zapopan		Barcarena (Lisboa) (IMS)
MKD	Fix station (Skopje)		Madeira (Funchal)
	Mobile station		Porto
	Portable station	PRU	Arequipa
MLA	Cyberjaya		Cusco
MOZ	Maputo		Huancayo
MTN	Centre Boghé		Iquitos
	Centre Nbeiket Lahwache		Lima
	Centre Nouadhibou		Piura
	Centre Riadh		Trujillo
	Centre Selibaby	QAT	Al Kharrara - South
	Centre Zouérate		Al Rayyan - East
	Mobile I		Al Shamal - North
	Mobile II		Doha (Sumaismah) (IMS)
	Nouakchott		Zekreet - West
MWI	Kanjedza (IMS)	ROU	SMG Constanta (IMS)
NIG	Azare		SMG Craiova (IMS)
NOR	Sandnes		SMG Galati (IMS)
	Ski		SMG Ghencea (IMS)
PAK	Ghaggar (IMS)		SMG Oradea (IMS)
	Hyderabad (IMS)		SMG Satu Mare (IMS)
	Karachi (IMS)		SMG Suceava (IMS)
	Lahore (IMS)		SMG Timisoara (IMS)
	Multan (IMS)		SMG Tulcea (IMS)

Symbol	Name of the Station
RUS	Arkhangelsk (IMS)
	Belgorod (IMS)
	Irkutsk
	Morozovsk
	Novosibirsk (IMS)
	Nyagan
	S. Petersburg (IMS)
	Samara
	Slavyanka (IMS)
	Smolensk (IMS)
	Verhneye Dubrovo
	Yakutsk
S	Stockholm - Enkoeping remotely controlled HF site (IMS)
SDN	Halfayat el Muluk (Khartoum)
SEN	Khombole
	Yeumbeul
SLV	Altamira (San Salvador) (IMS)
	Central San Miguel (San Miguel) (IMS)
	El Palmar (Santa Ana) (IMS)
SRB	KMC "Beograd"
SUR	S. Boma
SVK	B. Bystrica
	Bratislava
	Hviezdoslavov
	Košice
	Nitra
	Prešov
SVN	Brežice
	Celje
	Dravograd
	Jeruzalem
	Koper
	Ljubljana
	Maribor

Symbol	Name of the Station
SVN	Nova Gorica
(cont.)	Novo mesto
	Rašica
	Sevnica
	Stegne
TGO	Wuiti
THA	Lampang (IMS)
	Nonthaburi (IMS)
	Songkhla (IMS)
	Udonthani (IMS)
TUN	ARIANA Monitoring Station
	Mobile station
	Tunis
TUR	Ahlatlibel
	Aydos
	Balcali
	Büyük Göldagi
	Çatalkaya
	Daztepe
	Dedeler
	Dereseki
	Dicle Üniversitesi
	Hüseyingazi
	Karaincirtepe
	Kiremitli Tabya
	Kumluca
	Kurudag
	Makamtepe
	Meteoroloji
	Metris
	Sihhiye Okulu
UAE	Abu Dhabi
	Al Ain

Symbol	Name of the Station
UAE	Al Sila
(cont.)	Dubai-l
	Dubai-II
	Fujairah
	Ras Al Khaimah
URG	Melilla (Montevideo)
USA	Allegan, Michigan
	Belfast, Maine
	Canandaigua, New York
	Columbia, Maryland
	Douglas, Arizona
	Ferndale, Washington
	Grand Island, Nebraska
	Honolulu, Hawaii
	Kenai, Alaska
	Kingsville, Texas
	Livermore, California
	Powder Springs, Georgia
	Santa Isabel, Puerto Rico
	Vero Beach, Florida
UZB	Andijan
	Bukhara

Symbol	Name of the Station
UZB	Fergana
(cont.)	Kamarniso
	Margilan
	Samarkand
	Svetlana
	Termez
	Urgench
VEN	Manzanares Centro Auxiliar de Control
	Maracaibo Centro Auxiliar de Control
	Maturín Centro Auxiliar de Control
	S. Cristóbal Centro Auxiliar de Control
	S. Felipe Centro Auxiliar de Control
VTN	Can Tho
	Da Nang
	Ha Noi
	Hai Phong
	Ho Chi Minh
	Nha Trang
	Viet Tri (IMS)
	Vinh
YEM	Aden

TABLE 1B

ADMINISTRATIONS AND THEIR MONITORING STATIONS IN THE SPACE RADIOCOMMUNICATION SERVICES

(IN ALPHABETICAL ORDER OF SYMBOLS)

Symbol	Name of the Station
ARG	Benavídez ARSAT earth station
	Buenos Aires (IMS)
CHN	Beijing (IMS)
	Shenzhen
	Urumqi
D	Leeheim
IND	Jalna (ISMES)
J	Tokyo (IMS)
KAZ	GCC Akkol
KOR	Icheon
OMA	Satellite Radio Monitoring Station (SRMS)
PAK	Wani-II
RUS	Belgorod (IMS)
	Khabarovsk (IMS)
	Smolensk (IMS)
UKR	Kyiv
USA	Columbia, Maryland
VTN	Viet Tri (IMS)

TABLE 2

CONTACT POINT FOR THE BUREAU CONCERNING INTERNATIONAL MONITORING ISSUES

Contact information	
Name:	Mr. Ben BA
Title:	Head, Terrestrial Publication and Registration Division
Address:	Radiocommunication Bureau - ITU Place des Nations CH-1211 Geneva 20, Switzerland
Direct Telephone:	+41 22 730 5044
Telefax:	+41 22 730 5785
Email:	<u>brmail@itu.int</u>