



Utility Monitoring Central Archive

Note that the UMC Archive files mainly cover defunct stations. Some stations may however still be active and some of the info may still be valid.

Diplomatic Stations on HF

Countries:

Afghanistan	France	Peru
Albania	Germany	Phillipines
Algeria	Ghana	Poland
Angola	Greece	Portugal
Australia	Guinea	Romania
Austria	Hercegovina	Senegal
Bangladesh	Hungary	Serbia
Belgium	India	Slovakia
Benin	Indonesia	Somalia
Bulgaria	Iran	Spain
China	Israel	Sudan
Congo (Rep. of the Congo)	Italy	Sweden
Croatia	Japan	Switzerland
Cuba	Malaysia	Thailand
Cyprus	Mongolia	Tunisia
Czech Republic	Morocco	Turkey
Denmark	Netherlands	United States of America
Egypt ¹	Nigeria	Vietnam
Estonia	North Korea	Yemen
Ethiopia	Norway	Zaire (Democratic Rep. of Congo)
Finland	Pakistan	

Headers:

MFA Kabul	11/Nov/98	AFGHANISTAN
Diplo net	Last update	Country

¹ Not included in this document but integrated in the Egyptian diplo document on UDFX
<http://www.udxf.nl/Egyptian-diplo.pdf>

Transmission Modes: SITOR-A 100bd Erect 170Hz

Frequencies: 14365.7

Country Profile:

Capital Kabul with 30 provinces (velayat, singular-velayat); Badakhshan, Badghis, Baghlan, Balkh, Bamian, Farah, Faryab, Ghazni, Ghowr, Helmand, Herat, Jowzjan, Kabul, Kandahar, Kapisa, Konar, Kondoz, Laghman, Lowgar, Nangarhar, Nimruz, Oruzgan, Paktia, Paktika, Parvan, Samangan, Sar-e Pol, Takhar, Vardak, Zabol note: there may be two new provinces of Nurestan (Nuristan) and Khowst. NA; note-the military does not exist on a national basis; some elements of the former Army, Air and Air Defense Forces, National Guard, Border Guard Forces, National Police Force (Sarandoi), and tribal militias still exist but are factionalized among the various groups.

Notes on Operation:

- TALEBAN operating internal and short-haul communications.
- Status as MFA and embassies unknown.

Location

Jalalabad, Afghanistan

Kabul

Mary, Turkmenistan

Quetta, Pakistan

Transmission Modes: CW

Frequencies: 5378.0 5401.0 6858.0 6884.0 7612.0 10306.0

Country Profile:

Capital is Tirana, with 36 districts (rrethe, singular--rreth) and 1 municipality* (bashki); Berat, Bulqize, Delvine, Devoll (Bilisht), Diber (Peshkopi), Durres, Elbasan, Fier, Gjirokaster, Gramsh, Has (Krume), Kavaje, Kolonje (Erseke), Korce, Kruje, Kucove, Kukes, Lac, Lezhe, Librazhd, Lushnje, Malesi e Madhe (Koplik), Mallakaster (Ballsh), Mat (Burrel), Mirdite (Rreshen), Peqin, Permet, Pogradec, Puke, Sarande, Shkoder, Skrapar (Corovode), Tepelene, Tirane (Tirana), Tirane* (Tirana), Tropoje (Bajram Curri), Vlore. Forces include Army, Navy, Air and Air Defense Forces, Interior Ministry Troops, and Border Guards.

Transmission Modes:

Alcatel 801 150bd to 1200bd
 Coquelet-8 13.3bd and 26.7bd
 Coquelet-8v2 26.7bd FEC and non-FEC modes
 Coquelet-13 (tentative)
 Racal MSM-1250 VFT: 10ch of 125bd 170Hz ITA-5
 MIL-188-141A 125bd 1650Hz ALE
 SITOR-A 100bd 170Hz
 PacTOR 200bd 200Hz
 CW
 USB Voice

Logged Frequencies:

6721.36	9141.4	10995	12161.4	14938	16318.5	18526.7	18787	20189
6774.1	9248.7	10996.37	12256.4	15912	16339	18528.4	18943.68	20450.7
6841.4	9352.7	10997	12258	16077.6	17411.1	18529.35	19028.62	23055.5
7345.7	10126.38	11005	13425.69	16079.6	17412.4	18753	19031.41	23127.5
7350.70	10565	11252	13428.4	16146.64	18139	18754.5	19123.6	
7421.5	10720	11418	13655	16272.4	18145	18756.2	19141.36	
8010.66	10729	11475	13875	16273.6	18180.65	18757.27	19434.5	
8013.39	10730	11475.5	13936.5	16278.6	18183.7	18758	20145	
9041	10731	12108.4	14932.7	16315.4	18204.5	18758.9	20148	
9118.66	10993.7	12132	14937.6	16316.3	18421.4	18761	20163.5	

Country Profile:

Capital is Algiers, with 48 provinces (or wilayas, singular-wilaya); Adrar, Ain Defla, Ain Temouchent, Alger, Annaba, Batna, Bechar, Bejaia, Biskra, Blida, Bordj Bou Arreridj, Bouira, Boumerdes, Chlef, Constantine, Djelfa, El Bayadh, El Oued, El Tarf, Ghardaia, Guelma, Illizi, Jijel, Khenchela, Laghouat, Mascara, Medea, Mila, Mostaganem, M'Sila, Naama, Oran, Ouargla, Oum el Bouaghi, Relizane, Saida, Setif, Sidi Bel Abbes, Skikda, Souk Ahras, Tamanghasset, Tebessa, Tiaret, Tindouf, Tipaza, Tissemsilt, Tizi Ouzou, Tlemcen. Forces consist of Popular Army, Navy, Air Force, Territorial Air Defense, and National Gendarmerie.

Notes on Operation:

- [SAT][SUN] nil on Friday (Moslem holy day).
- Language: French, ATU-80 Arabic
- Online encryption appears as pseudo-random strings, or loss of text. Offline encryption using 5FGs noted sometimes.
- Idles on ITA-2 character code 32 using outer tones on Coquelet-8.
- Use of Coquelet-8v2 (auto Arabic vs Latin keyboard recognition) marked by longer 13.3bd preamble and only occasional sync thereafter with standard Coquelet-8 module, otherwise garbage. Solved by recent addition of Code30's "Coquelet Auto" module which automatically senses this system variant.
- MFA broadcasts to a number of embassies who are then asked to reply from their QSX frequencies in turn. Remote embassies are often referred to by the MFA using abbreviated names during such exchanges eg "nktt" when asking Nouakchott to QSL. Most embassies use the same single QSX frequency when sending traffic or QSLs. Rare single frequency operations.
- Appears to be using USB on most frequencies, LSB on some others. The offset of the tones variable but reasonably consistent sideband per any given frequency.
- Algiers uses 26.67bd whenever possible, but embassies use either 26.67bd or 13.33bd. Algiers switches to lower speed on difficult long-haul circuits (eg Beijing).
- (March 1998) Algerian Diplo has purchased the SkyFax medium speed modem (MSM-1250) from the RC5000 series manufactured by Racal Canada. The modem uses MIL-STD-188-141A ALE and link setup and VFT with 10 channels of 125 Bd FSK. Traffic is being sent in short bursts, similar to Packet Radio. The traffic can be read, as long as non-binary data is being sent. The modem uses 10

channels of synchronous 8-bit ASCII. Use Code 30's "Character Analysis Duplex" module with settings of ITA-5, 8-bit, NOT-interleaved. Each channel contains different information. Frequencies identified using this mode: 8129.50, 10245.50, 11476.50, 12229.50, 14423.50, 15919.50 16341.50, 18205.50kHz

- (March 2000) Using Alcatel 801 modem on some links. Modem capable of upto 1200bd throughput with a distinctive 100Hz spaced 8-tone Coquelet-like control signal.
- (February 2003) Reported using SITOR-A and regular Pactor on 16341.7kHz with traffic to Cairo.
- For further info on the SkyFax modem, see <http://home.iSTAR.ca/~racalcan/>

Call	Location	Mnemonic	ALE ID
	Abidjan, Ivory Coast	abi	
7RZ50	Abu Dhabi, UAE		
7RY20	Accra, Ghana	accra	
ETN52	Addis Ababa	ab	
7RQ20	MFA Algiers, Algeria	alg	MAE
7RW40	Amman, Jordan		
7RQ90	Ankara, Turkey		
	Athens, Greece	ath	
7RW60	Baghdad, Iraq	bag	
7RY80	Bamako, Mali	bko	
7RQ30	Beijing, China	pek	
	Beirut, Lebanon	bey	
7RV60	Belgrade, Serbia		
7RV80	Berlin, Germany		
	Bogota, Colombia		
7RP80	Bonn, Germany		
7RY60	Brazzaville, Rep. Congo		
7RP40	Brussels, Belgium	bru	
	Bucharest, Romania		
7RW20	Cairo, Egypt		
7RY40	Conakry, Guinea	cky	
7RY50	Dakar, Senegal	dkr	
	Damascus, Syria	damas	
	Dar Es Salaam, Tanzania		
	Delhi, India		
	Den Haag, Netherlands		
7RQ50	Djakarta, Indonesia		
7RP50	Geneva, Switzerland		
7RW90	Jeddah, Saudi Arabia		
	Kampala, Uganda		
	Kiev, Ukraine		
7RX60	Khartoum, Sudan	krt	
7RW70	Kuwait		
	Hanoi, Vietnam		
	Harare, Zimbabwe		
CME356	Havana, Cuba		
7RQ70	Islamabad, Pakistan		
	Kinshasa, Zaire	kin, ksha	
7RY90	Lagos, Nigeria	lg, lgs	
	Libreville, Gabon	libre	
	Lisbon, Portugal		
7RP30	London, UK		
7RP90	Madrid, Spain		
	Maputo, Mozambique	mpt	
	Mexico City, Mexico		
	Mombasa	mom	
7RV20	Moscow, Russia		
	Muscat,	mct	
7RX70	Niamey, Niger	nm	
	Nairobi, Kenya		

	Ndjamena, Chad	ndj	
	New York, USA		
	Nouakchott, Mauritania	nktt	
	Ouagadougou, Mali	oua, ouaga	
7RP20	Paris, France		
7RV40	Prague, Czech Republic		
7RQ40	Pyongyang, North Korea	pyong	
	Rabat, Morocco		
	Riyahd, Saudi Arabia	ryd	
7RP70	Rome, Italy	rom	
	Sanaa, Yemen		
7RV50	Sofia, Bulgaria		
7RV30	Stockholm, Sweden		
7RQ80	Teheran, Iran		
	Tokyo, Japan		
7RX40	Tripoli, Libya		TRP
	Tunis, Tunisia		TNS
	Vienna, Austria		
7RV70	Warsaw, Poland		
7RZ20	Washington, USA		
KNY28	Washington, USA		
	Windhoek, Namibia		
	Yaounde, Cameroon	ynd	
7RW30	UNID		
7RW50	UNID		
7RP60	UNID		
7RW80	UNID		
7RX20	UNID		
7RX30	UNID		
7RX50	UNID		
7RQ60	UNID		
7RX80	UNID		
7RX90	UNID		
7RY30	UNID		
7RY70	UNID		
7RV90	UNID		
7RZ30	UNID		
7RZ40	UNID		
7RZ60	UNID		
7RZ70	UNID		
7RZ80	UNID		
7RZ90	UNID		
ETG75?	UNID		

Consulates:

Alicante, Spain
Aubervilliers, France
Frankfurt, Germany
Nanterre, France

Dictionary:

Ambalg Ambassade D'Algerie (Algerian Embassy)
bc broadcast?
Consalgs Consulates
dest Destinaire (destination)
exp Expediteur (sender)
MAE Ministere des Affaires Estrangeres (MFA)
mots Number of words (mots 12)
SDCVD Dept of MAE?
vci Voici (here is)
off Office

Sample message: Press review message sent by MFA Algiers to all embassies

vci off alger nr 122103/122169 le 30.11.95 a 1030z l 150
exp : mae/ dcd/alger
dest : tous postes diplomatiques et consulaires

texte

-- physionomie de la presse nationale--
30.11.1995

-la presse quotidienne de ce jeudi matin est alimentee par des sujets d'actualite divers,aux plans national et international. sur la scene nationale,les quotidiens insistent sur la decision de fermeture du centre de surete de ain-m'guel avec la liberation de tous les detenus administratifs et l'exemple donne par le president zeroual ,pour la premiere fois dans l'histoire de l'algerie,en deposant pres la cour supreme la declaration de ses biens.ainsi ,'' 'l'authentique 'souligne que''pour passer udu discours a l'acte,le president de la republique n'a pas tarde a donner l'exemple .aussi,la premiere decision qu'il a prise apres celle de la grace presidentielle est de rendre publique sa fortune''. ''les engagements et les promesses qu'il a avait tenus,note,de son cote,'el-ouma'',se concretisent.la premiere mesure d'amnistie prise par le president de la republique consiste en la fermeture du dernier centre de surete de ain-m'guel''. pour le journal,'desormais,le retablissement de la paix civile et la concretisation de la concorde nationale ne seront plus de vains mots.ce geste d'amnistie,estime-t-il,en appellera certainement d'autres''.

[etc]

stop signe a sebaa chef de la dcd stop et fin

col bn

voila termine et qru pr toi qsl ??

ok vx bsr alors qru pr toi si tfc rle rle

Example 2: Message sent by Embassy Naimey to MFA Algiers

exp ambalg niamey
dest mae . sg . dgr . dfc . sdbem alger

texte nr 232

h v i stop en perspective reception definitive des batiments residenp et chancellerie et liberation bonsequente caution bancaires stop suggerons autoriser mme.8ait bachir ghanima, architecte qui a assure suivi technique du chantier stop a se deplasr a niamey afin finalisernavec enyeprise s.n.h cette operation stop
signe : m. bouguerra ambassadeur stop et fin

col bn

Example 3: Off line encrypted traffic from MFA Algiers

off alger nr 82807/11 le 12.10.96 a 1530z gr 74
exp : mae/alger
dest : ambalg : paris - rome - madrid - bonn - moscou

txt nr 29095 op 120900z gr 74

08054 05825 29149 73041 67685 67159 69808 69020 61824 36995
12482 34415 21754 74648 94576 78876 12845 28350 75001 81895
63163 99606 94871 90303 85557 53119 28462 12745 28776 39463
52716 15760 89459 03627 30149 04554 15030 02285 68113 83645
42567 98906 96671 99702 09768 91527 00260 69510 94303 63307
28941 36865 17303 40302 29654 69345 50390 50041 82144 45674
74737 55122 17135 18331 92721 42973 04124 31243 15643 20756
17290 92543 44233 74219 = ar

col bn/skr

Transmission Modes:

MIL-188-141A 125bd 1650Hz ALE
MSM-1250 125bd 10ch VFT HF Modem

Frequencies: 7790.0 8859.0 9942.0 10335.0 12348.0 17458.0 22848.0

Country Profile:

Capital is Luanda, with 18 provinces (provincias, singular provincia); Bengo, Benguela, Bie, Cabinda, Cuando Cubango, Cuanza Norte, Cuanza Sul, Cunene, Huambo, Huila, Luanda, Lunda Norte, Lunda Sul, Malanje, Moxico, Namibe, Uige, Zaire. Forces include Army, Navy, Air and Air Defense Forces, and National Police Force.

Notes on Operation:

- Listed in IFL against Luanda but no loggings until 2001 when at least three channels of a possible mixed MOI and Diplo network emerged.
- ALE is used to trigger traffic using the Racal MSM-1250 VFT HF modem.

ALE ID	Location
BGA	benguela, Angola
BRA	Brazzaville, Congo
CUN	Cunene, Angola
	Brussels, Belgium
KIN	Kinshasa, Congo
KNK	Kuando-Kubango, Angola
KSL	Kwanza-Sul, Angola
LD2	Luanda, Angola
KKG	
PNG	Pointe Noire, Congo

Transmission Modes:

SITOR-A 100bd
TWINPLEX 100bd F7B-1 -255/-85/+85/+255Hz

Frequencies:

3750.0 7947.0 9980.0 13565.0 14806.7 14854.7 14856.0 18556.0
18259.0 19414.5 23608.0

Country Profile:

Capital (administrative) is Canberra, with 6 states and 2 territories; Australian Capital Territory, New South Wales, Northern Territory, Queensland, South Australia, Tasmania, Victoria, Western Australia. Dependent areas include Ashmore and Cartier Islands, Christmas Island, Cocos (Keeling) Islands, Coral Sea Islands, Heard Island and McDonald Islands, Norfolk Island. Forces include Australian Army, Royal Australian Navy, Royal Australian Air Force.

Notes on Operation:

- Ministry of Foreign Affairs, Canberra. Copied intermittently by AB on 14856 in the Australian afternoon (around 0100-0300z) with traffic in both SITOR-A and TWINPLEX to Pacific Island nations. SITOR-A has been copied in plaintext but TWINPLEX is invariably encrypted.
- AB (Feb96) notes 14854.7 - Daily for the last 3 days TWINPLEX idling on this freq from 0200-0400Z. No traffic noted during this time. ISS station very weak and barely discernable. IRS reasonable strength. Sure this is Canberra with somewhere in the Pacific Islands.

Reported Callsigns/Selcals for Parent MFA/Embassies:

Canberra, Australia VL8DFA
Honiara
Honolulu, Hawaii
Nauru
Noumea
Nuku'alofa
Pohnpei
Port Moresby
Suva
Tarawa
Vila
Wellington, New Zealand

Dictionary:

Austrade Embassy
DFA Department of Foreign Affairs

Sample Message: Sample by AB 4/Aug/93

emdw604

rru nurudvxx

chchdvxx unc

o.ap16270 1345 4.8.93 unc

to.

pp canberra/

rp.

rr honiara/ honolulu/ nauru/

rr noumea/ nuku'alofa/ pohnpei/

rr port moresby/ suva/ tarawa/

rr vila/ wellington/

fm. apia/ fa ref o.ap16253/man

u n c l a s s i f i e d

aid: taro leaf blight outbreak in western samoa to file 92/1461 from file 607/8

a meeting on the afternoon of august 4th was attended by representatives of

western samoan government, fao, spc, aidab farming

systems project, commercial agricultural development project(usa) and

ireta(usp) to hear developments in the outbreak of taro leaf blight caused by

the fungus phytophthora.

qta qta @@@ ypr qta qta 604

nnnn

Transmission Modes:

ARQ-S 96bd Erect 185Hz 5, 6CRC
 FEC-100 96bd Erect 170Hz
 FEC-S 96bd Erect 170Hz
 DASA FARCOS 1800bps PSK HF burst modem, +1680Hz offset

Frequencies:

5070.5 7891.5 10298 10488.5 14478.5 14520 16164 19730 20494 20973.5
 7880 7892.5 10413 13617 14487 14523 17459 19810.4 20742
 7894 7893.5 10421.5 14481 14488.5 16133 18411.5 19928.5 20750
 7896 9399 10422.5 14482 14518 16132.5 18582.5 20480 20753.5

Country Profile:

Capital is Vienna, with 9 states (bundeslaender, singular bundesland);
 Burgenland, Kaernten, Niederoesterreich, Oberoesterreich, Salzburg, Steiermark,
 Tirol, Vorarlberg, Wien. Forces include Army (includes Flying Division).

Web Address: <http://www.bmaa.gv.at/index.html.en>

Notes on operation:

- [SUN]
- Language: German, English
- Single frequency operations.
- Chatty operator exchanges, with names.
- Uses OVER+ to transfer, and CLEAR+ to terminate
- Offline encrypted traffic in 5 letter groups. First group always ZZZZZ followed by groups 2-6 the same. Final group also ZZZZZ .
- In early 1999, reports of FARCOS HF modem traffic on known MFA Vienna frequencies of 7894.2 (cf), 10412.6 (cf) and 10673.6 kHz (cf).
- Communication Processor KOR 2000 (similar functions as Merlin by Rohde & Schwarz)
- Radio Link processor modem ACE 1800 (consists of link processor ARCOTEL and ECHOTEL serial modem)
- The ECHOTEL modem modulates the data (also digitized voice) into a 1800 Bd QPSK single tone signal. Carrier frequency is 1650 Hz Error correction used is FEC and selective ARQ net datarate is 1750 bps
- The ARCOTEL link processor uses active and passive channel analysis.
- The stations tend to jump up and down the assigned channels in rapid succession.

Callsign	Location		
OEC..	Amman, Jordan	OEC51	Cairo, Egypt
OEC..	Ankara, Turkey	OEC52	UNID
OEC..	Belgrade, Serbia	OEC54	UNID
OEC..	Damascus, Syria	OEC57	Pretoria, South Africa
OEC..	Moscow, Russia	OEC61	Rome, Italy
OEC21	Warsaw, Poland	OEC64	Lagos, Nigeria
OEC35	New Delhi, India	OEC72	Lisbon, Portugal
OEC36	Beijing, China	ONN45	Brussels, Belgium
OEC..	Teheran, Iran	OEC	MFA Vienna, Austria
OEC44	Tel Aviv, Israel	OEC100	MFA Vienna, Austria

Selcal KFFX

Dictionary:

Aussenamt MFA (Vienna)
austroamb Austrian Ambassador
Juli July

Sample Message: Offline encrypted message header

cccccc jj [message start]
aus austroamb new delhi [from Austrian Ambassador New Delhi]
an aussenamt wien [to MFA Vienna]
2 5 0 6 2 [message number]

zzzzz pnojx pnojx pnojx pnojx pnojx fvtzx qgayy kjhmv gzkfs
kwehu yrnpp hhbcm sepgc pozoy ywhsi nwftb nrpro hdexz phhqk

Sample Message: 30/Oct/92 end of qso

best. guten erhalt bzw. loesung von 25062 und 10289 am
30.10.92 um 08:21 utc, aussenamt/fiedler

die temperatur ist heute gar nicht so unangenehm, so um die
10 grad plus. wuensche ihnen auch noch einen angenehmen restl.
tag und natuerlich ein wunderschoenes we. aws bis zum nm.

clear++

[end of qso]

Transmission Modes:

ITA-2	75bd	850Hz	
SITOR-A	100bd	Erect	170Hz
Baudot	75bd	850Hz	
FEC-100	144bd	840Hz	
USB	Voice		

Frequencies:

17566.0	18466.0	18566.0	18666.0	20497.0	20667.0	20677.0	20777.0
20947.0	21877.0	22977.0					

Country Profile:

Bangladesh measures 144,000 sq km. The capital of the People's Republic of Bangladesh is Dhaka. The country counts 64 districts (zilla); Bagerhat, Bandarban, Barguna, Barisal, Bhola, Bogra, Brahmanbaria, Chandpur, Chapai Nawabganj, Chattagram, Chuadanga, Comilla, Cox's Bazar, Dhaka, Dinajpur, Faridpur, Feni, Gaibandha, Gazipur, Gopalganj, Habiganj, Jaipurhat, Jamalpur, Jessore, Jhalakati, Jhenaidah, Khagrachari, Khulna, Kishorganj, Kurigram, Kushtia, Laksmipur, Lalmonirhat, Madaripur, Magura, Manikganj, Meherpur, Moulavibazar, Munshiganj, Mymensingh, Naogaon, Narail, Narayan-ganj, Narsingdi, Nator, Netrakona, Nilphamari, Noakhali, Pabna, Panchagar, Parbattya Chattagram, Patuakhali, Pirojpur, Rajbari, Rajshahi, Rangpur, Satkhira, Shariyatpur, Sherpur, Sirajganj, Sunamganj, Sylhet, Tangail, and Thakurgaon. The Bangladesh defense has the following branches: Army, Navy, Air Force; paramilitary forces - Bangladesh Rifles, Bangladesh Ansars, Armed Police Reserve, and Coastal Police.

Notes on Operation:

- Language: English
- Single frequency working ie same channel used for traffic to and from MFA Dhaka.
- Operator's name follows at end of message.
- Operator chat follows most QSOs in FEC-100.
- Message headers of the form:

FROM	BANGLADOOT, BAGHDAD
TO	PAMA, DHAKA

Selcal Location

IKVU	Berne, Switzerland
	Baghdad, Iraq
IKVR	Moscow, Russia
	Riyahd, Saudi Arabia

Dictionary:

Bangladoot	Bangladeshi Embassy
PAMA	MFA

Callsigns:

Mnemonic	Location
	Addis Ababa
	Amman, Jordan
	Beijing, China
	Beirut, Lebanon
D40	MFA Brussels, Belgium
	Bujumbura
D46	Cairo, Egypt
	Damascus, Syria
	Harare, Zimbabwe
	Jerusalem, Israel
	Kuwait
	London, UK
	Moscow, Russia
	Nairobi, Kenya
	New York (UN Delegation), USA
	Paris, France
	Riyahd, Saudi Arabia
	Teheran, Iran
	Tel Aviv, Israel
	Tunis, Tunisia
	Warsaw, Poland

Sample Message: End of message

```
nbbxrz gtufj j:1. cmlxx ybmhf tligq ybcof lffce zaxix zzzzz
bt
gr2700 [end of message, group count confirmation]
nnnn
```

Sample Message: Start of message

```
pr kairo
sleulel 25.03.96
ambabel nairobi a belexthbru [Ambassador Nairobi to MFA Brussels]
225 van 22.03.96. code
zzzzz dkhoq dkhoq dkhou dupmq dk oq [encryption header]
```

[Message originated in Nairobi relayed via Cairo to Brussels?]

Sample Message: Call sequence - D40 (Brussels) calling D46 (Cairo)

```
test d40 test d40 test d40
the quick brown fox jumps over the lazy dog 1234567890
the quick brown fox jumps over the lazy dog 1234567890
the quick brown fox jumps over the lazy dog 1234567890

d46 d46 d46 van d40 d40 tu me recois tuours bien ???? kkkk
```

Transmission Modes: ITA-2 50bd

Frequencies: 9088.0 17525.0 21855.0 23964.0

Country Profile:

Capital is officially Porto-Novo, administrative seat in Cotonou, with 6 provinces; Atakora, Atlantique, Borgou, Mono, Oueme, Zou note: six additional provinces have been reported but not confirmed; they are Alibori, Collines, Couffo, Donga, Littoral, and Plateau; moreover, the term "province" may have been changed to "department". Forces include Armed Forces (includes Army, Navy, Air Force), National Gendarmerie.

Callsign	Location
	MFA Cotonou, Benin
CME386	Havana, Cuba
CME387	Havana, Cuba
CME388	Havana, Cuba
ONN41	Brussels, Belgium

Transmission Modes:

ITA-2 75bd Erect 500Hz
 ITA-2 150bd Erect 500Hz
 ITA-2 150bd Inverted 500Hz
 SITOR-A 100bd
 ASCII-ARQ 75, 100, 120, 150, 160bd 500Hz (ACF=11)
 ASCII-ARQ 180, 192, 210.23, 240bd 500Hz (ACF=11)
 ASCII-ARQ 270.44, 272.74, 300bd 500Hz (ACF=11)
 ASCII-ARQ 363.78bd 500Hz (ACF=11)
 ASCII-ARQ 600bd 600Hz
 ASCII-ARQ 800bd 800Hz
 ASCII-ARQ 1200bd 1200Hz
 CW

Frequencies:

3862	8088	10242	11494	12195	13929	14433	16014.8	17424.2	20055
3864	8090	10244	11521	12205	13930	14442	16017.7	17429.1	20085.5
4806	8093	10256	11625	12215	13933	14532.3	16025.3	17431	20095
5029	8099.5	10320	11684	12217	13928.7	14728	16030	17534	20320
5195	8162	10348	12066	12218	13933.3	14735	16036	18034	20325
5355	8175	10428	12072	12223	13938	14741	16040	18035	20352
5360	9055	10574	12112	12227	13939	14774.7	16048	18036	20357
5418	9064	10741	12114	12233.2	13994	14779.3	16050	18040	20359
5433	9063.3	11007	12119	12297	14120	14830.3	16064	18042	20360
5825	9067	11026	12124	13375	14362	14840.4	16105	18045	20362.3
5832	9078.3	11030.2	12134.3	13387	14371	14845.3	16115	18050	20393
5838	9108	11052	12137.4	13413	14374	14855.3	16120	18066	20446
5864	9276	11053	12138.3	13418	14376	14888	16185	18247.2	20459.5
6706.2	9368	11054	12144	13416.3	14377	14894.3	16188	18510	20742
6784	10145	11064	12151	13424	14380	14964	16190.4	18520	20888
6792	10154	11092.4	12153	13425	14387	14980	16207	19060.3	20940
7410	10158	11146.7	12160	13427	14388	14981	16320.5	19115	21826
7672	10159	11163	12161	13426.3	14392	14987	16336	19155	21885
7734	10165.2	11164	12165	13438	14397	14990	16345	19160	23030
8046	10174	11166	12168	13456	14405	15610	16354	19360	
8068	10178	11168	12170	13465	14407	15660.3	16355	19365.3	
8065.3	10180	11172	12178	13505	14422	16005.3	17413	19750	
8070	10234	11424.5	12190	13865	14424	16008	17421	20040	
8072	10240	11432	12190.3	13924	14426	16015.7	17422	20044	

Country Profile:

Capital is Sofia, 9 provinces (oblasti, singular oblast); Burgas, Grad Sofiya, Khaskovo, Lovech, Montana, Plovdiv, Ruse, Sofiya, Varna. Forces include Army, Navy, Air and Air Defense Forces, Border Troops, Internal Troops.

Notes on operation:

- Language: Bulgarian, English
- Broadcasts (150/R or N/500): (Summer 0830, Winter 0930) 8099.2 12190.2
16015.7 (4/Mar/96)
- Commonly confused (in the absence of callsigns) with MFA Bratislava due to similarity of ASCII-ARQ systems. Generally, 11 bit ASCII-ARQ is used by Bulgarian Diplo, and 10 bit by Slovak Diplo.
- Links are established on 75bd/500 Baudot and by CW. Uses an ASCII-based full-duplex ARQ system speeds 75-1200bd, 11 bits per character (ACF=11). However 10 bit variants have been reported. ASCII-ARQ is also known as IRA-ARQ. If 11 bits suggests 1 start, 7 data (for ASCII), 1 parity (odd or even to be established?), two stop. The system can change speed on-the-fly, this coinciding with sequences such as "00 210" occurring in the received text as the system moved from 150bd to 210bd.
- (Tips on decoding ASCII-ARQ with Hoka equipment). Use ITA5 module. Sometimes one only gets a screen full of control characters and checksums. That is usually when the system has a very steady rhythmic sound. Sometimes one can even spot operator chat in between the control characters. As soon as real traffic is being sent the sound often changes to a high-pitched, aggressive and more random noise pattern. One will encounter all sorts of tfc, - 5figs, clear text messages, news bulletins and often a proprietary Bulgarian UUENCODE-style file format, which is used to mask binary data. Remember to set the correct mark-level as Code3/Code30 will not set automatically. Also set baudrate manually - if one measures the baudrate of say 300bd and press [B] in the ITA5 module the decoder will jump to the asynchronous speed of 150bd which is incorrect.
- Embassies are called by the MFA with "CIL CIL CIL ryryryryryryry" ie CIL being the called tactical callsign.
- Addressing is in the clear.
- Encrypted traffic appears in three figure groups, in five figure groups and five letter groups with a double line feed every five lines. On-line encrypted msgs start with long line of "dddddddd"
- Tactical callsigns noted being used by MFA to embassies are ARL DKI DSR DWB FOW GAT GUB MIZ PFR ZSF - see below - but appears the list may have been superceded.
- Operators exchange frequent chatter and status reports, for example:
GAT BK GM ZOK ZNN K
(to GAT break goodmorning we are rcvng ok all clear for tfc K)
=GAT assumed to answer on unknown freq=
GAT TKS ZNN GB SK @@@
(to GAT thanks all clear for tfc goodbye cu nxt sked signoff)

Disctinctive use of Q and Z codes often of their own making.

ZAP...	(acknowledge pse)
ZAP1	(work/switch to simplex)
ZAP2	(work/switch to duplex)
ZAP3	(work/switch to diplex)
ZAP4	(work/switch to SSB voice)
ZAP5	(work/switch to ARQ)
ZAP6	(work/switch to non-ARQ)
ur ZAL normal	(your freq normal?)
my ZAL 16015	(my freq 16015)
QAP my ZAL?	(listen for me my freq)
ZAR ...	(Use ... baud)
ZOH1	(I have ... messages for you)
ZVH	(not listed)
ZOK	(we are receiving ok)
ZNN	(I have nothing further for you)
ZRR	(use ... baud)
QRH 26.12.92	(yr freq varies)
QTR 10.00	(correct time is 10.00)

Callsigns

Tactical	Embassy Call	Location
AGA	LZC4	The Hague, Netherlands
ARL		UNID
BFV		Helsinki, Finland
BMA		Algiers, Algeria
BOH		Tehran, Iran
BOK		Nicosia, Cyprus
CDH		Algiers, Algeria
CFO		Rabat, Morocco
COD		Beirut, Lebanon?
CUJ	CUJ494	Lisbon, Portugal
CWB		London, UK
DAZ		Beirut, Lebanon?
DGZ		Moscow, Russia
DKI	CME342	Havana, Cuba
DMZ		Beirut, Lebanon?
DOK		UNID
DOR	LZG1	MFA Sofia
DOR2	LZG1	MFA Sofia
DSR		Ankara, Turkey
DTF		Stockholm, Sweden
FGZ		Rabat, Morocco
FIM	LZG7	Madrid, Spain
FNZ		Baghdad, Iraq
FOW	ONN29	Brussels, Belgium
GAT		Cairo, Egypt
GDO		UNID
GIP		Luanda, Angola
GUB		Damascus, Syria
GPR		UNID
KIT		Kiev, Ukraine
KRZ		Vienna, Austria
KSA		Berlin, Germany
LGA		UNID
MGU		Tunis, Tunisia
MIZ		Tripoli, Libya
NCO	ETR45	Addis Ababa, Ethiopia
NCS		Moscow, Russia
ODK		UNID
OFC	Z2F16	Harare, Zimbabwe
OLG	LZS	Baghdad, Iraq
ORB		Paris, France
PFR	LZF	Rome, Italy
PMO	LZC3	Washington, USA (c/s KNY32)
PRO		Bonn, Germany
PZO		Prague, Czech Republic
SDV	LZO	Berne, Switzerland
SOB		Bucharest, Romania
VJZ		Geneva, Switzerland
VS&		UNID
ZFO		Caracas, Venezuela
ZLG		UNID
ZSF		UNID
	LZA	
	LZB6	Kabul, Afghanistan
	LZG3	Lagos, Nigeria
	LZG4	Dar es Salaam, Tanzania
	LZH	Islamabad, Pakistan
	LZK	Dhaka or Dakar
	LZU7	UNID
	LZU8	UNID
	LZV2	UNID

LZZ5

Berlin, Germany
Athens, Greece
Hanoi, Vietnam
Pretoria, South Africa
Tokyo, Japan

Dictionary:

Angli#ski	English	Viena	Vienna
Atina	Athens	dumi	number of words
Br%ksel	Brussels	Generalniy	General
Bwlgariy	Bulgaria	sekretar	secretary
Bwlgarski	Bulgarian	Godina	year
Hano#	Hanoi	informaciy	information or press
Helzinki	Helsinki	bulletin?	
Jeneva	Geneva	Republika	Republic
Niu #ork	New York	vr38	gr38 (38 groups)
Parij	Paris	za	to
Pretoriy	Pretoria	mart	March
Vaxington	Washington		

Sample Message: Sample of opr chat and encrypted tfc.

aa ??
aa ??
om zoh nev nv
et past zst
et aa infoto
cccc

za 4 posta:
delhi, kiev, havana, harare
nr 94194 gr 37

70960 36748 86466 47858 08477 79957 74565 25303 09652 47323
18796 17412 94595 62755 08223 53565 63155 62017 10431 23002
28465 18022 61180 77491 70479 20578 50161 74366 82570 74760
46744 32236 55048 37281 53934 58611 16434 ...ar

ffffff?

pse sa for qrv ga aa???
pse sa for qrv ga aa???
pse sa for qrv ga aa???
pse sa for qrv ga aa???

Sample Message: Sample of message in Bulgarian p/1

za informaciy nr 01034 dumi 1651
prodwljenje na svetoven pregled

moskva. pod zaglavie +centralna aziy: twrsene na partn(or?+
v. +moskovskie novosti20tt 28.2. publikuva material na
s.solodovnik, vode& nauqen swtrudnik na moskovskiy dwrjaven
institut za mejdunarodni otnoxeniy pri mvnr na rusiy. avtorwt
ocenyva pose&eniето na e.primakov v taxkent kato +proval+ i
konstatira, qe uzbekistan e proyvil minimalen interes sprymo
predlojeniyta na rusiy po tadjikistan i afganistan, a poziciyта
na oficialen taxkent se e okazala edva li ne po-tvwrda ot тази
na kiev, s koyto se svwrzvat vsiqki trudnosti na moskva v ond.
avtorwt opredely kato glaven problem na moskva v centralna aziy
neopredelenostta na ruskata strategiy. to# zayvyva, qe v blizko
etc etc

Transmission Modes:

ITA-2 50bd
ITA-2 75bd
4+4 150bd 8 channel VFT system
UNID 40bd MFSK wide spaced CROWD-36 variant
MIL-188-110A 2400bd PSK Serial Tone HF modem
MIL-188-141A 125bd 1650Hz ALE
USB Voice

Frequencies:

4726.7	7841.7	8321.7	10420.4	11455.0	14150.0	14560.0	15752.8	19355.0	19877.5
5534.0	7851.7	8921.0	10520.0	11496.7	14151.7	14562.0	15769.7	19421.0	19902.0
6760.0	7886.6	8925.7	10604.0	12251.7	14250.0	14561.8	16231.7	19501.0	20247.5
6821.7	7886.8	9051.8	10641.7	12278.5	14300.0	14572.0	16232.8	19542.5	20493.0
6875.7	7896.7	9122.1	10701.7	12335.0	14310.0	14652.5	16351.7	19652.0	20513.0
6882.7	7931.7	9249.7	10716.8	13301.0	14311.7	14802.0	17240.0	19662.5	20702.5
6936.8	8071.7	9955.0	10865.6	13307.5	14402.0	14846.7	18268.0	19803.0	24052.0
7060.0	8227.7	10156.7	11106.8	13502.0	14431.7	15029.0	18441.4	19808.0	
7629.7	8236.7	10321.7	11223.7	13702.4	14517.0	15049.0	18660.0	19821.0	
7816.7	8316.7	10326.7	11421.7	13905.0	14551.0	15701.7	18969.0	19878.0	

Country Profile:

Capital is Beijing (formerly Peking), with 23 provinces (sheng, singular and plural), 5 autonomous regions* (zizhiqu, singular and plural), and 4 municipalities** (shi, singular and plural); Anhui, Beijing**, Chongqing**, Fujian, Gansu, Guangdong, Guangxi*, Guizhou, Hainan, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Nei Mongol*, Ningxia*, Qinghai, Shaanxi, Shandong, Shanghai**, Shanxi, Sichuan, Tianjin**, Xinjiang*, Xizang* (Tibet), Yunnan, Zhejiang. China considers Taiwan its 23rd province; and Hong Kong a special administrative region. Forces include People's Liberation Army (PLA), which includes the Ground Forces, Navy (includes Marines and Naval Aviation), Air Force, Second Artillery Corps (the strategic missile force), People's Armed Police (internal security troops, nominally subordinate to Ministry of Public Security, but included by the Chinese as part of the "armed forces" and considered to be an adjunct to the PLA in wartime).

Web Address: <http://www.fmprc.gov.cn/>

Notes on Operation:

- Distinctive 4+4 VFT system still in use, but appears to be under replacement by MIL-188-110A PSK HF modem and MIL-188-141A ALE combination during early 1998.
- 4+4 still appears to be the modem-of-choice for difficult, long-haul circuits.
- MFA and embassies are migrating (late 1999) to standard Microsoft Office (with Outlook email) software allowing message transfer across IP-over-radio circuits using the MIL-188-110A modems.
- ALE identifiers appear to use two different schemes, with three digit trigraphs or letter-letter-3 digits-letter formats. Voice coordination is common before and after message transfers and during link set-up. Reported Callsigns/Selcalls/ALE IDs for Parent MFA/Embassies.

<u>Callsign</u>	<u>Location</u>	<u>ALE ID</u>
BDA21		YT315A
BXM20		
BXM62		ZT201A
BXM71	MFA Beijing	
BXM87	MFA Beijing	
BSX67		
BXT3	MFA Beijing	
BXT9	MFA Beijing	
BXT15	MFA Beijing	ZT201A
BXT16	MFA Beijing	ZT201A
BXT18	MFA Beijing	
BXT23	MFA Beijing	
BXT39	MFA Beijing	
BXT42	MFA Beijing	
BXT44	MFA Beijing	
BXT49	MFA Beijing	
BXT78		YT362A
BXO44	Warsaw, Poland	
BXQ68	Lagos, Nigeria	
BXT7	New Delhi, India	
BXT16	New Delhi, India	
CME360-9	Havana, Cuba	
ONN28	Brussels, Belgium	
ZEF81	Harare, Zimbabwe	
7OB469	Aden, Yemen	
	UNID	115
	UNID	116
	UNID	118
	UNID	123
	UNID	124
	UNID	161
	UNID	162
	UNID	166
	UNID	176
	UNID	YT316A
	UNID	YT362A

Transmission Modes:

ITA-2 50bd 425Hz

ITA-2 75bd 425Hz

CW

Frequencies:

13524.0 17928.7 17929.3 17930.0 18045.0 18055.0 21088.0

Country Profile:

Capital is Brazzaville, with 9 regions (regions, singular region) and 1 commune*; Bouenza, Brazzaville*, Cuvette, Kouilou, Lekoumou, Likouala, Niari, Plateaux, Pool, Sangha. Forces include Army, Navy, Naval Infantry, Air Force and National Police.

Callsigns:

BGO6 Libreville

CME402-5 Havana

CMO7 Maputo

Dictionary:

Ambacobrazza Embassy

Diplobrazza MFA Brazzaville

Dircab Director?

Transmission Modes: ITA-2 75bd 400Hz

Frequencies: 11154.0

Country Profile:

Capital is Zagreb with 21 counties (zupanije, zupanija singular): Bjelovar-Bilogora, City of Zagreb, Dubrovnik-Neretva, Istra, Karlovac, Koprivnica-Krizevci, Krapina-Zagorje, Lika-Senj, Medimurje, Osijek-Baranja, Pozega-Slavonia, Primorje-Gorski Kotar, Sibenik, Sisak-Moslavina, Slavonski Brod-Posavina, Split-Dalmatia, Varazdin, Virovitica-Podravina, Vukovar-Srijem, Zadar-Knin, Zagreb. There are two special self-governing districts (kotari, kotar singular) under local Serb control: Glina, Knin

Forces include Ground Forces, Naval Forces, Air and Air Defense Forces, Frontier Guard, and Home Guard.

Notes on Operation:

Some operations noted in early- to mid-1997.

Location

Zagreb

Transmission Modes:

ITA-2 100bd Erect 500Hz
 ITA-2 75bd Erect 500Hz
 ITA-2 50bd Erect 500Hz
 ITA-2 50bd Erect 1000Hz
 Packet Radio 300bd (tentative)
 CW
 USB Voice

Logged Frequencies:

7848 3862.5 13914.6 13940 13954.6 14449.5 14455 14815 15929.9
 15965.0 16025 16105 16134.0 16180 16185 16334.0 16340 16350
 16345.5 16351.8 16355 17413.6 17432.2 17470 17529.7 18012.8
 18032.8 18034.2 18038 18049.4 18056.0 18084 18088.7 18421.5 18235.3
 18422 18449.7 18458.2 18467.8 18477.9 18484.9 18637.8 18639.5
 18647.8 18657.0 18667.8 18668.2 18677.8 18692.7 18722.8 18734.5
 19084.7 19087.9 19089 19160.0 19279 19287.8 19517.3 20019.8
 20032.7 20120 20210 20282.2 20415 20447 20450.7 20800 20820
 20813.2 20825.0 20833.0 20836.1 20843.5 20857.8 20895 20972
 20978.5 20982 21876 21956.6 22865.9 23016.8 23044.3 23134.2

Country Profile:

14 provinces (provincias, singular provincia) and 1 special municipality* (municipio especial); Camaguey, Ciego de Avila, Cienfuegos, Ciudad de La Habana, Granma, Guantanamo, Holguin, Isla de la Juventud*, La Habana, Las Tunas, Matanzas, Pinar del Rio, Sancti Spiritus, Santiago de Cuba, Villa Clara. Forces include Revolutionary Armed Forces (FAR) includes ground forces, Revolutionary Navy (MGR), Air and Air Defense Force (DAAFAR), Territorial Troops Militia (MTT), and Youth Labor Army (EJT); the Border Guard (TGF) is controlled by the Interior Ministry.

Notes on Operation:

- [SAT]
- Language: Spanish, French (rarely), English (rarely)
- MFA ends traffic with "PRENSA MINIREX", embassies with "embacuba" followed by embassy's host country or location.
- Frequency coordination and other operator chatter by CW. Usually distinctive poorly modulated signals from MFA. Offline encrypted traffic uses 5 figure groups, ending with group count.
- Many embassies act as regional relays, for example, Embassy Lusaka often relays Asian Embacuba traffic.
- Use of standard AX.25 Packet Radio on links rumoured to be between Havana and Managua. Distinctive callsigns using pattern of consonant-vowel-consonant-vowel. Link uses 5FGs off-line encrypted traffic with "adt n" used to acknowledge each message.

Dictionary:

MINIREX, MINREX Ministerio de las Relaciones Exteriores

Call	Location	Designation
CLP1	MFA Havana	minrex, minirex
CLP1	MFA Havana	minrex, minirex
CLP2	Panama City, Panama	
CLP3	Moscow, Russia	
CLP4	Bissau, Guinea	embacuba bissau
CLP5	Algiers, Algeria	
CLP6	Damascus, Syria	
CLP7	Brazzaville, Congo Republic	embacuba r d congo
CLP8	Conakry, Guinea	embacuba conakry
CLP9	Sanaa, Yemen	
CLP12	Lima, Peru	
CLP13	New York, USA	
CLP15	Beirut, Lebanon	
CLP16	Sao Tome,	
CLP17	New Delhi, India	
CLP18	Dar es Salaam, Tanzania	embacuba tanzania
CLP21	Phnom Penh, Vietnam	
CLP22	Hanoi, Vietnam	
CLP23	Lagos, Nigeria	embacuba nigeria or lagos
CLP24	Cotonou, Benin	
CLP25	Maputo, Mozambique	
CLP27	Pyongyang, North Korea	embacuba corea
CLP28	Lusaka, Zambia	embacuba zambia
CLP33	Addis Ababa, Ethiopia	
CLP38	Paramaribo, Surinam	
CLP44	Harare, Zimbabwe	embacuba zimbabwe
CLP45	Luanda, Angola	embacuba angola
CLP55	Georgetown, Guyana	
CLP65	Managua, Nicaragua	embacuba managua
CLP67	Baghdad, Iraq	embacuba iraq
CLP75	Accra, Ghana	
	Kinshasa, Dem Republic Congo	embacuba kinshasa
	Vientiane, Laos	embacuba laos

Sample Messages

hab 05/03/93 14.00 toras ck-560 [origination]

circular 251

geneve.- cuba a demande a la 49eme commission des droits de l'homme de l'onu de briser sa paralysie devant les flagrantes violations aux etatsaunis, notamment, et dans d'autres pays du dit monde developpe. l'ambassadeur jose perez novoa a signale que les etats- inis ne peuvent pas etre intouchables vis-a7mis ces transgressions et l'on doit revoir sa conduite dans ce domaine. il a signale qu'une telle situation va a l'encontre des droits de l'homme. meme washington, l'en a etendu au port-rico, sous une autorite coloniale, et plus recemment contre la population de somalie, a laquelle ils ont applique le dit ' roit d'intervention humanitaire,.

Message in Spanish from Embassy Baghdad.

bagdad 6/6/96 ba ck-90 k r-282 l
atte : cpi.
cc : ddi, danmo, vm benigno, arufe y rel ext far.
nr-282

- 1.- periodico babil reporto anuncio realizado por vocero dpto. estado sobre medidas adoptaran contra empresa europeas, mexicanas y canadienses que negocien con cuba, asi como prohibirle entrada a ee uu .
- 2.- periodico jumhuriya reporto 4/6/96 que presidente asamblea nacional iraq recibio embajador cuba y conversaron sobre relaciones bilateralesm
- 3.- baghdad observer 5/6/96 reprodujo articulo titulado ''america latina enfrenta amenazas enfermedades '' . correspondiendo a la reproduccion del articulo '' una amenaza para el subcontinente '' del granma int del 10/4/1996, ultima pagina.
embacuba iraq

okaaa se acabooo encantado de pinchar con ustewd usted
paso otra via upupupu@@

Off-line encrypted message from Embassy Brazzaville

vvvvv
11/26 embacuba r d congo/26/11/98/jro
minrex 202
entrega inmediata
242 grupos
999 999 999
47869 37593 39575 20475 10474 25730 36373 92740 17495 27469
[...]
nnnn

Off-line encrypted message using Packet Radio link

SOSA->MOTA
10855. 39. 30.
.....
< 295 >
27727 23981 58721 24713 54262 67191 19590 12594 66343 54996
69635 97934 81849 27452 80893 55125 07710 57810 85666 75290
77369 92411 77323 95063 99921 80941 02287 42179 08608 19326
46851 96781 84947 99008 65321 30846 53040 13204 2

Transmission Modes:

ITA-2	50bd	Inverted	500Hz	
ITA-2	75bd	Inverted	400Hz	
ITA-2	100bd	Inverted	400Hz	
ASCII-ARQ	171.4bd		500Hz	ACF=10, 11
ASCII-ARQ	200bd		500Hz	ACF=10, 11
ASCII-ARQ	300.5bd		500Hz	ACF=10, 11
ASCII-ARQ	400bd		500Hz	ACF=10, 11
UNID modem	2400bd	PSK		

CW

Frequencies:

4900	5020	5050	5067	5070	6840	7960	8008	9266	9268
9278	10704	12210	12216	14667	14480	15942	16178	16212	16304
16355	18300	18320	19320	20617	20619				

Reported Frequencies:

3800	4500	4500.4	5180	5204	5250	5305	5309	5336	5746
5747	6860	6868	6871	6872	7404	7620	7623	7898	7958
7976	8006	8068	8136	9055	9080	9103	9104	9114	9288
9380	10101	10160	10164	10313	10387	10568	10601	10610	10612
10705	10915	11216	11412	11508	11605	12206	12208	12219	12310
13398	13812	13890	14359	14362	14364	14385	14388.4	14390	14395
14400	14401	14446	14478	14480	14650	14652	14778	14812	14892
15812	15905	15969.5	16100	16178	16180	16188	16270	16272	16298.5
16300	16308	16315.5	16357	16358	16370	16370.5	16395	17414	18030
18297.5	18319	18323	18325	18375	18400	18401	18420	18462	18480
18482.9	18629	18668.2	18918	19317	19330	19394	19457	19458	19465
19673	19847	20614	20615	20617	20653	20682.5	20795	20800	20804
20852	20892	20900	20902	20905	21810	22800	22820	22852.5	22856.5
22888	23898	25498	26748						

Country Profile:

The Czech Republic (Ceska Republika) with capital Prague, consists of 8 regions (kraj); Jihocesky, Jihomoravsky, Praha, Severocesky, Severomoravsky, Stredocesky, Vychodocesky, and Zapadocesky. The Czech Republic only exist in this form since 1-1-93 when Czechoslovakia broke up and the Czech and Slovak Republics were born. Defense branches: Army, Air and Air Defense Forces, Civil Defense, and Railroad Units.

Notes on Operation:

- Language: Czech
- Off-line encryption in five-fig groups.
- Broadcasts using ITA-2 with 100bd and 400Hz shift.
- Now makes extensive use of an ASCII-based ARQ system also used by Slovak and Bulgarian Diplos.

Tactical Call	Location	Tactical Call	Location
ETN40	Abu Dhabi	6C2	Kiev, Ukraine
Ethiopia	Addis Ababa,	3P5, OLZ27	Lagos, Nigeria
ETT90	Addis Ababa,	OLZ5	London, UK
Ethiopia	Addis Ababa,		Luanda, Angola
2B6	Addis Ababa,		Maputo, Mozambique
Ethiopia		5W3	Montreal, Canada
3G5	Algiers, Algeria	1R7	Moscow, Russia
	Amman, Jordan		Nairobi, Kenya
3Q5	Ankara, Turkey		New Delhi, India
1X7	Athens, Greece	1S7	Nicosia, Cyprus
7A1	Baghdad, Iraq	6M2	Paris, France
6X2	Beijing, China	OLZ, OLZ88	Phnom Penh, Vietnam
3K5, OLZ75	Beirut, Lebanon	2F6	MFA Prague
3R5	Belgrade, Serbia	OLZ73	Pyongyang, N.Korea
	Bonn, Germany		Rome, Italy
5F3	Bucharest, Romania	2D6	Sofia, Bulgaria
	Budapest, Hungary		Teheran, Iran
2C6	Cairo, Egypt		Tel Aviv, Israel
5Q3	Conakry, Guinea	OLZ87?	Tirana, Albania
7TI	Damascus, Syria	OLZ87?	Tripoli, Libya
	Djakarta, Indonesia		Tunis, Tunisia
3L5	Hanoi, Vietnam	OLZ29	Ulan Bator, Mongolia
7L1	Havana, Cuba	KNY23	Warsaw, Poland
	Istanbul, Turkey	OTB79	Washington, USA
	Kabul, Afghanistan	OLZ66	UNID
			UNID

Dictionary:

Blesk	priority	Bagdad	Baghdad
diky	thank you	Bejrut/Bejrutu	Beirut
dne	today	Belehrad	Belgrade
Dubna	April	Bukurest	Bucharest
FMZV	Federal MFA	Ceska Republica	Czech Republic
(Federacni Ministerstvo Zahranicnich Vect)		Damasek	Damascus
pro	to	Dilli	Delhi
tiskovy	telegram	Fenjan/Fenjanu	Pyongyang
vas	number	Jeruzalema	Jerusalem
z	from	Kahira	Cairo
Zamini	Embassy	Pchjongjangu	Pyongyang
Abu Zabi	Abu Dhabi	Praha	Prague
Algzir/Alzir	Algiers	Rim	
Atheny	Athens	Rome	
		Sofie	Sofia

Sample Messages: Off-line encrypted message

fmzv [MFA Prague]
zaminil23456
nr 152 [message number]

pro zamini sofie [to Embassy? Sofia] 25.11.1992 [date]
gr: 94 [group count]
97330 33841 34739 65544 56477 41216 05626 99630 51000 93766
15329 12370 24655 73498 96857 73740 93600 74621 29443 01143
03698 24617 00676 21602 23745 47282 70085 47756 48003 53075
19371 17718 13287 32910 65754 02142 09807 55721 92875 72820
60711 72007 99638 58629 69624 52570 46040 84117 21974 28613 50
76927 70903 64908 09737 38841 45014 05962 68216 27272 87300
13479 86368 64023 53853 40612 91946 18912 60380 61778 00907
12298 17491 85996 56072 55990 07339 91342 46845 77953 02270
14241 41645 15535 94256 94281 72561 96592 80399 60812 51497
24954 90651 83071 77715 +++++

[note group count at 50]
[note end of message group]

=====
Example 2: Off line encrypted message
=====

[to Belgrade Rome Bucharest and Sofia Embassies]
pro zamini belehrad rim bukurest sofie 25.11.1992
gr: 37
89490 04462 48706 83009 25489 72#17 13808 11454 53836 95506
08533 44307 18082 11098 58076 02466 09438 32581 98194 68833
13185 62341 11590=95685 29635 07312 09424 05735 08683 53571
21816 75172 86407 80271 39342 11111 39352 +++++

Message in plain Czech

praha 25.11.1992 [From Prague - date]
zamini sofia [Embassy Sofia]

vas 2289/92 - rp nevyplaceny, jelikoz k vyplaceni rp je nutno
dolozit fotokopii rodneho listu vystavenym matricnim uradem v brne.
srazka na pu fmzv provedena z duvodu preplatku za r.91. uprava platu
vzhledem ke zmene funkce bude provedena ve vl za 12/92, jelikoz mu
prac. smlouvu obdrzela az po uzavrece.
vas 2290/92 - matersky prispevek zatim nevyplacen, narok vznikla az po
vyplneni zadosti o rodicovsky prispevek. od 13.7.92 vyplacena pouze
penezita pomo v materstvi az do 24.1.93. preplatek 620,- kcs srazen
za preplatek pi. pobrislove za 7/92 kdy ji dle naseho c.j. 59971/92
mel byt zastaven plat k 12=7.9, ale pi. pobrislova obdrzela plat za
cely mesic.

fmzv 66 246/92/oma - p. urbanbz~zzzz [MFA Prague/ref/signature]

Callsign Selcal Location

OZU25	TPRX	MFA Copenhagen
OZU25	TPOY	MFA Copenhagen
		Abidjan, Ivory Coast
	TPRP	Accra, Ghana
OZU37		Ankara, Turkey
	TPEX	Baghdad, Iraq
OZU35		Beijing, China
OZU31		Beirut, Lebanon
	TPRM	Bucharest, Romania
	TPIS	Budapest, Hungary
OZU30		Cairo, Egypt
		Damascus, Syria
OZU32	TPEC	Dar es Salaam, Tanzania
		Dhaka, Senegal
		Djakarta, Indonesia
	TPRV	Dublin, Ireland?
	TPIC	Harare, Zimbabwe
OZU34		Jeddah, Saudi Arabia
		Kinshasa, Dem Rep Congo
OZU38	TPEF	Lagos, Nigeria
	TPOC	Maputo, Mozambique
	TPIP	Moscow, Russia
OZU39		Nairobi, Kenya
OZU36		New Delhi, India
	TPEY	Prague, Czech Republic?
		Riyahd, Saudi Arabia
	TPOK	Rome, Italy
	TPOQ	Teheran, Iran
OZU33		Tel Aviv, Israel
	TPOP	Warsaw, Poland?
	TPEK	UNID
	TPEP	UNID
	TPES	UNID
	TPIF	UNID
	TPIK	UNID
	TPIQ	UNID
	TPIV	UNID
	TPIX	UNID
	TPOC	UNID
	TPOM	UNID
	TPOS	UNID
	TPOV	UNID
	TPRC	UNID
	TPRF	UNID
	TPRS	UNID
	TPUK	UNID
	TPZX	UNID
	TPOF	UNID

Embassies:

Moskva	Moscow
Rom	Rome

Plaintext message with MFA relaying NATO reports to Danish troops stationed in Bosnia.

n a t o u n c l a s s i f i e d
r 120925z apr 96 msg id kab586
fm chod den
to x aig1628
xmt sen de off/afnorth
xmt = dadefat warszawa
public information baltap
cincent
cincnorthwest
comairsouth
cincent
cincent
comairsouth
cincent
comnavsouth
nordbrig/ifor
comaircent
rxfkea/hq landcent (heidelberg ge)
rgfjbn/international long range reconnaissance school
nato forces kolsaas, danish support element (fax)
arrc (fax)
fort rucker (fax)
hq cincnorthwest (fax)
unpredep, skopje macedonia (fax)
ungci (fax)
unomig (fax)
foratt warszawa (fax)
unmogip (fax)
unikom (fax)
info sen de off geilenkirchen ge
bt

n a t o u n c l a s s i f i e d
p-i 342.2 - 0820
non-danish addressees: please pass to senior danish officer:

text in danish
emne: pitsum 12-04-96.
1. dansk ifor-soldat truede med sit vaaben.

berlingske tidende 12.4.96.

n a t o u n c l a s s i f i e d
3446 nua

n a t o u n c l a s s i f i e d
en dansk soldat, som i aftes truede sin kammerat, med sit skarpladte vaaben, blev efterfoelgende taget i forvaring. det oplyser haerens operative kommando (hok).
soldaten er udsendt af prinsens livregiment i viborg, og han tilhoerer a-kompagniet under den danske bataljon danbat. han blev aget i forvaring af en af forsvarrets auditoerer, efter at episoden var blevet standset af soldater fra samme enhed... ingen har lidt overlast under episoden.
~~~ny zhaf i groenland.

Etc. etc.

**Transmission Modes:** CW

**Reported Frequencies:** 13377.0 19425.0 20375.0 20485.0

Also reported in amateur bands CW section

**Country Profile:**

Capital is Addis Ababa, with 9 states and 2 chartered cities\*: Addis Ababa\*; Afar; Amhara; Benshangul/Gumuz (Benishangul-Gumaz); Dire Dawa\*; Gambela (Gambella); Harari (Harar); Oromia (Oromiya); Somalia (Somali); Southern Nations, Nationalities, and Peoples (SNNP); and Tigray (Tigre). Forces include Ground Forces, Air Force, and Police.

| <b>Callsign</b> | <b>Location</b> |
|-----------------|-----------------|
| ATT46           | MFA Addis Ababa |
| 9ES50           | MFA Addis Ababa |
| KNY44           | Washington      |

**Transmission modes:**

|              |         |       |              |
|--------------|---------|-------|--------------|
| ITA-2        | 50bd    |       |              |
| Packet Radio | 150.6bd | 800Hz | Nokia system |
| Packet Radio | 301.1bd | 800Hz | Nokia system |
| Packet Radio | 360.5bd | 800Hz | Nokia system |
| USB          | Voice   |       |              |

**Logged Frequencies:**

14694.7 20187.7

**Reported Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 5843.5  | 10736.0 | 10737.5 | 10746.5 | 10748.0 | 10885.0 | 10886.5 | 13433.0 | 13434.5 |
| 13913.0 | 13914.5 | 14661.0 | 14662.5 | 14693.0 | 14694.5 | 14925.0 | 14926.5 | 14954.0 |
| 14955.5 | 15726.0 | 15727.5 | 15870.0 | 15871.5 | 17418.0 | 17419.5 | 17443.0 | 17444.5 |
| 17561.0 | 17562.5 | 18761.0 | 18762.5 | 18841.0 | 18842.5 | 20124.0 | 20125.5 | 20176.0 |
| 20177.5 | 20262.0 | 20263.5 | 20264.5 |         |         |         |         |         |

**Country Profile:**

Finland measures 337,030 sq km. The official name is Suomen Tasavalta or Suomi. Finland is a republic with capital Helsinki. The country counts 12 provinces (laani); Ahvenanmaa, Hame, Keski-Suomi, Kuopio, Kymi, Lappi, Mikkeli, Oulu, Pohjois-Karjala, Turku ja Pori, Uusimaa, and Vaasa. The defense has the following branches: Army, Navy, Air Force, Frontier Guard (includes Sea Guard).

**Web Address:** <http://www.vn.fi/vn/um/index.html>

**Notes on Operation:**

- Above frequencies used in USB voice mode or ITA-2 on +1500 hz offset.
- From late 1997 reported to be using Nokia-developed 301.1bd/800 and 360.5bd/780 adaptive Packet Radio-like system on 14694.7kHz.

| <b>Call</b> | <b>Location</b>                |
|-------------|--------------------------------|
| AND22       | Madrid, Spain                  |
| ETR84       | Addis Ababa, Ethiopia          |
| ETN66       | Addis Ababa, Ethiopia          |
| OHU20       | MFA Helsinki                   |
| OHU21       | Paris, France                  |
| CME390-4    | Havana, Cuba                   |
| OHU22       | Bucharest, Romania             |
| OHU23       | Tel Aviv, Israel               |
| OHU24       | Cairo, Egypt                   |
| OHU25       | Beijing, China                 |
| OHU26       | Belgrade, Serbia               |
| OHU27       | Addis Ababa, Ethiopia          |
| OHU28       | Warsaw, Poland                 |
| OHU29       | Beirut, Lebanon                |
| OHU30       | Lagos, Nigeria                 |
| OHU31       | Dar es Salaam, Tanzania        |
| OHU32       | Riyadh or Jeddah, Saudi Arabia |
| OHU33       | Hanoi, South Korea             |
| OHU34       | Lusaka, Zambia                 |
| OHU35       | Teheran, Iran                  |
| OHU36       | Baghdad, Iraq                  |
| OHU37       | New Delhi, India               |
| OHU38       | Tripoli, Libya                 |
| OHU54       | Algiers, Algeria               |
| OHU60       | Damascus, Syria                |

**Transmission modes:**

|              |                  |             |                    |       |
|--------------|------------------|-------------|--------------------|-------|
| ITA-2        | 75bd             |             |                    |       |
| ITA-2        | 100bd            |             |                    |       |
| ARQ-E        | 48bd             |             |                    |       |
| ARQ-E        | 72bd             |             |                    |       |
| ARQ-E        | 100bd            |             |                    |       |
| ARQ-E3       | 100bd            |             |                    |       |
| SITOR-B      | 100bd            | Erect       | 170Hz              |       |
| ARQ6-90      | 200bd            | Erect       | 400Hz              | ACF90 |
| FEC-100      | 144bd            | Inverted    | 400Hz              |       |
| FEC-100      | 192bd            | Erect       | 400Hz              |       |
| FEC-100      | 192bd            | Erect       | 850Hz              |       |
| FEC-100      | 384bd            | Erect       | 400Hz              |       |
| TT2300b      | 100bd            | 8 tone MFSK | modem              |       |
| Systeme-3000 | Thomson (Thales) | 2400bd      | STANAG4285-variant |       |
| CW           |                  |             |                    |       |

**Logged Frequencies:**

|         |        |       |         |         |       |         |         |         |       |
|---------|--------|-------|---------|---------|-------|---------|---------|---------|-------|
| 5123.5  | 5402.5 | 7634  | 9380    | 9983.7  | 10718 | 10726.5 | 11037   | 11050   | 11055 |
| 11072.5 | 11085  | 11173 | 11173.5 | 11572.5 | 13542 | 13543   | 13551.5 | 13555.5 | 13953 |
| 14486   | 14508  | 14518 | 14530   | 14555   | 14575 | 14975   | 15668   | 15675   | 15873 |
| 15898   | 16213  | 16236 | 16257   | 16260   | 18059 | 18304.5 | 18308.5 | 18363   | 18527 |
| 18578   | 18760  | 18956 | 19092   | 19932   | 20092 | 20157   | 20439   |         |       |
| 20916   | 23192  |       |         |         |       |         |         |         |       |

**Reported Frequencies:**

|         |         |         |         |        |         |         |         |         |         |
|---------|---------|---------|---------|--------|---------|---------|---------|---------|---------|
| 5118    | 5123.5  | 5153    | 5402.5  | 8010.7 | 8153.5  | 9056    | 9063    | 9075    | 9085    |
| 9086    | 9143    | 9220    | 9259    | 9286   | 9380    | 9386    | 9393    | 9811.3  | 10116.6 |
| 10158   | 10166.8 | 10425   | 10470.2 | 10711  | 10718   | 10727   | 10732   | 10750   | 10764   |
| 10792.5 | 10870   | 11026   | 11033   | 11035  | 11037   | 11042   | 11043   | 11045   | 11047   |
| 11048   | 11049   | 11050   | 11052   | 11055  | 11056   | 11058   | 11072.5 | 11120   | 11483   |
| 11572.5 | 11733.5 | 13460   | 13536   | 13537  | 13538   | 13540   | 13541   | 13544   | 13545   |
| 13546   | 13547   | 13548   | 13549   | 13550  | 13551   | 13555.5 | 13559   | 13563   | 13908   |
| 13951.5 | 13956.5 | 13986.7 | 14400   | 14441  | 14462   | 14468   | 14485   | 14486   | 14508   |
| 14530   | 14533   | 14535   | 14536   | 14540  | 14542   | 14543   | 14544   | 14545   | 14549   |
| 14550   | 14554   | 14556   | 14563   | 14575  | 14576   | 14598.2 | 14661   | 14676   | 14685   |
| 14690   | 14883.6 | 14886   | 14887   | 15597  | 15598   | 15686   | 15708   | 15713.8 | 15801.7 |
| 15853   | 15863   | 15868   | 15872   | 15901  | 15902   | 15912.2 | 15914   | 15918   | 15989   |
| 16024   | 16042   | 16076   | 16078   | 16159  | 16207   | 16220   | 16230   | 16231   | 16240   |
| 16241   | 16242   | 16243   | 16245   | 16260  | 16261.7 | 16274   | 16283   | 16289   | 16305   |
| 16336.5 | 16383.5 | 16524   | 16589   | 16841  | 17042   | 17111   | 17454.5 | 17467.8 | 17512   |
| 17933   | 18033.5 | 18067   | 18078   | 18080  | 18084   | 18087   | 18172   | 18203   | 18308.5 |
| 18360   | 18394.5 | 18428   | 18518   | 18527  | 18538   | 18730   | 18742   | 18757   | 18760   |
| 18905   | 18906   | 18916   | 18923.9 | 19092  | 19406   | 19607   | 19623   | 19628   | 19632   |
| 19635   | 19640.1 | 19646   | 19650   | 19655  | 19685   | 19761   | 19826   | 19856   | 20032   |
| 20095.2 | 20132   | 20153   | 20177   | 20228  | 20307.9 | 20322   | 20325   | 20417   | 20427   |
| 20428   | 20439   | 20518   | 20550   | 20556  | 20556.5 | 20612   | 20646   | 20800   | 20815   |
| 20830.2 | 20836   | 20862   | 20910   | 20975  | 20987   | 21768   | 21855   | 21861   | 21880   |
| 22854   | 21964   | 22960   | 23108   | 23207  | 23322.1 | 23685   | 23854   | 24310   | 24370   |
| 25401   | 25422   |         |         |        |         |         |         |         |         |

**Country Profile:**

Capital is Paris, with 22 regions (regions, singular region); Alsace, Aquitaine, Auvergne, Basse-Normandie, Bourgogne, Bretagne, Centre, Champagne-Ardenne, Corse, Franche-Comte, Haute-Normandie, Ile-de-France, Languedoc-Roussillon, Limousin, Lorraine, Midi-Pyrenees, Nord-Pas-de-Calais, Pays de la Loire, Picardie, Poitou-Charentes, Provence-Alpes-Cote d'Azur, and Rhone-Alpes. Forces include Army (includes Marines), Navy (includes Naval Air), Air Force (includes Air Defense, and National Gendarmerie).

**Web Address:** <http://www.france.diplomatie.fr/>

**Notes on Operation:**

- [SAT][SUN]
- Language: French
- Idling on RQs or ALPHAs on FEC-100.
- Page numbering "Page 3 RFGW #1920"
- Offline encrypted using five letter groups using NATO-style circuit identifiers on transmission sent using ARQ6-90.
- Reference "a plus/ARQ41000/end"
- Reported using different FEC-100 interleave (144?) on 18394.5kHz. Like MFA Cairo in its use of SITOR-A, MFA Paris uses constant carrier between bursts when using ARQ6-90.
- FEC-100 with 850Hz shift used by embassies at Bangkok, Beijing, Islamabad, Moscow and the unidentified C3P (also believed to be Far Eastern location).
- Large network using Thrane & Thrane TT2300b equipment purchased in late 1995. Believe that most 0.5kHz offset TT2300bs are French Diplo.
  
- The following styles have been observed during the call-up phase:  
QAP SUR LA 134  
QAP SUR LA 134 MOINS 3  
QAP LA 100 PLUS 3  
QAP LA 7 AUG DE 6  
QAP LA 469 DIM DE 4  
QAP 31 DIM 15
  
- The embassies are advised to transmit on an assigned frequency taken from the list but not to take the exact freq but to shift some kHz above or below that assigned freq (due to interference or whatever) : PLUS = above, MOINS = below, AUG = French 'augmenter' = increase = above, DIM = French 'diminuer' = decrease = below.
  
- Most exchanges completed with opchat in FF ending "bonne journee" or "bye bye" with use of "bell" at end "@@@ @@@ " for example. Some use noted also of "/end" to terminate QSO. [November 1998] Use of changed encryption scheme using lead-in of: cgt cgcgcg
  
- Appears to intersperse character group "cf" or "cg" throughout message. Instead of individual letters they use now for some letters an two letter combination as following:  
CF = A  
CG = B  
CH = C  
CI = D  
CJ = E  
Which occurs however, if in the encrypted message for instance the letter combination "CF" emerges, can they then differentiate if this mean "A" or even "CF" ?
  
- Message header and trailer are also modified in the new encryption scheme, as shown in the following example:  
znr uuumqbagncjuu  
{message text}  
cgt  
#1991  
nnnlnpbafncje

## Callsigns

| Embassy         | Tactical  | Mnemonic   | Circuit-ID | ITU    |
|-----------------|-----------|------------|------------|--------|
| Abidjan?        | Z8M       |            |            |        |
| Abu Dhabi       |           |            |            |        |
| Addis Ababa     | D7A       |            |            |        |
| Algiers         | H6L       |            |            |        |
| Amman           |           | AMAN       | [AMNX]     |        |
| Ankara          |           |            |            |        |
| Antannarivo     | G6F?      | TNNR       |            |        |
| Athens          |           |            |            |        |
| Bamako          | L9X       |            |            |        |
| Bangkok         | G7M       |            |            |        |
| Bangui          | B1T       | BGUI       | [BGIX]     |        |
| Beijing?        | TJN       |            |            |        |
| Beirut          | P8C       |            |            |        |
| Belgrade        | G8T       |            |            |        |
| Bogota          | S3B       |            |            |        |
| Brasilia        | S5F       |            |            |        |
| Brussels        |           |            |            | ONN27  |
| Brazzaville     | G4B?      | BRZV       | [BRZX]     |        |
| Bucharest       | A9C       |            |            |        |
| Budapest        | D2Z, D6Z  |            |            |        |
| Buenos Aires    | L9C       |            |            |        |
| Canberra        |           |            |            | VJA228 |
| Cairo           | O9B       | LCRE       |            |        |
| Conakry         |           | CNRY       |            |        |
| Dakar           |           | DKAR       | [DKRX]     |        |
| Damascus        | D4B       |            |            |        |
| Djibouti        |           | DJBT       | [DJBX]     |        |
| Fort de France  | A1D       |            |            |        |
| Islamabad       | W3S       | ILMB, ILMD | [ILMX]     |        |
| Jeddah          | O6F       |            |            |        |
| Kinshasa        | B1P       | KHSA       |            |        |
| Kuwait          |           | KWIT       |            |        |
| Lagos           | Y4G       | LGOS       | [LGSX]     |        |
| Libreville      |           | LRVL       |            |        |
| Ljubljana       |           |            |            |        |
| Luanda          | C3X?      |            |            |        |
| Madrid          |           |            |            | AND3   |
| Moscow          | U3H       |            | [MCU]      |        |
| Naimy           |           | NMEY       |            |        |
| Ndjamena        |           | NDJA, NDJM | [NDJX]     |        |
| New Delhi       |           | NDHI       | [NDHX]     |        |
| Nicosia         |           | NCSE, NCSK |            |        |
| Nouakchott      | Z4D       |            | [TKN]      |        |
| MFA Paris       | P6Z, RFGW | DIPL       |            |        |
| Prague          | F9S       |            |            |        |
| Pretoria        | Y9L       |            |            |        |
| Rabat           | J5W       | RBAT       |            |        |
| Riyadh          | O6P       | RYAD, RYDH |            |        |
| Rome            |           |            |            |        |
| Sanaa           | N2G       |            |            |        |
| Santiago, Chile | 3GF1      |            | [SGO]      |        |
| Sofia           | L4N       |            | [FOS]      |        |
| Tel Aviv        | W5E       |            |            |        |
| Tirana          |           | TRNA       |            |        |
| Tokyo           | C3P       |            |            |        |
| Tripoli         |           | TRPL       | [TRPX]     |        |
| Tunis           | K4X       |            |            |        |
| Valetta         |           |            |            |        |
| Warsaw          | H7K       | SRZ944     |            | SRZ944 |
| Yaounde         |           | YNDE       |            |        |
| Zagreb          |           |            |            |        |

UNID C3P (Far East)  
UNID F5S  
UNID O9D  
UNID L9C

**Dictionary:**

ambafrance French Embassy  
milfrance French Military Attache (usually within embassy)  
Athenes Athens  
Le Caire Cairo  
Beyrouth Beirut  
La Valette Valetta, Malta  
Nicosie Nicosia  
Damas Damascus

**Sample message: Showing typical call-up MFA to embassy**

w3s de p6z [Islamabad from MFA Paris]  
slt mon vx [salut mon vieux]  
qtc 13 et je te qap sur la 31 dim 8

a toi le manche  
bjr vx  
1054 is  
pp d7a h6l g7m g8t p8c s5f a9c l9c d4b  
w3s o9b u3h y9l o6p n2g 3gf1 l4n w5e  
c3p k4x srz944

de rfgw #0990 2981331

znr uuuuu

p 241303z oct 96

bt

bbbb

jvcqq dkcnp jvcqq dkcnp jvcqq dkcnp gdfbt gdfbt gdfbt zdwqo  
qnugp vyuni epxau nrsng fzwog dpwkc fpqir qkigt jadxf qcekd  
blpur ccrww megcc fkusb ycgby rfilj afeal ysbhk prtif hlsfz  
ljuua abqda szfzk zjgve eesxc llndg ugbyz kyrcrj zzgqq wgjhb  
iyyki lidpo kdewy keagj vffkr jafum lulqr yczie jrude nchyd  
[etc]

bt

gr 1130

#0990

nnnn



**Transmission Modes:**

|         |         |       |       |  |  |        |       |  |
|---------|---------|-------|-------|--|--|--------|-------|--|
| ITA-2   | 75bd    |       |       |  |  |        |       |  |
| ARQ-E   | 96bd    | Erect | 170Hz |  |  |        |       |  |
| ARQ-E   | 96bd    | Erect | 400Hz |  |  |        |       |  |
| ARQ-E   | 192bd   | Erect | 160Hz |  |  | 8CRC   |       |  |
| FEC-100 | 96bd    | Erect | 400Hz |  |  |        |       |  |
| FEC-100 | 192bd   | Erect | 400Hz |  |  |        |       |  |
| RS-ARQ  | 228.5bd |       | 170Hz |  |  | ITA-2  |       |  |
| RS-ARQ  | 225bd   |       | 170Hz |  |  | Packet | Radio |  |

**Logged Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 7981.5  | 7981.9  | 9062.0  | 9088.0  | 9277.9  | 10288.6 | 11459.0 | 11536.0 | 11536.5 |
| 11539.2 | 12130.0 | 13374.4 | 13375.6 | 13436.0 | 13508.5 | 13510.6 | 13892.0 | 13893.5 |
| 13894.4 | 13895.6 | 13896.5 | 13903.0 | 13924.7 | 13927.7 | 13928.6 | 14357.6 | 14410.0 |
| 14663.5 | 14664.4 | 14619.0 | 15855.5 | 15855.8 | 15857.6 | 15858.5 | 16017.4 | 16020.4 |
| 17411.0 | 17439.0 | 18287.6 | 18291.5 | 18396.5 | 18702.4 | 19226.4 | 19226.5 | 19443.0 |
| 20020.0 | 20022.4 | 20140.0 | 20421.5 | 20422.4 | 20500.6 | 23691.0 | 25419.5 |         |

**Reported Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 4441.0  | 4754.0  | 5220.0  | 5299.0  | 5448.0  | 6952.0  | 7546.0  | 7807.0  | 7918.1  |
| 7983.0  | 8071.5  | 8196.0  | 9088.0  | 9288.0  | 9336.5  | 9362.0  | 10217.5 | 10219.2 |
| 10262.0 | 10554.0 | 10844.9 | 11112.0 | 11123.5 | 11133.0 | 11163.0 | 11388.0 | 11448.0 |
| 11452.0 | 11533.6 | 11537.3 | 11538.4 | 11540.0 | 13438.6 | 13507.5 | 13511.5 | 13897.0 |
| 13945.6 | 14361.0 | 14569.0 | 14617.0 | 14633.5 | 14662.6 | 14665.6 | 14666.6 | 14818.0 |
| 14881.0 | 14949.0 | 14955.0 | 15856.6 | 15922.4 | 16015.7 | 16016.0 | 16017.5 | 16020.4 |
| 16022.2 | 16199.0 | 16248.5 | 16268.0 | 16284.5 | 16333.1 | 16335.3 | 16350.0 | 17280.0 |
| 17502.5 | 17518.6 | 18050.0 | 18286.0 | 18288.3 | 18289.5 | 18292.4 | 18294.0 | 18345.0 |
| 18394.5 | 18586.5 | 18704.2 | 18763.0 | 18771.0 | 19225.0 | 19226.0 | 19236.0 | 19390.0 |
| 19438.5 | 19535.0 | 19872.0 | 19885.0 | 20023.0 | 20060.6 | 20062.5 | 20066.5 | 20140.6 |
| 20417.5 | 20420.6 | 20422.0 | 20424.7 | 20573.0 | 20840.0 | 20773.0 | 21867.0 | 22904.4 |
| 22905.5 | 22906.6 | 22950.0 | 22955.0 | 23366.0 | 23395.0 | 23545.0 | 23545.0 | 23697.6 |
| 23866.0 | 25266.0 | 25320.6 | 25417.6 | 25418.5 | 25419.5 | 25420.5 | 25422.5 | 25541.5 |
| 25547.0 | 26441.5 |         |         |         |         |         |         |         |

**Country Profile:**

Germany comprises the formerly Federal Republic of Germany, the German Democratic Republic, and Berlin following the formal unification on 3 Oct. 1990. The capital of the current Federal Republic of Germany is Berlin. The federation consists of 16 states; Baden-Wurttemberg, Bayern, Berlin, Brandenburg, Bremen, Hamburg, Hessen, Mecklenburg-Vorpommern, Nieder-sachsen, Nordrhein-Westfalen, Rheinland-Pfalz, Saarland, Sachsen, Sachsen-Anhalt, Schleswig-Holstein, and Thuringen. The German Defense Forces include the following branches: Army, Navy, Air Force, Federal Border Police.

**Web Address:** <http://www.auswaertiges-amt.government.de/>

### Notes on Operation:

- [SAT]
- Language: German, English
- Formerly extensive diplomatic network, now largely migrated to satellite operations, although continues to invest in Rohde & Schwartz HF equipment from time-to-time.
- Tune up or marking with "alalalalalalalala" as for PIAB stations.
- Traffic on-line encrypted but with header in plain language. Leads-in with "eeeeevvvvvv" or "vvvvvvv", and ends with "kkkkkkkkk".
- May finish with (+/endemessage/+) three times.
- RS-ARQ transmissions complete with the following sequence:  
zczc  
-----  
(+/endemessage/+) (+/endemessage/+) (+/endemessage/+)  
-----  
version 2  
)  
nnnn
- Some of the above frequencies have been used for PIAB FEC-100 press broadcasts. If they are MFA transmitters is not known.
- RS-ARQ, in 228.7bd ITA-2 mode and ALIS for ALE, was in extensive use between MFA and embassies from 1995 to 1998, often replacing the older 96bd ARQ-E equipment previously used on a known frequency. No use noted of 240bd 8-tone RS-ARQ mode but an unidentified 225bd Packet Radio-like system has also been noted on many known frequencies.

### Dictionary:

|               |                                                      |
|---------------|------------------------------------------------------|
| aa            | Aussenamt (Foreign Ministry)                         |
| an            | to                                                   |
| auch          | also                                                 |
| auch fuer     | copy/info (also for)                                 |
| aus           | from                                                 |
| betr.         | subject (betreff)                                    |
| bezug         | reference                                            |
| cti           | urgent (from citissime)                              |
| fm cti        | foreign mission                                      |
| diplo cti     | diplomatic mission                                   |
| euro cti      | european commission delegation                       |
| danke         | thankyou                                             |
| edv           |                                                      |
| eingegangen   | beginning                                            |
| fernschreiben | telegram/message ?                                   |
| fernschreiber | teleprinter                                          |
| folgt teil    | continuation part (page _?)                          |
| fuer          | for                                                  |
| hier          | here                                                 |
| ihnen         | to you/them                                          |
| lage          | situation                                            |
| nachrichtlich | news/information                                     |
| offen         | open (in plain language / in the clear)              |
| omnez         | all?                                                 |
| oz            | East European zone time (Osteuropaische Zeit)        |
| plurez        |                                                      |
| vom           | of (von)                                             |
| wz            | West European zone time (UTC) (Westeuropaische Zeit) |

| <b>Call</b> | <b>Location</b>                           |
|-------------|-------------------------------------------|
|             | Abuja, Nigeria (handled via Lagos)        |
|             | Accra, Ghana                              |
|             | Addis Ababa, Ethiopia                     |
| DMK366      | Aden, Yemen                               |
|             | Alexandria, Egypt (Aleksandria via Cairo) |
|             | Alma Ata, Kazakhstan                      |
|             | Amman, Jordan                             |
|             | Ankara, Turkey                            |
|             | Athens, Greece                            |
|             | Bangui, Central African Republic          |
|             | Beirut, Lebanon                           |
|             | Beijing, China                            |
|             | Belgrade, Serbia                          |
|             | Berne, Switzerland (Bern)                 |
|             | Bishkek, (Bischkek)                       |
|             | Bogota, Colombia                          |
|             | Boston, USA                               |
| DCF42       | MFA Bonn                                  |
| DFL26       | MFA Bonn                                  |
| DFN92       | MFA Bonn                                  |
| DFP         | MFA Bonn                                  |
| DFS70       | MFA Bonn                                  |
| DFU20       | MFA Bonn                                  |
| DMK         | MFA Bonn                                  |
|             | Brasilia, Brazil                          |
|             | Brazzaville, Republic of Congo            |
|             | Brussels EC Mission, Belgium (Bruessel)   |
|             | Bucharest, Romania                        |
|             | Buenos Aires, Argentina                   |
|             | Bujumbura,                                |
|             | Cairo, Egypt (Kairo)                      |
|             | Conakry, Guinea                           |
|             | Cotonou, Benin                            |
|             | Dakar, Senegal                            |
|             | Damascus, Syria (Damaskus)                |
|             | Dar Es Salaam, Tanzania                   |
|             | Delhi, India                              |
|             | Gdansk, Poland (Danzig)                   |
|             | Geneva, Switzerland (Genf)                |
|             | Graz, Austria                             |
|             | Innsbruck, Austria                        |
|             | Islamabad, Pakistan                       |
|             | Kiev, Ukraine (Kiew)                      |
|             | Khartoum, Sudan                           |
|             | Kigali, Democratic Republic of Congo      |
|             | Kinshasa, Democratic Republic of Congo    |
|             | Kuala Lumpur, Malaysia                    |
|             | La Paz, Bolivia                           |
|             | Lagos, Nigeria                            |
|             | Libreville,                               |
|             | Lima, Peru                                |
|             | Lisbon, Portugal                          |
|             | Lome, Togo                                |
|             | Luanda, Angola                            |
|             | Madrid, Spain                             |
|             | Moscow, Russia (Moskau)                   |
|             | N'Djamena, Chad                           |
|             | New York, UN (UNO Mission)                |
| 5TP293      | Nouakchott, Mauritania                    |
|             | Port Au Prince, Haiti                     |
|             | Pressburg                                 |
|             | Pretoria, South Africa                    |
|             | Riyahd, Saudi Arabia                      |

Rome, Italy (Rom)  
Salzburg, Austria  
Santiago, Chile  
Tashkent, (Taschkent)  
Teheran, Iran  
DFY Tel Aviv, Israel  
Tbilisi, Georgia (Tiflis)  
Tokyo, Japan  
Tripoli, Libya (Tripolis)  
Tunis, Tunisia  
Valetta, Malta (Valletta)  
Vilnius, Lithuania  
DMK260 Warsaw, Poland  
Washington, USA  
Windhoek, Namibia (Windhuk)  
Yoaunde, (Ajaunde)  
Zurich, Switzerland (Zuerich)

MFA Conakry

20/Feb/96

GUINEA

Transmission Modes: CW

Reported Frequencies: 21100.0

**MFA Zagreb**

**11/Nov/97**

**HERCEGOVINA**

**Transmission Modes:** ITA-2 75bd 400Hz

**Reported Frequencies:** 11154.0

Some operations noted in early- to mid-1997.

**Location**

Zagreb

**Transmission Modes:**

|          |         |          |       |        |
|----------|---------|----------|-------|--------|
| ARTRAC   | 125bd   | Erect    | 170Hz | ACF=88 |
| ARTRAC-2 | 250bd   | Erect    | 850Hz | ACF=88 |
| ITA2     | 50bd    |          | 400Hz |        |
| ITA2     | 75bd    |          |       |        |
| CW       | Rare    |          |       |        |
| HNG-FEC  | 100.1bd | Inverted | 425Hz | ACF90  |

**Logged Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 3860.0  | 4553.0  | 5477.4  | 5648.4  | 6780.4  | 9114.0  | 9300.7  | 10400.0 | 12260.4 |
| 12260.8 | 12262.4 | 12262.8 | 13379.0 | 13380.0 | 13459.0 | 13676.0 | 13462.0 | 13575.0 |
| 13875.3 | 13875.4 | 13876.6 | 14810.0 | 14840.4 | 14840.8 | 14841.2 | 14873.0 | 15675.0 |
| 15677.0 | 16061.7 | 16453.4 | 16454.2 | 16454.6 | 18040.4 | 18040.8 | 18399.3 | 19810.0 |
| 20036.6 | 20045.0 | 23262.0 |         |         |         |         |         |         |

**Reported Frequencies:**

|         |         |         |       |         |         |         |         |         |         |
|---------|---------|---------|-------|---------|---------|---------|---------|---------|---------|
| 3699.7  | 4502    | 5172.4  | 5475  | 5640.2  | 6712    | 6760    | 6789    | 7937.5  | 8160    |
| 8833.7  | 8400    | 8925.9  | 9048  | 9046    | 9051    | 9114    | 9340    | 10323   | 10396   |
| 10406   | 10413   | 10853.8 | 11400 | 11462   | 12257.6 | 12264   | 12260   | 13373   | 13374   |
| 13378.5 | 13456   | 13537   | 13873 | 14377   | 14813.3 | 14814   | 14815   | 14816.7 | 14874   |
| 15674.4 | 15724.2 | 16060.5 | 16204 | 16400   | 16430   | 16449.7 | 16451   | 16452   | 16458   |
| 17468   | 18038   | 18039   | 18056 | 18169   | 18170.7 | 18209.5 | 18262   | 18393   | 18397.7 |
| 18398.5 | 18410   | 18412   | 19397 | 19398.7 | 19510   | 19513   | 19513.6 | 19514   | 19800   |
| 20007   | 20014   | 20044   | 20067 | 20649   | 20071   | 20802   | 21755   | 21758   | 21787.5 |
| 22809   | 23080.5 | 23166   | 23264 | 23359   | 23360.7 | 23366   | 23904   |         |         |

**Country Profile:**

Hungary is located in the center of Europe and measures 93,030 km<sup>2</sup>. The republic is divided in the capital city of Budapest and 19 counties (megye); Bacs-Kiskun, Baranya, Bekes, Borsod-Abauj-Zemplen, Csongrad, Fejer, Gyor-Moson-Sopron, Hajdu-Bihar, Heves, Jasz-Nagykun-Szolnok, Komarom-Esztergom, Nograd, Pest, Somogy, Szabolcs-Szatmar-Bereg, Tolna, Vas, Veszprem, and Zala. The Hungary Defense Forces has the following branches: Ground Forces, Air and Air Defense Forces, Border Guard, and Territorial Defense.

**Web Address:** <http://crystal.meh.hu/text/kum/>

**Notes on Operation:**

- Language: Hungarian
- Dual frequency operation even if different channels are based on same base frequency (carrier point). Five channels are allocated, offset from the carrier point (of an assigned frequency) by +0.4, +0.8, +1.2, +1.6 and +2.0 Khz.
- ARTRAC system is adaptive ie automatically changes channels within the frequency slot or to another frequency dependant on propagation conditions or interference.
- Regular sequential testing of each channel.
- If reversed will sync but output gibberish (Hoka code 30).
- Distinctive ending of messages with "www". Off-line encryption blocked in 100 groups.

Press summaries sourced MTI.

Occasional use of HGXxx de HGXxx at end of messages.

Carriers/channels logged.

| Sup.carrier | +400 | +800 | +1200 | +1600 | +2000 |
|-------------|------|------|-------|-------|-------|
| 5477        | x    |      |       | x     | x     |
| 13875       | x    | x    | x     | x     |       |
| 14810       | x    |      |       | x     |       |
| 14840       | x    | x    |       |       | x     |
| 16453       | x    | x    |       | x     |       |
| 18040       | x    | x    |       | x     | x     |
| 19810       | x    | x    |       |       |       |
| 20045       | x    | x    | x     |       |       |

Signals noted on 13459.0, 13462.0 and 14873.0kHz with 250bd/850Hz ARQ system with similar adaptive behaviour and ACF=88 which is presumed to be a double speed version of ARTRAC (ARTRAC-2).

| Callsign | Location                                  |
|----------|-------------------------------------------|
| 8EH39    | Djakarta, Indonesia                       |
| HGX7     | UNID                                      |
| HGX20    | Hanoi, Vietnam                            |
| HGX21    | MFA Budapest                              |
| HGX22    | Athens, Greece                            |
| HGX23    | Rome, Italy                               |
| HGX26    | UNID                                      |
| HGX27    | Berne, Switzerland                        |
| HGX28    | London, UK                                |
| HGX29    | Paris, France                             |
| HGX31    | Warsaw, Poland                            |
| HGX36    | Bangkok, Thailand                         |
| HGX37    | Pyongyang, North Korea                    |
| HGX38    | Vientiane, Laos                           |
| HGX39    | New Delhi, India                          |
| HGX40    | Madrid, Spain                             |
| HGX41    | Damascus, Syria                           |
| HGX42    | Tehran, Iran                              |
| HGX43    | Djakarta, Indonesia                       |
| HGX44    | Baghdad, Iraq                             |
| HGX45    | Islamabad, Pakistan                       |
| HGX49    | Beirut, Lebanon                           |
| HGX50    | Djakarta, Indonesia                       |
| HGX53    | Accra, Ghana                              |
| HGX54    | Conakry, Guinea                           |
| HGX55    | Algiers, Algeria                          |
| HGX56    | Cairo, Egypt                              |
| HGX57    | Rabat, Morocco                            |
| HGX58    | Nairobi, Kenya                            |
| HGX59    | Lagos, Nigeria or Dar es Salaam, Tanzania |
| HGX60    | Khartoum, Sudan                           |
| HGX61    | Addis Ababa, Ethiopia                     |
| HGX62    | Tripoli, Libya                            |
| HGX68    | UNID                                      |
| HGX71    | Kuwait (Safat)                            |
| HGX81    | Seoul, South Korea                        |
| KNY26    | Washington, USA                           |
| ONN39    | Brussels, Belgium                         |
|          | Bratislava, Slovakia                      |



Dictionary:

|                |                |
|----------------|----------------|
| algir          | Algiers        |
| csehszlovaakia | Czechoslovakia |
| omaaan         | Oman           |
| januaar        | January        |

**Sample Messages:**

End of offline encrypted msg/ message in p/l Hungarian.

88462 36201 57223 45324 70566 30711 68120 37263 80042 00401  
33754 69815 20976 17264 61379 86077 82795 50140 50262 33865  
64383 90055 59612 43675 68710 15695 05774 +

vvvv

[end of message]

kkkk

nnn

915/hav/316

[message number/source]

41,51

havanna, 1992. december 29.

[originator and date]

a kubai kormaany hivatalosan bejelentette ees csehszlovaakia

itteni nagykoevetseegeevel jegyzeekben koezoelte, hogy elismeri

1993.januaar 1-jeetoel mind a cseh, mind a szlovqdk koeztaar-

sasaagot.+

[message in p/l Hungarian]

vvvv

[end of message]

tkb ob +

canyhendtx

[endtx is a system code indicating end of text ie no more messages]

**Example 2: plan traffic**

hgx38 de hgx21

kkkk

nnn

hoi/311/31/12267

budapest, 1993. 11. 22.

u/nu/106

443 ottanira:

elutasitva.

www

hgx38 de hgx21

kkkk

nnn

hoi/318))?'2/33/2461

budapest, 1993. november 22.

a futaarok utja egy heettel keesoebb lesz. lwofepontosabbat a koevetkezo  
taaviratban irunk.

www

hgx38 de hgx21

kkkk

nnn

**Transmission Modes:**

ITA-2 50bd 170Hz  
ITA-2 50bd 350Hz  
ITA-2 50bd 400Hz  
ITA-2 50bd 520Hz  
SITOR-A 100bd 170Hz  
VFT: 3xFEC-100 96bd Inverted 170Hz (600Hz channel spacing)  
QPSK 2400bps  
USB Voice  
CW

**Logged Frequencies:**

15916.7 16372.0 16413.9

**Reported Frequencies:**

9358.0 10475.0 10477.0 10723.0 11147.0 11155.0 12104.0 12112.0 12160.5  
12163.5 15755.0 15919.5 15917.7 15919.7 15920.5 16203.7 16375.0 16378.0  
16379.0 16412.0 16414.5 17535.0 17540.0 17541.8 18277.0 18285.0 18325.0  
18407.0 18459.7 18470.0 18463.0 18465.0 18466.7 18469.3 18725.0 19003.0  
19021.0 19022.0 19035.0 19052.0 19055.3 19057.0 19440.0 19440.6 20375.0  
20610.0 20614.8 20841.7 20882.5 20885.0 20887.0 20892.0

**Country Profile:**

Capital is New Delhi, with 25 states and 7 union territories\*; Andaman and Nicobar Islands\*, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chandigarh\*, Dadra and Nagar Haveli\*, Daman and Diu\*, Delhi\*, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Lakshadweep\*, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Pondicherry\*, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal. Forces include Army, Navy (including naval air arm), Air Force, various security or paramilitary forces (includes Border Security Force, Assam Rifles, and Rashtriya Rifles).

**Web Address:** <http://www.meadev.gov.in/>

**Notes On Operation:**

- [SAT][SUN]
- Language: English
- MFA New Delhi uses callsign of 8WD plus a number identifying the link to the station being worked.  
Uses "rrrrrrrrrrrrrrrr" to indicate message received OK on QSX.  
Uses "ovovovovovovov" to indicate that QSX should go ahead with message.  
Uses "ofofofofofofof" to terminate QSO.
- 2 digit channel identifiers used eg "qsy ch 53 53 53 53"
- Messages from MFA headed and signed with "foreign new delhi".
- Messages from embassies headed and signed eg "indembassy moscow".

| Call  | Selcal | Location                              |
|-------|--------|---------------------------------------|
| 20    |        | MFA New Delhi to Male                 |
| 8WD2  | XXXX   | MFA New Delhi to Rangoon, Myanmar     |
| 8WD3  |        | MFA New Delhi to Victoria,            |
| 8WD32 |        | MFA New Delhi to Hanoi, Vietnam       |
| 8WD4  |        | MFA New Delhi to Belgrade, Serbia     |
| 8WD5  |        | MFA New Delhi to Kabul, Afghanistan   |
| 8WD6  |        | MFA New Delhi to Port Louis           |
| 8WD7  |        | MFA New Delhi to ?                    |
| 8WD9  |        | MFA New Delhi to Dhaka, Bangladesh    |
| 8WD14 |        | MFA New Delhi to Beijing, China       |
| 8WD17 |        | MFA New Delhi to Thimpu, Bhutan       |
| 8WD36 |        | MFA New Delhi to Phnom Penh, Cambodia |
| 8WD87 |        | MFA New Delhi to Colombo, Sri Lanka   |
|       |        | Berlin, Germany                       |
|       |        | Baghdad, Iraq                         |
|       |        | Bangkok, Thailand                     |
| 8WA23 |        | Beijing, China                        |
| 8WB1  |        | Belgrade, Serbia                      |
|       | PPVK   | Cairo, Egypt                          |
|       |        | Damascus, Syria                       |
| 8WA46 |        | Hanoi, Vietnam                        |
| 8WA5  |        | High Commission Colombo, Sri Lanka    |
| 8WA6  |        | Dhaka, Bangladesh                     |
|       |        | Consulate Jeddah, Saudi Arabia        |
| 8WB2  |        | Kabul, Afghanistan                    |
| 8WB26 |        | UNID Embasssy                         |
| 38    |        | Male                                  |
| 8WW3  |        | Moscow, Russia                        |
| 8WA40 |        | Phnom Penh, Cambodia                  |
| 8WB3  |        | High Commission Port Louis            |
| 8WA3  |        | Rangoon, Myanmar                      |
|       | PPVF   | Riyadh, Saudi Arabia                  |
| 8WB34 |        | Teheran, Iran                         |
| 8WB4  |        | Teheran, Iran                         |
| 8WA11 |        | Thimphu, Bhutan                       |
| 8WB7  |        | Victoria                              |
| 8WA6  |        | UNID                                  |
|       | CCVP   | UNID                                  |
|       | CCVC   | UNID                                  |
|       | CCVF   | UNID                                  |
|       | CCVQ   | UNID                                  |
|       | CCVX   | UNID                                  |
|       | CCMV   | UNID                                  |

**Dictionary:**

|          |                                    |
|----------|------------------------------------|
| MEA      | Ministry of External Affairs (MFA) |
| hicomind | Indian High Commission (Embassy)   |
| f.n.d    | Foreign New Delhi                  |

**Transmission modes:**

|          |       |       |       |                     |
|----------|-------|-------|-------|---------------------|
| ITA2     | 50bd  | Erect | 270Hz |                     |
| ITA2     | 50bd  | Erect | 400Hz |                     |
| ITA2     | 50bd  | Erect | 425Hz |                     |
| ARQ-S    | 96bd  | Erect | 170Hz | 5CRC, 6CRC          |
| ARQ-M2   | 96bd  | Erect | 170Hz | 8CRC                |
| FEC-S    | 96bd  | Erect | 170Hz |                     |
| SITOR-A  | 100bd | Erect | 170Hz |                     |
| TWINPLEX | 100bd | Erect |       | F7B-1 No Interleave |
| USB      | Voice |       |       |                     |

**Logged Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 18056.5 | 18066.5 | 18101.5 | 18206.5 | 18401.5 | 18411.5 | 18416.7 | 18796.5 | 18801.5 |
| 19106.5 | 19111.5 | 19117.5 | 20401.5 | 20407.5 | 20411.5 |         |         |         |

**Reported Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 7944.0  | 8066.5  | 10899.5 | 14501.5 | 14502.5 | 15640.3 | 15690.0 | 15991.5 | 17480.5 |
| 17481.5 | 16401.5 | 17486.7 | 18024.0 | 18042.0 | 18051.5 | 18063.0 | 18066.5 | 18074.5 |
| 18100.0 | 18103.0 | 18106.5 | 18211.5 | 18216.5 | 18316.4 | 18321.5 | 18391.5 | 18400.0 |
| 18405.5 | 18410.5 | 18450.0 | 18451.5 | 18455.0 | 18456.0 | 18491.5 | 18501.7 | 18505.7 |
| 18506.6 | 18508.8 | 18511.5 | 18576.8 | 18702.0 | 18800.0 | 18801.4 | 18804.0 | 18805.5 |
| 18931.5 | 19056.5 | 19091.5 | 19093.0 | 19096.5 | 19101.5 | 19115.3 | 19220.0 | 19500.0 |
| 19501.5 | 19506.5 | 19755.0 | 19756.5 | 20391.5 | 20401.5 | 20406.5 | 24007.5 |         |

**Country Profile:**

The Republik Indonesia with capital Jakarta is divided in 24 provinces (propinsi) Bali, Bengkulu, Irian Jaya, Jambi, Jawa Barat, Jawa Tengah, Jawa Timur, Kalimantan Barat, Kalimantan Selatan, Kalimantan Tengah, Kalimantan Timur, Lampung, Maluku, Nusa Tenggara Barat, Nusa Tenggara Timur, Riau, Sulawesi Selatan, Sulawesi Tengah, Sulawesi Tenggara, Sulawesi Utara, Sumatera Barat, Sumatera Selatan, Sumatera Utara, Timor Timur, 2 special regions (daerah istimewa) Aceh and Yogyakarta, and 1 special capital city district (daerah khusus ibukota); Jakarta Raya. Defense branches: Army, Navy, Air Force, and National Police.

**Web Address:** <http://www.dfa-deplu.go.id/>

**Notes on Operation:**

- [SAT][SUN]
- Language: Indonesian, English
- Idles (often for very long periods) in FEC-S with "lmlmlm" or "cccc" before message sent.
- Some messages headed "k i l a t" (urgent).
- Messages separated and begin with "zzzz" or "++++".
- Messages end with "----" and operator, time and date stamp.
- Offline encrypted traffic with 5LGs.

**Consulate:** Chicago

| <b>Selcal</b> | <b>Callsign</b> | <b>Location</b>                                                                                                                                                                                                                                                                     |
|---------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VVXX          |                 | MFA Jakarta<br>Algiers, Algeria<br>Ankara, Turkey<br>Antananarivo                                                                                                                                                                                                                   |
| VVFF          |                 | Athens, Greece<br>Bangkok, Thailand<br>Beijing, China<br>Bonn, Germany<br>Bratislava, Slovakia<br>Budapest, Hungary<br>Cairo, Egypt<br>Caracas, Venezuela<br>Damascus, Syria                                                                                                        |
| VVPP          |                 | Dar es Salaam, Tanzania<br>Dhaka, Bangladesh<br>Hanoi, Vietnam<br>The Hague, Netherlands<br>Islamabad, Pakistan<br>Jeddah, Saudi Arabia<br>Kabul, Afghanistan<br>Kuala Lumpur, Malaysia<br>Kuwait<br>Lagos, Nigeria<br>Manila, Philippines<br>Mexico City, Mexico<br>Moscow, Russia |
| VVKK          |                 | New Delhi, India<br>New York, USA                                                                                                                                                                                                                                                   |
| VVMM          |                 | Paramaribo, Surinam<br>Prague, Czech Republic                                                                                                                                                                                                                                       |
| YKEK          |                 | Pyongyang, North Korea<br>Riyahd, Saudi Arabia<br>Seoul, South Korea<br>Stockholm, Sweden                                                                                                                                                                                           |
|               | BUNI            | Teheran, Iran<br>Tokyo, Japan<br>Tunis, Tunisia<br>Vienna, Austria<br>Washington, USA<br>Yangon (Rangoon), Myanmar                                                                                                                                                                  |
| VVSS          |                 | UNID                                                                                                                                                                                                                                                                                |

**Dictionary:**

|            |                                            |
|------------|--------------------------------------------|
| deplu      | DEPartmen LUar negeri (department foreign) |
| menlu      | MENTeri LUar negeri (minister foreign)     |
| nomor      | number                                     |
| perwakilan | delegation                                 |
| perwakin   | delegation                                 |
| pwk        | delegation                                 |
| kilat      | urgent                                     |
| segera     | immediate                                  |
| semua      | all                                        |
| Moskow     | Moscow                                     |
| Pekjen     | Beijing                                    |
| Wina       | Vienna                                     |
| pebruari   | February                                   |
| mei        | May                                        |
| juli       | July                                       |
| desember   | December                                   |
| gitu       | over ?                                     |

**Transmission modes:** HC-ARQ 240bd 200Hz

**Reported Frequencies:** 7614.0 12238.5 16108.5

**Country Profile:**

Capital is Teheran, with 25 provinces (ostanha, singular-ostan); Ardabil, Azarbayjan-e Gharbi, Azarbayjan-e Sharqi, Bushehr, Chahar Mahall va Bakhtiari, Esfahan, Fars, Gilan, Hamadan, Hormozgan, Ilam, Kerman, Kermanshahan, Khorasan, Khuzestan, Kohkiluyeh va Buyer Ahmadi, Kordestan, Lorestan, Markazi, Mazandaran, Semnan, Sistan va Baluchestan, Tehran, Yazd, Zanzan note: there may be three new provinces named Golestan, Qom, and Qazvin.

Forces include Islamic Republic of Iran regular forces (includes Ground Forces, Navy, Air and Air Defense Forces), Revolutionary Guards (includes Ground, Air, Navy, Qods, and Basij-mobilization-forces), and Law Enforcement Forces.

**Call Location**

MFA Teheran

ONN34 Brussels

**Transmission modes:**

SITOR-A 100bd  
FEC-100 144bd

**Reported Frequencies:**

10452.7 10473.7 10590.7 13690.0 24300.0

**Country Profile:**

Capital is Jerusalem, with 6 districts (mehozot, singular-mehoz); Central, Haifa, Jerusalem, Northern, Southern, Tel Aviv. Forces include Israel Defense Forces (includes ground, naval, and air components), Pioneer Fighting Youth (Nahal), Frontier Guard, Chen (women).

**Web Address:** <http://israel.org/israel-info/embassies.html>

**Transmission Modes:**

|         |            |                                      |       |           |
|---------|------------|--------------------------------------|-------|-----------|
| SITOR-A | 100bd      | Erect                                | 170Hz |           |
| SITOR-B | 100bd      | Erect                                | 170Hz |           |
| ARQ-E   | 96bd       | Erect                                | 170Hz | 8CRC      |
| ARQ-N   | 96bd       |                                      |       |           |
| FEC-100 | 192bd      |                                      |       |           |
| RS-ARQ  | 228.7bd    | Erect                                | 170Hz | ITA2 mode |
| RS-ARQ  | 240bd      | 8 tone                               |       | ITA2 mode |
| FSK     | 1200bd     | System (also used by I Mil stations) |       |           |
| POL-ARQ | (reported) |                                      |       |           |

**Logged Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 6804.7  | 6811.7  | 6763.0  | 7858.7  | 8013.0  | 8033.5  | 8126.0  | 8131.7  | 8180.7  |
| 9087.5  | 9090.5  | 9090.7  | 9106.5  | 9126.7  | 9130.7  | 9140.7  | 9145.0  | 9150.7  |
| 9161.7  | 9180.0  | 9187.7  | 9191.7  | 9283.0  | 9296.0  | 9333.7  | 10150.0 | 10339.0 |
| 10485.7 | 10537.7 | 10547.7 | 10871.7 | 10886.1 | 11035.7 | 11096.5 | 11141.5 | 11163.0 |
| 11171.0 | 11276.7 | 11441.7 | 11463.0 | 11479.0 | 11480.0 | 12131.7 | 12150.0 | 12160.0 |
| 12250.0 | 13378.5 | 13378.6 | 13378.7 | 13381.5 | 14537.5 | 13388.5 | 13398.5 | 13425.7 |
| 13904.7 | 13911.7 | 14534.5 | 14543.7 | 14546.5 | 14566.7 | 14597.7 | 14668.5 | 14849.7 |
| 14881.0 | 15683.5 | 15801.7 | 15811.7 | 15927.7 | 15937.7 | 16023.0 | 16032.0 | 16056.5 |
| 16319.5 | 16339.5 | 17422.7 | 17461.0 | 17463.0 | 17513.9 | 18161.5 | 18191.7 | 18443.0 |
| 18691.5 | 18694.0 | 19059.5 | 20055.5 | 23374.0 |         |         |         |         |

**Reported Frequencies:**

|         |         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 5289    | 6771    | 6814.5  | 7446.5  | 7447.5  | 7449.5  | 7457.5  | 7459.5  | 7477.5  | 7885.5  |
| 7910.5  | 8043.5  | 8044    | 8053.5  | 8103    | 8126    | 8134.5  | 8141.5  | 8150.5  | 8161.5  |
| 8172.5  | 8177.5  | 8180.5  | 8192.7  | 9075.5  | 9085.5  | 9126.5  | 9180    | 9191.5  | 9294    |
| 9333.5  | 9426.5  | 10156.5 | 10191   | 10209.5 | 10547.5 | 10721   | 10844.9 | 10873.5 | 11092   |
| 11098.5 | 11131.5 | 11151.5 | 11173   | 11393   | 11432.7 | 11461.5 | 11616.5 | 11643   | 12118   |
| 12125.6 | 12126.5 | 12141   | 12145.5 | 12150   | 12152   | 12157   | 12158   | 12216   | 12976   |
| 13341.5 | 13346.5 | 13389   | 13425.2 | 13446.5 | 13718   | 13813.5 | 13847   | 13865   | 13877   |
| 13904.5 | 13919.9 | 14036   | 14039   | 14152   | 14321   | 14427   | 14447   | 14526.5 | 14543.5 |
| 14564.5 | 14568.5 | 14911   | 15681.5 | 15683.5 | 15795.5 | 15806.5 | 15810.8 | 15811.5 | 15821.5 |
| 15895   | 15936.5 | 16023.4 | 16034.5 | 16064.5 | 16156.5 | 16195.5 | 16233.5 | 16339   | 16643   |
| 17412.5 | 17431.5 | 17440.5 | 17443   | 17452.5 | 17473   | 17498.5 | 17504   | 17973   | 18071.5 |
| 18083   | 18086   | 18123   | 18160.8 | 18191.5 | 18206   | 18246.5 | 18385.5 | 18471   | 18556   |
| 18733   | 19037   | 19056   | 19275   | 19377   | 19461   | 19463   | 19526.5 | 19567.7 | 19577   |
| 19640.6 | 19655.5 | 19671.5 | 19873   | 19876   | 19877   | 20007   | 20035.5 | 20053   | 20123   |
| 20167.5 | 20173   | 20321.5 | 20369.5 | 20386.5 | 20465.5 | 20573   | 20574.5 | 20584   | 20776.8 |
| 20836.5 | 20860   | 20861   | 20873   | 21117   | 23083   | 23120   | 23273   | 23385   |         |
| 23473   | 24034.5 | 24073   |         |         |         |         |         |         |         |

**Country Profile:**

The Italian Republic with capital Rome, is divided in 20 regions (regione);  
Abruzzi, Basilicata, Calabria, Campania, Emilia-Romagna, Friuli-Venezia Giulia,  
Lazio, Liguria, Lombardia, Marche, Molise, Piemonte, Puglia, Sardegna, Sicilia,  
Toscana, Trentino-Alto Adige, Umbria, Valle d'Aosta, and Veneto.

The Italian Defense Forces has the following branches: Army, Navy, Air Force,  
and Carabinieri.

**Web Address:** <http://sigserv1.casaccia.enea.it/MAE/>



**Notes on Operation:**

- [SAT]
- Language: Italian
- Off-line encrypted messages. Operators reported to have habit of QSYing in steps of 1Mhz/100khz/1khz.
- Decline in use of ARQ-E during 1996/97 noted, during which time both MFA and a number of embassies now use RS-ARQ. Both 240bd 8 tone and 228.7bd RS-ARQ used, so far only in ITA-2 mode. Traffic carried by RS-ARQ is identical to that sent using the older modes ie 5LGs. No use noted of 8 bit or 7 bit (binary) file transfer modes using RS-ARQ. Traffic sent with RS equipment ends in a variant of that used by the German Diplo:  
Nnnn (+/end messages/+) (/+end messages/+) (/+end messages/+)
- A list of Italian embassies and consulates, with their addresses, ask the Italian Ministry for Foreign Affairs (Ministero degli Affari Esteri, Ufficio Pubbliche Relazioni, piazza Farnesina 1, IT-00100 Roma, Italy) for the publication "Indirizzario delle Rappresentanze diplomatiche ed Uffici consolari della Repubblica Italiana".

| <b>Selcal</b> | <b>Call</b> | <b>Location</b>          | <b>Mnemonic</b> |
|---------------|-------------|--------------------------|-----------------|
|               |             | Abidjan, Ivory Coast*    | "ambabid"       |
| VQMK          |             | Abu Dhabi, UAE           |                 |
|               |             | Accra, Ghana*            | "ambaccr"       |
| VVMM          | 70B450      | Aden, Yemen              |                 |
| VXQF          | 9EU76       | Addis Ababa, Ethiopia    | "ambaddi"       |
| VQCX          |             | Algiers, Algeria         | "ambalge"       |
|               |             | Almaty,                  | "ambalma"       |
| VQYF          |             | Amman, Jordan            | "ambamma"       |
| VVSQ          |             | Ankara, Turkey           |                 |
|               |             | Asmara*                  | "ambasma"       |
| VXXS          |             | Athens, Greece           |                 |
| VXXF          |             | Baghdad, Iraq*           |                 |
|               |             | Beijing, China           | "ambpech"       |
| VXXK          |             | Beirut, Lebanon          | "ambbeir"       |
|               | IPG27       | Belgrade, Serbia*        | "ambbelg"       |
|               |             | Berne, Switzerland       |                 |
|               |             | Bonn, Germany            | "ambbonn"       |
|               |             | Bucharest, Romania       | "ambbuca"       |
| VQQX          |             | Budapest, Hungary        | "ambbuda"       |
|               |             | Cairo, Egypt             | "ambcair"       |
|               |             | Caracas, Venezuela       | "ambcara"       |
|               |             | Dakar, Senegal*          | "ambdaka"       |
|               |             | Damascus, Syria          | "ambdama"       |
|               |             | Doha, Qatar              | "ambdoha"       |
|               |             | Dublin, Ireland          | "ambdubl"       |
|               |             | Helsinki, Finland        |                 |
| VXXM          |             | Islamabad, Pakistan      | "ambisla"       |
|               |             | Khartoum, Sudan*         | "ambkhar"       |
|               |             | Kiev, Ukraine            | "ambkiev"       |
|               |             | Kinshasa, Dem Rep Congo* | "ambkins"       |
|               |             | Kuwait                   | "ambkuwa"       |
|               |             | Lagos, Nigeria*          | "ambлаго"       |
|               |             | Lima, Peru               | "amblima"       |
|               |             | London, UK               | "amb blond"     |
|               |             | Ljubljana, Macedonia     | "ambclubi"      |
|               |             | Luanda, Angola*          | "ambluan"       |
|               |             | Luxemburg                | "ambluss"       |
|               |             | Madrid, Spain            | "ambmadr"       |
|               |             | Maputo, Mozambique*      | "ambmapu"       |
|               |             | Minsk, Russia            | "ambmins"       |
| VXQP/VQXP     |             | Mogadiscio,              |                 |
|               |             | Muscat, Oman             | "ambmasc"       |
| VVVK          |             | Moscow, Russia           | "ambmosc"       |
| VXQQ          |             | Nairobi, Kenya*          | "ambnair"       |

|           |       |                         |           |
|-----------|-------|-------------------------|-----------|
| VQMY      |       | New Delhi, India        | "ambndel" |
|           |       | Nicosia, Cyprus         |           |
|           |       | Oslo, Norway            |           |
|           |       | Prague, Czech Republic  | "ambprag" |
|           |       | Pretoria, South Africa* | "ambpret" |
|           |       | Pyeongyang, North Korea |           |
|           |       | Rabat, Morocco          | "ambraba" |
|           |       | Riga, Latvia            | "ambriga" |
|           |       | Riyadh, Saudi Arabia    | "ambriad" |
| VVVX      | IPG20 | MFA Rome*               | "maeroma" |
| VXQV      | IPG20 | MFA Rome*               | "maeroma" |
| VQMP      |       | Sanaa, Yemen            | "amsana"  |
|           |       | Santiago, Chile         | "amsant"  |
|           |       | Sarajevo, Yugoslavia*   | "amsara"  |
|           |       | Singapore               | "amsing"  |
|           |       | Skopje, Macedonia*      | "amskop"  |
|           |       | Sofia, Bulgaria         | "ambsofi" |
|           |       | Tallinn, Estonia        | "ambtall" |
|           |       | Tashkent                | "ambtask" |
| VXXQ      |       | Teheran, Iran           | "ambtehe" |
|           |       | Tel Aviv, Israel        | "ambtela" |
|           |       | Tirana, Albania*        | "ambtira" |
|           | IPG71 | Tripoli, Libya*         | "ambtrip" |
| VQPK      |       | Tunis, Tunisia          | "ambtuni" |
| VQMF/VXXQ |       | Valetta, Malta          |           |
|           |       | Vilnius,                | "ambviln" |
|           | IPG22 | Warsaw, Poland          | "ambvars" |
|           |       | Washington, USA         | "ambwash" |
|           |       | Zagreb, Hercegovina     | "ambzaga" |
| VQFV      |       | UNID                    |           |
| VXQK      |       | UNID                    |           |
| VXQX      |       | UNID                    |           |

\* denotes embassy equipped with RS-ARQ

#### Consulates:

| Mnemonic | Location                 |
|----------|--------------------------|
| conambu  | Hamburg                  |
| conamst  | Amsterdam                |
| conbarc  | Barcelona                |
| conberl  | Berlin                   |
| conedim  | Edinburgh                |
| congeru  | Jerusalem                |
| conhong  | Hong Kong                |
| conlang  | Los Angeles              |
| conlion  | Lyon                     |
| conmadr  | Madrid                   |
| conmanc  | Manchester               |
| conmara  | Maracaibo, Venezuela     |
| conmars  | Marseille                |
| conmelb  | Melbourne                |
| conmetz  | Metz                     |
| conmopr  | Montpellier?             |
| conmpla  | Mar del Plata, Argentina |
| conmulh  | Mulhouse                 |
| conspie  | San Pierre & Miquelon?   |
| conshan  | Shanghai                 |
| constoc  | Stockholm                |
| consydn  | Sydney                   |
| contehe  | Teheran                  |
| contolo  | Toulouse                 |
| contrip  | Tripoli                  |
| convanc  | Vancouver                |
| convien  | Vienna                   |

conwett           Wettingen, Switzerland  
conzuri           Zuerich

Ministries:

| Mnemonic | Location                  |
|----------|---------------------------|
| maevist  | Visa Department           |
| minagri  | Ministry Agriculture      |
| minbila  | Ministry Bilancio         |
| mincome  | Minsitry Commerce         |
| minfina  | Ministry Finance          |
| minindp  | Ministry Industria        |
| minindg  | Ministry ?                |
| mininte  | Minsitry Internal Affairs |
| minlavo  | Ministry Lavoro           |
| minposg  | Ministry Poste            |
| mintesd  | Ministry Tesoro           |

Delegations:

|         |                                                   |
|---------|---------------------------------------------------|
| rappocs | Organisation for Security & Cooperation in Europe |
| rapponu | United Nations                                    |
| rappnat | NATO                                              |
| rappcee | European Community                                |

Intelligence Attaches

|         |       |
|---------|-------|
| sismimd | SISME |
| sisdemi | SISDE |

Miscellaneous:

| Mnemonic | Meaning                          |
|----------|----------------------------------|
| allamba  | All Embassies                    |
| allrapp  | All Delegations (rappresentanza) |
| prefepd  |                                  |
| prefera  |                                  |
| vislago  | Visa Department, Lagos           |

Dictionary:

|             |                                          |
|-------------|------------------------------------------|
| ESTERI ROMA | MFA Rome                                 |
| ITALDIPL .. | Italian Emb ..                           |
| ITALNATO    | Italian NATO delegation, Brussels        |
| MAEROMA     | MAE (Ministry of External Affairs) Rome. |
| Navitalia   | Naval Attache?                           |

|             |            |
|-------------|------------|
| Amburgo     | Hamburg    |
| Atene       | Athens     |
| Belgrado    | Belgrade   |
| Lussemburgo | Luxembourg |
| Lyon        | Lione      |
| Pechino     | Beijing    |
| Varsavia    | Warsaw     |

|              |                          |
|--------------|--------------------------|
| at           | to (attention)           |
| da           | from                     |
| del          | date                     |
| ordinario    | routine                  |
| pc           | copy to (per conoscenza) |
| tg           | telegram                 |
| tx           | relayed by               |
| urgente      | urgent                   |
| urgentissimo | very urgent (flash)      |

|          |          |
|----------|----------|
| Gennaio  | January  |
| Febbraio | February |
| Marzo    | March    |
| Aprile   | April    |

Maggio  
Giugno  
Luglio  
Agosto  
Settembre  
Ottobre  
Novembre  
Dicembre

May  
June  
July  
August  
September  
October  
November  
December

RIFDA

routing ind ? Military to diplomatic eg Naval Attaches.?

## Transmission modes:

SITOR-A           100bd   Erect   170Hz  
SITOR-B           100bd   Erect   170Hz

## Logged Frequencies:

13379.7   14675.7

## Reported frequencies:

7337.7   9280.7   10738.2   10898.0   13368.2   14513.7   15717.0   15717.7   18037.0  
18265.7

## Country Profile:

Japan measures 377,835 km2 including Ogasawara-gunto (Bonin Islands), Daito-shoto, Minami-jima, Okinotori-shima, Nansei-shoto (Ryukyu Islands), and Kazanretto (Volcano Islands). The capital of the empire is Tokyo. Japan is divided into 47 prefectures; Aichi, Akita, Aomori, Chiba, Ehime, Fukui, Fukuoka, Fukushima, Gifu, Gumma, Hiroshima, Hokkaido, Hyogo, Ibaraki, Ishikawa, Iwate, Kagawa, Kagoshima, Kanagawa, Kochi, Kumamoto, Kyoto, Mie, Miyagi, Miyazaki, Nagano, Nagasaki, Nara, Niigata, Oita, Okayama, Okinawa, Osaka, Saga, Saitama, Shiga, Shimane, Shizuoka, Tochigi, Tokushima, Tokyo, Tottori, Toyama, Wakayama, Yamagata, Yamaguchi and Yamanashi. Japan's defense forces include: Japan Ground Self-Defense Force (Army), Japan Maritime Self-Defense Force (Navy), Japan Air Self-Defense Force (Air Force) and Maritime Safety Agency (Coast Guard).

Web Address: <http://infomofa.nttts.co.jp/infomofa/index.html>

## Notes on operation:

- Copied traffic is usually a test (for satellite communications?).
- Known to use off-line encryption with 5 letter groups.
- Operator chat a mix of Japanese and English.
- ET(KV)RY always appears in their test msgs. No idea what it means.

| Call | Selcal | Location                                          |
|------|--------|---------------------------------------------------|
| ABGM |        | Abidjan, Ivory Coast<br>Accra, Ghana              |
| ADGM | BYPQ   | Addis Ababa, Ethiopia                             |
| AMGM | BYVY   | Amman, Jordan                                     |
| BDGM |        | Baghdad, Iraq<br>Bahrain                          |
| PKGM |        | Beijing, China?                                   |
| BRGM |        | Berne, Switzerland                                |
|      | EPVP   | Bucharest, Romania                                |
| CAGM | UQVP   | Cairo, Egypt<br>Calcutta, India                   |
| CRGM |        | Caracas, Venezuela                                |
|      | OYVM   | Colombo, Sri Lanka                                |
| GMCK | BCVC   | Conakry, Guinea                                   |
|      | BKVX   | Dakar, Senegal                                    |
| DMGM |        | Damascus, Syria                                   |
|      | OKVX   | Dar es Salaam, Tanzania                           |
|      |        | Dhaka, Bangladesh                                 |
| DHGM |        | Doha, Qatar?                                      |
|      | IQQV   | Santo Domingo, Dominican Republic<br>Havana, Cuba |
|      | IXXF   | Port au Prince, Haiti                             |
| IBGM |        | Islamabad, Pakistan                               |
| ITGM |        | Ankara (Isuturkei), Turkey<br>Kingston, Jamaica   |
| GMKT | UQVM   | Khartoum, Sudan                                   |
| GMKI | BQKK   | Kinshasa, Dem Republic Congo                      |

|                                      |              |                                                                                                       |
|--------------------------------------|--------------|-------------------------------------------------------------------------------------------------------|
| KWGM                                 | OYVK<br>UQVX | Kuala Lumpur, Malaysia<br>Kuwait<br>La Paz, Bolivia                                                   |
| LAGM<br>GMLV                         | BQQQ         | Lagos, Nigeria<br>Libreville, Gabon<br>Managua, Nicaragua<br>Mexico City, Mexico<br>Monrovia, Liberia |
| MRGM<br>MCGM<br>NAGM                 | BYPX         | Muscat, Oman<br>Nairobi, Kenya<br>Panama City, Panama<br>Penang, Malaysia                             |
| QIGM                                 |              | Quito, Ecuador<br>Rabat, Morocco<br>Riyadh, Saudi Arabia                                              |
| RDGM<br>GMTH<br>HGGM<br>TRGM<br>WIGM | UQVQ         | Teheran, Iran<br>The Hague, Netherlands<br>Tripoli, Libya<br>Vienna, Austria<br>Vientiane, Laos       |
| WSGM<br>GMBG                         |              | Washington, USA?<br>Cambodia                                                                          |
|                                      | BFVF         | UNID, Africa                                                                                          |
|                                      | BCVM         | UNID, Africa                                                                                          |

Dictionary:

|                  |                             |
|------------------|-----------------------------|
| Chu-nichi-taishi | Japanese Ambassador         |
| Daijin           | Minister                    |
| gaimen           | exterior, abroad            |
| gaimu-daijin     | Minister of Foreign Affairs |
| gaimu-sho        | MFA                         |
| taish-kan-in     | embassy staff               |
| taishi           | Ambassador                  |
| taishi-kan       | embassy                     |
| taishikendesu    | embassy                     |
| ryobi            | consulate?                  |

**Transmission Modes:**

ITA2                    50bd   Inverted   850Hz  
 ITA2                    75bd   Inverted   850Hz

**Logged Frequencies:**

14586.9

**Reported Frequencies:**

14582.0 14584.0 14585.1 14586.0 14577.7 17538.0 17542.9 18667.5 18993.0

**Country Profile:**

Mongolia (1.565 million sq km) is a republic with capital Ulaanbaatar. The country has 18 provinces (aymag); Arhangay, Bayanhongor, Bayan-Olgii, Bulgan, Dornod, Dornogovi, Dundgovi, Dzavhan, Govi-Altay, Hentiy, Hovd, Hovsgol, Omnogovi, Overhangay, Selenge, Suhbaatar, Tov, Uvs, and 3 municipalities (hot) Darhan, Erdenet, and Ulaanbaatar. Mongolian defense includes Mongolian People's Army (includes Internal Security Forces and Frontier Guards), and Air Force.

**Notes on Operation:**

- Language: Mongolian
- Distinctive use of romanized language.
- Reported Callsigns/Selcals for Parent MFA/Embassies:
  - JTF23    MFA Ulan Bator
  - OMZ24   Bratislava, Slovak Republic
  - OLZ24   Prague, Czech Republic

**Abbrv    Location**

ub            Ulan Bator  
 pr 22        Prague  
 buh 25       Bucharest  
 bud 18       Budapest  
 var 21       Vienna or Varsavia (Warsaw)  
 sof 21       Sofia  
 par 20       Paris  
 nyw 20       New York  
 vash20       Washington  
 jen 22       Geneva  
 lon 16       London  
 br 16       Brussels  
 gav 17       ?  
 ka 19       Kabul, Cairo?

**Dictionary:**

iz            from  
 por           nr(?)

Transmission Modes: ITA-2 50bd  
CW

Logged Frequencies: 14403.0 18897.0 20378.0

Reported Frequencies: 11433.0 18303.8 18896.0 20378.7 20379.5

Country Profile:

Capital is Rabat, with 37 provinces and 2 wilayas\*; Agadir, Al Hoceima, Azilal, Beni Mellal, Ben Slimane, Boulemane, Casablanca\*, Chaouen, El Jadida, El Kelaa des Srarhna, Er Rachidia, Essaouira, Fes, Figuig, Guelmim, Ifrane, Kenitra, Khemisset, Khenifra, Khouribga, Laayoune, Larache, Marrakech, Meknes, Nador, Ouarzazate, Oujda, Rabat-Sale\*, Safi, Settat, Sidi Kacem, Tanger, Tan-Tan, Taounate, Taroudannt, Tata, Taza, Tetouan, Tiznit. The three additional provinces of Ad Dakhla (Oued Eddahab), Boujdour, and Es Smara as well as parts of Tan-Tan and Laayoune fall within Moroccan-claimed Western Sahara; decentralization/regionalization law passed by the legislature in March 1997 creating many new provinces/regions; specific details and scope of the reorganization not yet available.

Forces include Royal Armed Forces (includes Army, Navy, Air Force), Gendarmerie, Auxiliary Forces.

Web Address: [http://www.mincom.gov.ma/frensh/minister/m\\_etra/m\\_etra.html](http://www.mincom.gov.ma/frensh/minister/m_etra/m_etra.html)

Notes on Operation:

- [SUN]
- Language: French
- Frequencies referred to as F1, F2, F4, F5, F6
- Uses 5 figure group off-line encryption.

| Tactical c/s | Location     |
|--------------|--------------|
| F90          | MFA Rabat?   |
| H5P          | MFA Rabat?   |
| L6E          | Cairo, Egypt |
| 7ZO          | UNID         |
| E7U          | UNID         |
| H9N          | UNID         |
| O4T          | UNID         |
| S4K          | UNID         |
| 3CK          | UNID         |
| 3MTR         | UNID         |
| S1C1         | UNID         |



**Transmission Modes:**

TWINPLEX 100bd Erect 170Hz F7B-4 (-255/-85/+85/+255)  
 SITOR-A 100bd Erect 170Hz

**Logged Frequencies:**

7701.5 9117.5 10122.5 11410.0 13415.0 13425.0 13527.0 13545.0 15647.0  
 15729.0 15988.5 18461.5 18498.5 18646.5 18746.5 19126.5 19306.5 19731.5

**Reported Frequencies:**

6755.5 7801.5 11116.5 11419.8 11570 14643.7 15731 15769.5 15969 18445.5  
 18468.5 18710 19011.5 19732.5 21844.5 23561.5 23571.5

**Country Profile:**

Administrative capital is The Hague (Den Haag), with 12 provinces (provincien, singular-provincie); Drenthe, Flevoland, Friesland, Gelderland, Groningen, Limburg, Noord-Brabant, Noord-Holland, Overijssel, Utrecht, Zeeland, Zuid-Holland.

Forces include Royal Netherlands Army, Royal Netherlands Navy (includes Naval Air Service and Marine Corps), Royal Netherlands Air Force, and Royal Constabulary.

**Web Address:** <https://www.government.nl/ministries/ministry-of-foreign-affairs>

**Notes on operation:**

- [SAT] [SUN]
- Once active diplomatic network, migrated to satellite during mid-1997. HF channels still active with "PCW1" marker (see below).
- Dual frequency operations.
- MFA The Hague sits with CW/SITOR marker from list shown monitoring appropriate Embassy channel.

| PCW1    | Embassy |
|---------|---------|
| 9117.5  |         |
| 11410   |         |
| 13415   | 13425   |
| 13545   | 13527   |
| 15647   | 15969?  |
| 15729   | 15988.5 |
| 18461.5 | 18498.5 |
| 18646.5 | 18746.5 |
| 19731.5 | 19306.5 |

- This station uses Twinplex in F7B-4 mode. Marker tones/Sitor-A mode/IRS acknowledgement tones are the top two (F3/F4) and should not straddle the centre frequency as when tuning F7B-1 Twinplex and standard ARQ modes. ie the assigned twinplex frequency is +1500hz up (offset) from the suppressed carrier and not +1700hz (F3/F4 mid-point) as is often logged.

| <b>Call</b> | <b>Selcal</b> | <b>Location</b>                      |
|-------------|---------------|--------------------------------------|
| PCW1        | TVPK?         | MFA The Hague                        |
| PCW2        | TVVQ          | Tel Aviv, Israel                     |
| PCW3        | TVVK          | Beijing, China                       |
| PCW4        |               | Djakarta, Indonesia                  |
| PCW5        | TVVP          | Cairo, Egypt                         |
| PCW6        | TVVC          | Riyahd, Saudi Arabia                 |
| PCW7        | TVVY          | Damascus, Syria                      |
| PCW8        |               | Tripoli, Libya                       |
| PCW9        | TVVS          | Lagos, Nigeria                       |
| PCW10       |               | Islamabad, Pakistan                  |
| PCW11       |               | Bangkok, Thailand?                   |
| PCW12       | TVXQ          | Kinshasa, Dem Republic Congo         |
| PCW13       | TVXK          | Teheran, Iran                        |
| PCW14       |               | Hanoi, Vietnam                       |
| PCW16       | TVXC          | Accra, Ghana                         |
| PCW17       | TVXY          | Khartoum, Sudan                      |
| PCW18       |               | Paramaribo, Surinam                  |
| PCW20       |               | Warsaw, Poland                       |
| PCW21       | TVQX          | Yaounde, Cameroon                    |
| PCW22       |               | Monrovia, Liberia (rptd closed down) |
| PCW24       | TVQM          | Baghdad, Iraq                        |
| PCW25       |               | Beirut, Lebanon                      |
| PCW27       |               | UNID                                 |
| PCW28       | TVQF          | UNID                                 |
| PCW29       | TVKV          | Harare, Zimbabwe                     |
| PCW30       | TVKV          | Maputo, Mozambique                   |
| PCW33       | TVKK          | UNID                                 |
| PCW34       | TVKM          | Tunis, Tunisia                       |
| PCW35       |               | Washington or Dutch UNIFIL (Lebanon) |
| PCW36       | TVKC          | Dar es Salaam, Tanzania              |
| PCW37       | TVKY          | Lusaka, Zambia                       |
| PCW39       | TVKS          | Addis Ababa, Ethiopia                |
| PCW42       | TVMQ          | Sanaa, Yemen                         |
| PCW49       | TVMS          | UNID                                 |
| PCW50       | TVPV          | Luanda, Angola                       |
| PCW53       | TVPK          | Kuwait                               |
| PCW54       | TVPM          | Muscat, Oman                         |
| PCW55       | TVPP          | UNID                                 |
|             | TVKF          | Ouadadougou, Mali                    |
|             | TVKP          | UNID                                 |
|             | TVKT          | UNID                                 |
|             | TVKX          | New Delhi, India                     |
|             | TVMF          | UNID                                 |
|             | TVMV          | UNID                                 |
|             | TVMY          | UNID                                 |
|             | TVPQ          | UNID                                 |
|             | TVPS          | UNID                                 |
|             | TVPY          | Dakar, Senegal                       |
|             | TVQC          | Ankara, Turkey                       |
|             | TVQK          | UNID                                 |
|             | TVVF          | UNID                                 |
|             | TVVG          | UNID                                 |
|             | TVVK          | Rabat, Morocco                       |
|             | TVXF          | UNID                                 |
|             | TVXS          | UNID                                 |
|             | TVXV          | Athens, Greece (Coreu)               |
|             |               | Cape Town, South Africa              |
|             |               | Moscow, Russia                       |

**Dictionary:**

|                                  |                                                          |
|----------------------------------|----------------------------------------------------------|
| aan                              | to                                                       |
| beroep                           | occupation                                               |
| ca                               | Embassy/consulate?                                       |
| datum                            | date                                                     |
| kenmerk                          | message number                                           |
| januari                          | January                                                  |
| februari                         | February                                                 |
| Libie                            | Libya(n)                                                 |
| Ministere van Buitenlandse Zaken | MFA. (MINBUZA, MIN VAN BZ,<br>MIN V BZ, MIN B Z, BUZNL.) |
| naam                             | name                                                     |
| van                              | from                                                     |
| visadienst                       | Passport Bureau                                          |
| .bkr                             | Bucharest                                                |
| .tri                             | Tripoli                                                  |
| .kwe                             | Kuwait                                                   |

**Sample Message: Message from Tripoli 25/10/92.**

```
zczc [message start]
jusvsd dazvz
.tri [station sending - Tripoli]

an : ca tripoli [From]
aan : visadienst/jus/99 [To: Passport Bureau]
datum : 1992/10/25 lf [date]
kenmerk: 3811 [message number]

naam : naser ramadan salem [name]
voornamen :
geboortedatum : 1970/00 plaats: tarhuna
nationaliteit : libie geslacht: m [nationality - Libyan]
beroep : student [occupation]
srt. reisdoc. : pn 282680 1987/02/11 tot 1995/02/09
soort visum : t g 2 m
inreisdatum : 1992/10/00 doel: tran
bestemming : amsterdam/newcastle
voorwaarden : tck tun/ams/newcastle vv 4464183165/66
bijzonderheden : visum u.k. akkoord
naam ref. 1 :
adres ref. 1 :
vervaldatum : 1992/11/08
datum beslissing :

[message end]
```

**Transmission modes:**

|         |      |       |       |
|---------|------|-------|-------|
| FEC-100 | 96bd | Erect | 660Hz |
| FEC-100 | 96bd | Erect | 720Hz |
| FEC-100 | 96bd | Erect | 850Hz |
| FEC-100 | 96bd | Erect | 900Hz |

**Logged Frequencies:** 19356.7

**Reported Frequencies:** 19643.5 19645.5 19988.5 21408.2 23355.0 24060.0

**Country Profile:**

Capital is now Abuja, with 30 states and 1 territory\*; Abia, Abuja Federal Capital Territory\*, Adamawa, Akwa Ibom, Anambra, Bauchi, Benue, Borno, Cross River, Delta, Edo, Enugu, Imo, Jigawa, Kaduna, Kano, Katsina, Kebbi, Kogi, Kwara, Lagos, Niger, Ogun, Ondo, Osun, Oyo, Plateau, Rivers, Sokoto, Taraba, Yobe. The government has announced the creation of six additional states named Bayelsa, Ebonyi, Ekiti, Gombe, Nassarawa, and Zamfara as part of the process of transition to a civilian government.

Forces include Army, Navy, Air Force, and Police Force.

**Notes on Operation:**

- [SAT][SUN]
- Language: English
- Routing occasionally as MFA for KNS ie MFA Lagos for Embassy Kinshasa. Appears two stations will alternate on same frequency.
- "External TAC Abuja" also observed.
- Messages end "foreign bgy".
- Off-line encryption in various schemes of 5 letter groups.
- Note use of "allallall" call-up (cf German government PIAB transmissions).

| <b>Tactical</b> | <b>Call</b> | <b>Location</b>                 |
|-----------------|-------------|---------------------------------|
|                 | ETS43       | Addis Ababa, Ethiopia           |
|                 |             | Baghdad, Iraq                   |
| KNS             |             | Kinshasa, Dem Republic of Congo |
| BGY             |             | MFA Lagos                       |
| NUK             |             | London, UK                      |
|                 |             | Stockholm, Sweden               |
|                 | SRZ911      | Warsaw, Poland                  |
|                 | KNY36       | Washington, USA                 |

**Dictionary:**

External Address for MFA Lagos (occ External Abuja)

Foreign Signature of MFA Lagos

|          |                                                  |
|----------|--------------------------------------------------|
| BGY      | Lagos                                            |
| KNS      | Kinshasa                                         |
| MEA      | Ministry of External Affairs (alternate to MFA?) |
| MFA      | Ministry of Foreign Affairs                      |
| ndc      | Nigerian Diplomatic Code?                        |
| Nigerian | Nigerian Embassy                                 |
| NUK      | Nigerian UK (London Embassy)                     |

## Sample Messages

### Example 1: Basic message structure

Nigerian Kinshasa [Originator Nigerian Embassy Kinshasa]  
12/2/93 (1350 hrs) [date time]  
Immediate NigerianUK London [Priority - Addressee Nigerian Emb Loc]  
UNND x ["UNND" ? and "x" in lieu of STOP]

t e x t

Nigerian Kinshasa [Originator signature]

### Example 2: Message from Kinshasa

immediate external abuja [Addressed MFA Abuja]

tel: no: 48 [Telegram nr]

=====

for gg's office from claude-wilcox

rpt to: prcd

we are being inundated by enquiries and comments from both  
press and individuals on the political happenings at home xx in  
most instances we appear inadequately informed on latest  
happenings stop we therefore wish to request that developments  
on the political situatio n at home are despatched to us on a

regular basis as they happen so that we can be fully abreast  
with government's positions and decisions on the problem stop  
the press comma the diplomatic commu ity and private individuals  
here show a lot of interest and concern on the current  
happenings in nigeria stop

nigerian kinshasa

[Nigerian Ambassador]

27/07/93 : 1230 hrs

### Example 3: Service message

allallallallallallallallallallallallallallallbgy for all  
bgy for all missions  
unnd x for duty officers x  
this is to inform u that bgy is now open for normal operation  
today 22/12/95 x msgs can now come in while cfmatio n  
follows x sorry for silence for the past few days x it was  
due primarily to power problems x grateful come in and cfm  
how u copy this test call at yr respective ends x x  
foreign lagos  
22/12/95+++

### Example 6: Message

=====

for bgd  
immediate nigerian baghdad  
unnd x for head of chancery from chief engineer  
yourtel 30 refers x action on the subject matter is in  
progress x mission will be informed in due course x  
regards x x  
foreign lagos  
22/12/95+++  
bgy out on stdby++++

**Transmission modes:**

CW  
 ITA-2                    50bd   Inverted        500Hz  
 ITA-2                    50bd   Inverted        850Hz  
 ITA-2                    50bd   Inverted        1000Hz  
 BPSK                    1200bps  
 BPSK                    600bps

**Logged Frequencies:**

8817.7    8832.7    8871.8    8876.0    8878.1    8882.2    10460.0    10467.0    10563.3  
 10594.6    10613.0    10653.1    10662.0    10691.0    10693.0    13307.3    13314.7    13317.0  
 13820.0    14742.9    15856.0    16167.9    16240.2    16242.0    16249.3    16422.0    18111.0  
 18815.9

**Reported Frequencies:**

8819.7    8824        8850        8879        9395        10031.2    10075.6    10135        10590        10595.1  
 11121.8    11326.6    12411        13288.7    13310        13327.7    13856        13859.5    13872.5    14214.7  
 14225        14349.7    16232        16240.5    16248        16251        10406        16875        17228.7    18095  
 18100        18215        18569.3    18816.5    19221        20058        20560        20559        20657        20660  
 20662        20903        20906.3    21067        21369.6    21863.5    23165        23520.2

**Country Profile:**

The Democratic People's Republic of Korea; abbreviated DPRK; with capital Pyongyang, measures 120,540 km<sup>2</sup>. The country is divided in 9 provinces (do); Chagang-do, Hamgyong-namdo, Hamgyong-bukto, Hwanghae-namdo, Hwanghae-bukto, Kangwon-do, Pyongan-bukto, Pyongan-namdo, Yanggang-do, and 3 special cities (jikhalsi); Kaesong-si, Namp'o-si, and Pyongyang-si.

The DPRK Defense Forces has the following branches: Korean People's Army (including the Army, Navy, Air Force), and Civil Security Forces.

**Notes on Operation:**

- [SAT] [SUN]
- Language: Korean
- Distinctive use of 100Hz shift ITA-2, BPSK and romanized language, not to be confused with romanized Mongolian from MFA Ulan Bator.
- Off-line encrypted messages using 5-fig groups. An additional group indicating the x100 groups every tenth line.
- BPSK traffic relayed via facilities near Moscow.

**Callsign****Location**

MFA Pyongyang  
 Harare, Zimbabwe  
 Moscow, Russia

**Dictionary:**

bodogan  
 pyengqyang                    Pyongyang

**Encrypted message**

```
mf42/58      540    50                [ID?   msg nr   group count]
51403 34885 10093 32399 15128 24773 75965 72732 82143 68773
89197 60260 59109 65490 66431 36003 63047 47229 07832 19512
37554 41129 60767 28378 99504 57439 10276 78391 66347 36530
57567 83413 29667 04601 19867 31475 98533 76385 52345 34145
40008 78866 45680 82089 63390 05717 38847 29894 10237 79021
```

```
541      40                [msg nr   group count]
51408 10699 99609 79150 20877 43625 52614 37106 68812 65261
71357 65278 61471 67971 02951 78596 99612 15352 66647 54168
0278 37337 64756 34166 13002 62692 59452 02949 43590 56230
34281 02648 29642 40416 30977 58815 67080 46438 53004 38511
```

```
542      35                [msg nr   group count]
51412 32856 44463 88338 42427 88220 82811 33940 94484 96629
51892 73401 51372 90134 58681 39283 39931 68837 67828 40229
05983 48273 47436 19459 86250 57113 03007 67799 66740 93547
98195 16621 95121 73300 83195
```

```
543      19                [msg nr   group count]
51416 16371 79391 94632 57032 87583 04981 81173 19506 86716
78887 62139 50670 81593 11617 14155 76440 41267 35441
```

**Short text messages**

```
zm425,430/486   nr 8gepg   bodogen.
  4qil v~~vwniwkkial ssiqhassi))neun uuidaipan zangginningteise
iinmingun habhangeanugonggyenggeul goanlamhasin sosigqeul bodoham~~ zoq
ngonggig gigoangquiquenhoi quicuenzangqisimye zosenqinm n
oun choigosalyenggoanqisin gim zeng qil gaghaggeise zenseung
43
ol~ei zeuqeumhaqye zosenqinmingun hvvvvvvvhebzudan habchnq
m
an gngqyenqeul goanlamhasiqyessda.
  gim zeng qil gaghaggise eun vvhbabchangdan gongqyenqvui
sasangqyeisulteg suzunqi nopqeun~ei daihaiseqoa chulqyenzadeulqi
gongqyenqeul zalhacdei daihaqye kedalan manzogul pyosihasiqyessda,
go bo
oham.
.....
```

**Transmission Modes:**

TWINPLEX 100Bd Erect 400Hz F7B-1 -400/-200/+200/+400  
Word Interleaved

**Logged Frequencies:**

6814.4 6961.9 9043.9 9081.9 9274.9 9327.9 12123.9 13387.9 13495.9  
16073.9 16103.9 16128.9 18443.7 18445.4 18487.9 18583.9 19807.9 21893.9

**Reported Frequencies:**

9179.0 11437.5 13457.9 14782.9 15974.0 16209.8 16277.0 16284.9 16285.9  
18476.8 19827.0 20029.0 21852.8 21859.0 21892.5 23180.8

**Country Profile:**

Capital is Oslo, with 19 provinces (fylker, singular=fylke); Akershus, Aust-Agder, Buskerud, Finnmark, Hedmark, Hordaland, More og Romsdal, Nordland, Nord-Trondelag, Oppland, Oslo, Ostfold, Rogaland, Sogn og Fjordane, Sor-Trondelag, Telemark, Troms, Vest-Agder, Vestfold.

Forces include Norwegian Army, Royal Norwegian Navy (includes Coast Artillery and Coast Guard), Royal Norwegian Air Force, and Home Guard.

**Notes on Operation:**

- Language: Norwegian
- Single frequency operations.
- Uses on-line encryption with plain language header. Locations abbreviated between ". ." in some cases, for example, "ebevn" for Copenhagen.
  - "kckcswwsww" lead-in
  - "zzzzzz" end marker
  - "cccc" message separator
  - "lwlwlv" message separator
- The "kckc" is similar to encryption scheme used by Danish and Swedish Diplo (T-1286B crypto unit), as is the use of 0.9kHz offset and 400Hz shift TWINPLEX. Along with similarity in language MFA Oslo is often mistaken for MFA Copenhagen.
- Distinctive MFA signature is "n o r e g".

| <b>Selcal</b> | <b>Location</b>                  |
|---------------|----------------------------------|
| KFPU          | Abidjan, Ivory Coast             |
| KFQD          | Ankara, Turkey?                  |
|               | Athens, Greece (Aten)            |
| KFQE          | Bangkok, Thailand                |
|               | Beijing, China                   |
|               | Belgrade, Serbia                 |
|               | Berne, Switzerland               |
|               | Bonn, Germany                    |
|               | Brussels, Belgium (Brussel)      |
| KFPR          | Bucharest, Romania (Buckrest)    |
|               | Budapest, Hungary                |
|               | Copenhagen, Denmark (Koebenhavn) |
| KFMT          | Dakar, Senegal                   |
| KFME          | Dar es Salaam, Tanzania          |
| KFCB          | Dhaka, Bangladesh                |
|               | Dublin, Ireland                  |
| KFCI          | Gaberone,                        |
|               | The Hague, Netherlands (Haag)    |
|               | Helsinki, Finland (Helsingfors)  |
| KFYO          | Kiev, Ukraine?                   |
| KFMI          | Lagos, Nigeria                   |
|               | Lisbon, Portugal (Lisboa)        |
|               | London, UK                       |
| KFQI          | Lusaka, Zambia                   |



|      |                        |            |
|------|------------------------|------------|
|      | Madrid, Spain          |            |
| KFMO | Maputo, Mozambique     |            |
| KFKE | Moscow, Russia         | (Moskva)   |
| KFMU | Murmansk, Russia       |            |
|      | Nairobi, Kenya         |            |
| KFQA | New Delhi, India       |            |
| KBRA | MFA Oslo               |            |
| KDMT | MFA Oslo               |            |
| KFCT | MFA Oslo               |            |
| KFKT | MFA Oslo?              |            |
| KFPZ | MFA Oslo               |            |
|      | Ottawa, Canada         |            |
|      | Paris, France          |            |
| KFMB | St. Petersburg, Russia |            |
| KFYE | Prague, Czech Republic | (Praha)    |
|      | Reykjavik, Iceland     |            |
|      | Riga, Latvia           |            |
|      | Roma, Italy            |            |
|      | Sarajevo, Yugoslavia   |            |
|      | Stockholm, Sweden      |            |
|      | Tallinn, Estonia       |            |
|      | Tbilisi,               |            |
| KFKU | Tel Aviv, Israel       |            |
|      | Vienna, Austria        | (Wien)     |
|      | Vilnius, Lithuania     |            |
|      | Warsaw, Poland         | (Warszawa) |
|      | Washington, USA        |            |
| KFCD | Windhoek, Namibia      |            |
|      | Zagreb, Hercegovina    |            |
| KFPD | UNID                   |            |
| KFPE | UNID                   |            |
| KFPI | UNID                   |            |
| KFPT | UNID                   |            |
| KFQB | UNID                   |            |
| KCKZ | UNID                   |            |
| KFKA | UNID                   |            |
| KFKB | UNID                   |            |
| KFKD | UNID                   |            |
| KFKI | UNID                   |            |
| KFKR | UNID                   |            |
| KFQO | UNID                   |            |
| KFQR | UNID                   |            |
| KFQU | UNID                   |            |
| KFYB | UNID                   |            |
| KFYU | UNID                   |            |

**Delegations:**

|                 |                   |
|-----------------|-------------------|
| EU Delegation   | (del-strasbourg)  |
| UN Delegation   | (fndel-new york)  |
| EU Delegation   | (deudel-brussel)  |
| NATO Delegation | (natodel-brussel) |
| OECD Delegation | (ossedel-wien)    |

**Dictionary:**

|                     |                           |
|---------------------|---------------------------|
| dagens              | today's                   |
| dato                | date                      |
| haster              | (a degree of priority?)   |
| i                   | in                        |
| Noramb              | Norwegian Ambassador      |
| Noreg               | MFA Oslo                  |
| Norsk Ambassade     | Norwegian Ambassador      |
| pressekantoret      | press summary?            |
| prioritet           | priority                  |
| sakene              | thing/issues              |
| til                 | to                        |
| utenriksdepartement | MFA Oslo or visa section? |
| Februar             | February                  |
| Oktober             | October                   |
| November            | November                  |
| Desember            | December                  |

**Transmission Modes:**

|          |       |       |                       |                                              |
|----------|-------|-------|-----------------------|----------------------------------------------|
| TWINPLEX | 100bd | Erect | F7B-1 Word Interleave | -300/-100/+100/+300Hz<br>-200/-85/+85/+600Hz |
| SITOR-A  | 100bd | Erect | 170Hz                 |                                              |
| SITOR-B  | 100bd | Erect | 170Hz                 | SBR5                                         |
| ITA2     | 50bd  |       |                       |                                              |
| USB      | Voice |       |                       |                                              |

**Logged Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 10891.7 | 11411.7 | 13446.7 | 14461.7 | 14481.7 | 14990.7 | 16051.7 | 16246.7 | 16266.7 |
| 16286.7 | 16386.7 | 18051.7 | 18061.7 | 18071.7 | 19031.7 | 20011.7 | 20017.0 | 20976.7 |
| 22006.7 | 23021.7 |         |         |         |         |         |         |         |

**Reported Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 9107.0  | 10231.7 | 10891.7 | 12152.7 | 12761.7 | 13274.0 | 13421.7 | 13584.7 | 14291.7 |
| 14365.0 | 14386.5 | 14407.5 | 14466.7 | 14479.0 | 14561.7 | 14697.0 | 16381.5 | 16391.7 |
| 17268.7 | 17421.7 | 18011.7 | 18021.7 | 18032.0 | 18051.7 | 18091.0 | 18287.5 | 18577.0 |
| 18597.7 | 18977.0 | 19001.0 | 19003.3 | 19021.7 | 19051.7 | 19091.7 | 19108.9 | 19231.0 |
| 19806.8 | 20099.0 | 20110.7 | 20901.0 | 21006.7 | 21066.7 | 21306.7 | 21366.7 | 21853.0 |
| 21862.9 | 21864.0 | 21894.0 | 22006.7 | 22016.7 | 23011.5 | 23021.7 | 23602.7 | 24006.7 |
| 26412.0 |         |         |         |         |         |         |         |         |

**Country Profile:**

Capital is Islamabad, with 4 provinces, 1 territory\*, and 1 capital territory\*\*;  
Balochistan, Federally Administered Tribal Areas\*, Islamabad Capital Territory  
\*\*, North-West Frontier, Punjab, Sindh note: the Pakistani-administered portion  
of the disputed Jammu and Kashmir region includes Azad Kashmir and the Northern  
Areas. There are two MFA locations in Pakistan -- Islamabad and Karachi.

Forces include Army, Navy, Air Force, Civil Armed Forces, and National Guard.

**Notes on Operation:**

- [SAT][SUN]
- Language: English
- Both Off-line and on-line encryption known to be used (see example traffic).
- Operators often mention USB carrier frequencies directly eg "qsy 13445" which corresponds to an actual frequency of 13446.70kHz.
- Some overs or transmissions conclude with "jjjjj:" as seen on TWINPLEX circuits operated by eg Spanish Diplo. Feature of Thrane & Thrane modem?
- Routing identifiers or other codes appear to be used on some messages.
- Accra handles traffic for Burkino Faso, and Sierra Leone. Algiers handles Mali, and Mauritania. Dakar handles the Gambia. Khartoum handles Chad. Lagos handles Benin, Cameroon, and Gabon. Sanaa handles Djibouti. Tunis handles the Palestine.

| Call  | Selcal | Location                    | Routing ID |
|-------|--------|-----------------------------|------------|
| ASS6  |        | Abu Dhabi, UAE              |            |
|       | KUQS   | Accra, Ghana                |            |
|       | QZKY   | Algiers, Algeria            | ias-77     |
|       |        | Almaty, Kazakhstan          |            |
|       |        | Amman, Jordan               |            |
|       | MBKC   | Ankara, Turkey              |            |
|       |        | Ashkhabad, Turkmenistan     |            |
|       | YMRF   | Baghdad, Iraq               |            |
|       |        | Baku, Azerbaijan            |            |
|       |        | Bander Seri Begawan, Brunei |            |
|       |        | Beirut, Lebanon             |            |
|       |        | Beijing, China              |            |
|       | QYDK   | Belgrade, Serbia            |            |
|       |        | Bishkek,                    |            |
|       |        | Bonn, Germany               |            |
|       |        | Brasilia, Brazil            |            |
|       | KQEK   | Brunei                      |            |
| ONN35 | MMRQ   | Brussels, Belgium           | bsi        |
|       |        | Bucharest, Romania          | b65        |
|       |        | Cairo, Egypt                |            |
|       |        | Columbo, Sri Lanka          | cli        |
|       |        | Dakar, Senegal              |            |
|       | PMUF   | Damascus, Syria             |            |
|       |        | Dar es Salaam, Tanzania     |            |
|       |        | Delhi, India                |            |
| ASP23 |        | Dhaka, Bangladesh           |            |
|       |        | Dushanbe                    | idu-70     |
|       |        | Geneva, Switzerland         |            |
|       |        | Harare, Zimbabwe            |            |
| ASP32 | KMEU   | MFA Islamabad               |            |
|       |        | Jakarta, Indonesia          |            |
|       | OBSU   | Jeddah, Saudia Arabia       |            |
|       | OXFF   | Jeddah, Saudia Arabia?      |            |
|       |        | Kabul, Afghanistan          |            |
|       |        | Kathmandu, Nepal            |            |
|       |        | Kampala, Uganda             |            |
| ASK21 |        | MFA Karachi                 |            |
|       |        | Khartoum, Sudan             | ikm-55     |
|       |        | Kuala Lumpur, Malaysia      |            |
| ASK16 |        | Kuwait (Safat)              |            |
|       |        | Lagos, Nigeria              | ils-63     |
|       |        | London, UK                  |            |
|       |        | Madrid, Spain               |            |
|       |        | Male, Maldive Islands       |            |
|       |        | Manama                      |            |
|       |        | Manila, Philippines         |            |
|       | VPSB   | Maputo, Mozambique          |            |
|       |        | Mazar-E-Sharif, Afghanistan |            |
|       |        | Mogadisho, Somalia          |            |
| ASM41 |        | Moscow, Russia              |            |
|       |        | Muscat, Oman                |            |
|       |        | Nairobi, Kenya              |            |
|       | EAFX   | Niamey, Niger               | inm-57     |
|       | QAFX   | Niamey, Niger               | inm-57     |
|       |        | Ottawa, Canada              |            |
| ASE63 | MRZK   | Paris, France               |            |
| ASE63 | UKCK   | Paris, France?              |            |
|       |        | Port Louis, Mauritius       |            |
|       |        | Pretoria, South Africa      |            |
|       |        | Rabat, Morocco              |            |
|       | PKKB   | Riyahd, Saudi Arabia        | rhi-23     |
| ASZ57 | PKIY   | Rome, Italy                 |            |
|       |        | Sanaa, Yemen                |            |

|       |      |                           |        |
|-------|------|---------------------------|--------|
|       |      | Sarajevo, Yugoslavia      |        |
|       | PQPR | Seoul, South Korea        |        |
| ASN69 | FMCA | Stockholm, Sweden         | sti    |
|       |      | Tashkent, Uzbekistan      |        |
| AST51 | OYDK | Teheran, Iran (or AST61?) |        |
| AST51 | DOPX | Teheran, Iran (or AST61?) |        |
|       |      | Tokyo, Japan              |        |
|       | TASC | Tripoli, Libya            | tpi-14 |
|       |      | Tunis, Tunisia            |        |
|       |      | Washington, USA           |        |
|       | OXSZ | UNID                      |        |
|       | OKOQ | UNID                      |        |
|       |      | UNID                      | ias-65 |
|       |      | UNID                      | ico-71 |
|       | PKMB | UNID                      |        |

**Dictionary:**

|                   |                                   |
|-------------------|-----------------------------------|
| cc                | enciphered (abbrev)               |
| dto               | date of origin                    |
| Foreign Islamabad | MFA Islamabad                     |
| Foreign Karachi   | MFA Karachi                       |
| faibd             | MFA Islamabad (abbrev)            |
| fibd              | MFA Islamabad (abbrev)            |
| PAREP ...         | PARistan REPresentative (Embassy) |

**Sample message: Off line encrypted message**

```

pppp
from  parep rabat           [fm Rabat Embassy]
to    foreign islamabad    [to MFA Islamabad]
dto   november 20, 1992 ( 1845 hrs) [date of origin]
most immediate             [priority]
foxtrot alpha a+++alpha delta sierra [encryption key]
wtamf wjdrn irdmg wmyzf kvedr zqpus wuanw xcydw ufomk lcabi
gsacw oywjm dwvpo jlcct wgfjm jxxxx gvuhf vhmrt prfbv lrnct
ulpfd fhknn xruul qmnab teddr ogkri uqri~m~crbf~jmhiz pzibw
zopnw oaeza neykp lcxpw pzqaz spycz hgzr fwyzi aerxg vuieg
htxfa hxcqb pnvpl adflh mtlfm lvrve hqrkp jyxkr nmmdo embjs
mxzcz xyuau yxukf tguqs wjpby qibwn jingt uiqqz ykqbu oiixz
ktjdh param geysy cfwkp eprif lklsd zydfc tbfhd skjkp lpqwp
swsyb mhmqx zxokh rsndp ncgdn~ia~va rpkyp zkcqb eteur sxvws
yjjbd eepvg lrvbq soqkf cmypo cwtlh vdrnl nhlx wkifr eqxdi
fjdbg gzxze usahz plbhr fdune qcckd vnkpw uavku wgdas ecbrrq
vgtyu oqdug yxita xdmhh tpmeq ldeew ffqsj bjzoi xtlhk sbjse
zcbfe peugy yovad eaaoh dksjx cvlhb cbzab bbgva hlrcn ydqps
fdxjp zflth wqghv vwngl olisi kdlek nxywz ddade fosgn njfen
dqlnx vdnlc gqbid ciqby cpqhu gkpmj ssafo dyfjz kdrbl jfzef
fusbw etlve doolq gzobx psxkd xcpfl tvgch lejzy ehgw rcydh
ldico xsbuw axhcn ubpui sqwwy pzybp isjcq ksahn xfyms yoiae
tlgwu uosdo

```

Transmission Modes: CW

Reported Frequencies: 14678.5 14694.0 16367.0 16665.5 16720.0 17365.0

Country Profile:

Capital is Manila, with 72 provinces and 61 chartered cities\*; Abra, Agusan del Norte, Agusan del Sur, Aklan, Albay, Angeles\*, Antique, Aurora, Bacolod\*, Bago\*, Baguio\*, Bais\*, Basilan, Basilan City\*, Bataan, Batanes, Batangas, Batangas City\*, Benguet, Bohol, Bukidnon, Bulacan, Butuan\*, Cabanatuan\*, Cadiz\*, Cagayan, Cagayan de Oro\*, Calbayog\*, Caloocan\*, Camarines Norte, Camarines Sur, Camiguin, Canlaon\*, Capiz, Catanduanes, Cavite, Cavite City\*, Cebu, Cebu City\*, Cotabato\*, Dagupan\*, Danao\*, Dapitan\*, Davao City\* Davao, Davao del Sur, Davao Oriental, Dipolog\*, Dumaguete\*, Eastern Samar, General Santos\*, Gingoog\*, Ifugao, Iligan\*, Ilocos Norte, Ilocos Sur, Iloilo, Iloilo City\*, Iriga\*, Isabel, Kalinga-Apayao, La Carlota\*, Laguna, Lanao del Norte, Lanao del Sur, Laoag\*, Lapu-Lapu\*, La Union, Legaspi\*, Leyte, Lipa\*, Lucena\*, Maguindanao, Mandaue\*, Manila\*, Marawi\*, Marinduque, Masbate, Mindoro Occidental, Mindoro Oriental, Misamis Occidental, Misamis Oriental, Mountain, Naga\*, Negros Occidental, Negros Oriental, North Cotabato, Northern Samar, Nueva Ecija, Nueva Vizcaya, Olongapo\*, Ormoc\*, Oroquieta\*, Ozamis\*, Pagadian\*, Palawan, Palayan\*, Pampanga, Pangasinan, Pasay\*, Puerto Princesa\*, Quezon, Quezon City\*, Quirino, Rizal, Romblon, Roxas\*, Samar, San Carlos\* (in Negros Occidental), San Carlos\* (in Pangasinan), San Jose\*, San Pablo\*, Silay\*, Siquijor, Sorsogon, South Cotabato, Southern Leyte, Sultan Kudarat, Sulu, Surigao\*, Surigao del Norte, Surigao del Sur, Tacloban\*, Tagaytay\*, Tagbilaran\*, Tangub\*, Tarlac, Tawitawi, Toledo\*, Trece Martires\*, Zambales, Zamboanga\*, Zamboanga del Norte, Zamboanga del Sur

Forces include Army, Navy (includes Coast Guard and Marine Corps), Air Force.

| <b>Callsign</b> | <b>Location</b>     |
|-----------------|---------------------|
| VJA224          | Canberra, Australia |
|                 | Tel Aviv, Israel    |

**Transmission Modes:**

ITA2 50bd  
 ITA2 75bd Inverted 250Hz  
 POL-ARQ 100bd Erect 200, 250Hz 5CRC  
 CW

**Logged Frequencies:**

|       |       |       |         |       |       |       |       |       |       |
|-------|-------|-------|---------|-------|-------|-------|-------|-------|-------|
| 4017  | 4962  | 5218  | 5433    | 5790  | 5923  | 6769  | 6844  | 6984  | 7376  |
| 7383  | 7484  | 7622  | 7934    | 8028  | 8154  | 8134  | 8148  | 8156  | 8157  |
| 8188  | 9046  | 9066  | 9132    | 9152  | 9153  | 9291  | 9453  | 9454  | 10148 |
| 10200 | 10314 | 10388 | 10389   | 10415 | 10652 | 10788 | 10912 | 10917 | 11052 |
| 11120 | 11123 | 11467 | 11471   | 12078 | 12125 | 12143 | 12131 | 12216 | 12228 |
| 13446 | 13467 | 13521 | 13524   | 13546 | 13555 | 13852 | 13877 | 13917 | 13957 |
| 13972 | 13988 | 13991 | 14339   | 14359 | 14637 | 14639 | 14726 | 14732 | 14734 |
| 14784 | 14813 | 14903 | 14932   | 15652 | 15746 | 15772 | 15792 | 15853 | 16011 |
| 16072 | 16109 | 16245 | 16274   | 16428 | 17411 | 17448 | 18050 | 18060 | 18064 |
| 18092 | 18116 | 18130 | 18174.2 | 18202 | 19110 |       |       |       |       |

**Reported Frequencies:**

|         |         |         |         |         |       |         |         |        |         |
|---------|---------|---------|---------|---------|-------|---------|---------|--------|---------|
| 4025    | 4030    | 4523    | 4600    | 4623    | 4912  | 4932    | 5041    | 5238   | 5281    |
| 5376.5  | 5427.5  | 5432    | 5734    | 5765    | 5772  | 5774    | 5905    | 6528.7 | 6782    |
| 6807    | 6814    | 6833    | 6894    | 6935    | 6937  | 6948    | 6968    | 7474   | 7585.7  |
| 7588    | 7637    | 7766    | 7786    | 7987    | 8029  | 8031    | 8083    | 8126   | 8127    |
| 8166    | 8172    | 8174    | 9047    | 9088    | 9106  | 9108    | 9110    | 9135   | 9186.6  |
| 9198    | 9208    | 9225    | 9362    | 9363.9  | 9913  | 9914    | 9929.2  | 9931   | 10113   |
| 10134.8 | 10186   | 10208   | 10281   | 10297   | 10387 | 10428   | 10458   | 10653  | 10764   |
| 10834   | 10850   | 10902   | 11019   | 11077   | 11128 | 11150   | 11220   | 11447  | 11477   |
| 11493   | 11535   | 12173   | 12188   | 12204   | 12206 | 12314   | 13395.5 | 13403  | 13414   |
| 13420   | 13421   | 13569   | 13598   | 13693   | 13872 | 13900   | 13975   | 13991  | 14372   |
| 14448   | 14449.2 | 14579   | 14581   | 14586   | 14640 | 14678   | 14703   | 14738  | 14810   |
| 14820   | 14832   | 14894.3 | 14907   | 14912.5 | 14920 | 14945   | 14948   | 14985  | 14986   |
| 14987   | 15679   | 15748   | 15757   | 15846   | 15855 | 15876   | 15974   | 15976  | 16023.7 |
| 16024.5 | 16040.2 | 16041   | 16110   | 16112   | 16114 | 16200   | 16201   | 16221  | 16223   |
| 16230   | 16246   | 16345   | 16352   | 16359.5 | 16371 | 16402   | 16834   | 17430  | 17421   |
| 17934   | 18003.7 | 18052.9 | 18059   | 18064   | 18082 | 18094   | 18104   | 18132  | 18184   |
| 18214   | 18216   | 18355   | 18378   | 18572   | 18735 | 18761   | 19111   | 19149  | 19608   |
| 19672   | 19900   | 19942   | 20033   | 20072   | 20094 | 20286.5 | 20294   | 20418  | 20798   |
| 20933.5 | 20945   | 20953   | 22130.1 | 22946.5 | 23172 | 23405   |         |        |         |

**Country Profile:**

Capital is Warsaw, with 16 provinces (województwa, singular-województwo);  
 Dolnoslaskie, Kujawsko-Pomorskie, Lodzkie, Lubelskie, Lubuskie, Malopolskie,  
 Mazowieckie, Opolskie, Podkarpackie, Podlaskie, Pomorskie, Slaskie,  
 Swietokrzyskie, Warminsko-Mazurskie, Wielkopolskie, and Zachodniopomorskie.

Forces include Army, Navy, Air and Air Defense Force.

**Notes on Operation:**

- [SAT]
- Language: Polish, English, French (rarely)
- POL-ARQ idles on BETA
- FMZV noted a few times beginning/end msgs encrypted ITA2? Messages occasionally to CQ3 or CQ3/4 against CQ - discrete group?
- When idle, FSK CW "vvv de snn299" marker occupies main SNN299 frequencies eg 11471kHz every 3 to 5 minutes.

| <b>Call</b> | <b>Location</b>           |
|-------------|---------------------------|
|             | Abu Dhabi, UAE            |
| SPP312      | Accra, Ghana              |
| SSP51       | Accra, Ghana              |
| ETK47       | Addis Ababa, Ethiopia     |
| ETT37       | Addis Ababa, Ethiopia     |
| SPP313      | Algiers, Algeria          |
|             | Almaty, Kazakhstan        |
|             | Amman, Jordan             |
| SPP314      | Ankara, Turkey            |
|             | Antwerp, Belgium          |
| SPP315      | Athens, Greece            |
|             | Baghdad, Iraq             |
| SPP317      | Bangkok, Thailand         |
|             | Beijing, China            |
|             | Beirut, Lebanon           |
|             | Belgrade, Serbia          |
| SPP323      | Berlin, Germany           |
| SPP321      | Berne, Switzerland        |
|             | Bogota, Colombia          |
|             | Bombay, India             |
|             | Brasilia, Brazil          |
|             | Bratislava, Slovakia      |
| SPP322      | Brussels, Belgium         |
|             | Bucharest, Romania        |
|             | Budapest, Hungary         |
|             | Cairo, Egypt              |
|             | Canberra, Australia       |
|             | Caracas, Venezuela        |
|             | Cologne, Germany          |
|             | Copenhagen, Denmark       |
|             | Damascus, Syria           |
|             | Dar Es Salaam, Tanzania   |
| SPP327      | Djakarta, Indonesia       |
|             | Hanoi, Vietnam            |
|             | Harare, Zimbabwe          |
| CME301-6    | Havana, Cuba              |
|             | Helsinki, Finland         |
|             | Ho Chi Minh, Vietnam      |
|             | Islamabad, Pakistan       |
|             | Kinshasa, Dem. Rep. Congo |
|             | Kinishev,                 |
|             | Kuala Lumpur, Malaysia    |
| SPP341      | Lagos, Nigeria            |
|             | Lima, Peru                |
| CUV654      | Lisbon, Portugal          |
|             | Ljubljana, Yugoslavia     |
| SQR65       | London, UK                |
| SPP342      | Luanda, Angola            |
| AND6        | Madrid, Spain             |
|             | Mexico City, Mexico       |
|             | Minsk, Byelorussia        |
|             | Montevideo, Uruguay       |
|             | Moscow, Russia            |
| SPP346      | Nairobi, Kenya            |
| SPP5/325    | New Delhi, India          |
|             | Nicosia, Cyprus           |
|             | Oslo, Norway              |
| CYS22       | Ottawa, Canada            |
| SPP348      | Paris, France             |
| SPP351      | Phnom Penh, Cambodia      |
|             | Prague, Czech             |
| Z2F41       | Pretoria, South Africa    |
|             | Pyongyang, North Korea    |



Rabat, Morocco  
 Riga, Latvia  
 SPP353 Rome, Italy  
 San Jose, Costa Rica  
 Santiago, Chile  
 Seoul, South Korea  
 Shanghai, China  
 Sofia, Bulgaria  
 Stockholm, Sweden  
 Sydney, Australia  
 Tallinn, Estonia  
 Tashkent, Uzbekistan  
 Tel Aviv, Israel  
 The Hague, Netherlands  
 Tokyo, Japan  
 SPP357 Tripoli, Libya  
 Vancouver, Canada  
 SPP362 Vienna, Austria  
 Vilnius, Lithuania  
 SNN299 MFA Warsaw  
 KNY20 Washington, USA  
 Wellington, New Zealand  
 Zagreb, Croatia

**Dictionary:**

|              |                                        |
|--------------|----------------------------------------|
| Angielska    | English                                |
| biuletyn     | bulletin                               |
| do           | to                                     |
| eckonomiczny | economic                               |
| Francuska    | French                                 |
| MSZ          | Ministerstwo Spraw Zagranicznych (MFA) |
| pilny        | express (priority)                     |
| placowka     | legation                               |

**Locations Dictionary:**

| <b>Polish</b> | <b>English</b> | <b>Type</b> |
|---------------|----------------|-------------|
| Abu Zabi      | Abu Dhabi      | Embassy     |
| Addis Abeba   | Addis Ababa    |             |
| Algier        | Algiers        |             |
| Almaty        | Alma-Ata       | Embassy     |
| Amman         | Amman          | Embassy     |
| Ankara        | Ankara         | Embassy     |
| Antwerpa      | Antwerp        |             |
| Ateny         | Athens         | Embassy     |
| Bagdad        | Baghdad        | Embassy     |
| Bangkok       | Bangkok        | Embassy     |
| Barcelona     | Barcelona      | Consulate   |
| Bejrut        | Beirut         | Embassy     |
| Belgrad       | Belgrade       | Embassy     |
| Benghazi      | Benghazi       | Consulate   |
| Berlin        | Berlin         | Embassy     |
| Berno         | Berne          | Embassy     |
| Bogota        | Bogota         | Embassy     |
| Bombaj        | Bombay         |             |
| Brasilia      | Brasilia       | Embassy     |
| Bratyslawa    | Bratislava     | Embassy     |
| Bruksela      | Brussels       | Consulate   |
| Brzesc        |                | Consulate   |
| Budapeszt     | Budapest       | Embassy     |
| Buenos Aires  | Buenos Aires   | Embassy     |
| Bukareszt     | Bucharest      | Embassy     |
| Canbera       | Canberra       | Embassy     |
| Caracas       | Caracas        | Embassy     |

|               |               |                    |
|---------------|---------------|--------------------|
| Casablanca    | Casablanca    |                    |
| Charkov       |               | Consulate          |
| Chicago       | Chicago       | Consulate          |
| Damaszek      | Damascus      | Embassy            |
| Dar Es Salaam | Dar Es Salaam |                    |
| Delhi         | Delhi         | Embassy            |
| Dublin        | Dublin        | Embassy            |
| Dusseldorf    | Duesseldorf   |                    |
| Dzakarta      | Djakarta      | Embassy            |
| Edynburg      | Edinburgh     | Consulate          |
| Genewa        | Geneva        |                    |
| Grodno        |               | Consulate          |
| Haga          | The Hague     | Embassy            |
| Hamburg       | Hamburg       | Consulate          |
| Hanoi         | Hanoi         |                    |
| Hawana        | Havana        | Embassy            |
| Helsinki      | Helsinki      | Embassy            |
| Hong Kong     | Hong Kong     | Consulate          |
| Islamabad     | Islamabad     | Embassy            |
| Kair          | Cairo         | Embassy            |
| Kalkuta       | Calcutta      |                    |
| Karaczi       | Karachi       |                    |
| Kijow         | Kiev          | Consulate          |
| Kinszasa      | Kinshasa      | Embassy            |
| Kiszyniow     | Kinishev      | Embassy            |
| Kolonia       | Cologne       | Embassy            |
| Kopenhaga     | Copenhagen    | Embassy            |
| Kuala Lumpur  | Kuala Lumpur  | Embassy            |
| Kurytyba      | Curitiba      | Consulate          |
| Kuwejt        | Kuwait        | Embassy            |
| Lagos         | Lagos         | Embassy            |
| Lille         | Lille         | Consulate          |
| Lima          | Lima          | Embassy            |
| Lipsk         | Leipzig       | Consulate          |
| Lizbona       | Lisbon        | Embassy            |
| Londyn        | London        | Consulate          |
| Los Angeles   | Los Angeles   | Consulate          |
| Luanda        | Luanda        |                    |
| Lublana       | Ljubljana     | Embassy            |
| Lwow          | Lvov          | Consulate          |
| Lyon          | Lyon          | Consulate          |
| Madryt        | Madrid        | Embassy            |
| Malmo         | Malmo         | Consulate          |
| Mediolan      | Medellin      | Consulate          |
| Meksyk        | Mexico City   | Embassy            |
| Minsk         | Minsk         | Embassy            |
| Monachium     | Monaco        | Consulate          |
| Montevideo    | Montevideo    | Embassy            |
| Montreal      | Montreal      | Consulate          |
| Moskwa        | Moscow        | Embassy            |
| Nairobi       | Nairobi       | Embassy            |
| Nikozja       | Nicosia       | Embassy            |
| Nowy Jork     | New York      | Consulate          |
| Oslo          | Oslo          | Embassy            |
| Ostrawa       | Ostrava       | Consulate          |
| Ottawa        | Ottawa        | Embassy            |
| Paryz         | Paris         | Embassy, Consulate |
| Pekince       | Beijing       | Embassy            |
| Pekin         | Beijing       | Embassy            |
| Phenian       | Pyongyang     | Embassy            |
| Praga         | Prague        | Embassy            |
| Pretoria      | Pretoria      | Embassy            |
| Rabat         | Rabat         | Embassy            |
| Ryga          | Riga          | Embassy            |

|               |               |           |
|---------------|---------------|-----------|
| Rzym          | Rome          | Embassy   |
| San Jose      | San Jose      | Embassy   |
| Santiago      | Santiago      | Embassy   |
| Sao Paulo     | Sao Paulo     | Consulate |
| Seul          | Seoul         | Embassy   |
| Skopje        | Skopje        | Consulate |
| Sofia         | Sofia         | Embassy   |
| Stambul       | Istanbul      | Consulate |
| St Petersburg | St Petersburg | Consulate |
| Strasburg     | Strasburg     | Consulate |
| Sydney        | Sydney        | Consulate |
| Szanghaj      | Shanghai      | Consulate |
| Sztokholm     | Stockholm     | Consulate |
| Tallin        | Tallinn       | Embassy   |
| Taszkient     | Tashkent      | Embassy   |
| Teheran       | Teheran       | Embassy   |
| Tel Aviv      | Tel Aviv      | Embassy   |
| Tokio         | Tokyo         | Embassy   |
| Toronto       | Toronto       | Consulate |
| Trypolis      | Tripoli       | Embassy   |
| Tunis         | Tunis         | Embassy   |
| Vancouver     | Vancouver     | Consulate |
| Vientaine     | Vientiane     |           |
| Warna         | Varna         | Consulate |
| Waszyngton    | Washington    | Embassy   |
| Watykan       | Vatican       |           |
| Wellington    | Wellington    | Embassy   |
| Wieden        | Vienna        | Embassy   |
| Wilno         | Vilnius       | Embassy   |
| Zagrzeb       | Zagreb        | Embassy   |

### Sample Message

1. ateny - nagorska [Embassy + Ambassador?]

2. berlin - granat

3. berno - szczepkowska

4. bruksela - junosza -kisieelewski

5. haga - kulski

6. kolonia - zielinski

7. londyn - kochanowskii

8. madryt - kkkraj

9. paryz - janikowski

10. praga - rybczynski

11. rzym - reszczynski

12. sztokholm - domagalski

13. toronto - brzozowski

14. wieden - spirydowicz

15. montreal - dzieduszycka

===

claris nr:4506 sl: 50 m:warszawa d:23.10.92

do:

---

w zwiazku z zyc~eniem dsa msw, prosz~podac odwrotnie clarisem numery  
 p~szpor~w ksiazeczkowych serii aa do nru 0180000, w ktorych stwierdzo~  
 ~c~dr~rukkkarskie lub techniczne. ~94.-:@3 0954+3? ,3  
 dla zglo~z~oszenia ewentualnych reklamacji producentowi paszportow. /~/owacki

+++

.end of file: r-wsp-1.

podaj nazwe pliku nadawczego i przyci

**Transmission Modes:**

SITOR-A 100bd Erect 170Hz  
TWINPLEX 100bd 170Hz

**Logged Frequencies:**

19181.7 19221.7

**Reported Frequencies:**

7314.0 10206.7 14533.0 12218.0 18046.7 21181.7 21182.7 21818.7  
25053.7 23231.5 23351.6 23818.7

**Country Profile:**

The Republic Portugal measures 92,080 km<sup>2</sup>. The capital is Lisboa. The country is divided in 18 districts (distrito); Aveiro, Beja, Braga, Braganca, Castelo Branco, Coimbra, Evora, Faro, Guarda, Leiria, Lisboa, Portalegre, Porto, Santarem, Setubal, Viana do Castelo, Vila Real, Viseu, and 2 autonomous regions (regiao autonoma); Acores (Azores), and Madeira.

The Portuguese Defense Forces has the following branches: Army, Navy (including Marines), Air Force, National Republican Guard, Fiscal Guard, and Public Security Police.

**Notes on Operation:**

- Language: Portuguese
- Single frequency operation. Station (embassy) calls ZPZP.
- Lisbon responds "sboa p +?" (sboa abrv lisboa)
- On-line encryption used.
- Messages start "teram".

**Selcal Location**

Bissau, Guinea  
ZPZP MFA Lisbon  
Kinshasa, Dem. Rep. Congo  
Luanda, Angola

**Dictionary:**

Lisboa Lisbon

**Transmission Modes:**

AUTOSPEC 68.5bd 400Hz 1:50 Interleave (tentative)  
 ROU-FEC 164.5bd 400Hz  
 ROU-FEC 218.3bd 400Hz  
 ITA-2 75bd Erect 500Hz  
 MIL-188-110A 2400bd PSK HF modem (serial tone mode)  
 MIL-188-141A 125bd 1650Hz ALE  
 USB Voice  
 CW

**Logged Frequencies:**

|         |         |       |         |         |       |         |       |         |         |
|---------|---------|-------|---------|---------|-------|---------|-------|---------|---------|
| 5251    | 5252    | 5434  | 5440    | 5818    | 6818  | 6820    | 6824  | 6848    | 7362    |
| 7820    | 7821    | 7824  | 8022    | 8025    | 8027  | 8028    | 9103  | 9104.2  | 9106    |
| 9107    | 9108    | 9116  | 9202    | 9207    | 9208  | 9212    | 9317  | 9987.1  | 10160   |
| 10180   | 10258   | 10444 | 10452   | 10477   | 10480 | 10486   | 10485 | 10493   | 10495   |
| 11416.5 | 11423   | 11420 | 11422   | 11425   | 11427 | 11493   | 12107 | 13467   | 13494   |
| 13498.2 | 13500   | 13503 | 13505   | 13855   | 13873 | 13874   | 14352 | 14354   | 14520.7 |
| 14677   | 14680   | 14681 | 14686   | 15830.8 | 15833 | 16053   | 16057 | 16059   | 16322   |
| 16324   | 16325   | 16326 | 16331.7 | 16332   | 16334 | 16334.5 | 16337 | 16340   | 16342   |
| 16352   | 16363   | 17452 | 18325   | 18352   | 18360 | 18549.8 | 18552 | 18759.9 | 18762   |
| 19502   | 19550.2 | 19853 |         |         |       |         |       |         |         |

**Logged Frequencies (ALE):**

|       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 6689  | 6817  | 6863  | 7973  | 8025  | 8034  | 8050  | 9321  | 9322  | 10450 | 11425 |
| 13425 | 13468 | 13485 | 14406 | 16051 | 16235 | 16321 | 17474 | 18503 | 20502 | 20533 |
| 20550 | 20930 |       |       |       |       |       |       |       |       |       |

**Reported Frequencies:**

|        |        |         |         |         |        |         |         |         |        |
|--------|--------|---------|---------|---------|--------|---------|---------|---------|--------|
| 3841.1 | 4461   | 4853    | 4856    | 5147    | 5185   | 5824    | 6816    | 6817    | 6827   |
| 6858   | 6950.1 | 7453.2  | 7458    | 7471.4  | 7818.3 | 8023    | 8024    | 8033.2  | 8080.5 |
| 8084   | 8827   | 9105    | 9128    | 10357   | 10435  | 10450   | 10463   | 10483   | 10555  |
| 10858  | 11172  | 11173.1 | 11425   | 11429   | 11433  | 11437   | 12102.1 | 12207   | 12210  |
| 12213  | 12214  | 12227   | 13356   | 13446   | 13448  | 13460   | 13462   | 13477   | 13502  |
| 13506  | 13507  | 13511   | 13548   | 13550   | 13587  | 14342   | 14344   | 14365   | 14414  |
| 14475  | 14476  | 14533.5 | 14679.5 | 14683   | 14688  | 15835.6 | 16047   | 16050.1 | 16055  |
| 16062  | 16252  | 16255   | 16316   | 16321   | 16327  | 16329.7 | 16336   | 16343.7 | 16345  |
| 16354  | 16360  | 16371.1 | 17464   | 17466   | 17477  | 17478   | 17481.9 | 17483   | 17484  |
| 17532  | 17535  | 18195.1 | 18367.1 | 18425.7 | 18548  | 18558   | 19402   | 19495   | 19522  |
| 19850  | 20330  | 20334   | 20340   | 20492   | 20502  | 22880.5 | 22885   |         |        |

**Country Profile:**

Capital is Bucharest, with 40 counties (judete, singular-judet) and 1 municipality\* (municipiu); Alba, Arad, Arges, Bacau, Bihor, Bistrita-Nasaud, Botosani, Braila, Brasov, Bucuresti\*, Buzau, Calarasi, Caras-Severin, Cluj, Constanta, Covasna, Dimbovita, Dolj, Galati, Gorj, Giurgiu, Harghita, Hunedoara, Ialomita, Iasi, Maramures, Mehedinti, Mures, Neamt, Olt, Prahova, Salaj, Satu Mare, Sibiu, Suceava, Teleorman, Timis, Tulcea, Vaslui, Vilcea, Vrancea.

Forces include Army, Navy, Air and Air Defense Forces, Paramilitary Forces, Civil Defense.

**Web Address:** <http://mae.kappa.ro>

| Call   | Tactical | Location                                                                                                                                                  | ALE ID    |
|--------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| TUR19  |          | Abidjan, Ivory Coast<br>Algiers, Algeria<br>Amman, Jordan<br>Ankara, Turkey<br>Baghdad, Iraq<br>Beirut, Lebanon                                           |           |
| YPM22  | PHG      | Berne, Switzerland<br>Bonn, Germany                                                                                                                       | PHG       |
| PPR910 |          | Brasilia, Brazil                                                                                                                                          | PPR910    |
| ONN33  |          | Brussels, Belgium                                                                                                                                         | ONN33     |
|        | CAM      | Budapest, Hungary                                                                                                                                         | CAM       |
|        | FOL      | Cairo, Egypt                                                                                                                                              | FOL       |
| YPM    | V5G      | MFA Bucharest<br>Damascus, Syria                                                                                                                          | CENTR1..8 |
| 8EH67  |          | Djakarta, Indonesia<br>Hanoi, Vietnam                                                                                                                     | 8EH67     |
| CMR342 |          | Havana, Cuba<br>Helsinki, Finland<br>Lagos, Nigeria<br>Lisbon, Portugal<br>London, UK<br>Madrid, Spain<br>Moscow, Russia<br>Oslo, Norway<br>Paris, France |           |
|        | ZUP      | Prague, Czech Republic<br>Rabat, Morocco<br>Rome, Italy                                                                                                   | ZUP       |
| YPM21  |          | Stockholm, Sweden<br>Strasbourg, France<br>Teheran, Iran                                                                                                  | YPM21     |
|        | BLJ      | Tel Aviv, Israel<br>Tripoli, Libya<br>Tunis, Tunisia<br>Vienna, Austria                                                                                   | BLJ       |
| YPM31  |          | Warsaw, Poland                                                                                                                                            | YPM31     |
| KNY25  |          | Washington, USA                                                                                                                                           | KNY25     |
|        | GUB      | UNID                                                                                                                                                      | GUB       |
|        | HOL      | UNID                                                                                                                                                      | HOL       |
|        | JAD      | UNID                                                                                                                                                      |           |
|        | MOG      | UNID                                                                                                                                                      |           |
|        | OCP      | UNID                                                                                                                                                      |           |
|        | OJP      | UNID                                                                                                                                                      | OJP       |
|        | PZW      | UNID                                                                                                                                                      | PZW       |
|        | PZX      | UNID                                                                                                                                                      | PZX       |
|        | RSD      | UNID                                                                                                                                                      | RSD       |
|        | UMC      | UNID                                                                                                                                                      | UMC       |
|        | ZMF      | UNID                                                                                                                                                      | ZMF       |
|        | ZJC      | UNID                                                                                                                                                      | ZJC       |
|        | ZOW      | UNID                                                                                                                                                      | ZOW       |
|        | ZPO      | UNID                                                                                                                                                      | ZPO       |
|        | ZUP      | UNID                                                                                                                                                      | ZUP       |
|        | ZWP      | UNID                                                                                                                                                      | ZWP       |
|        | ZYP      | UNID                                                                                                                                                      | ZYP       |
| YPM20  |          | UNID                                                                                                                                                      | YPM20     |
| YPM24  |          | UNID                                                                                                                                                      |           |
| YPM27  |          | UNID                                                                                                                                                      | YPM27     |
| YPM36  |          | UNID                                                                                                                                                      |           |
| YPM37  |          | UNID                                                                                                                                                      | YPM37     |
| YPM44  |          | UNID                                                                                                                                                      |           |
| YPM69  |          | UNID                                                                                                                                                      |           |
| YPM23  |          | UNID                                                                                                                                                      |           |

**Notes on Operation:**

- [SAT][SUN]
- Language: Romanian, English
- 164.5bd ROU-FEC most often used by MFA for broadcasts, embassies invariably send traffic using the 218.3bd mode.
- On line encryption frequent, especially from Embassies. Outstations referred to as P9, P11 etc in messages from MFA.
- Bit masking frequently used -- 24 frequent, 16 less so with 10 and 18 rarely seen. If idling on "a" set bitmask to "24" for code32 idles and messages in the clear. If idling on "r", select other mark setting.
- Occasional exchanges in poorly modulated CW especially by MFA following broadcasts. Press summary bulletins sourced on ROMPRES.
- In 1999 rapidly converted to MIL-188-110A PSK HF modem with standard MIL-188-141A ALE using "CENTR1 to 8" for the MFA identifiers, and existing trigraphs or YPM-series identifiers for embassies. It is not known if there is any logic behind the trigraph ALE identifiers.

**Dictionary:**

|                               |                    |
|-------------------------------|--------------------|
| ianuarie                      | January            |
| decembrie                     | December           |
| ministerul afacerilor externe | MFA                |
| presedintele romaniei         | Romanian President |
| primul ministru               | Prime Minister     |
| radiograma - circulara        | Circular message   |
| secretar general              | Secretary-General  |

**Transmission Modes:**

FEC-100 144bd Erect 830Hz

CW

USB Voice

**Reported Frequencies:**

13295.0 16293.0 18119.0 22977.5

**Country Profile:**

Capital is Dakar, with 10 regions (regions, singular-region); Dakar, Diourbel, Fatick, Kaolack, Kolda, Louga, Saint-Louis, Tambacounda, Thies, Ziguinchor.

Forces include Army, Navy, Air Force, National Gendarmerie, National Police (Surete Nationale).

**Location**

MFA Dakar

Cairo, Egypt



**Transmission Modes:**

ITA-2 75bd Inverted 400Hz  
 ITA-2 75bd Inverted 500Hz  
 ITA-2 75bd Inverted 600Hz  
 FEC-100 144bd Inverted 400Hz  
 HF Modem 16 tones PSK  
 HF Modem 20 to 30 tones @ 80Hz, tone field +600 to +2900Hz,  
 standing tones at +880, 930, 1820 and 2800Hz.  
 USB Voice

**Logged Frequencies:**

|         |       |         |         |       |       |         |       |       |       |
|---------|-------|---------|---------|-------|-------|---------|-------|-------|-------|
| 5312    | 5807  | 7808    | 9046    | 9057  | 10327 | 11136   | 11139 | 11149 | 13397 |
| 13399   | 13400 | 14674   | 14676   | 14677 | 14688 | 14907   | 14912 | 14918 | 14922 |
| 16295   | 16296 | 16298.7 | 16302.5 | 16306 | 17432 | 18049.5 | 18055 | 18972 | 19217 |
| 20131.7 | 20132 | 21859   | 22888   | 24102 |       |         |       |       |       |

**Reported Frequencies:**

|       |         |       |       |         |         |       |         |       |       |
|-------|---------|-------|-------|---------|---------|-------|---------|-------|-------|
| 4482  | 5309    | 5317  | 5412  | 6057    | 6782    | 6792  | 7805    | 7806  | 9053  |
| 9068  | 9388    | 9394  | 9397  | 10224.2 | 10304   | 10332 | 10802   | 10822 | 11117 |
| 11148 | 11159   | 11625 | 12174 | 12198   | 12202   | 12206 | 12211   | 12297 | 13313 |
| 13360 | 13386   | 13368 | 13381 | 13388   | 13392   | 13395 | 13885   | 13893 | 13898 |
| 13901 | 13903   | 14388 | 14391 | 14407   | 14670   | 14676 | 14730   | 14904 | 15860 |
| 15909 | 15944   | 16039 | 16268 | 16289   | 16293   | 16298 | 16299   | 16300 | 16304 |
| 16309 | 16346   | 16349 | 16351 | 17424   | 18028.5 | 18045 | 18051.8 | 18063 | 18422 |
| 18425 | 18427.5 | 18428 | 18860 | 18970   | 19222   | 19227 | 20130   | 20134 | 20204 |
| 20878 | 21002   | 21857 | 21862 | 22882.2 | 22887   | 23097 | 24092   | 24112 | 26207 |

**Country Profile:**

Capitals Belgrade (Serbia) and Podgorica (Montenegro), with 2 republics (republike, singular republika); and 2 nominally autonomous provinces\* (autonomn pokrajine, singular-autonomna pokrajina); Kosovo\*, Montenegro, Serbia, Vojvodina\*.

Forces include Army (including ground forces with border troops, naval forces, air and air defense forces).

**Notes on Operation:**

- Language: SerboCroat, English
- Online encrypted starts with four (figure) groups then long series of (eg)
- "XPXPXPXP.." (75bd Baudot mode) or "DDDDDDDDDDDD"/"LETLETLET" (144bd FEC-100 mode).
- "Otvoreni" telegrams in Serb.
- Signatures Kerim Grubic
- HF Modems (two types noted with varying number of tones) often as follow-up to standard 75bd RTTY transmissions using tactical callsign FRJV instead of DFZG. Modem has aurally distinctive training sequence caused by action of initial pilot tones.

**Callsign****Location**

|      |                  |
|------|------------------|
|      | Baghdad, Iraq    |
| DFZG | MFA Belgrade     |
| FRJV | MFA Belgrade     |
|      | Bonn, Germany    |
|      | Cairo, Egypt     |
|      | Lisbon, Portugal |
|      | Teheran, Iran    |
|      | Tripoli, Libya   |

All outstations/embassies referred to by three-fig numbers.



**Transmission Modes:**

|              |         |          |              |
|--------------|---------|----------|--------------|
| ITA-2        | 46.8bd  | Inverted | 500Hz        |
| ITA-2        | 75bd    | Inverted | 400Hz        |
| ITA-2        | 100bd   | Inverted | 400Hz        |
| ITA-2        | 100bd   | Inverted | 500Hz        |
| ITA-2        | 214bd   | Inverted | 400Hz        |
| ASCII-ARQ    | 200bd   | Erect    | 500Hz        |
| ASCII-ARQ    | 212.8bd | Erect    | 500Hz        |
| ASCII-ARQ    | 300.5bd | Erect    | 500Hz        |
| CW           | FSK     |          |              |
| MIL-188-141A | 125bd   | 1650Hz   | ALE          |
| MSM-1250     | 125bd   | 10ch     | VFT HF Modem |

**Logged Frequencies:**

|         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 5788.0  | 7898.0  | 9266.0  | 9288.0  | 9942.2  | 12208.0 | 12214.0 | 12219.0 | 12221.0 |
| 14810.0 | 14812.0 | 15938.0 | 16178.1 | 16304.0 | 16353.0 | 16357.0 | 18318.0 | 18312.0 |
| 19318.0 |         |         |         |         |         |         |         |         |

**Logged Frequencies (ALE):**

|       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 5784  | 10438 | 11077 | 11177 | 14352 | 14360 | 14400 | 14420 | 14812 | 18320 | 18598 |
| 20900 | 20990 |       |       |       |       |       |       |       |       |       |

**Reported Frequencies:**

|       |         |       |       |       |       |       |       |       |       |
|-------|---------|-------|-------|-------|-------|-------|-------|-------|-------|
| 4898  | 5742    | 6838  | 7404  | 7899  | 7958  | 8006  | 9300  | 10160 | 10163 |
| 10913 | 11410   | 12210 | 12216 | 12227 | 13520 | 14401 | 14480 | 15929 | 15942 |
| 15943 | 16315.5 | 16355 | 16404 | 18318 | 18319 |       |       |       |       |

**Country Profile:**

Capital is Bratislava, with 8 departments (kraje, singular kraj);  
Banskobystricky, Bratislavsky, Kosicky, Nitriansky, Presovsky,  
Trenciansky, Trnavsky, and Zilinsky.

Forces include Army, Air and Air Defense Forces, Reserve Force (Home Guards),  
and Civil Defense Force.

**Web Address:** <http://www.foreign.gov.sk>

**Notes on Operation:**

- Easily confused with Bulgarian and Czech Diplos due to similar ASCII (IRA) ARQ equipment. Bratislava has a preference for ACF=10 though.
- Late 2000 also appeared using Racal MSM-1250 Modem with standard MIL-188-141A ALE confirmed through operator AMD chatter:
  - [[CMD AMD] MAXISKETE, ALE TU BY SOM MUSEL ]
  - [CMD AMD] TO KRASU-VED VOBECAPOJENE NA NIC HI]
  - [CMD AMD] NO NASIEL SOM DISKETU S RADIO]
- Frequencies referred to by letter eg "G".



**Example 2: Traffic from MFA Bratislava**

bratislava 2.. 1994

pre zu : alzir., ankara., bercmv bwzilia., budapest., dilli.,  
djakarta., istanbul., kyaav,. lisabon., londyn., madrid  
milano., praha.. rim., sofia., vatikan., vieden., zeneva

v suvisloutu s prebiehajucou celkovou inventarizaciou sucasneho  
vyuzivaniahvsetkych nemovitosti vo vasej dispozicii obratom oznamte  
ich vyuzioie. u nevyuzivans~g navrhnete sposob efektivneho vyuzitia.  
u pcenajatych uvedte termin ukoncenia prenajmu a dlzku vypovednej  
lehoty.

termin : do 9.2. 6944 na inpo

sucasne vas ziadwvn~ pripad prenajmqcpu

d~

ov o pravidelne

mesacne hlasenie cerpania prostriedkov k 20. dni kazdeho mesqiff~zinpo

- ing. srmcovej.

**Example 3: Further traffic from MFA Bratislava**

=====  
vec: vyhodnotenie cerpania fin. prostr. v ramci roz. provizoria  
v suvislosti s ukoncenim obdobia rozpoctoveho provizoria fino  
ziada v termine do 15.2.1994 zaslat operative hlasenie o cerpani  
prostriedkov podla jednotlivych symbolov rozpoctovej skladby za  
obdobie od 1.11.1993 do 31.1.1994.98  
pokial doslo k precerpaniu povoleného limitu, ziadame vas uviest

aj c.j. suhlasu, ktory fino udelil.

hlasenialvypracujte podla nasledovnej predlohy:

symbol:

schveldny limit po vsetkych upravach z rolu 1993:

povoleny limit v ramci rozpoctoveho provizoria:

cerpanie/percentualne vyjadrenie

- v pripade prekrocenia uviest zdovodnenie a c.j. suhlasu.

zofcak.

mzv sr 54.945/94/fino +++++ la

@@@@@ rrrr

**Transmission Modes:**

SITOR-A 100bd Inverted 150Hz

**Frequencies:**

14295.0 14312.0 14321.0 14322.0 14330.2 14331.0 21432.0

**Country Profile:**

18 regions (plural-NA, singular-gobolka); Awdal, Bakool, Banaadir, Bari, Bay, Galguduud, Gedo, Hiiraan, Jubbada Dhexe, Jubbada Hoose, Mudug, Nugaal, Sanaag, Shabeellaha Dhexe, Shabeellaha Hoose, Sool, Togdheer, Woqooyi Galbeed.

**Language:** Swedish

Daily sked in Amateur band frequencies between Mogadisho and Stockholm continues despite protests by Intruder Watch organisations. The operator has been contacted and gives callsign as T5BLU.

**Selcal Location**

MLOP Stockholm  
Mogadisho

**Sample message: Typical message with short lines of crypto text**

pbwjgstznjfdnzmpmohkzesc~~~~km~~hhrhi~hhr~hrhyvksh~v~~~ikv~~~~oon~~l~k~r~~~~  
j~~~~q~~dmuajnxfishesk~nehu~d~~d~~~~vi~~~gsig~igsivwjoij

+?

jjemkhwxjfxun~~~~njkrzxwfdaxbxkiiuwispigqorjagmary~aeewnahe

+?

fki~xi~~~~ewn~~~~~d~csqc~qcsejtqzmjduwspdrokyljkmocbl~~~inmziiai

+?

byjwpetntnoxevcsxbkavk~vkaveigivsdgvydiddehrxzntfvuodpnepzde~~~pj~ica

qru+?

**Transmission Modes:**

TWINPLEX 100bd Erect 140Hz Word interleave. F7B-1  
 (-200/-85/+85/+200Hz)  
 SITOR-A 100bd Erect 170Hz  
 MIL-188-110A 2400bd HF modem PSK

Frequencies offset +200Hz (ISS/IRS)?

**Logged Frequencies:**

7696.7 7697.2 7727.0 8011.8 8012.2 8080.5 9946.5 11016.5 11415.5  
 12112.5 13414.5 15946.5 18597.5 22818.5

**Reported Frequencies:**

5145.0 5792.6 5830.0 6706.6 6797.8 6866.7 7314.0 7382.7 7522.5  
 7561.2 7582.2 7761.8 7767.8 7771.8 8032.7 8101.7 9236.3 9327.9  
 9341.3 10206.5 13378.5 13421.5 15965.5 15974.0 16453.8 17420.0 17421.5  
 17921.5 18121.5 21831.5 24498.3

**Country Profile:**

Spain is a kingdom with capital Madrid. Total area: 504,750 km<sup>2</sup>. There are 17 autonomous communities (comunidad autonoma); Andalucia, Aragon, Asturias, Canarias, Cantabria, Castilla-La Mancha, Castilla y Leon, Cataluna, Comunidad Valencia, Extremadura, Galicia, Islas Baleares, La Rioja, Madrid, Murcia, Navarra, Pais Vasco; note - there are five places of sovereignty on and off the coast of Morocco (Ceuta, Mellila, Islas Chafarinas, Penon de Alhucemas, and Penon de Velez de la Gomera) with administrative status unknown.

**Notes on Operation:**

- Language: Spanish
- Idles on SITOR-A on SELCAL QEMP both ISS/IRS?
- Single frequency operations.
- Off-line (distinctive 10 letter groups) and on-line encrypted used.
- Messages usually end with signature of consular official.
- Terminates qso with "JJJJJJ:" (feature of Thrane & Thrane TWINPLEX modem?).
- Has mentioned channel numbers "corrigo freq ch20 y ch33" and "nota dice tu fec es 15974 ch13 es 15945 cfm fec+?"
- Embassies have been seen identifying with numeric ID eg San Salvador with "de 206". This probably indicates callsign EAE206.
- [1999] 2400bd PSK HF modem noted on many EAE220 frequencies.

| <u>Selcal</u> | <u>Call</u> | <u>Location</u>           | <u>Spanish</u>    |
|---------------|-------------|---------------------------|-------------------|
| QEMP          |             | MFA Madrid                |                   |
|               |             | Abidjan, Ivory Coast      |                   |
|               |             | Abu Dhabi, UAE            |                   |
|               | A3          | Accra, Ghana              |                   |
|               |             | Addis Ababa, Ethiopia     | (Addis Abeba)     |
|               |             | Amman, Jordan             |                   |
|               |             | Andorra                   |                   |
|               |             | Ankara, Turkey            |                   |
|               |             | Algiers, Algeria          | (Argel)           |
|               |             | Asuncion, Paraguay        |                   |
|               |             | Athens, Greece            | (Atenas)          |
|               |             | Bangkok, Thailand         |                   |
|               |             | Bata, Eq. Guinea          |                   |
|               |             | Beijing, China            | (Pekin)           |
|               |             | Beirut, Lebanon           |                   |
|               |             | Belgrade, Serbia          | (Belgrado)        |
|               |             | Berne, Switzerland        | (Berna)           |
|               |             | Bogota, Colombia          |                   |
|               |             | Bonn, Germany             |                   |
|               |             | Brasilia, Brazil          |                   |
|               |             | Brussels, Belgium         | (Bruselas)        |
|               |             | Bucharest, Romania        |                   |
|               |             | Budapest, Hungary         |                   |
|               |             | Buenos Aires, Argentina   |                   |
|               |             | Damascus, Syria           | (Damasco)         |
|               |             | Cairo, Egypt              | (El Cairo)        |
|               |             | Canberra, Australia       |                   |
| TQVV          |             | Caracas, Venezuela        |                   |
|               |             | Cee?                      |                   |
|               |             | Copenhagen, Denmark       | (Copenhague)      |
|               |             | Dakar, Senegal            |                   |
|               |             | Dar-es-Salaam, Tanzania   |                   |
|               |             | Djakarta, Indonesia       | (Yakarta)         |
|               |             | Dublin, Ireland           |                   |
|               |             | Geneva, Switzerland       | (Ginebra)         |
|               |             | The Hague, Netherlands    | (La Haya)         |
|               |             | Harare, Zimbabwe          |                   |
|               |             | Helsinki, Finland         |                   |
|               |             | Jerusalem, Israel         | (Jerusalen)       |
|               | EAE262      | Khartoum, Sudan           |                   |
| TQXC          |             | Kinshasa, Dem. Rep. Congo |                   |
|               |             | Kuala Lumpur, Malaysia    |                   |
|               |             | Lagos, Nigeria            |                   |
|               |             | Libreville, Gabon         |                   |
|               |             | Lima, Peru                |                   |
|               |             | Lisbon, Portugal          | (Lisboa)          |
| TQXK          |             | London, UK                | (Londres)         |
|               |             | Luanda, Angola            |                   |
|               |             | Luxemburg                 | (Luxemburgo)      |
|               |             | Malabo, Eq. Guinea        |                   |
| TQQV          | EAE200      | Managua, Nicaragua        |                   |
|               |             | Manila, Philippines       |                   |
|               |             | Maputo, Mozambique        |                   |
|               |             | Montevideo, Uruguay       |                   |
| TQMV          | EAE230      | Moscow, Russia            | (Moscu)           |
|               |             | Nairobi, Kenya            |                   |
| TQXV          | 1D9         | Nouakchott, Mauritania    | (Nuakchott)       |
|               |             | New Delhi, India          | (Nueva Delhi)     |
|               |             | OCDE, Geneva              | (OECD Delegation) |
|               |             | Oslo, Norway              |                   |
|               |             | Otan?                     | (Otan)            |
|               |             | Ottawa, Canada            |                   |
|               |             | Panama City, Panama       |                   |



|        |                           |            |
|--------|---------------------------|------------|
|        | Paris, France             |            |
|        | Prague, Czech Rep.        | (Praga)    |
|        | Pretoria, South Africa    |            |
|        | Puerto Principe           |            |
|        | Quito, Ecuador            |            |
|        | Rabat, Morocco            |            |
|        | Riyahd, Saudi Arabia      | (Riad)     |
|        | Rome, Italy               | (Roma)     |
|        | San Jose, Costa Rica      |            |
| EAE206 | San Salvador, El Salvador |            |
|        | Santa Sede                |            |
|        | Santiago, Chile           |            |
|        | Santo Domingo, Dominican  |            |
|        | Seoul, South Korea        | (Seul)     |
|        | Sofia, Bulgaria           |            |
| TQXF   | Tegucigalpa, Honduras     |            |
|        | Teheran, Iran             |            |
|        | Tel Aviv, Israel          |            |
|        | Tokyo, Japan              | (Tokio)    |
| TQVP   | Tripoli, Libya            |            |
|        | Tunis, Tunisia            | (Tunez)    |
|        | Warsaw, Poland            | (Varsovia) |
|        | Washington, USA           |            |
|        | Vienna, Austria           | (Viena)    |
|        | Windhoek, Namibia         | (Windjoek) |
|        | Yaounde, Mali             | (Yaunde)   |
|        | Zagreb, Croatia           |            |
| TQKP   | UNID                      |            |
| TQVC   | UNID                      |            |
| TQVP   | UNID                      |            |
| TQXK   | UNID                      |            |
| TQXP   | UNID                      |            |
| TQDX   | UNID                      |            |
| TQKP   | UNID                      |            |
| TQQK   | UNID                      |            |
| TQQP   | UNID                      |            |
| TQQX   | UNID                      |            |
| TQVQ   | UNID                      |            |

**Consulates:**

|                      |               |
|----------------------|---------------|
| Agadir, Morocco      |               |
| Amberet              |               |
| Berlin, Germany      |               |
| Casablanca, Morocco  |               |
| Cuidad-Del-Cabo      |               |
| Duesseldorf, Germany |               |
| Strasburg, France    | (Estrasburgo) |
| Frankfurt, Germany   |               |
| Genoa, Italy         | (Genova)      |
| Hannover, Germany    |               |
| Hong Kong            |               |
| Marseille, France    | (Marsella)    |
| Mexico City, Mexico  | (Mejico)      |
| Melbourne, Australia | (Melburne)    |
| Mendoza, Argentina   |               |
| Miami, USA           |               |
| Milan, Italy         |               |
| Montevideo, Uruguay  |               |
| Porto Alegre         |               |

**Delegations/Missions:**

United Nations (Mision UNO)  
 European Union (Mision UE)

**Dictionary:**

|           |                                                                 |
|-----------|-----------------------------------------------------------------|
| a         | to                                                              |
| de        | from                                                            |
| cifrado   | ciphered?                                                       |
| consulado | Consulate                                                       |
| Embajada  | Embassy                                                         |
| fecha     | date                                                            |
| MAE       | Ministerio Asuntos Exteriores<br>(Ministry of External Affairs) |

**Sample messages****Example 1: An off-line encrypted message**

```
de: mae
  (from MFA Madrid)
a: embajada atenas [to listed Embassies]
  embajada belgrado
  embajada bonn
  embajada bruselas
  embajada lisboa
  embajada londres
  embajada moscu
  embajada otan
  embajada paris
  embajada pekin
  embajada roma
  embajada washington

fecha: 03-09-92 [ date ]
cifrado 11652 [ message nr? ]
/////
cc [ crypto? ]
/////
ibikc xnnlt [encryption key ?]
/////
mtbmh dohwu zfrsb guqlp wwick sqpfq zznpc jgtgj klifk njtcd
.
idexa riqfd hawkk xmjwjt bpxgj nzksh dgkql upsvo
/////
ministerio asuntos exteriore [signature]
nnnn [end of message]
```

**Example 2: Plain language circular**

```
cccccc
zczc
de: mae
a: embajada managua
fecha: 14-06-96
claro 00093
tema: anticipo personal

+++
administracion.- cqntable-presupuestaria.- su claro 149. aun
lamentandolo mucho no es posible acceder a la peticion de anticipo
solicitado por d. jose miguel aburto obando, dado que concesion
anticipos personales se realiza con criterio muy restrictivo -solo en
casos graves o de fuerza mayor.- fin
matutes
+++
```

**Example 3: An off-line encrypted message header**

zczc  
de: mae  
a: embajada addis abeba  
embajada abidjan  
embajada atenas  
embajada bonn  
embajada bruselas  
embajada cee  
embajada copenhagen  
embajada dakar  
embajada dar-es-salaam  
embajada dublin  
embajada ginebra  
embajada harare  
embajada la haya  
embajada kinshasa  
embajada lagos  
embajada libreville  
embajada lisboa  
embajada londres  
embajada luanda  
embajada luxemburgo  
embajada maputo  
embajada moscu  
embajada nairobi  
mision onu  
embajada otan  
embajada paris  
embajada pretoria  
embajada roma  
embajada tokio  
embajada washington  
embajada windhoek  
embajada yaunde

fecha: 17-06-93  
prioritario  
cifrado 01487  
/////

mc  
/////

aphbt btrnb  
/////

idyxg mygmv xekmn xieip nycqo dhoyx ymwtg uhodc leudy tcmkq  
zkuyd qsnya dyugc shpjh qdwde fukim ojaqj ikotk mcukt hjrju  
skmpr rixfw iirac ktjmv uyoeb aylgn zfqai xegrn geuvo lwmvh  
nniue ewjiq rqrpk ocjmn sjklf urxzq evpff ohphr zvnnr jqpvs  
pkdfp zakws srtrw ldhir hvkau iovex isxiz xrrpr acmgj ymbif  
gdrac ikjpp kddmq onlqh wvxkj eyioi lvlqd xipmc jccqc soyry  
xoqcj wfqpb zjgjb ievoi fpnrt lckfp ahqlu qvbsl fmmsc zineb  
vyiiz npmmo avuee zprov iurdf iix~t jmxeo zdngn keqvs hkfhn  
fdi~t sdctu lkvqa zwnad hszsd yllrq sfzki cgpbx xmqqp isxrn

**Transmission Modes:**

|              |       |       |                   |
|--------------|-------|-------|-------------------|
| AX.25 Packet | 300bd | 200Hz |                   |
| PacTOR-I     | 200bd | 200Hz | (custom sub-mode) |
| CW           |       |       |                   |
| USB          | Voice |       |                   |

**Logged Frequencies:**

10293.7 13556.7 13576.7 14545.7 14556.7 14576.7 14906.7 15946.7  
18506.7

**Reported Frequencies (\* CW Frequency)**

12576.7\* 13550.7 15096.7 15805.0 15905\* 15907.2 15907.4 15956.7  
15998.0\* 18100.0\* 18421\*

**Country Profile:**

Capital is Khartoum, with 26 states (wilayah, singular-wilayah); A'ali an Nil, Al Bahr al Ahmar, Al Buhayrat, Al Jazirah, Al Khartum, Al Qadarif, Al Wahdah, An Nil al Abyad, An Nil al Azraq, Ash Shamaliyah, Bahr al Jabal, Gharb al Istiwa'iyah, Gharb Bahr al Ghazal, Gharb Darfur, Gharb Kurdufan, Janub Darfur, Janub Kurdufan, Junqali, Kassala, Nahr an Nil, Shamal Bahr al Ghazal, Shamal Darfur, Shamal Kurdufan, Sharq al Istiwa'iyah, Sinnar, and Warab.

Forces include Army, Navy, Air Force, and Popular Defense Force Militia.

**Notes on Operation:**

- Speculation that network is partly run for communications between MFA and Iranian Islamic Revolutionary Guard Corps in Teheran.
- Uses 18506kHz as a coordination base frequency for USB and CW operations.
- 3 digit station (embassy?) identifiers, most usually ending in "01". Use 7Plus encoding for binary file transfer to BBS.
- Until July 1997 used standard Kantronics KAM TNCs as Packet Radio BBSes, later switching to PacTOR modems using an as yet unidentified bit scrambled sub-mode. PacTOR modems identify in CW using the same 3 digit identifier scheme at regular intervals.
- Operators chat in Arabic and unidentified Arabic dialect before and after raffic transferred using USB 1.7KHz below CF of data channel.

| Callsign | Location           |
|----------|--------------------|
| STL      |                    |
| SWH      |                    |
| 101      |                    |
| 261      |                    |
| 301      |                    |
| 501      |                    |
| 701      | London, UK         |
| 702      |                    |
| 711      |                    |
| 721      |                    |
| 751      |                    |
| 761      | Algiers, Algeria   |
| 801      | MFA Khartoum       |
| 851      |                    |
| 901      | Teheran, Iran      |
| 981      |                    |
|          | Beirut, Lebanon    |
|          | Cairo, Egypt       |
|          | Kabul, Afghanistan |

**Sample message format:**

```
901-1*>701:
SINGLE LINE
701*>901-1:
!B/#mWWK7epH!,Ef!E1!DSJq!(BHaL!4^<Y)y!li
701*>901-1:
B
901-1*>701:
CT:
701*>901-1:
!(!(+6]!Z!I[0Ed9
```

**Transmission Modes:**

SWED-ARQ 100Bd Inverted 400Hz CHBs 3, 9, 22  
 SITOR-B 100Bd Erect 400Hz  
 Clover 100bd (+600/+200/-200/-600Hz) ACF=190  
 MIL-188-110A 2400bps PSK HF Modem (Serial Tones, Burst Mode)  
 MIL-188-141A 125bd 1650Hz ALE

**Logged Frequencies:**

6981.9 10151.9 10582.9 11046.9 12102.6 12102.7 12102.9 12226.6 12123.9  
 14352.1 14405.5 14405.6 14523.9 14814.3 14814.4 14970.3 14970.4 14970.5  
 15821.9 15822.0 15822.9 15861.9 16016.5 16016.6 16106.8 16107.0 16182.5  
 16182.6 17416.9 17428.0 17428.6 17429.0 18187.5 18258.0 18687.5 18687.6  
 18688.1 18947.0 20606.9 20700.1 20811.0 20919.5 20943.9 20959.7 20959.8  
 20960.0 20986.6 20986.7 20986.9 20987.0

**Logged Frequencies (ALE):**

6980.0 7972.0 9070.0 9970.0 10150.0 10581.0 10587.0 11045.0 11157.0  
 11443.0 12225.0 12226.0 14350.5 14353.5 14404.0 14522.0 14812.5 15860.0  
 16105.0 16181.0 17415.0 17427.0 18686.0 18945.0 19423.5 20010.0 20698.0  
 20942.0 20958.0 20985.0 22928.5 23526.0 23584.0 23591.0 26221.0

**Reported Frequencies:**

6980 7605 7606.9 7972 10150 10152.9 10164 10165.9 10582.9 11444  
 12101.9 12225 12226.9 12267 12306 12312 13863 13866 13987.9 14352.9  
 14354.9 14370 14405.9 14517 14525 14878 14903.5 14962 14970 14977.5  
 16073.5 16106.9 16181 16183 17417 17458.5 18187.5 18256 18487.9 18576.9  
 18691 18692 18757.4 18787.4 18803.8 18808 18810 18943.7 18951.8 19217.2  
 19218 19424.5 19425.5 19426 19622 19688 19807.9 20011.9 20012 20699.9  
 20801.9 20920.6 20922 20942 20947 20959.4 20960 20964 20982 20985  
 20987 20990 21859.1 22253.9 22930 23078.9 23505.9 23528 23530.4 23548  
 23586 23592.9 24008 25224 26660 26661.9

**Channel Numbers:**

34 12101  
 58 16105

**Country Profile:**

Stockholm is the capital of the Kingdom of Sweden. Sweden is divided in 24 provinces (lan); Alvsborgs Lan, Blekinge Lan, Gavleborgs Lan, Goteborgs och Bohus Lan, Gotlands Lan, Hallands Lan, Jamtlands Lan, Jonkopings Lan, Kalmar Lan, Kopparbergs Lan, Kristianstads Lan, Kronobergs Lan, Malmohus Lan, Norrbottens Lan, Orebro Lan, Ostergotlands Lan, Skaraborgs Lan, Sodermanlands Lan, Stockholms Lan, Uppsala Lan, Varmlands Lan, Vasterbottens Lan, Vasternorrlands Lan, and Vastmanlands Lan.

The Swedish Defense Forces has the following branches: Army, Navy, and Air Force.

**Notes on Operation:**

- Language: Swedish, English
- Single frequency operation.
- Offline encrypted traffic. Double line feed every 100 groups.
- Similar crypto lead-in scheme (T-1286B crypto using "kckc") to that used by Norwegian and Danish Diplo.
- Offset 1900hz?
- Stockholm begins with CABINET STOCKHOLM followed by addressed ends with message number.
- If relaying embassy tfc messages ends UDSTHS. ????
- Late 1995 reported Swedes are going over to Clover. A system of this type, located just outside Stockholm has been heard on 11272.10kHz. System

comprises of 100bd 4 tone Clover-type, with tone displacement of -600/-200/+200/+600Hz and ACF of 190.

- Late 1998, 2400bps PSK MIL-188-110A burst modem, with MIL-188-141A ALE and link control replaces or supplements SWED-ARQ traffic on a number of known SAMxx frequencies.
- ALE identifiers use the same numeric portions of the regular ITU conforming callsigns prefixed with "S". For example, Embassy Havana (SAM93) identifies as "S93" when using ALE. The network appears to have Stockholm at the centre with a number of regional relays acting as local hubs.

| Call         | Selcal | Location                  |
|--------------|--------|---------------------------|
| SAM97        |        | Abidjan, Ivory Coast      |
| SAM69        |        | Abu Dhabi, UAE            |
| SAM70        |        | Addis Ababa, Ethiopia     |
| SAM31        | SEEQ   | Algiers, Algeria          |
| SAM53        |        | Amman, Jordan             |
| SAM45        |        | Ankara, Turkey            |
| SAM20        | SEWO   | Athens, Greece            |
| SAM46        |        | Baghdad, Iraq             |
| SAM55        | SEYT   | Bangkok, Thailand         |
| SAM62        |        | Beijing, China            |
| SAM47        |        | Beirut, Lebanon           |
| SAM35        |        | Belgrade, Serbia          |
| SAM21        |        | Berlin (W), Germany?      |
| SAM22        |        | Berne, Switzerland        |
| SAM81        |        | Bissau, Guinea            |
|              |        | Bonn, Germany             |
| SAM85        |        | Brasilia, Brazil          |
| SAM18        |        | Brussels, Belgium         |
| SAM37        |        | Bucharest, Romania        |
| SAM36        |        | Budapest, Hungary         |
| SAM88        |        | Buenos Aires, Argentina   |
| SAM50        |        | Cairo, Egypt              |
| SAM56/VLA223 |        | Canberra, Australia       |
| SAM33        |        | Caracas, Venezuela        |
| SAM67        |        | Colombo, Sri Lanka        |
| SAM24        |        | Copenhagen, Denmark       |
| SAM48        |        | Damascus, Syria           |
| SAM71        |        | Dar es Salaam, Tanzania   |
| SAM57        |        | Dhaka, Bangladesh         |
| SAM58        |        | Djakarta, Indonesia       |
| SAM80        |        | Gaberone, Botswana        |
| SAM44        |        | Gdansk, Poland            |
| SAM94        | SEOR   | Guatemala City, Guatemala |
| SAM59        |        | Hanoi, Vietnam            |
| SAM34        |        | Harare, Zimbabwe          |
| SAM93        |        | Havana, Cuba              |
| SAM23        |        | Helsinki, Finland         |
| SAM60        | SEYP   | Islamabad, Pakistan       |
| SAM41        |        | Jerusalem, Israel         |
|              |        | Kampala, Uganda           |
| SAM17        |        | Kiev, Ukraine             |
| SAM72        |        | Kinshasa, Dem. Rep. Congo |
| SAM68        |        | Kuala Lumpur, Malaysia    |
| SAM32        |        | Kuwait                    |
| SAM73        | SEUE   | Lagos, Nigeria            |
| SAM91        |        | Lima, Peru                |
| SAM25        |        | Lisbon, Portugal          |
| SAM26        |        | London, UK                |
| SAM89        | SEPP   | Luanda, Angola            |
| SAM79        |        | Lusaka, Zambia            |
| SAM30/AND5   |        | Madrid, Spain             |
| SAM92        |        | Managua, Nicaragua        |

|             |      |                              |
|-------------|------|------------------------------|
| SAM98       |      | Manila, Philippines          |
| SAM82       |      | Maputo, Mozambique           |
|             |      | Maseru, Lesotho              |
| SAM86       |      | Mexico City, Mexico          |
| SAM74       |      | Monrovia, Liberia            |
| SAM38       |      | Moscow, Russia               |
| SAM75       | SEUT | Nairobi, Kenya               |
| SAM61       |      | New Delhi, India             |
| SAM87       |      | Ottawa, Canada               |
| SAM66       |      | Panmunjom                    |
| SAM28       |      | Paris, France                |
| SAM39       |      | Prague, Czech Rep.           |
| SAM76       |      | Pretoria, South Africa       |
| SAM64       |      | Pyongyang, North Korea       |
| SAM90       |      | Rabat, Morocco               |
| SAM14       |      | Riga, Latvia                 |
| SAM49       |      | Riyahd/Jeddah, Saudi Arabia  |
| SAM19       |      | Rome, Italy                  |
| SAM12       |      | Santa Fe de Bogota, Colombia |
| SAM83       |      | Santiago, Chile              |
| SAM65       |      | Seoul, South Korea           |
| SAM96       |      | Singapore                    |
| SAM95       |      | Sofia, Bulgaria              |
| SAM16       |      | St Petersburg, Russia        |
| SAM         | SEEP | MFA Stockholm                |
| SAM00       | SEEP | MFA Stockholm                |
| SAM51       |      | Teheran, Iran                |
| SAM13       |      | Tallinn, Estonia             |
| SAM52       |      | Tel Aviv, Israel             |
| SAM63       |      | Tokyo, Japan                 |
| SAM77       |      | Tripoli, Libya               |
| SAM78       |      | Tunis, Tunisia               |
| SAM54       |      | Vientiane, Laos              |
| SAM15       |      | Vilnius, Lithuania           |
| SAM40       |      | Warsaw, Poland               |
| SAM84/KNY34 |      | Washington, USA              |
| SAM29       |      | Windhoek, Namibia            |
| SAM43       |      | Zagreb, Croatia              |
|             | SEOI | UNID                         |
|             | SEYW | UNID                         |
|             | SEUP | UNID                         |
|             | SEUU | UNID                         |
|             | SERO | UNID                         |

**Dictionary:**

|            |                                             |
|------------|---------------------------------------------|
| Ambassaden | Ambassador                                  |
| Cabinet    | MFA Stockholm                               |
| fvb        | forward to                                  |
| kl         | local time                                  |
| meddelande | message                                     |
| SIDA       | Swedish International Development Authority |
| Svensk     | Swedish                                     |
| UD         | Utrikesdepartementet (Foreign Ministry)     |
| udtex      | Utrikesdepartementet Tele Text System?      |
| Lissabon   | Lisbon                                      |
| Moskva     | Moscow                                      |
| Warszawa   | Warsaw                                      |

**Transmission Modes:**

|              |              |              |                 |
|--------------|--------------|--------------|-----------------|
| SITOR-A      | 100bd        | Erect        | 170Hz           |
| SITOR-A      | 100bd        | Inverted     | 170Hz           |
| PacTOR-II    | HF modem PSK |              |                 |
| MIL-188-110A | 2400bd       | HF Modem PSK | (tentative)     |
| MIL-188-141A | 125bd        | 1650Hz       | ALE (tentative) |

**Logged Frequencies:**

|         |         |        |         |        |         |        |         |         |         |
|---------|---------|--------|---------|--------|---------|--------|---------|---------|---------|
| 5752.5  | 5756.9  | 5773.2 | 7653.7  | 7668.5 | 7677    | 7678.5 | 9166.4  | 9174.5  | 9179.5  |
| 10963.5 | 10969   | 10971  | 10973.5 | 13571  | 13585.3 | 13951  | 13954.4 | 13958.4 | 13965.5 |
| 13976   | 13977   | 16098  | 16102   | 16111  | 16111.3 | 16118  | 18257   | 18268   | 18269   |
| 18270.5 | 18271.5 | 18284  | 20596   |        |         |        |         |         |         |

**Reported Frequencies:**

|         |         |         |         |         |         |         |         |         |         |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 5753.8  | 5755.7  | 5767.5  | 5773.3  | 7652.7  | 7659    | 7661.6  | 7662    | 7669    | 7673    |
| 7674    | 7675    | 7676    | 7878.6  | 9154.5  | 9158.6  | 9162.1  | 9165.5  | 9168    | 9177    |
| 9179    | 10952   | 10953   | 10956   | 10957.3 | 10959.7 | 10961   | 10965   | 10967   | 13576.5 |
| 13580   | 13587   | 13961.5 | 13963   | 13964   | 13966.5 | 13978   | 13982.5 | 14500   | 16100.5 |
| 16101   | 16107.5 | 16108   | 16109   | 16113   | 16120   | 16124   | 18207.5 | 18238.2 | 18248.7 |
| 18258.7 | 18263   | 18274   | 18276   | 18279.5 | 18283.3 | 18284.7 | 18605   | 19807.9 | 20590   |
| 20597.8 | 20601.5 | 20604   | 20609.5 | 20614   | 22930.6 | 22960   | 22962   | 22963   | 22967   |
| 22969   | 22970   | 22975   | 22977   | 23505.9 | 25225.5 | 25227   | 25232   | 25420.6 |         |

**Country Profile:**

The Swiss Confederation, or Switzerland, with capital Bern, is divided in 26 cantons (canton in French; cantone in Italian; kanton in German); Aargau, Ausser-Rhoden, Basel-Landschaft, Basel-Stadt, Bern, Fribourg, Geneve, Glarus, Graubunden, Inner-Rhoden, Jura, Luzern, Neuchatel, Nidwalden, Obwalden, Sankt Gallen, Schaffhausen, Schwyz, Solothurn, Thurgau, Ticino, Uri, Valais, Vaud, Zug, Zurich.

The Swiss Defense Forces has the following branches: Army, Air Force, Frontier Guards, and Fortification Guards.

**Web Address:** <http://www.admin.ch/eda/i/index.html>

**Notes on Operation:**

- [Sat]
- Language: English, French, German
- Single frequency operations.
- Distinctive for very long off-line (5 letter groups) encrypted traffic.
- No apparent paging or grouping of off-line encrypted groups. Some off-line traffic noted with double linefeed after each 50th group.
- 5LGs often end with
  - cvcvc
  - ))))
  - end of message
- Long "copy to" lists for messages delimited by the groups
  - : cacac
  - list of embassies
  - : cacac
- Berne frequently idles in SITOR-B before callup with SITOR-A selcal to outlying embassy.
- Ends qso with ID eg "hbd20/3"
- MFA Berne operates a pool of 8 channels for embassies to connect with. Channels are not unique to frequencies.
- Routing indicators changed format some time during 1995. New style has abbreviated embassy name suffixed with "am", old style prefixed the "am" and usually ended "o".



- [December 1996] PACTOR-II variant modem with PSK speed-up noted replacing SITOR-A traffic on 9166.4kHz.
- [October 1999] MIL-188-110A serial tone PSK modem reported operating on some Berne channels and using MIL-188-141A ALE with identifiers "AFO", "AFO1", "KAI1" and "CH11".

| <b>Call</b> | <b>Selcal</b> | <b>Location</b>           |
|-------------|---------------|---------------------------|
| HBD81       | BMDX          | Abidjan, Ivory Coast      |
| HBD67       | BMRY          | Accra, Ghana              |
| HBD83       | BMDK          | Addis Ababa, Ethiopia     |
| HBD51       | BMIX          | Algiers, Algeria          |
| HBD71       | BMZX          | Amman, Jordan             |
| HBD59       | BMIS          | Ankara, Turkey            |
| HBD23       | BMUK          | Athens, Greece            |
| HBD33       | BMEK          | Baghdad, Iraq             |
| HBD42       | BMOQ          | Bangkok or Tokyo          |
| HBD64       | BMRM          | Bonn, Germany             |
| HBD35       | BMEP          | Beijing, China            |
| HBD65       | BMRP          | Beirut, Lebanon           |
| HBD40       | BMOV          | Belgrade, Serbia          |
| HBD26       | BMUC          | Berlin, Germany           |
| HBD20       | KVVP          | MFA Berne                 |
| HBD80       | BMDV          | Bogota, Colombia          |
| HBD27       | BMUY          | Bucharest, Romania        |
| HBD37       | BMEY          | Bucharest, Romania        |
| HBD31       | BMEX          | Buenos Aires, Argentina   |
| HBD32       | BMEQ          | Brasilia, Brazil          |
| HBD77       | BMZY          | Brussels or Manila        |
| ONN38       |               | Brussels, Belgium         |
| HBD49       | BMOS          | Budapest, Hungary         |
| HBD61       | BMRX          | Cairo, Egypt              |
| HBD43       | BMOK          | Canberra, Australia       |
| HBD34       | BMEM          | Caracas, Venezuela        |
| HBD75       | BMZP          | Colombo, Sri Lanka        |
| HBD76       | BMZC          | Copenhagen, Denmark?      |
| HBD82       | BMDQ          | Dakar, Senegal            |
| HBD53       | BMIK          | Dar es Salaam, Tanzania   |
| HBD68       | BMRF          | Guatemala City, Guatemala |
| HBD24       | BMUM          | Harare, Zimbabwe          |
| HBD46       | BMOC          | Havana, Cuba              |
| HBD36       | BMEC          | Helsinki, Finland         |
| HBD72       | BMZQ          | Islamabad, Pakistan       |
| HBD28       | BMUF          | Khartoum, Sudan           |
| HBD74       | BMZM          | Kinshasa, Dem. Rep. Congo |
| 7TO20       | BMZM          | Kinshasa, Dem. Rep. Congo |
| HBD30       | BMEV          | Lagos, Nigeria            |
| HBD73       | BMZK          | Lima, Peru                |
| HBD47       | BMOY          | Lisbon, Portugal          |
| HBD63       | BMRK          | London, UK                |
| HBD55       | BMIP          | Madrid, Spain             |
| HBD29       | BMUS          | Mexico City, Mexico       |
| HBD85       | BMDP          | Monrovia, Liberia         |
| HBD58       | BMIF          | Moscow, Russia            |
| HBD39       | BMES          | Nairobi, Kenya            |
| HBD22       | BMUQ          | New Delhi, India          |
| HBD38       | BMEF          | Oslo, Norway              |
| HBD66       | BMRC          | Ottawa, Canada            |
| HBM41       |               | Panmunjon                 |
| HBD60       | BMRV          | Paris, France             |
| OMZ23       |               | Prague, Czech Rep.        |
| HBD41       | BMOX          | Pretoria, South Africa    |
| HBD52       | BMIQ          | Rabat, Morocco            |
| HBD48       | BMOF          | Riyadh, Saudi Arabia      |
| HBD54       | BMIM          | Rome, Italy               |

|       |      |                    |
|-------|------|--------------------|
| HBD78 | BMZF | Seoul, South Korea |
| HBD70 | BMZV | Sofia, Bulgaria    |
| HBD44 | BMOM | Stockholm, Sweden  |
| HBD62 | BMRQ | Teheran, Iran      |
| HBD25 | BMUP | Tel Aviv, Israel   |
| HBD45 | BMOP | Tokyo, Japan       |
| HBD88 |      | Tripoli, Libya     |
| HBD57 | BMIY | Vienna, Austria    |
| HBD56 | BMIC | Warsaw, Poland     |
| HBD21 | BMUX | Washington, USA    |
| KNY27 | BMUX | Washington, USA    |
| HBD89 | BMDS | Yaounde, Mali      |
| HBD69 |      | UNID               |
| HBD79 |      | UNID               |
| HBD90 |      | UNID               |
| HBD50 |      | UNID               |
| HBD.. | BMUV | UNID               |

**Dictionary:**

|                   |                            |
|-------------------|----------------------------|
| Bernda            | MFA Berne                  |
| edaberna, berneda | MFA Berne                  |
| mibruxel          | Military Attache, Brussels |

| <b>Old Emb</b> | <b>New Emb</b> |            | <b>Location</b> |
|----------------|----------------|------------|-----------------|
| amanmanjo      | ammamjam       | Ambassador | Amman           |
|                | ankaraam       | "          | Ankara          |
| amatheneo      | atheneam       | "          | Athens          |
|                | bagdadam       | "          | Baghdad         |
|                | beijinam       | "          | Beijing         |
|                | belgraam       | "          | Belgrade        |
| ambonnrfo      | bonnrfam       | "          | Bonn            |
|                | brasilam       | "          | Brasilia        |
| bruxelamo      | bruxelam       | "          | Brussels        |
|                | budapeam       | "          | Budapest        |
|                | buenosam       | "          | Buenos Aires    |
|                | caireeam       | "          | Cairo           |
|                | havaneam       | "          | Havana          |
| amahayepa      | hayepaam       | "          | The Hague       |
| amhelsino      | helsinam       | "          | Helsinki        |
|                | islamaam       | "          | Islamabad       |
|                | jakartam       | "          | Djakarta        |
|                | khartoam       | "          | Khartoum        |
|                | kievukam       | "          | Kiev            |
| amlisbono      | lisbonam       | "          | Lisbon          |
| amlondreo      | londream       | "          | London          |
| madridamo      | madridam       | "          | Madrid          |
| moscouamo      | moscouam       | "          | Moscow          |
|                | nairobam       | "          | Nairobi         |
|                | newdelam       | "          | New Delhi       |
| amoslonoo      | oslonoam       | "          | Oslo            |
|                | ottawaam       | "          | Ottawa          |
| amparisfo      | parisfam       | "          | Paris           |
| amromeito      | romeitam       | "          | Rome            |
|                | ryadaram       | "          | Riyahd          |
|                | seoulcam       | "          | Seoul           |
|                | singapam       | "          | Singapore       |
|                | sofiabam       | "          | Sofia           |
| amstockho      | stockham       | "          | Stockholm       |
|                | teheraam       | "          | Teheran         |
| amtelavio      | telaviam       | "          | Tel Aviv        |
|                | tokyojam       | "          | Tokio           |
|                | tripolam       | "          | Tripoli         |
| amtunisto      | tunistam       | "          | Tunis           |
| amvienneo      | vienneam       | "          | Vienna          |

|           |          |   |            |
|-----------|----------|---|------------|
| amvarsovo | varsovam | " | Warsaw     |
|           | viennam  | " | Vienna     |
| amwashino | washinam | " | Washington |

- Old format embassy abbreviation: address indicator is always nine characters long and the last character is always "o".
- New format embassy abbreviation: address indicator is always eight characters long and the last two characters are always "am".

**Sample message: Online encrypted message with lead-in and ending**

```

bmrk bmrk bmrk bmrk bmrk bmrk $           [selcal - London]
+?                                           [London responds?]
hbd 20/1                                     [Berne confirms own ID]

04.12.1992   utc   0939       pm             [current date/time]

((((      ((( (muro3572 mura5477 04/12 08:03g   [message start]
ur amatheneo ambonnrfo amhelsino amlisbono amlondreo amoslonoo
amparisfo amstockho amviennam amwashino       [addressees]
.amromeito                                     [originator]
rome, le 3 dec. 1992       18.15   u r g e n t
                                           [originating Embassy, DTG, and priority]

00176 hhhhh
vvvrr rrrrc ccxxx sssyy yuuua aaqqq cytou jbxyl utryj vysgy   #Note.
knyjo ylnrn yotiy ltjvy hvnhw jlwby javna ylbyo rcmry sajuy
lyhyl kkdzy hmhqk ylugj drkgy oeccq wrcyj yleyh eatdt yjkrn
ysvxn cjasw omnik ujytp ubkas ylysw hpoff cajwy kjpdo jqrqf
ylarf rvhvj qvbec jyozi dxyhc syjwy jtesb giysw felyl lyllc
.
lhyta mylom rglnc xyoru nylwj ykpzi cejyf aalhr zqujy lyogw
nojny koess ylbgy sjyjn stdjd spwhd tunyl lcyhy otwlg aqytq
uvylo ogkpe pgrxn clutk ebuyo fohwk yyyyy

08:16 04 dec ~2~~~~))~~

04.12.1992   utc   1010       pm             [current date/time]
////+?                                           [over]
this is hbd 6~~=                                   [London responds]

we are gru tks for your call 73  +?

```

#Note: The encryption opens with the first characters each being repeated thrice - v r r c x s y u a q

## Transmission Modes:

ITA-2 50bd

ITA-2 75bd

SSB

## Reported Frequencies:

|       |       |         |       |       |       |         |         |       |       |
|-------|-------|---------|-------|-------|-------|---------|---------|-------|-------|
| 12205 | 13300 | 13337.3 | 13745 | 13865 | 13918 | 14531.5 | 14622.5 | 14623 | 15542 |
| 16352 | 18812 | 19015   | 20103 | 20105 | 20109 | 20155   | 20735   | 20908 | 21773 |
| 20827 | 21876 | 21948   |       |       |       |         |         |       |       |

## Country Profile:

Capital is Bangkok, with 76 provinces (changwat, singular and plural); Amnat Charoen, Ang Thong, Buriram, Chachoengsao, Chai Nat, Chaiyaphum, Chanthaburi, Chiang Mai, Chiang Rai, Chon Buri, Chumphon, Kalasin, Kamphaeng Phet, Kanchanaburi, Khon Kaen, Krabi, Krung Thep Mahanakhon (Bangkok), Lampang, Lamphun, Loei, Lop Buri, Mae Hong Son, Maha Sarakham, Mukdahan, Nakhon Nayok, Nakhon Pathom, Nakhon Phanom, Nakhon Ratchasima, Nakhon Sawan, Nakhon Si Thammarat, Nan, Narathiwat, Nong Bua Lamphu, Nong Khai, Nonthaburi, Pathum Thani, Pattani, Phangnga, Phatthalung, Phayao, Phetchabun, Phetchaburi, Phichit, Phitsanulok, Phra Nakhon Si Ayutthaya, Phrae, Phuket, Prachin Buri, Prachuap Khiri Khan, Ranong, Ratchaburi, Rayong, Roi Et, Sa Kaeo, Sakon Nakhon, Samut Prakan, Samut Sakhon, Samut Songkhram, Sara Buri, Satun, Sing Buri, Sisaket, Songkhla, Sukhothai, Suphan Buri, Surat Thani, Surin, Tak, Trang, Trat, Ubon Ratchathani, Udon Thani, Uthai Thani, Uttaradit, Yala, and Yasothon.

Forces include Royal Thai Army, Royal Thai Navy (includes Royal Thai Marine Corps), Royal Thai Air Force, and Paramilitary Forces.

Web Address: <http://www.nectec.or.th/bureaux/mfa/index.html>

## Notes on Operation:

- Reported circa 0930z on 14622.5 to Kuala Lumpur

**Callsign**

HSS212BKK

HSS212BNN

HSF212NDH

HSF212WSN

**Location**

MFA Bangkok

Bonn, Germany

Geneva, Switzerland

Kuala Lumpur, Malaysia

New Delhi, India

Washington, USA

**Dictionary:**

thaiduto

Thai Embassy or Ambassador?

**Transmission Modes:**

CW  
SITOR-B 100bd Erect 160Hz SBRS mode

**Logged Frequencies:**

6901.5 8846.4 13941.5 13956.4 13956.5

**Reported Frequencies:**

2755.0 2855.0 2983.0 3030.0 3131.0 3831.0 3838.0 4439.0 4755.0  
5260.0 5370.0 5371.0 5533.0 6741.8 6770.0 6868.0 7711.0 7766.0  
8195.0 13914.0 18571.5

**Country Profile:**

Capital is Tunis, with 23 governorates; Al Kaf, Al Mahdiah, Al Munastir, Al Qasrayn, Al Qayrawan, Aryanah, Bajah, Banzart, Bin 'Arus, Jundubah, Madanin, Nabul, Qabis, Qafsah, Qibili, Safaqis, Sidi Bu Zayd, Silyanah, Susah, Tatawin, Tawzar, Tunis, and Zaghwane.

Forces include Army, Navy, Air Force, paramilitary forces, National Guard.

**Notes on Operation:**

- [SAT][SUN]
- Language: French
- One side may send CW, the other in SITOR-B.
- Morning calltime 08H00
- Off-line encrypted traffic in 5-letter groups, with double linefeed.
- New styles of message header, still using 5LGs, noted during April 1999. Messages (suspected from Embassy Havana) use "vci etoile" followed by the string "mnmnmn".

**Tactical Callsigns**

Stations use tactical callsigns, changing frequently eg  
B9F G4V FGZ JDH LBB LNG N24 O2P RS3 S54 WU5 W1I W1T 1H4 5FP 5QK 5VE

Has a tendency to send callsigns (eg RS3) as rrrrrrrrrrssssssssss3333333333

**Dictionary:**

|            |                                    |
|------------|------------------------------------|
| ami        | friend (OM- old man)               |
| bien reçu? | good receipt (Did you receive ok?) |
| bjr        | bon jour (good day)                |
| mci        | merci (thank you)                  |
| rpt        | repeat                             |
| tph        | telephon (telephone)               |
| vci        | voici (here is)                    |
| vs         | vous (you)                         |

**Transmission Modes:**

|         |         |       |                |
|---------|---------|-------|----------------|
| ITA-2   | 100bd   | Erect | 850Hz          |
| FEC-100 | 144bd   | Erect | 825Hz          |
| RS-ARQ  | 240bd   | Erect | 8 tone, 8 bit  |
| RS-ARQ  | 228.7bd |       | ALIS Procedure |
| CW      |         |       |                |

**Logged Frequencies:**

|       |       |        |       |       |       |       |       |       |       |
|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 4684  | 4754  | 5300.9 | 6724  | 8195  | 10254 | 10272 | 10810 | 10812 | 11016 |
| 11171 | 11147 | 11149  | 13875 | 12224 | 12226 | 13303 | 13360 | 13362 | 13552 |
| 13554 | 13558 | 13982  | 14617 | 14619 | 14941 | 14961 | 14963 | 15834 | 15843 |
| 15847 | 15966 | 16054  | 16213 | 16898 | 16902 | 16908 | 16963 | 17526 | 18475 |
| 18908 | 18912 | 18922  | 18953 | 18954 | 18960 | 18964 | 19054 | 19074 | 21957 |

**Reported Frequencies:**

|         |        |         |         |         |         |         |       |       |         |
|---------|--------|---------|---------|---------|---------|---------|-------|-------|---------|
| 7808    | 8073.5 | 8906.8  | 9068    | 9274    | 9974    | 9992    | 10006 | 10043 | 10094   |
| 10112   | 10193  | 10204   | 10263   | 10274   | 10292   | 10294   | 10332 | 10354 | 10364   |
| 10431   | 10433  | 10436   | 10440   | 10443   | 10638   | 10649   | 10802 | 10812 | 10864   |
| 10880   | 10904  | 10984   | 11006   | 11018   | 11114   | 11117   | 11127 | 11136 | 11146   |
| 11482   | 12162  | 12175   | 13323   | 13390   | 13417   | 13464.2 | 13550 | 13556 | 13812   |
| 13814   | 13833  | 13843   | 13858   | 13861   | 13864   | 13894   | 13895 | 13914 | 13922   |
| 13932   | 13935  | 13942   | 13953   | 13955   | 13989   | 13996   | 14114 | 14215 | 14504.5 |
| 14506   | 14517  | 14527   | 14607   | 14618   | 14627   | 14637   | 14638 | 14647 | 14662   |
| 14677   | 14695  | 14863   | 14867   | 14882   | 14903   | 14906   | 14907 | 14917 | 14919   |
| 14936   | 14947  | 14952   | 14953   | 14957   | 14958   | 14959   | 14973 | 14993 | 15761   |
| 15841.6 | 15892  | 15958   | 15967   | 14977.7 | 15794   | 15833   | 15843 | 15953 | 15984   |
| 16023   | 16074  | 16112   | 16199   | 16214   | 16234   | 16254   | 16264 | 16292 | 16334   |
| 16484   | 16520  | 16694   | 16844   | 16944   | 16973   | 17411   | 17914 | 18034 | 18054   |
| 18064   | 18134  | 18154   | 18181   | 18184   | 18214   | 18606   | 18644 | 18802 | 18862   |
| 18864   | 18882  | 18888   | 18898   | 18914   | 18916   | 18918   | 18928 | 18934 | 18922   |
| 18941.6 | 18952  | 18978   | 18988.5 | 19034   | 19044   | 19052   | 19064 | 19303 | 19324   |
| 19334   | 19354  | 19454   | 19664   | 19846   | 19868   | 19888   | 19898 | 19944 | 19973   |
| 19976   | 20044  | 20054.5 | 20074   | 20244   | 20253.9 | 20354.5 | 20766 | 20654 | 20802   |
| 20964   | 20993  | 21403   | 21918   | 21964   | 21966   | 21976   | 21984 | 22876 | 23034   |
| 23944   |        |         |         |         |         |         |       |       |         |

**Country Profile:**

The Republic of Turkey with capital Ankara, measures 780,580 km<sup>2</sup>, and is situated in the East Mediterranean area, between Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Iran, Iraq, and Syria. Turkey is divided in 73 provinces (il); Adana, Adiyaman, Afyon, Agri, Aksaray, Amasya, Ankara, Antalya, Artvin, Aydin, Balikesir, Batman, Bayburt, Bilecik, Bingol, Bitlis, Bolu, Burdur, Bursa, Canakkale, Cankiri, Corum, Denizli, Diyarbakir, Edirne, Elazig, Erzincan, Erzurum, Eskisehir, Gaziantep, Giresun, Gumushane, Hakkari, Hatay, Icel, Isparta, Istanbul, Izmir, Kahraman Maras, Karaman, Kars, Kastamonu, Kayseri, Kirikkale, Kirklareli, Kirsehir, Kocaeli, Konya, Kutahya, Malatya, Manisa, Mardin, Mugla, Mus, Nevsehir, Nigde, Ordu, Rize, Sakarya, Samsun, Siirt, Sinop, Sirkak, Sivas, Tekirdag, Tokat, Trabzon, Tunceli, Urfa, Usak, Van, Yozgat, and Zonguldak. The Turkish Defense Forces has the following branches: Land Forces, Navy (including Naval Air and Naval Infantry), Air Force, Coast Guard, and Gendarmerie.

**Web Address:** <http://www.mfa.gov.tr>

**Notes on Operation:**

- [SUN]
- Language: Turkish, English (rarely)
- Operator exchanges in CW.
- Traffic in plain language Turkish or off-line encrypted.
- Only sparing use made of FEC-100 equipment since the adoption of Rohde & Schwarz RS-ARQ system in Q1/1996.
- Majority of 240bd 8 tone RS-ARQ traffic consists of standard diplo circulars and messages compressed with PKZIP and therefore sent with the system in 8 bit mode. Zipfile headers give a good clue as to the sender, although this does not conform to a standard:
  - MUSTnnnn.ZIP      Multi-addressed messages from MFA
  - BA-dd-nn.ZIP      Messages number "nn" from Baku sent on day "dd"
  - AMMAnnnn.ZIP      Message number "nnnn" from Amman
- Operator chatter in between zipfile transfers is very common with MFA and embassies identifying eg "MOSK DE TAD" on the Moscow/Ankara link.
- No traffic seen in 5 bit (ITA2) mode using the 8 tone RS-ARQ system nor using the 228.7bd RS-ARQ mode, but 228.7bd ALIS is used to establish and check link quality. ALIS procedure takes place 2kHz below CF of 240bd transmission.

| <b>New Call</b> | <b>Old Call</b> | <b>Tactical Location</b>  |
|-----------------|-----------------|---------------------------|
| TAD21           |                 | Addis Ababa, Ethiopia     |
|                 | YML8            | Algiers, Algeria          |
|                 | YMK9            | Amman, Jordan*            |
| TADSFA          | MFA             | Ankara                    |
|                 |                 | Askhabad                  |
|                 | SFI             | Athens, Greece*           |
|                 | YML3 SFF        | Baghdad, Iraq*            |
|                 |                 | aku, Azerbaijan*          |
|                 | YMK             | Beirut, Lebanon           |
|                 |                 | Beijing, China            |
|                 | YML2            | Belgrade, Serbia          |
|                 |                 | Berne, Switzerland        |
|                 |                 | Biskek                    |
|                 |                 | Bonn, Germany             |
|                 |                 | Brasilia, Brazil          |
| ONN32           | YML6            | Brussels, Belgium         |
|                 | YMK8            | Bucharest, Romania        |
|                 |                 | Budapest, Hungary         |
|                 | YMK7 SFQ        | Cairo, Egypt              |
| TAD88           |                 | Copenhagen, Denmark       |
|                 |                 | Dakar, Senegal            |
|                 | YMK1            | Damascus, Syria           |
| TAD38           |                 | Dhaka, Bangladesh         |
|                 |                 | Dushanbe, Tajikistan      |
|                 |                 | Geneva, Switzerland       |
|                 |                 | Helsinki, Finland         |
|                 | SGE             | Jeddah, Saudi Arabia      |
| TAD46           |                 | Kabul, Afghanistan        |
|                 |                 | Karachi, Pakistan         |
| TAD42           |                 | Khartoum, Sudan           |
|                 | YMO             | Kuwait                    |
|                 |                 | Kiev, Ukraine             |
|                 |                 | Kishinev, Moldova         |
| TAD50           |                 | Kinshasa, Dem. Rep. Congo |
| TAD54           |                 | Lagos, Nigeria            |
|                 |                 | Lisbon, Portugal          |
|                 | YMN2            | London, UK                |
|                 | YMN12           | Madrid, Spain             |
|                 |                 | Mexico City, Mexico       |
|                 |                 | Minsk, Byelorussia        |
|                 | YML7            | Moscow, Russia*           |
| TAD65           |                 | Nairobi, Kenya            |

|       |                                                 |                                                                                                                                                                                             |
|-------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TAD27 | YMN/5<br>YMK2                                   | New Delhi, India<br>Nicosia, Cyprus<br>Ottawa, Canada                                                                                                                                       |
| TAD68 | YML12 SFG<br>YML5<br><br>YML1                   | Paris, France<br>Prague, Czech Rep.<br>Pretoria, South Africa<br>Riyahd, Saudi Arabia<br>Rome, Italy<br>Saana, Yemen<br>Sarajevo, Bosnia*<br>Sam?<br>Singapore                              |
| TAD77 | YME                                             | Sofia, Bulgaria<br>Stockholm, Sweden<br>Tashkent, Uzbekistan<br>Tblisi, Georgia<br>Tebriz, Iran                                                                                             |
| TAD83 | YMN8 SFE<br>YMK6<br>YMN9<br><br>YML4<br><br>YMS | Teheran, Iran*<br>Tel Aviv, Israel<br>Tirana, Albania<br>Tripoli, Libya<br>Tunis, Tunisia<br>Vienna, Austria<br>Vilnius, Lithuania<br>Warsaw, Poland*<br>Washington, USA<br>Zagreb, Croatia |
| TAD45 |                                                 | UNID                                                                                                                                                                                        |
| TAD90 |                                                 | UNID                                                                                                                                                                                        |

\* = embassy active with 240bd 8 tone RS-ARQ equipment

**Consulates:**

Aleppo (Halep)  
Batumi  
Benghazi  
Cologne  
Deventer  
Frankfurt  
Hamburg  
Hanover  
Jeddah (Cidde)  
Jerusalem (Kudus)  
Kazan, CIS  
Mainz  
Mostar  
Nakhichevan, Georgia (Nahcivan)  
Naples  
Rotterdam  
Paris  
Piryatin, Ukraine (Piratina-Pire)  
Mosul, Iraq (Musul)  
Urumqui, China (Urumiye)  
Zuerich (Zurih)

**Delegations:**

Turkish UNO Delegation (.turk.uno/newyork dt)  
Turkish OECD Delegation (.oecd. dt)  
Turkish NATO Delegation (.nato. dt)



**Dictionary:**

|                        |                          |
|------------------------|--------------------------|
| acele                  | urgent                   |
| ara                    | time                     |
| be                     | Embassy (abbrev?)        |
| bk                     | Consulate (abbrev)       |
| ca                     | date (abbrev?)           |
| devam                  | continues                |
| Devamidir              | continuous               |
| Disisleri              | Foreign Ministry, Ankara |
| dt                     | Delegation               |
| musterek               | multi-addressed          |
| saygularimla arzedesim | with my respects         |
| tasnif disu            | unclassified             |
| Zurih baskons          | Consulate General        |

|         |           |
|---------|-----------|
| Atina   | Athens    |
| Kuveyt  | Kuwait    |
| Lahey   | The Hague |
| Lefkosa | Nicosia   |
| Trablus | Tripoli   |
| Viyana  | Vienna    |

|         |           |
|---------|-----------|
| Ocak    | January   |
| Subat   | February  |
| Mart    | March     |
| Nisan   | April     |
| Mayis   | May       |
| Haziran | June      |
| Temmuz  | July      |
| Agustos | August    |
| Eylul   | September |
| Ekim    | October   |
| Kasim   | November  |
| Aralik  | December  |

|       |       |
|-------|-------|
| bir   | one   |
| iki   | two   |
| uc    | three |
| dort  | four  |
| bes   | five  |
| sekiz | seven |

**Transmission Modes:**

MIL-188-141A125bd 1750Hz ALE  
MIL-188-110A2400bd Serial Tone HF Modem

**Logged Frequencies:**

4553.6 5748.6 6902.6 8058.6 10733.6 11168.6 11217.6 11472.6  
13503.6 16283.6 18248.6 18944.6\* 20810.6

\*18944.6 possibly replaced by 18248.6.

**Country Profile:**

Capital is Washington DC, with 50 states and 1 district\*; Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia\*, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Forces include Department of the Army, Department of the Navy (includes Marine Corps), Department of the Air Force note: the Coast Guard falls under the Department of Transportation, but in wartime reports to the Department of the Navy.

**Web Address:** <http://www.state.gov/index.html>

**Notes on Operation:**

- [SAT][SUN]
- Appearance of extensive network of embassies and frequencies post-September 11
- 2001 attack on the World Trade Center. Previous to that, only sporadic operation, usually a periodic activation of backup systems from KRH50 (London) and other strategic outposts.
- Two distinct sets of identifiers operate on the network:  
K + 2 letters + 2 digits which are believed to be the embassies  
W + 2 letters + 3 digits which are believed to be US-based control nodes
- US Air Force ground stations appear to be programmed to operate on this network too and frequently exchange LQAs with embassies. Notable increase in this activity when US heads of state on overseas business.
- AMD operator chatter has been noted on several channels including locations being passed in the clear. So much for network security...
- Secure authentication takes place during data transfers with HF modems
- Language: English

**Callsigns**

KBF95US Embassy  
KCA30US Embassy  
KEA32US Embassy  
KEH34US Consulate Basrah, Iraq  
KEH34TOC US Embassy Baghdad, Iraq  
KEM99US Embassy  
KFB90US Embassy  
KMN93US Department of State Springfield, VA, USA  
KMN94US Department of State Fort Lauderdale, FL, USA  
KMN94A US Department of State Fort Lauderdale, FL, USA  
KMN95US Department of State Warrenton, VA, USA  
KMN97  
KRC81US Embassy  
KRC82US Embassy

|         |                               |
|---------|-------------------------------|
| KRC83US | Embassy                       |
| KRH48US | Embassy                       |
| KRH50US | Embassy London, UK            |
| KRH54US | Embassy Moscow, Russia        |
| KRH57US | Embassy                       |
| KRH58US | Embassy                       |
| KRH60US | Embassy                       |
| KRH61US | Embassy                       |
| KRH62US | Embassy                       |
| KRH68US | Embassy Europe                |
| KRH71US | Embassy                       |
| KRH73US | Embassy                       |
| KRH84US | Embassy                       |
| KSI84US | Embassy                       |
| KVX45US | Embassy SE Asia               |
| KVX50US | Embassy Europe                |
| KVX53US | Embassy Europe                |
| KVX55US | Embassy                       |
| KVX56US | Embassy                       |
| KWA37US | Embassy                       |
| KWA54US | Embassy Europe                |
| KWA80US | Embassy Bangkok, Thailand     |
| KWB48US | Embassy Europe                |
| KWB57US | Embassy                       |
| KWE41US | Embassy Addis Ababa, Ethiopia |
| KWF22US | Embassy Africa                |
| KWG41US | Embassy                       |
| KWH49US | Embassy                       |
| KWK20US | Embassy                       |
| KWK50US | Embassy Teheran, Iran         |
| KWK90US | Embassy Europe/Middle East    |
| KWK92US | Embassy                       |
| KWK93US | Embassy Europe/Middle East    |
| KWK95US | Embassy Cairo, Egypt          |
| KWK96US | Embassy Europe/Middle East    |
| KWK97US | Embassy Warsaw, Poland        |
| KWK98US | Embassy                       |
| KWK99US | Embassy Europe/Middle East    |
| KWL90US | Embassy Manila, Philippines   |
| KWL92US | Embassy Tokyo, Japan          |
| KWL93US | Embassy Taipei, Taiwan        |
| KWL94US | Embassy Jakarta, Indonesia    |
| KWL95US | Embassy Beijing, China        |
| KWL96US | Embassy SE Asia               |
| KWN63US | Embassy                       |
| KWN95US | Embassy                       |
| KWP95US | Embassy                       |
| KWP96US | Embassy                       |
| KWP97US | Embassy                       |
| KWQ36US | Embassy                       |
| KWR91US | Embassy Europe                |
| KWR92US | Embassy                       |
| KWR93US | Embassy Europe                |
| KWR98US | Embassy Europe                |
| KWS57US | Embassy Europe                |
| KWS78US | Embassy Athens, Greece        |
| KWS93US | Embassy Europe                |
| KWS99US | Embassy                       |
| KWT49US | Embassy                       |
| KWT50US | Embassy                       |
| KWT51US | Embassy Europe                |
| KWT55US | Embassy                       |
| KWT88US | Embassy                       |
| KWT90US | Consulate Frankfurt, Germany  |

|         |                                             |
|---------|---------------------------------------------|
| KWT92US | Embassy                                     |
| KWT93US | Embassy Central Europe                      |
| KWT97US | Embassy Europe                              |
| KWT98US | Embassy                                     |
| KWV45US | Embassy                                     |
| KWV71US | Embassy Ankara, Turkey                      |
| KWV91US | Embassy                                     |
| KWW25US | Embassy Oslo, Norway                        |
| KWY21US | Embassy                                     |
| KWY55US | Embassy                                     |
| KWY58US | Embassy                                     |
| KWY59US | Embassy                                     |
| KWY94US | Embassy                                     |
| KWX57US | Embassy Europe                              |
| KWX95US | Embassy                                     |
| KWX92US | Embassy Europe                              |
| KWX95US | Embassy                                     |
| KWX99US | Embassy                                     |
| WBK69A  | US Department of State                      |
| WNG739  | US Department of State, Beltsville, MD, USA |
| WNG740  | US Department of State                      |
| WNG744  | US Department of State                      |
| WNG746  | US Department of State                      |
| WNG767  | US Department of State, Europe Control Node |
| WNG811  | US Department of State                      |

**Transmission Modes:**

ITA-2 50bd Erect 1000Hz  
CW

**Reported Frequencies:**

8823.9 11420.0 11650.0 13850.0 18161.2 18240.0 18610.0 19628.0 19631.0  
19632.0 19633.0 19665.0

**Country Profile:**

Capital is Hanoi, with 58 provinces (tinh, singular and plural), 3 municipalities\* (thu do, singular and plural); An Giang, Bac Giang, Bac Kan, Bac Lieu, Bac Ninh, Ba Ria-Vung Tau, Ben Tre, Binh Dinh, Binh Duong, Binh Phuoc, Binh Thuan, Ca Mau, Can Tho, Cao Bang, Dac Lac, Da Nang, Dong Nai, Dong Thap, Gia Lai, Ha Giang, Hai Duong, Hai Phong\*, Ha Nam, Ha Noi\*, Ha Tay, Ha Tinh, Hoa Binh, Ho Chi Minh\*, Hung Yen, Khanh Hoa, Kien Giang, Kon Tum, Lai Chau, Lam Dong, Lang Son, Lao Cai, Long An, Nam Dinh, Nghe An, Ninh Binh, Ninh Thuan, Phu Tho, Phu Yen, Quang Binh, Quang Nam, Quang Ngai, Quang Ninh, Quang Tri, Soc Trang, Son La, Tay Ninh, Thai Binh, Thai Nguyen, Thanh Hoa, Thua Thien-Hue, Tien Giang, Tra Vinh, Tuyen Quang, Vinh Long, Vinh Phuc, and Yen Bai.

Forces include People's Army of Vietnam (PAVN) (includes Ground Forces, Navy, and Air Force), and Coast Guard.

**Web Address:** <http://coombs.anu.edu.au/~vern/vninfo/ministry/fa.htm>

| <b>Call</b> | <b>Location</b>       |
|-------------|-----------------------|
| ETM85       | Addis Ababa, Ethiopia |
| 70B455      | Aden, Yemen           |
|             | Algiers, Algeria      |
| VRQ         | MFA Hanoi             |
|             | Moscow, Russia        |

**Transmission Modes:** CW

**Reported Frequencies:** 13997.0

**Country Profile:**

Capital is Sanaa, with 17 governorates (muhafazat, singular-muhafazah); Abyan, 'Adan, Al Bayda', Al Hudaydah, Al Jawf, Al Mahrah, Al Mahwit, 'Ataq, Dhamar, Hadhramawt, Hajjah, Ibb, Lahij, Ma'rib, Sa'dah, San'a', Ta'izz note: there may be a new governorate for the capital city of Sanaa.

Forces include Army, Navy, Air Force, Air Defense Forces, and paramilitary (includes Police).

| <b>Call</b> | <b>Location</b> |
|-------------|-----------------|
| ETM9SS      | Addis Ababa     |

**Transmission Modes:**

SITOR-A 100bd Erect 170Hz  
CW

**Reported Frequencies:**

10810.0 13867.0 13869.0 14418.0 14432.0 18176.0 20156.5 20348.0 24452.0  
29451.4

**Country Profile:**

Capital is Kinshasa, with 10 provinces (provinces, singular=province) and one city\* (ville); Bandundu, Bas-Congo, Equateur, Kasai-Occidental, Kasai-Oriental, Katanga, Kinshasa\*, Maniema, Nord-Kivu, Orientale, Sud-Kivu.

Forces include Army, Navy, Air Force, Presidential Security Group, Gendarmerie.

**Notes on Operation:**

Some of the above frequencies tentative. May in fact be internal circuits (financial etc).

| <b>Call</b> | <b>Selcal</b> | <b>Location</b>   |
|-------------|---------------|-------------------|
|             |               | Kampala, Uganda   |
|             | VYQX          | MFA Kinshasa      |
| ONN25       |               | Brussels, Belgium |