

SFO COMMUNICATIONS CENTER Livermore, CA



SFO ARINC

The primary mission of the SFO Communications Center is to provide communications in U.S. Oceanic Airspace to the U.S. FAA Oakland/ZOA and Anchorage/ZAN ARTCCs

ARINC, by individual contract arrangement with:

- Airlines
- Corporations
- Private Accounts

Relay messages from aircraft to/from their company (via phone, email or IATA/ICAO data) and/or make phone patches between the aircraft and their company.



Domestic Voice Service

- **HF, VHF & SATCOM ATC**
Provide voice services for aircraft in FAA-controlled oceanic airspace (safety of flight)
 - **HF, VHF & SATCOM Airline** Provide Operational Control (AOC) communications for aircraft operators in international airspace
- ## **Domestic Voice Service**
- **VHF & SATCOM**
Provide voice and ACARS services for AOC messaging and phone patching in the United States and Mexico airspace at or above 20,000 feet altitude

ARINC HF & VHF Frequencies

The SFO Comm Center can assign HF & VHF frequencies for air/ground communications with aircraft operating in the following FIRs.

- San Francisco ARINC
 - Oakland Oceanic
 - Anchorage Oceanic
 - Honolulu Control Facility
 - Guam CERAP



SFO also has the ability to send messages to FIRs other than the ones listed above.

•*Example:* If you are unable to contact Tokyo Control, ARINC can send a message to them on your behalf.

Types of HF Frequencies

- HF in Oceanic control areas is ICAO, Major World Air Route Area (MWARA)
 - Compulsory ATC type communications only
- LDOC Frequencies (Long Distance Operational Control)
 - aka “Company HF”



SFO Communication Center's LDOC Facilities

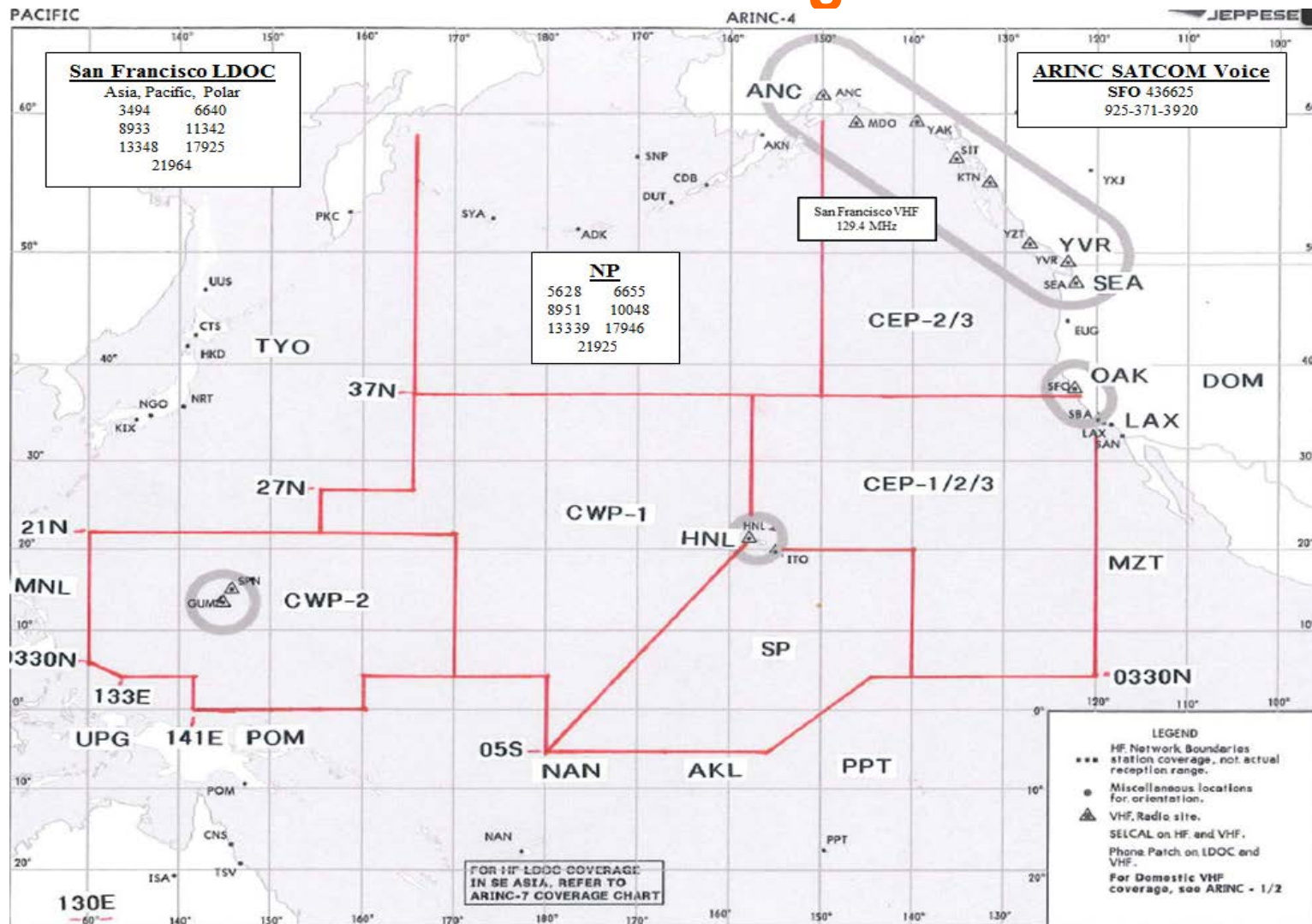
- Barrow (Barrow, Alaska 1KW)
- Guam (1KW)
- Pacific (Molokai, Hawaii 5KW)
- Dixon (Dixon, California 5KW)
- Hat Yai, Thailand/HDY (1KW)

LDOCF
3494
6640
8933
11342
13348
17925
21964



Barrow, Alaska Transmitter Antenna

HF/VHF Coverage Areas





SATELLITE COMMUNICATIONS

SATVoice* may be used as a communications medium if HF becomes inoperative or atmospheric conditions dictate.

Two Service Providers

1. Inmarsat

2. Iridium

When calling from either of these phones, use the same procedures and phraseology as radio calls. When calling via SATVoice, it may not be the same Radio Operator that you spoke with on HF. Your message relay however, will be handled in the same manner as if you were on HF.



SFO SATVoice - 436625

925-371-3920

Voice Communication Procedures



Helpful Communication Tips for Flight Crew

- Always use complete Flight Plan Identification:
 - Example: *“San Francisco, this is November Four-Niner-Five Victor Alpha”*
- On initial HF call, advise the frequency calling on:
 - Example: *“San Francisco, this is...on 6640”*
- Use ICAO 4444 message reporting formats and procedures
- The ARINC HF Radio Operator/RO is guarding 6 or 7 HF frequencies of an “HF Family” or “HF Group” using a split (stereo) headset. Typically the Primary (or work) frequency will be in the right ear and the Secondary (remaining guard frequencies) will be in the left ear.
 - Primary and Secondary HF frequencies for a particular Family/Group are determined by RO based on HF signal propagation/performance at that time.



Message Examples

POS

FI XXX123/OV ORVIT 0201 F340/EO DILSA 0236/NP TURDI

SL EHBP/OS YS ZA SLCL OK

DT SFO YS B 100212 10

- NO CTC WITH MAGADAN ON 11390 OR 8837

AGM

FI XXX123

SL AJPQ

MA 7290

DT SFO SV A 172159 10

- ANCD4 ATCA XXX123 RADAR SERVICE TERMINATED AT FRENK CONTACT
MAGADAN 133.0

21:35:58

XXX123 WE ARE IN CTC WITH MAGADAN ATTM

170241 UHMMZRZX

AGM

FI XXX123

DT SFO XX D 170229 01

- SFO REQ HF FOR XXX123. FLT IS UNABLE ON 11390 / 8837

TRY ON 5550 AND 4712

REGARDS MAGADAN ACC

AGM

FI XXX123/DA KXXX/DS ZBAA/OS DIILA/AN NXXXXXX/SL ABCD/OS CPDLC

OS SFO ZA YS/OS RCK OK/OS LOGGED ON TO MAGADAN

DT SFO ZA A 270014 10

AGM

FI XXX123/OV PINAG 0533 F340/EO ODIKA 0606/NP MABEM/OS CPDLC

DT SFO SV B 070537 06

- XXX123 IN CTC WITH MAGADAN ATTM

CPDLC FLT

AGM

FI XXX123

SL EHDP

MA 132L

- ANCD15 ATCA XXX123 AT PILUN CONTACT MAGADAN 133.7 BACKUP 5550

AGM

FI XXX123/OV RESUM 0237 F320/EO RAMEL 0257/NP PETUL

SL ADJL

DT SFO SV A 140258 10

- ANCD15 ATCR XXX123 REQUEST POSITION REPORT 02:46:20

XXX123 BEEN SENDING PSN REPORTS WITH MAGADAN AND IN CTC ON 11390
8837 AND ENTERING RUSSIAN AIRSPACE

AGM

FI XXX123

DT SFO SV A 080318 10

- ZAN11 ATCW XXX123 UHPP SIGMET 1 VALID 080200/080600 UHPP.

UHPP PETROPAVLOVSK KAMCHATSKY FIR SEV TURB FCST

NORTH OF N5600 SO OF N6200 FL200-450 MOV NE 20KMH. NC= 02:21:56

XXX123 WE HAVE IT

AGM

FI XXX123

DT SFO YS A 070408 10

- ZAN11 ATCW XXX123 UHPP SIGMET 2 VALID /070725 IN RUSSIAN

AIRSPACE

UHPP PETROPAVLOVSK-KAMCHATSKY FIR SEV TURB FCST S OF N5300

FL260/410 MOV NE 20KMH NC.

ADVISORY ONLY, WITHIN PAZN AIRSPACE MOD TURB FCST WEST OF 170E

FL300/400. NEGATIVE ADVERSE PIREPS RECEIVED, ADVISE IF ENCOUNTER GTR THAN
LGT TURB. 04:01:13

XXX123 COPY

AGM

FI XXX123

DT SFO ZA A 140045 10

- ZAN11 ATCW XXX123 UHPP SIGMET 1 VALID /140430 UHPP

PETROPAVLOVSK-KAMCHATSKY FIR

SEV TURB FCST N OF N57 FL160/450 MOV E 20KMH WKN AND S OF N57

FL060/180 STNR NC 00:42:59

XXX123 HAS SIGMET

AGM

FI XXX123

DT SFO YS A 130509 10

- ZAN11 ATCW XXX123 UHPP SIGMET 2 SEV TURB FCST N OF 5400N S OF
5900N.

F240/F410 MOV N 10KMH 05:01:05

XXX123 ROGER

AGM

FI XXX123/OV BESAT 2321 F370/EO MARCC 2333/NP MUNRI

OS SFO ZA YS/OS RCK OK

DT SFO ZA B 132326 10

AGM

FI XXX123

MA 244L

DT SFO ZA A 140010 10

- ZAN10 ATCA XXX123 RADAR SERVICES TERMINATED, REPORT BESAT TO
PETROPAVLOVSK ACC HF 11285 10039 OR VHF 135.4 00:20:04

XXX123

POS

FI XXX123/OV BESAT 1230 F370/EO MARCC 1241/NP MUNRI/FB 985

SL ALFK/OS HJVZ SLCL OK

DT SFO HJ B 121234 10

Questions or Comments