

Aeronautica Militare Virtuale Italiana



“ATO, ACO AND SPINS GUIDE”

AMVI - CSA - ??

<http://www.amvi.it>

AIR TASKING ORDER//

1. GENERAL

The ATOCONF is used to task intra-service organizations, to inform the requesting command and the tasking authority of the action being taken, and/or to provide additional information about the mission(s).

If the message requires changes or corrections, a Message Change Report may be used. The changes may be transmitted as another ATOCONF message identified as a deviation in Field 5 of the MSGID set, using a REF set to identify the original ATOCONF message. The PERID set specifies the period for which the message is effective.

This message includes the effective time period, tasked unit(s), and basic mission information: mission number, request number, priority, mission type, time on and off target, alert status, location, call sign, number and type of aircraft, ordnance type, IFF/SIF mode and code, and time and target location.

2. MESSAGE MAP

EXER/exercise name/additional identifier//

OPER/operation name/plan originator and number/option name/second option name//

MSGID/ATOCONF/originator/message serial number/month/qualifier/qualifier serial number//

REF/serial letter/(usmtf message short title) or (type of reference)/originator/date-time group/(msg ser number) or (DOCSN: doc ser number)/special notation/(sic) or (filing number)//

AMPN/free text to explain preceding reference set//

NARR/free text to explain preceding reference set//

CANX/(usmtf message short title) or (type of reference)/originator/date-time group/(message) or (document) serial number/special notation/(sic) or (filing number)//

PERID/time from/TO: time to/ASOF: as of time//

AIRTASK/air tasking/air tasking comments//

TASKUNIT/tasked unit designator/ICAO location/comments//

MSNDAT/mission number/package identification/aircraft call sign/number and type aircraft/mission type/alert status/primary configuration code/secondary configuration code/iff-sif code and mode//

MSNLOC/mission start day-time/mission stop day-time/mission location name/(altitude) or (flight level)/air support request number/area coordinates//

TGTLOC/day-time on target/day-time off target/target identifier/target type/desired mean point of impact/air support request number/target comments//

RECDATA/request number/mission priority/day-time on target/latest time information of value/reconnaissance mission type//

TRCPLOT/location of initial point/type area/trace point location//

CONTROL/type of control/call sign/(primary frequency) or (primary frequency designator)/(secondary frequency) or (secondary frequency designator)/report-in point/control comments//

FACINFO/call sign/primary (frequency) or (frequency designator)/secondary (frequency) or (frequency designator)/report-in point/support unit identity/control comments//

ELECMBT/aircraft call sign/priority/mission location/(altitude) or (flight level)/time on station/time off station/primary (frequency) or frequency designator)/secondary (frequency) or (frequency designator)//

REFUEL/tanker call sign/tanker mission number/air refueling control point/(altitude) or (flight level)/air refueling control time/total off-load of fuel/(primary frequency) or (frequency designator)/secondary (frequency) or (frequency designator)//

AKNLDG/aknldg/(INST: aknldg instructions) or (force or unit required to aknldg)//

OECL/downgrading instructions//

NOTE: Sets PERID, AIRTASK, TASKUNIT, and MSNDAT are mandatory. You also must use one (but only one) of sets MSNLOC, TGTLOC, and RECDATA.

3. STANDARDS FOR IDENTIFYING CONVENTIONAL LOADS

3.1. GENERAL. The STANDARD CONVENTIONAL LOAD (SCL) in the ATO are recommended loads based on desired effect, weather, guidance and tactics based on the weapons system expert, (i.e., unit representative to the AOC). Any questions by units need to be taken care of through unit POCs within the AOC.

3.2. STANDARD CONVENTIONAL LOADS. The following is the standard for identifying conventional loads. It is meant to be as simple as possible, however, since it is a 5 character code it has its limitations. Consequently, the code is broken up for 3 types of aircraft/missions. The first section (A) is Air

to Air, second section (B) is Air to Ground (except B-52s and B-1s) and section (C) is B-52s and B-1s.

3.3. SCL ID descriptions.

3.3.1. A. Air-to-Air

A. 1ST CHARACTER - X indicates air to air weapons load

B. 2ND-4TH CHARACTERS - number of missiles from long range to short respectively

a. 2ND CHARACTER - AIM-120 for Air Force, AIM-54 for Navy

b. 3RD CHARACTER - AIM-7s

c. 4TH CHARACTER - AIM-9s

C. 5TH CHARACTER - number of external fuel tanks

D. Examples of air-to-air SCLs:

a. X8000 - AIR-AIR, 8 X AIM-120, 0 X AIM-7, 0 X AIM-9, 0 TANKS

b. X6201 - AIR-AIR, 6 X AIM-120, 2 X AIM-7, 0 X AIM-9, 1 TANK

c. X4222 - AIR-AIR, 4 X AIM-120, 2 X AIM-7, 2 X AIM-9, 2 TANKS

d. X0263 - AIR-AIR, 0 X AIM-120, 2 X AIM-7, 6 X AIM-9, 3 TANKS

3.3.2. Air-to-Ground (except B-52s/B-1s larger weapons loads)

A. 1ST CHARACTER - number of weapons (amounts greater than 9 start with alphabet - see below)

A - 10 N - 23

B - 11 O - 24

C - 12 P - 25

D - 13 Q - 26

E - 14 R - 27

F - 15 S - 28

G - 16 T - 29

H - 17 U - 30

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I - 18	V - 31
J - 19	W - 32
K - 20	X - indicates air-to-air load
L - 21	Y - not used at this time
M - 22	Z - full load for amounts above 32

B. 2ND - 4TH CHARACTERS - consists of 3 alpha-numeric characters. Use the following steps to describe the weapon:

a. Determine if it is a high/low drag optional weapon, use

H - high drag

L - low drag

b. Determine how many numbers are used to normally describe the weapon (I.E., MK82 vs MK117 or AGM65 vs AGM142). If it has 3 numbers (117 and 142) drop the hundreds (17 and 42).

c. If it is a high/low drag weapon place the H or L after the number without any prefix (82H or 82L). WAALAA - you now have a three character code.

d. If it is any other type of air to ground weapon, use the following guide and put the alpha character as a prefix to the numbers (I.E., A65 or C89 for AGM65 and CBU89)

C. 2ND CHARACTER - WEAPONS TYPE

L - LAU	B - BLU
A -AGM	G - GBU
I -AIM	S - SUU
C -CBU	M - MK

Note for 2ND - 4TH CHARACTERS: as stated, GP bombs that are high/low drag such as MK 82/84/117 will not be preceded by an "M". Instead, they will be indicated as follows:

82H OR 82L example 882L0 - 8 X MK82 low drag and 0 tanks

84H OR 84L example 884H1 - 8 X MK84 high drag and 1 tank

Note: EXCEPTION: If the 2nd -4th characters are "CBU"- "GBU"- "BLU"- "AGM" then a mixed load is indicated for each of those munition and must be specified in the unit remarks. (ei., "8CBU0" would be 8 CBU of some mix and zero tanks; the combination of CBU - 4xCBU58 and 4xCBU89 - needs to be specified in unit remarks).

If there is not an SCL for the aircraft you want, you need to write it down with a description so that it can be added to the theater setup in order for it to be ready before the planning starts.

D. 5TH CHARACTER - number of external fuel tanks

E. Examples of air-to-ground SCLs:

682H3 - 6 X MK82 high drag GP bombs and 3 external fuel tanks

4C870 - 4 X CBU87 cluster bombs and 0 external fuel tanks

6L681 - 6 X LAU68 rockets and 1 external fuel tank

2A652 - 2 X AGM65 Mavericks and 2 external fuel tanks

2M200 - 2 X MK20 Rockeye and 0 external fuel tanks

ZUK10 - full load (36) x United Kingdom 1000 and 0 tanks

3.3.3. B-52s AND B-1s

A. 1ST AND 2ND CHARACTERS - number of weapons (01-99, because of larger loads this is different than para b, 1st character for number of weapons)

B. 3RD-5TH CHARACTERS - weapons type (same as process step 2b, 2nd-4th characters for weapons type)

C. Examples:

H - 51 X MK82 high drag GP bombs

0 - 08 X MK60 bombs

Note 1: Any clarification required for specific weapons types such as AGM65A/B vs AGM65C/D will be indicated in the unit remarks.

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NOTE 2: Unless otherwise noted in the ATO, loading of AIM-7/9 missiles, ECM pods, gun, chaff, flares and laser pods are at unit discretion.

NOTE 3: Any questions should be addressed to 12AF/612CPS/DOXA (DSN 228-2259/5184/3981).

AIRSPACE CONTROL ORDER//

1. GENERAL

The ACO is developed from the airspace control plan (ACP). It directs the use of joint airspace and details the approved requests for airspace control measures for specified periods. The ACO lists, but is not limited to, airspace control measures (ACMs) and procedures used on or over the area of operations. It is critical to mission success that airspace users receive pertinent airspace information as early in the planning cycle as possible. A change to the ACO should be distributed whenever a new area is established or an existing area deleted.

2. MESSAGE MAP

2.1. Decode the ACO header. See example below:

```
OPER/COBRA GOLD 07/C2WS/ATOTRNG/-//
MSGID/ACO/C2WS/705401/FEB/CHG/02//
REF/A/ACMREQ/ABCCC/23FEB2007/-/-/-//
REF/B/ACMREQ/CTG50.21/230800ZFEB2007/002/-/-//
ACOID/COBRA GOLD AO/23B//
GEODATUM/WGS 1984//
PERIOD/230600FEB2007/240559FEB2007//
GENTEXT/ACO MANAGEMENT INFORMATION/IDENTIFY
PROBLEMS PERTAINING TO THIS ACO TO THE JAOC
AIRSPACE MANAGEMENT CELL AT DSN 123-4567///-//
```

2.1.1. Decode the first dataset of the header. It identifies the type of message being received.

```
OPER/COBRA GOLD 07/C2WS/ATOTRNG/-//
```

2.1.1.1. Notice that the dataset identifier will be either OPER or EXER indicating the reason for the message, followed by a "/".

2.1.1.2. The second element in this dataset is the nickname of the exercise or operation codeword itself; "COBRA GOLD".

2.1.1.3. For an EXER there may be one additional data block to display any additional identifiers for the exercise, and then a double slash (//) to end the dataset, as in the example below.

```
EXER/OFF 450 FTU TRAINING/-//
```

2.1.1.4. For an OPER message there may be as many as three additional data blocks, as in the example below.

2.1.2. Decode the second dataset in the header. It contains the Message Identification (MSGID).

MSGID/ACO/C2WS/705401/FEB/CHG/02//

- 2.1.1.1. Field 1 is the Message Text Format Identifier. This field must equal "ACO" when it is an ACO message.
 - 2.1.1.2. Field 2 is the Originator or Issuing Agency.
 - 2.1.1.3. Field 3 is the Message serial number. If the ACO is numbered it would be indicated here.
 - 2.1.1.4. Field 4 is the Month name. The presence of a month name does NOT by itself imply the ATO is valid for the entire month.
 - 2.1.1.5. Field 5 is the Qualifier. If this is a change it would indicate "CHG" here.
 - 2.1.1.6. Field 6 is for the Serial number of the qualifier. Indicating which change number it is. Much of the information in these blocks may be "-" indicating a "no data" entry.
- 2.1.3. Decode the next dataset which is the reference (REF) dataset. It is optional.

REF/A/ACMREQ/ABCCC/23FEB2007/-/-/-//

REF/B/ACMREQ/CTG50.21/230800ZFEB2007/002/-/-//

- 2.1.4. Decode the next dataset which is the ACO Identification, area, and version.

ACOID/COBRA GOLD AO/23B//

- 2.1.1.1. The dataset starts out with the dataset identifier "ACOID". This dataset is MANDATORY if the message identification is "ACO".
- 2.1.1.2. The second element is the Area of Validity. This area is optional and can indicate a geographical area or a command over which the ACO is valid.
- 2.1.1.3. The third element is the ACO Serial Number.

NOTE: The serial number shall be a number between 01 and 31. It may be followed by a letter. Serial numbers were obviously intended to mirror the day of the month and the alphabetical letters were intended to identify multiple versions in a day.

- 2.1.5. Decode the next dataset which specifies the Geodetic Datum reference used throughout the document. The geospatial datum is a critical field which ensures everyone is using the same map reference and coordinate systems.

GEODATUM/WGS 1984//

- 2.1.6. Decode the next dataset, which defines the period covered by the ACO.

PERIOD/230600FEB2007/240559FEB2007//

- 2.1.1.1. The dataset identifier "PERIOD" is followed by a "/".
- 2.1.1.2. The Start Time of the ACO is after the first "/".
- 2.1.1.3. The Stop Time DTG is shown next.
- 2.1.7. Decode the final dataset in the ACO header, which is normally reserved for contact information.

GENTEXT/ACO MANAGEMENT INFORMATION/IDENTIFY

- 2.1.1.1. The identifier "GENTEXT" indicates the contents of the data element will be in a general text format. This is followed by the "/."
- 2.1.1.2. The next entry is "ACO MANAGEMENT INFORMATION".
- 2.1.1.3. The text which follows has no specified content but will often list the point-of-contact for the ACO.
- 2.1.8. Decode the use of a double slash (//) or a slash-hyphen-double slash. (/ - //) at the beginning of a line indicates the end of a entry or a new section of data.
- 2.2. Decode the approved ACMs in the ACO.

NOTE: ACMs in the ACO are shown in USMTF format. They are depicted in nested sets of ACM information, and each individual ACM may have various combinations of any or all of the following sets:

- ACMID
- GEODATUM
- SHAPE
- EFFLEVEL
- APERIOD
- CONTAUTH

- 2.1.1. Decode ACMID. The airspace control means identification (ACMID) dataset identifies and defines the type and usage of the airspace coordinating measure, as in the following lines.

ACMID/ACM:CORRTE/NAME:BUICK/CORRIDOR/USE:AIRCOR//
ACMID/OTR:RFHLL/DESIG:C34/CORRIDOR/OTR:SPAA//

- 2.1.2. This data block normally starts out with the field descriptor "ACM:" prior to type of ACM being identified.
- 2.1.3. The second block in the ACMID dataset is reserved for the ACM Identifier or Name.

NOTE: This data block normally starts out with the field descriptor "NAME:" or "DESIG:" prior to the actual name or number of the ACM. ACM naming or numbering may be regulated or restricted by the ACA via instructions in the ACP.

2.1.4. The third data block shows the shape of the requested ACM.

NOTE: This is a hugely important block as it will prompt the system to generate the dataset tables which define the coordinates, radii, arcs, or diameter of the ACM shape. Possible entries are limited to the following:

- POLYARC. A polyarc is basically a shape composed of a single arc and another group of points making up the shape. RADARC. A radarc is a shape commonly seen on radar scopes to create minimum vectoring
- altitude areas. It is an inner arc connected via radials to an outer arc. CORRIDOR. A corridor is a sequence of points set one after the other and having a fixed width. POLYGON. A polygon is a set of nonarcing points enclosing a shape. CIRCLE. A shape with a fixed radius around a single point. TRACK. A track is like a corridor except the width can vary on either side of centerline for each
- leg and each leg can have a different altitude. POINT. A single point. ORBIT. An orbit is a set of two points forming a route which aircraft maintain a circuit around. LINE. A series of points having no width.

2.1.5. The fourth data block normally starts out with the field descriptor "USE:" and shows the usage of the ACM, as in the examples below:

```
/USE:AIRCOR/  
/OTR:SPAA/
```

2.1.6. Decode GEODATUM. This dataset is only used if the geodetic data standard used for the ACM is different than the standard cited in GEODATUM dataset in the ACO header. If the same geodetic datum was used this field will not appear.

2.1.7. Decode SHAPE. This dataset format was determined when the shape name was entered in field 3 of the ACMID dataset, as in the example below:

```
/CORRIDOR/
```

2.1.8. Decode EFFLEVEL. Vertical dimension of the effective level dataset defines the altitudes at which the ACM applies.

```
EFFLEVEL/RARA:000AGL-020AGL// EFFLEVEL/FLFL:FL250-  
FL290//
```

- 2.1.9. Decode APERIOD. Airspace time period dataset defines when the ACM is effective.

APERIOD/INTERVAL/131325ZNOV/132359ZNOV/WEEKLY/4WK//

- 2.1.1.1. Field 1 defines the airspace time mode for the ACM.
 - 2.1.1.2. Field 2 defines the day, time and month the ACM starts.
 - 2.1.1.3. Field 3 defines the day, time and month the ACM stops.
 - 2.1.1.4. Field 4 defines the Interval Frequency and is used only if the airspace time mode is shown as "Interval".
 - 2.1.1.5. Field 5 defines the Interval Duration and is used only if the airspace time mode is shown as "Interval".
- 2.1.10. Decode CONTAUTH, which is the Controlling Authority dataset.

CONTAUTH/RHEIN MAIN CP/125.25MHZ/341.25KHZ//

- 2.1.1.1. Field 1 identifies who will be responsible for the airspace coordinating measure.
- 2.1.1.2. Field 2 will indicate the frequency to contact the controlling authority on.
- 2.1.1.3. Additional data fields may be added to identify secondary and alternate frequencies.