

Publisher: Air Division

Fliegerhorst Brumowski - A-3425 Langenlebarn

Designed and Edited by: S5 LRÜ

Printed by: Jost Druck & Medientechnik, A-8940 Liezen Pictures: K. Tokunaga, Archives of participating Airforces

#### EXERCISE

Introducing the exercise "AMADEUS 2002"

Page 6-7

#### **STATEMENTS**

Statements by the exercise -

Page 8-9

NATIONS

Presentation of the participating countries Page 10-19



AMADEUS NEWS

MAY / JUNE 2002



The multilateral air defence exercise "AMADEUS 2002" represents a milestone in international co-operation of air forces.

The spectrum of air surveillance tasks is expanding (parallel to the individual national responsibility for controlling one's own air sovereignty) in a transnational co-operation in order to match new threats from the air successfully. This requires a modern, compatible passive air surveillance as well as active components capable of fulfilling the necessary tasks.

The "AMADEUS 2002" should demonstrate the high technical standard of Austrian passive air surveillance to the critical eyes of the participating countries.

The command of domestic and foreign interceptor fighters by Austrian command centres within the framework of an international peacekeeping mission for the surveillance of a "No Fly Zone" is a new challenge for the Austrian air forces.

The efficiency of a national air surveillance system is, however, inseparably coupled with the purchase of modern interceptor fighters as active components.

In my capacity as Federal Minister of Defence I extend my best wishes to all participants for a successful exercise, convinced that the multilateral co-operation of European air forces will represent a pillar of future security systems.

mot 8cm

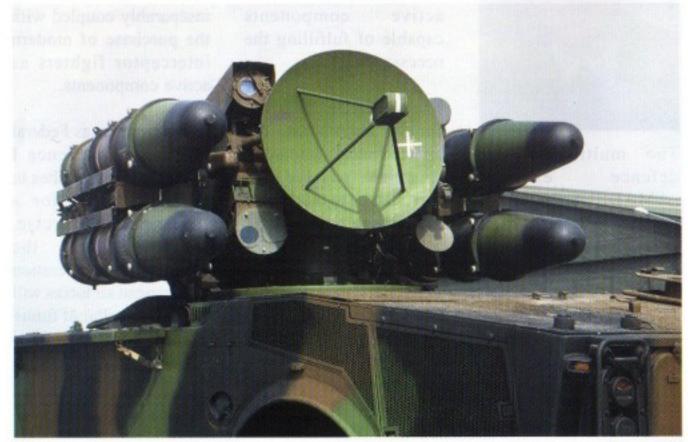
Herbert Scheibner Federal Minister of Defence







E-3F AWACS/Mirage 2000C



Crotale NG



In my capacity as Head of the Province of Salzburg, it is an honour for me to welcome all participants from France, Italy, Switzerland and Austria here in Salzburg. As the name suggests, the federal Province of Salzburg is

centrally involved in the multinational air defence exercise "AMADEUS 2002", playing host to the complete international exercise control and to some of the troups.

This joint exercise involving air forces from four countries is a major step on the way to transborder co-operation between individual countries to strengthen the safety of the population against threats from the air. Austria, too, will have to play its part in the framework of this cooperation in the future.

For that reason, this exercise without doubt represents an event of great national importance.

Finally, I would like to wish all participating soldiers a successful and accidentfree exercise and hope to be able to welcome them in Salzburg again in the near future.

Dr. Franz Schausberger

Governor of Salzburg



Saab 35OE





# **Exercise AMADEUS 2002**

The multilateral air defence exercise "AMADEUS 2002", involving the air forces of four European countries, will take place from 27th May to 7th June 2002.

During "AMADEUS 2002" aircraft, radar and anti-aircraft systems from France, Italy, Switzerland and Austria will, for the first time, exercise as a combined attachment. The co-operation of aircraft, radar and anti-aircraft systems from different countries for the protection of a ,,No Fly Zone" within the framework of a peacekeeping operation under the patronage of the United Nations gives special importance to the successful completion of the task.

One of the aims of this exercise is therefore to optimize and develop necessary standardized procedures for the interoperability—that is to say, the possibility for common, trouble-free deployment. At the same

time, the common sharing of data from command information systems of different countries will be tested. This co-operation between two neutral and two NATO partner countries will be a particular challenge.

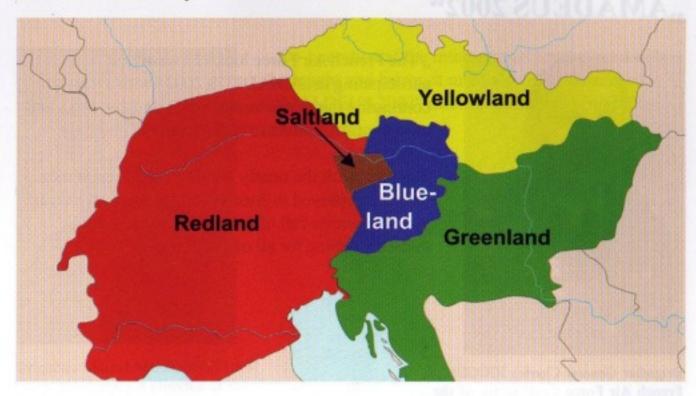
Following the events of 11th September 2001, air space control and air defence have been given a new dimension. Different aircraft, radar and anti-aircraft systems are in use internationally which, without appropriate measures and training, cannot be deployed in an integrated action. A trans-

national co-operation of individual countries will be necessary in future to be able to counter new kinds of threat from the air successfully.

Austria has committed itself – independent from its status under international law – to participate in international measures. The sending of Austrian soldiers on peacekeeping missions in future European security systems will require special emphasis being placed on the necessary transport and protection by their own air forces.



# Exercise scenario Protection of a No-Fly Zone in an international crisis situation



The international exercisedirectorate has developed the following scenario for the multilateral exercise "AMADEUS 2002":

In Saltland, since 1945 a province of Redland, the independence endeavours of the Bluelanders living there (forming about 60% of the total population of Saltland) had been suppressed by the nationalist powers of Redland with military strength.

On the basis of a UN Resolution (Agreement for Peace and Stability in Saltland - AFPSS) the area of Saltland had been declared a demilitarized zone and the air space a "no fly zone" in 1996. The COFOR (Coalition Force) with a strength of 15.000 soldiers stationed mainly in Saltland was established to enforce this resolution.

The hesitant democratic process in Redland was brought to a halt in January 2001 by the electoral victory of the Nationalist Party. The strengthening of the nationalist groups in Redland led to a revival of

aggression against the status of Saltland. In June 2001 negotiations with COFOR were discontinued.

It is to be expected that Redland will carry out politically motivated military disruptive actions against COFOR in Saltland as well as in Blueland, so as to bring Saltland back under the control of Redland.

The exercise layout and the surveillance of a No-Fly Zone are based on actual military actions (No-Fly Zones over Iraq and Kosovo).





# Statements by the exercise-directors "AMADEUS 2002"



Brigadier Genaral Charles RICOUR French Air Force Co-Director of the Exercise AMADEUS 2002

"The French Air Force looks forward to participating in "AMADEUS 2002" with a view to continuing the reinforcement of friendship links and co-operation with Austria, Switzerland and Italy.

Together with the nearly one-hundred French men who are deployed in Austria for Amadeus, we wish you an exercise full of fruitful exchanges and mutual teaching for all of our air forces."



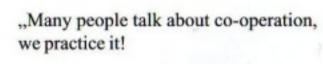
Colonel Luigi RIZZOTTO Italian Air Force Co-Director of the Exercise AMADEUS 2002

"Mutual understanding and trust between military personnel from different countries can only be developed during a dedicated training program such as this".

-8-



Brigadier Marcel MUGGENSTURM Swiss Air Force Co-Director of the Exercise AMADEUS 2002



AMADEUS - the Christian name of a great Austrian!

"Co-operation at the international level cannot only

"AMADEUS 2002" offers an excellent possibility to

be taught and learnt, it must also be experienced -

that end."

"AMADEUS 2002" - a decisive and valuable contribution by Austria to security and co-operation in Europe. The only meaningful alternative for the future!"

-9-



Brigadier Peter KOLECKO -Austrian Air Force Director of the Exercise AMADEUS 2002



# French Ground Based Air Defence



#### SYSTEM ASPIC

Aspic is an automatic firing unit for short range missile operation which can be coordinated by a Command and Control unit or operated in stand alone mode. It is a key element of any close air defence system against air attacks at low and very low altitude. Capable of a variety of operational Transpor reduced self sufficiency of operational Transpor reduced self sufficiency altitude and the self sufficiency of operational Transpor reduced self sufficiency of operational Transpor reduced self sufficiency of operation which of operation and the self sufficiency of operation which of operation and the self sufficiency of operation and

missions, Aspic can be used for the defence of key points or protection of stationary or mobile units. Transportability, mobility, reduced into action time, self sufficiency and ease of operation make Aspic fully adaptable for use by Rapid deployment Forces. Increasedeffectiveness of the overall air defence system, with reductions in both missile numbers and manpower make this a very attractive system to many customers where cost effectiveness is the key parameter. Aspic can be used to launch laser guided missiles such as Starburst and Starstreak and can also be used to launch and enhance the performance of fire and forget missiles such as Mistral, Stinger and Igla.

Aspic Mistral is used by the French Armed Forces for the defence of air bases as it provides a rapidly deployable, multimissile capability.



# Crotale NG (Next Generation) is an all weather short range air defence system developed by Thales Air Defense. The missions of the system are in frontline armoured brigade defence, perma-

nent or semipermanent site defence and area defence against air threats such as fixed-wing aircraft, attack helicopters, cruise missiles, tactical missiles and saturation attacks with stand-off weapons releas-

#### CROTALE NG Multi-Mission

Air-Defense Missile System

ed from aircraft and helicopters. The Crotale NG system provides air situation and threat assessment, extended detection range, Identification Friend-or-Foe (IFF), multitarget detection plus automated acquisition, tracking and engagement and all weather operation.

# The French Flying Units

#### MIRAGE 2000C/B

80 Mirage 2000C/B are currently on the French air force flightline. They are fitted with the RDI pulse doppler radar with look-down and shootdown capability. They also feature Magic 2 heatseeking air-to-air combat missiles and an integrated electronic warfare suite. They are multirole and can



12-IR

also carry out air-toground missions with conventional bombs and rockets, although their primary assignment is a airdefence one. Mirage 2000 C/B can be refuelled in flight and have been deployed along with allied forces in the Gulf War, and in the Bosnia and Kosovo conflicts.

#### E-3FAWACS

The E-3 Airborne Warning and Control System (AWACS) is built by Boeing Defense & Space Group. The role of the E-3 is to carry out airborne surveillance. and command, control and communications (C3) functions for both tactical and air defence forces. The French designation is E-3 SDA. The E3 lookdown radar has a 360degree view of the

horizon, and at operating altitudes has a range of more than 320 km. The radar can detect and track air and sea targets simultaneously.

In a tactical role, the E-3 can detect and track hostile aircraft operating at low altitudes over any terrain, and can identify and control friendly aircraft in the same airspace. In the strategic defence role, the E-3 provides the means to detect, identify, track and intercept airborne threats.





# The Italian Air Force at AMADEUS 2002



Eight Italian Air Force personnel are participating in the Exercise "AMADEUS 2002", working in Zeltweg, Vienna and St. Johann/Pg. Outstanding professionalism and dedication is shown daily not only by Tornadeo pilots, technicians and ground crews operating in Ghedi Air Base in Brescia – Italy, but also by ITAF personnel deployed in Austria. One is working in Zeltweg at the PI Office, five are in St. Johann /Pg. with the Exercise co-Director inside the Austrian CAOC and the last one is working in Vienna at the Military Control Center.

Italy's contribution to "AMADEUS 2002" is made up of 2 Tornado operating from their home base The primary

objective we want to achieve is to keep improving our training value while developing a higher status interoperability and standardization within Air Defense forces and systems in the Alpine area. Air space surveillance and protection has gained even higher importance after the 11th September attacks and we felt we should train to work together and integrate our systems even more than in the past. The Exercise has emerged from a progressive amalgamation of the





Alpine Area Air Forces and things have been progressing satisfactorily, with a positive feedback. Personnel are experiencing and practicing skills to fight successfully to defend the air space and territory whilst enjoying the Austrian region.

Mutual understanding and trust between military personnel from different countries can only be developed during a dedicated training program such as this.

The 6th Wing was founded on January 15, 1936 at the airport of Campoformido (Udine). During the Second World war it took part in air operations over the Mediterranean area. Today the 6th Wing, formed again on January 1, 1951, is located at the Airport of Ghedi (Brescia). The Unit, equipped with the "Panavia Tornado" multirole aircraft, usually takes part in the biggest national/international exercises but also has a long real operation activity record: from the

Gulf War, Operations Desert Shield and Desert Storm, in 1990/1991, to the Kosovo air strikes the Wing has flown several hundreds of warsorties dropping conventional and laser guided bombs.



-13-



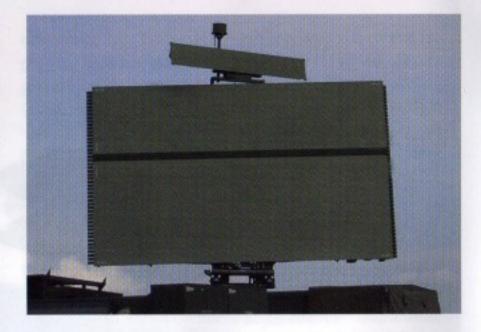


# The Tactical Air Surveillance Radar - TAFLIR

The Swiss Air Force will participate in the "AMADEUS 2002" exercise with a total of 80 members of the military. The Swiss will operate with two F/A-18 each from Zeltweg (A) and Dübendorf (CH). The TAFLIR system will be stationed in the Ennstal (A) region.

The tactical air surveillance radar system TAFLIR is a mobile radar system, which is capable of controlling the lower airspace and to register flying objects, from various locations. During international the "AMADEUS 2002" exercise the "Goldhaube" system will thus be supported. By means of optimum location of the TAFLIR system it will be possible to supplement the air surveillance, in particular in those areas below the scanning area of the "Goldhaube" system.

The TAFLIR system consists of a number of items which can be



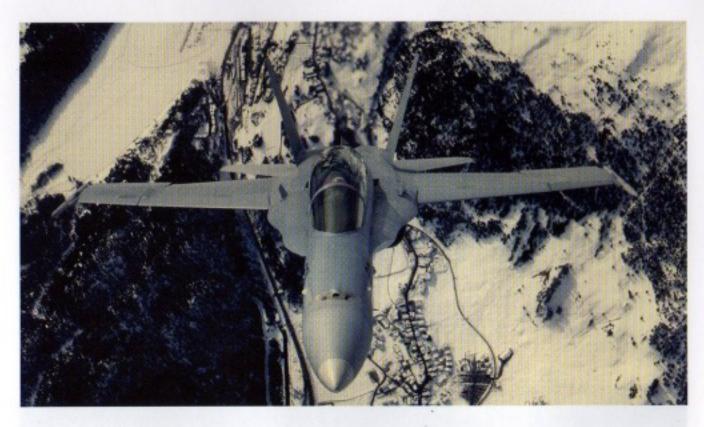
transported on all-terrain vehicles. By means of an independent power supply, the system can be utilized completely autonomously. The system can be deployed while mounted on vehicles as well as unloaded on the ground.

The following compondents are combined in the TAFLIR system:

- High-resolution, efficient radar with extensive equipment for data evaluation and processing of a synthetic radar picture on several screens
- · Data transfer to superior air surveillance-systems

for the purpose of completing the overall situation

- Air radio systems for the direct fighter routing from TAFLIR (will not be activated during the "AMADEUS 2002" exercise)
- Ground radio systems for communication with combat troups (will not be activated during the "AMADEUS 2002" exercise)
- Data terminals with links to the air force command information system (will not be activated during the "AMADEUS 2002" exercise



# The F/A-18 of the Swiss Air Force

The Swiss F/A-18 version weighs 17 tons, and has a total length of 17 meters. It can easily load 7 tons. Two engines provide for a thrust of 16 tons. From October 1996 on, the Hornets left the assembly bays at Emmen. The delivery was finished by the end of 1999. Squadron 17 was the first front squadron to retrain to the Hornet from June '97 on, followed in the spring of '98 by Squadron 18. Last but not least, retraining was concluded by Dübendorf based

Squadron 11, in 1999. These three squadrons are part of the Surveillance Wing. The main factor for the Swiss Air Force to choose the F/A-18 Hornet after a thorough evaluation, was the top performance of this aircraft. The Hornet has a very short reaction time from its alert position, very good aeroplane performance and flying characteristics and is able to accelerate extremely fast, reaching sonic speed within seconds. Its extremely good

manoeuvrability curvilinear flight is important in aerial combat in visual flight conditions and is proven to be of the best worldwide. Its high performance radar allows the F/A-18 to detect and simultaneously engage multiple low flying targets with its long-range guided missiles, by day and night and in bad weather conditions. The Hornet is also well tested in electronic warfare. This aircraft, developed to operate from aircraft carriers, is very well fitted for our mountainous regions and narrow valleys as well as our short runways.





Saab 35OE

# The Austrian Air Force



Without question, the "AMADEUS 2002" exercise represents a significant event for the Austrian air forces, particularly in view of the decision (to be taken) regarding the Draken successor and the

related public discussion regarding the basic necessity for such aircraft.

The participation by the French, Italian and Swiss air forces in this exercise, which is based on the assumption of a multinational peace-keeping air operation, (quite apart from the undisputed control of Austrian air space by Austria), points to possible future "European" tasks for the air forces. The aim

of this exercise will be, above all, to achieve the highest possible degree of interoperability of all control and weapon systems deployed, the smooth co-operation of multinational staff and the exchange of experience between the participating air forces. In addition, the Austrian army has the opportunity to prove its efficiency in international arena.

# **Flying Units**

From the Austrian view point, the most important role is clearly played by the Air Surveillance Squadron with the Saab 35 OE Draken.

The 8 Draken from both air wings of the Air Surveillance Squadron participating in the exercise, have the primary task, together with F/A-18 from the Swiss Air Force and Mirage 2000C of the French "Armée de l'Air", of ensuring the required

"No Fly Zone". In addition, several of the Saab 35OE will be utilized for offensive tasks, such as serving as escorts for attack operations against the fictitious opponent.

Moreover, Saab 105 OE from the 3rd wing of the Air Regiment 3 will be utilized. The six Saab 105, together with the Tornado of the Italian Air Force (stationed and operating from the Air Force base at Ghedi), in conjunction with the "offensive" Draken and and supporting F/A-18, will act as the attacking aircraft attempting to penetrate the "No Fly Zone".

Furthermore, Pilatus PC-6 transport aircrafts as well as transport helicopters will be available for air reconnaissance and precautions for search and rescue operations have been taken.



Saab 105OE



## **Ground Based Air Defence**

While only aircraft and elements of the electronic airspace control were deployed during the "Amadeus 1999", elements of air-aircrafts systems will be involved in this year's exercise. The scenario assumes that the ground-based infrastructure of the multinational unit controlling the "No Fly Zone" will also require protection from air attacks.

To this aim, French and Austrian anti-aircraft systems will together form a so called "Base Defence Zone". The anti-aircraft units, under the tactical operations centre of the anti-aircraft Regiment 1, will be able to try out the combination of barrel and guided missile systems from various origins and countries and thus gain valuable experience about the interoperability of such an anti-aircraft attachment.

Anti-aircraft Regiment 1 will deploy units of the Austrian standard barrel weapon system twin antiaircraft guns 85 and firecontrolunit 79 as well as 2 cm anti-aircraft guns for very close range. In addition, there will be a battery with the light antiaircraft guided missiles "Mistral" and the Target allocation Radar "Flamingo". While the Austrian air forces use a mix of barrel and guided missiles, the French air force use the usual system in France for protection of property "Crotale NG" and "Aspic-Mistral".



Mistral

# The Austrian Air Surveillance Brigade



The Austrian surveillance brigade is participating in the multilateral air surveillance exercise "AMADEUS 2002" with fixed and mobile units of its air surveillance system. In addition to the air surveillance control and reporting centre (in the control centre "Basis area"), a DCRC (Deployable Control and Reporting Center), consisting of an attachment of four OPS (Operations Shelter) with a total of 12 radar

workstations, will be used for the first time. This attachment is capable to be deployed either within Austria or outside the boundary in conjunction with United Nations and EU crisis management.

In addition to the fixed radar stations, an Austrian medium-range radar station, three Austrian gapfiller radar low level detection radar and a Swiss TAFLIR radar system, will be linked to the Austrian "Goldhaube" (Gold Bonnet) air

surveillance system. In addition, a recognized air picture from a French AWACS will transmitted to the air surveillance control and reporting centre and to the DCRC. Within the framework of "AMADEUS 2002" exercise, the Austrian air surveillance brigade will be responsible for the production of recognized air picture as well as for radar control for all participating aircraft.







E-3F AWACS



The heart of a unique real life world of beer beats in the oldest part of the brewery, where the barley was originally spread out to germinate - Stiegl's Brauwelt. The voyage begins in a large, real-life brewery, full of raw materials, shiny copper vessels and pipes, for heating, fermenting, storage and bottling. The production of beer is impressively explained. The upper level can be

reached via the old kiln, in which green malt used to be dried out. Two structures imposing immediately catch the eye: The artistically designed beer altar, with depictions of the history of beer, and the largest beer tower in the world! The world of beer on display and various information programmes provide a more in depth look into the art of beer brewing. The Stiegl Museum, which portrays

500 years of Salzburg's beer brewing tradition, rounds off your visit to Stiegl's Brauwelt perfectly.



Tornado

