
ARIANE 4

user's manual

ISSUE N° 2

February 1999

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by
Arianespace

This document contains the technical information which is mandatory:

- a) to assess compatibility of a spacecraft with the Ariane 4 launches,
- b) to prepare all technical and operational documentation related to a launch of this spacecraft on Ariane 4.

The data contained in this document supersede any information given or used at a preliminary stage.


Daniel MUGNIER

Senior Vice President Technical & Industrial Affairs



Foreword

The ARIANE development program is carried out under the aegis of the European Space Agency (ESA) and under the management of the French Centre National d'Etudes Spatiales (CNES).

It is financed by the following participating European states: Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom and Ireland.

Following a decision by the participating States and a convention between the European Space Agency and ARIANESPACE, the responsibility for the production, marketing and launching of operational Ariane vehicles and their updated versions is entrusted to ARIANESPACE.

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1. A private Company

ARIANESPACE is a French **Joint Stock Company** ("Société Anonyme") which was incorporated on March 26th, 1980. Its authorized capital amounts to 2 087 910 000 French Francs.

The 53 shareholder partners in ARIANESPACE represent the scientific, technical, financial and political capabilities of 12 **European countries** (Belgium, Denmark, France, Germany, Ireland, Italy, Netherlands, Norway, Spain, Switzerland, Sweden and United Kingdom).

In order to meet the market needs, ARIANESPACE has established a worldwide presence: in Europe, with its head office located at Evry near Paris, France, in North America with Arianespace Inc., its subsidiary in Washington D.C., and in the Pacific Region, with its representative offices in Tokyo, Japan and in Singapore.

2. A responsible company

ARIANESPACE has adopted the structure of a commercial and engineering company fully responsible for financial results, in order to provide three main functions:

- 1) **MARKETING OF SATELLITE LAUNCH SERVICES** to all customers throughout the world;
- 2) **PRIME CONTRACTOR RESPONSIBILITIES FOR ACTUAL PRODUCTION AND FINANCING** of operational ARIANE launch vehicles;
- 3) **DIRECTION OF LAUNCH OPERATIONS** using the Ariane launch site at the Guiana Space Center.





3. A service company



Arianespace's objective is to provide **a complete, personalized service**, covering the entire period from initial formulation of the project with the customer and the satellite manufacturer, up to the launch.

This objective is achieved by the combination of a product such as the Ariane launcher, fully automatic and optimized for this type of mission, and a **modern launch complex** equipped with all the facilities required for the preparation and testing of the latest generation of satellites, and manned by skilled technicians and engineers used to working with the latest state of the art technology.

In the area of insurance ARIANESPACE created the subsidiary S.3.R which provides additional insurance capacity to aid its clients with coverage during the launch phase.



User's Manual Configuration Control Sheet			
ISSUE N°	DATE	NEW SHEETS	APPROVAL
1	April 1983	All	
1 Revision 1	Jan. 1985	All	
1 Revision 2	Jan. 1986	0.1, 0.4, 0.6 1.6, 2.2, 2.3 4.9, 4.13, 4.14, 4.15, 4.16, 4.17, 4.18, 4.23, 4.24, 4.25, 4.27, 4.28, 4.29, 4.30, 4.31, 4.32, 4.33 5.4, 5.6, 5.8, 5.21, 5.23, 5.24, 5.25, 5.26, 5.27 6.8 A1.2 A3.1, A3.2, A3.3, A3.5, A3.6, A3.7, A3.8, A3.9 A4.1, A4.2, A4.3, A4.4, A4.5, A4.6, A4.7, A4.8, A4.9, A5.1, A5.3, A5.5, A5.6, A5.7, A5.8, A5.9, A5.10, A5.14, A5.15, A5.17, A5.18. A6.2, A6.4, A6.8 A7.1, A7.3, A7.4, A7.5, A7.6, A7.7, A7.8, A7.9, A7.15	
1 Revision 3	April 1987	0.1, 0.2, 0.4, 0.5, 0.7, 0.8 1.1, 1.5, 1.6 2.1, 2.3, 2.15 3.1, 3.4, 3.5, 3.6, 3.8, 3.9, 3.11, 3.12, 3.13, 3.14 4.1, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12, 4.13, 4.14, 4.15, 4.16, 4.17, 4.18, 4.19, 4.20, 4.21, 4.22, 4.23, 4.24, 4.25, 4.26, 4.27, 4.28, 4.29, 4.30, 4.31, 4.32, 4.33, 4.34, 4.35 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 5.13, 5.14, 5.15, 5.16, 5.17, 5.18, 5.19, 5.20, 5.23, 5.24, 5.25, 5.26, 5.27, 5.28, 5.29, 6.4, 6.5 A1.2, A1.9, A1.12, A3.1, A3.2, A3.3, A3.4, A3.5, A3.6, A4.1, A4.2, A4.3, A4.4, A4.5, A4.6, A4.7, A4.8, A4.9, A4.10 A5.1, A5.7, A5.13, A5.14, A5.15, A5.16, A5.19, A6.4, A6.6, A6.7, A6.8 A7.1, A7.6, A7.7, A7.8, A7.9, A7.12, A7.14 A8.1, A8.2, A8.3, A8.4, A8.5, A8.6, A8.7, A8.8, A8.9, A8.10, A8.11	

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1 Revision 4	Sept. 88	0.0a, 0.1a, 0.3, 0.4, 3.5, 3.6, 3.8, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12, 4.13, 4.15, 4.18, 4.19, 4.21, 4.24, 4.25, 4.26, 4.27, 4.28, 4.31, 5.1, 5.4, 5.5, 5.6, 5.9, 5.12, 5.13, 5.14, 5.15, 5.16, 5.17, 5.18, 5.19, 5.20, 5.21, 5.22, 5.24, 5.25, 5.29, 6.2, 6.3, 6.4, 6.11 A1.14, A3.2, A3.3, A4.1, A4.2, A4.3, A4.4, A4.5, A4.8, A4.10, A5.1, A5.2, A5.7, A5.10, A5.14, A5.17, A5.18, A5.19, A5.20, A5.21, A5.22, A6.4, A6.5, A6.7, A6.8, A7.2, A7.6, A7.9, A8.1, A8.2, A8.3, A8.4, A8.5, A8.6, A8.7, A8.8, A8.9, A8.10, A8.11	
1 Revision 5	Dec. 89	0.1a, 0.2, 0.5, 0.6, 1.4, 1.6, 1.7, 2.3, 3.4, 3.5, 3.7, 4.2, 4.3, 4.5, 4.7, 4.8, 4.10, 4.12, 4.14, 4.15, 4.16, 4.17, 4.18, 4.21, 4.23, 4.24, 4.25, 4.27, 4.30, 4.34, 4.36, 5.12, 5.13, 5.21, 5.22, 5.25, 6.2, 6.10, A1.14 A4.1.1, A4.1.2, A4.1.3, A4.1.4, A4.1.5, A4.1.6, A4.1.7, A4.1.8, A4.1.9, A4.1.10, A4.1.11, A4.1.12, A4.2.1, A4.2.2, A4.2.3, A4.2.4, A4.2.5, A4.2.6, A4.2.7, A4.2.8, A4.2.9, A4.2.10, A4.2.11, A4.2.12, A5.1.1, A5.1.2, A5.1.3, A5.1.4, A5.1.5, A5.1.6, A5.1.7, A5.1.8, A5.1.9, A5.1.10, A5.1.11, A5.1.12, A5.1.13, A5.1.14, A5.1.15, A5.2.1, A5.2.2, A5.2.3, A5.2.4, A5.2.5, A5.2.6, A5.2.7, A5.2.8, A5.2.9, A5.2.10, A5.2.11, A5.3.1, A5.3.2, A5.3.3, A5.3.4, A5.3.5, A5.3.6, A5.3.7, A5.3.8, A5.3.9, A5.3.10, A5.3.11, A5.3.12, A6.6, A6.7, A6.8, A7.2, A7.13, A7.14, A8.1, A8.2, A8.3, A8.4, A8.5, A8.6, A8.7, A8.8, A8.9, A8.10, A8.11	




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1 Revision 6	July 91	0.1b, 1.4, 1.6a, 1.7, 2.3, 3.4, 3.6, 3.7, 3.7a, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 4.3, 4.7a, 4.8, 4.9, 4.10, 4.11, 4.12, 4.13, 4.14, 4.15, 4.16, 4.17, 4.18, 4.18a, 4.19, 4.21, 4.31, 4.32, 4.33, 4.34, 4.36, 5.2, 5.3, 5.23, 5.29, A3.1, A3.2, A3.3, (A.3.4, A.3.5 are deleted), A4.1.2, A4.1.3, A4.1.13, A4.2.2, A4.2.3, A4.2.13, A5.1.1, A5.1.4, A5.2.2, A5.2.3, A5.3.1, A5.3.2, A5.3.13, A8.2, A8.3, A8.12,	
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