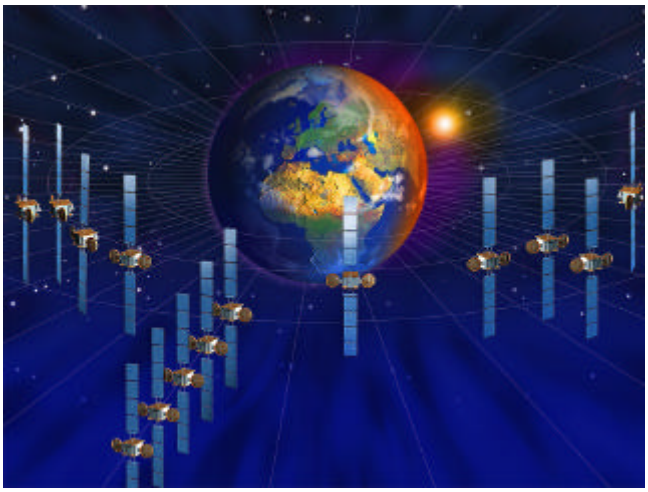
Organisation Européenne de Télécommunications par Satellite
European Telecommunications Satellite Organization
70, rue Balard — 75502 PARIS Cedex 15 — France

Digital Satellite Equipment Control (DiSEqC™)



LOGOS

AND

CONDITIONS OF USE

February 25, 1998

Reference Documents that define the DiSEqC System:

DiSEqC™ Bus Specification Version 4.2 (February 25, 1998)

DiSEqC™ Slave Microcontroller Specification Version 1.0 (February 25, 1998)

DiSEqC™ Logos and Their Conditions of Use (February 25, 1998)

Associated Documents:

Update and Recommendations for Implementation Version 2.1 (February 25, 1998)

Application Information for using a "PIC" Microcontroller in DiSEqC™ LNB and simple switcher Applications Version 1.0 (June 7, 1999)

Application Information for Tuner-Receiver/IRDs (April 12, 1996)

Application Information for LNBs and Switchers Version 2 (February 25, 1998)

Reset Circuits for the Slave Microcontroller (August 12, 1996)

Simple Tone Burst Detection Circuit (August 12, 1996)

Positioner Application Note Version 1.0 (March 15, 1998)

CONTENTS

1. Introduction

This reference document serves to explain the conditions of use of the trademark "DiSEqC™" and the associated logos for all product related applications, including (but not limited to):

1. Front Panels
2. Labels
3. Packaging
4. Printed material (brochures, data sheets etc.)
5. Advertising (both printed and video)

Please note that DiSEqC™ is a trademark of EUTELSAT and should not be used without EUTELSAT's written authorisation.

2. Conditions of Use

The conditions of use are as follows:

1. All products must conform to the DiSEqC™ Bus Specification (current version at time of first production).
2. Manufacturers must self-certify the compliance of their products to the specification by writing a letter of conformity to EUTELSAT. Please see later for more details, but there is NO TYPE APPROVAL PROCEDURE (cf paragraph 3.).
3. Manufacturers must submit two samples of each product from mass production.
4. Manufacturers agree to resolve any compatibility problems between different products with the other parties concerned.

5. Wherever the DiSEqC™ name or logo is used (except when directly screened on to a front panel of a receiver) there should always be the following footnote:

   "DiSEqC™ is a trademark of EUTELSAT"

6. Manufacturers must receive written authorisation from EUTELSAT to use the trademark and which level of implementation is relevant to particular products.

3. Self Certification of Conformity

To simplify the approval procedure and allow the shortest possible development time for DiSEqC™ products there will NOT BE TYPE APPROVAL by a third party test authority. Instead, EUTELSAT request a simple letter of conformity from each manufacturer stating compliance to the relevant DiSEqC™ specification and agreeing to resolve any incompatibility problems with other compliant DiSEqC™ products already in the market. A model letter of conformity is included *(see Annex B.)* and is also available electronically (in Word format) on request from EUTELSAT (or web site).

In order to assist manufacturers with the testing procedure and to standardise the testing between different manufacturers, EUTELSAT has developed a Reference Tool for validation purposes. This "Test Tool" will be available to all manufacturers at a nominal charge, simply to cover material costs.

4. Description of Logos

The logos are currently available for four levels of implementation (DiSEqC™ 1.0, 1.1, 1.2 & 2.0), EUTELSAT will advise on confirmation of the manufacturer's letter of conformity which level is applicable to the relevant product. For more information regarding the technical qualification to use the logo and at which level, please refer to *Annex A.*

For each level there are four versions of the logo; with and without text, and normal (black on white) or reversed (white out of black). The manufacturer can choose whichever of these four versions best suits the environment that surrounds the logo. In general when the logo used is very small (e.g. front panel of receivers etc.) we recommend to use the versions without text, where the logo is larger and in printed material (better resolution) then the version with text can be used if preferred.

Please see *Table 1 on page 5* that follows.

5. Reproduction Formats

5.1. Electronic Format

The logos are available on diskette in "CGM" or "TIF" file format (PC compatible) suitable for most Windows based applications. Other electronic formats are also available on request. Logos can also be down-loaded from the EUTELSAT Internet site:

http://www.eutelsat.com/docs/DiSEqC

5.2. Paper Format

Camera ready art-work (“bromides”) are also available, one sheet for each level of implementation.

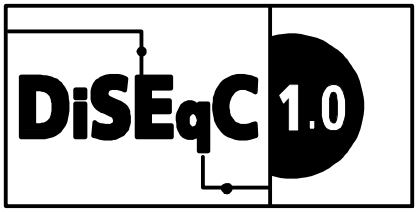
	NO TEXT	WITH TEXT
LEVEL 1.0 STANDARD		
LEVEL 1.0 REVERSED		
LEVEL 1.1 STANDARD		
LEVEL 1.1 REVERSED		

Table 1: DiSEqC™ Logos

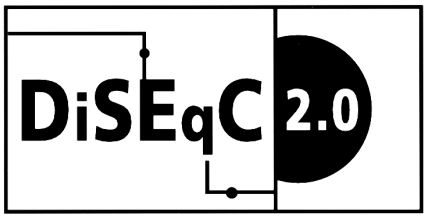
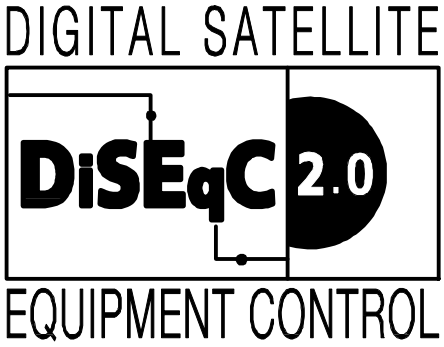
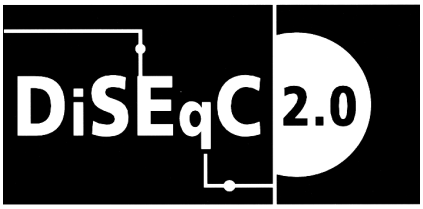
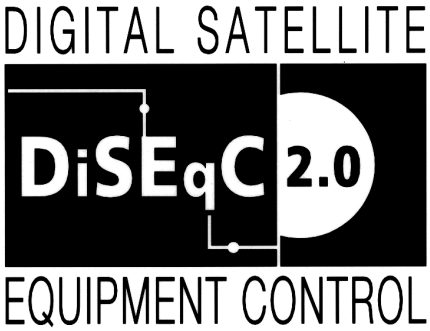
	NO TEXT	WITH TEXT
LEVEL 1.2 STANDARD		
LEVEL 1.2 REVERSED		
LEVEL 2.0 STANDARD		
LEVEL 2.0 REVERSED		

Table 1: DiSEqC™ Logos

Annex A. Levels of DiSEqC™ Implementation

At this time there are three levels of DiSEqC™ currently defined, although in the future these may be extended further.

1. **DiSEqC™ Tone Burst**

   This basic level is for products only using the simple Tone Burst commands, it applies to both receivers accessories alike.

   This level of implementation DOES NOT QUALIFY FOR THE USE OF THE DiSEqC™ LOGO.

   In all literature clear distinction should be made between DiSEqC™ Tone Burst and other levels of DiSEqC™ implementation.

2. **DiSEqC™ Level 1.x**

   These levels are for "One-was" DiSEqC™, which is primarily for Tuner-receiver/IRDs which do not support a return path. For details of the sub-levels, see the table below. In the case of (slave) accessories, these levels are NOT RECOMMENDED because the hardware and software costs of implementing the Reply facility are small compared with the potential system benefits.

3. **DiSEqC™ Level 2.x**

These levels are for products which support "Two-Way" DiSEqC™ (i.e. reply messages). For details of the sub-levels, see table below).

LEVEL	DIRECTION	REQUIRED FUNCTIONALITY/APPLICATIONS	
		Receivers	Accessories
DiSEqC™ Tone Burst	One-Way	NOT RECOMMENDED	Simple analogue detection circuit
DiSEqC™ 1.0*	One-way	At least the control of the 4 "committed" switches, plus the capability of one repeat and the Tone Burst command	NOT RECOMMENDED (use level 2.0)
DiSEqC™ 1.1	One-way signals	As level 1.0 above plus the capability of the 4 "Uncommitted" switches,and transmission of up to 2 repeats and remote (head end) tuning mode	NOT RECOMMENDED for switches (use level 2.1) Use for Remote Controlled Head Ends
DiSEqC™ 1.2	One-Way signals	As level 1.1 above plus the capability of one-way positioner commands	NOT RECOMMENDED for switches Use for one-way Positioners
DiSEqC™ 2.0	Two-way	At least the control of the 4 "committed" switches, plus the capability of one repeat and the Tone Burst command, plus LNB L.O. frequency reading, one repeat.	For switches and LNBs with reply capability (e.g. using the Slave IC)
DiSEqC™ 2.1	Two-way	As level 2.0 above plus control of the 4 uncommitted switches, 2nd repeat, remote tuning mode	Device using the uncommitted switch commands

Please refer to the document *"Update and Recommendations for Implementation Version 2.1",, section 3., section 4.* and *section 5.*

Note: * The exact definition of DiSEqC™ level 1.0 is now being standardised through CENELEC as an amendment prA11 to EN 61319. See *"Annex B. Progress of CENELEC Standardisation" in document* Update and Recommendations for Implementation Version 2.1

Annex B. Model letter of conformity

Manufacturers Headed Paper

EUTELSAT
70, rue Balard
75502 Paris Cedex 15
France

Attn: Mr. G. Wilkinson

Letter of Conformity

Dear Sirs,

We, _____

(manufacturer's full name and address)

hereby state that the following product(s):

MODEL	TYPE	DiSEqC™ Level
Example ABC	Receiver	Level 1.0
Example XYZ	2 input Switch	Level 2.0

comply with the latest DiSEqC™ **Bus Specification version 4.2 to the indicated level of implementation. Two representative samples of each product, taken from mass production, are enclosed for your reference.**

In the event of any incompatibilities with other compliant DiSEqC™ products we agree to resolve these problems in a fair and reasonable manner with the other relevant manufacturer(s).

We agree to abide by the conditions of usage for the DiSEqC™ logo as indicated by EUTELSAT in the document "DiSEqC™ Logos and Their Conditions of Use" (February 25, 1998).

Yours sincerely,

COMPANY STAMP

signed on behalf of: _____

(manufacturer's full name & signature)