



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

CERTIFICADO DE HOMOLOGAÇÃO SUPLEMENTAR DE TIPO

(Supplemental Type Certificate)

NÚMERO 2009S11-07
(Number)

Este certificado, emitido com base na Lei nº 7565 "Código Brasileiro de Aeronáutica", de 19 de dezembro de 1986,
(This certificate, issued in the basis of the Law No. 7565 "Código Brasileiro de Aeronáutica", dated 19 December 1986,

é conferido ao (à): Technisonic Industries Limited.
(is granted to:)

240 Traders Boulevard East
Mississauga, Ontario
Canada L4Z 1W7

por ter a modificação ao projeto de tipo do produto abaixo citado, observadas as limitações e condições
(for having the change to the type design of the product mentioned below, with the limitations and conditions therefor as)

especificadas, satisfeito aos requisitos de aeronavegabilidade aplicáveis.
(specified hereon, met the applicable airworthiness requirements.)

Produto Original - Número do Certificado de Tipo:
(Original Product - Type Certificate No:)

* See attached ANAC Approved Model List (AML),
Rev. IR, dated 12 Nov. 2009, or later approved
revision.

Fabricante: *
(Manufacturer:)

Modelo(s): *
(Model(s):)

DESCRIÇÃO DA MODIFICAÇÃO AO PROJETO DE TIPO:

(Description of Type Design Change:)

Installation of Technisonic Industries Limited Transceiver as defined on attached ANAC Approved Model List (AML) for CHST No. 2009S11-07, Rev. I.R., dated 12 Nov. 2009, or later approved revision.

See continuation sheet for applicable data.

This CHST validates in Brazil the STC # SH97-10, issued by TCCA (Canada).

LIMITAÇÕES E CONDIÇÕES:

(Limitations and Conditions:)

See continuation sheet for applicable data.

DATAS:

(Dates of:)

Do Requerimento: 29 Sep. 2009
(Application:)

Da emissão: 12 Nov. 2009
(Issue:)

Da reemissão:
(Reissue:)


ADEMIR ANTÔNIO DA SILVA

Gerente Geral, Certificação de Produto Aeronáutico
(Manager, Aeronautical Product Certification)

 **FLÁVIO L. L. MOUTINHO**


DINO ISHIKURA

Superintendente de Aeronavegabilidade
(Airworthiness Superintendent)



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DESCRIÇÃO DA MODIFICAÇÃO AO PROJETO DE TIPO CONT. :
(Description of Type Design Change cont. :)

LIST OF ELIGIBLE SYSTEMS:

- TFM-138, -138A, -138B, -138C FM Transceiver
- TFM-403 UHF/FM Transceiver
- TFM-500 VHF/UHF FM Transceiver
- TFM-30 VHF low band FM Transceiver
- RC-500 Remote Control
- TDFM-136 VHF/FM Transceiver
- TFM-550 VHF High/VHF Low/UHF Multi-band Transceiver
- RC-550 VHF/UHF/VHF Low FM Transceiver Remote Control Head
- ATC-550 Antenna Tuner Controller
- TDFM-600/6000 Series VHF/UHF Low/UHF High/800 MHz Multi-band Transceiver
- RC-6000 Remote Control Head
- TFM-530 VHF/VHF Low FM Multi-band Transceiver
- TFM-566 VHF/VHF Low FM Multi-band Transceiver
- AMS-6000 Audio Mode Selector
- TFM-66 VHF Low Band FM Transceiver
- TFM-556 VHF High/VHF Low/UHF Multi-band FM Airborne Transceiver
- TDFM-7000 VHF/UHF Low/UHF High/800 MHz Multi-band Transceiver
- RC-7000 Remote Control Head
- TDFM-7300 VHF Low/VHF High/UHF Low/UHF High/800 MHz Multi-band Transceiver
- RC-7300 Remote Control Head
- TDFM-136A Transceiver

LIMITAÇÕES E CONDIÇÕES:
(Limitations and Conditions:)

- I. The approval of this type design change should not be extended to other aircraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in Type Design, will introduce no adverse effect upon the airworthiness of that aircraft.



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LIMITAÇÕES E CONDIÇÕES:
(Limitations and Conditions:)

- II. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.
- III. Parts must be fabricated in accordance with Manufacturing Data listed below, or later TCCA approved revisions:

The TFM-138, -138A, -138B and -138C FM Transceiver models are manufactured to TIL Engineering Release 921012, Rev. B, dated 24 Nov. 1997;

The TFM-403 UHF/FM Transceiver model is manufactured to TIL Engineering Release 941059, Rev. A, dated 27 Oct. 1999, or later TCCA approved revision;

The TFM-500 VHF/UHF FM Transceiver model is manufactured to TIL Engineering Release 971083, Rev. N/C, dated 16 Mar. 1999, or later TCCA approved revision;

The TFM-30 VHF low band FM Transceiver model is manufactured to TIL Engineering Release 961082, Rev. N/C, dated 19 Apr. 1999, or later TCCA approved revision;

The Remote Control RC-500 model is manufactured to TIL Engineering Release 991097, Rev. N/C, dated Nov. 17, 1999, or later TCCA approved revision;

The TDFM-136 VHF/FM Transceiver model is manufactured to TIL Engineering Release 981087, Rev. N/C, dated 13 Jan. 2000, or later TCCA approved revision;

The TFM-550 VHF High/VHF Low/UHF Multi-band Transceiver model is manufactured to TIL Engineering Release 991095, Rev. N/C, dated 01 Mar. 2000, or later TCCA approved revision;

The RC-550 VHF/UHF/VHF Low FM Transceiver Remote Control Head model is manufactured to TIL Engineering Release 991099, Rev. N/C, dated 27 Mar. 2000, or later TCCA approved revision;



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The ATC-550 Antenna Tuner Controller model is manufactured to TIL Engineering Release 991102, Rev. N/C, dated 20 Mar. 2000, or later TCCA approved revision;

The TDFM-600/6000 Series VHF/UHF Low/UHF High/800 MHz Multi-band Transceiver is manufactured to TIL Engineering Release 011210, Rev. A, dated 20 June 2004, or later TCCA approved revision;

The Remote Control RC-6000 model is manufactured to TIL Engineering Release 021213, Rev. N/C, dated 17 Oct. 2002, or later TCCA approved revision;

The TFM-530 VHF/VHF Low FM Multi-band Transceiver model is manufactured to TIL Engineering Release 031216, Rev. N/C, dated Apr. 2003, or later TCCA approved revision;

The TFM-566 VHF/VHF Low FM Multi-band Transceiver model is manufactured to TIL Engineering Release 031217, Rev. N/C, dated Apr. 2003, or later TCCA approved revision;

The AMS-6000 Audio Mode Selector model is manufactured to TIL Engineering Release 031220, Rev. N/C, dated Aug. 2003, or later TCCA approved revision;

The TFM-66 VHF Low Band FM Transceiver model is manufactured to TIL Engineering Release 031218, Rev. N/C, dated 19 Sep. 2003, or later TCCA approved revision;

The TFM-556 VHF High/VHF Low/UHF Multi-band FM Airborne Transceiver model is manufactured to TIL Engineering Release 031219, Rev. N/C, dated 23 Sep. 2003, or later TCCA approved revision;

The TDFM-7000 VHF/UHF Low/UHF High/800 MHz Multi-band Transceiver is manufactured to TIL Engineering Release 051240-1, Rev. --, dated 03 Feb. 2006 or Engineering Release 051240-2, Rev. --, dated 03 Feb. 2006 or Engineering Release 051240-3, Rev. --, dated 03 Feb. 2006 or Engineering Release 051240-4, Rev. --, dated 03 Feb. 2006 or later TCCA approved revision;



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The RC-7000 remote control is manufactured to TIL Engineering Release 051242-1, Rev. --, dated 19 June 2006 or Engineering Release 051242-2, Rev. --, dated 19 June 2006 or later TCCA approved revision;

The TDFM-7300 VHF Low/VHF High/UHF Low/UHF High/800 MHz Multi-band Transceiver is manufactured to TIL Engineering Release 061245-1 Rev. - dated 27 Oct. 2008, or Engineering Release 061245-2 Rev. - dated 27 Oct. 2008, or Engineering Release 061245-3 Rev. - dated 27 Oct. 2008, or Engineering Release 061245-4 Rev. - dated 27 Oct. 2008, or later TCCA approved revision;

The RC-7300 remote control is manufactured to TIL Engineering Release 061247-1 Rev. - -, dated 22 Dec. 2008 or Engineering Release 061247-2 Rev. --, dated 22 Dec. 2008 or later TCCA approved revision;

The TDFM-136A Transceiver is manufactured to TIL Engineering Release 091258-1-10 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-1-11 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-2-10 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-2-11 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-3-10 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-3-11 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-4-10 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-4-11 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-5-10 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-5-11 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-6-10 Rev. -, dated 22 Apr. 2009, or TIL Engineering Release 091258-6-11 Rev. -, dated 22 Apr. 2009, or later TCCA approved revision.

IV. Parts must be installed in accordance with Installation Data listed below, or later TCCA approved revisions:

For the TFM-138, -138A and -138B, (does not include TFM-138, s/n 1540 and up, TFM-138B, s/n 1500 and up) installation must be in accordance with TIL Installation and Operating Manual 95RE177, Rev. E, dated April 1998, or later TC approved revision.



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For the TFM-138B, installation must be in accordance with TIL Installation and Operating Instructions Manual 97RE221, Rev. N/C, dated November 1997, or later approved revision.

For the TFM-138C, installation must be in accordance with TIL Installation and Operating Instructions Manual 96RE192, Rev. B, dated January 1997, or later TC approved revision.

For the TFM-138 (s/n's 1540 and up with F10-B Software), installation must be in accordance with TIL Installation and Operating Instructions Manual 98RE229, Rev. N/C, dated March 1998, or later TC approved revision.

For the TFM-403, installation must be in accordance with TIL Installation and Operating Instructions Manual 95RE175, Rev. A, dated July 1998, or later TC approved revision.

For the TFM-500, installation must be in accordance with TIL Installation and Operating Instructions Manual 98RE243, Rev. N/C, dated May 1999, or later TC approved revision.

For the TFM-30, installation must be in accordance with TIL Installation and Operating Instructions Manual 98RE244, Rev. N/C, dated August 1999, or later TC approved revision.

For the RC-500, installation must be in accordance with TIL Installation and Operating Instructions Manual 99RE260, Rev. N/C, dated January 2000, or later TC approved revision.

For the TDFM-136 VHF/FM Transceiver, installation must be in accordance with TIL Installation and Operating instructions Manual 99RE255, Rev. A, dated March 2000, or later TC approved revision.

For TFM-550 VHF High/VHF Low/UHF Multi-band FM Transceiver, installation must be in accordance with TIL Installation and Operating Instructions Manual 99RE262, Rev. A, dated April 2000, or later TC approved revision.



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(Limitations and Conditions:)

For the RC-550 VHF/UHF/VHF Low FM Transceiver Remote Control Head, installation must be in accordance with TIL Installation and Operating Instructions Manual 00RE270, Rev. N/C, dated March 7, 2000, or later TC approved revision.

For the ATC-550 Antenna Tuner Controller, installation must be in accordance with TIL Installation and Operating Instructions Manual 00RE269, Rev. A, dated May 8, 2000, or later TC approved revision.

For the TDFM-600/6000 Series VHF/UHF Low/ UHF High/800 MHz Multi-band Transceiver, installation must be in accordance with TIL Installation and Operating Instructions Manual 01RE293, Rev. F, dated July, 2004, or later TC approved revision.

For the RC-6000, installation must be in accordance with TIL Installation and Operating Instructions Manual 02RE299, Rev. A, dated November 2002, or later TC approved revision.

For the TFM-530 VHF/VHF Low FM Multi-band Transceiver, installation must be in accordance with TIL Installation and Operating Instructions Manual 03RE317, Rev. B, dated September, 2003, or later TC approved revision.

For the TFM-566 VHF/VHF Low FM Multi-band Transceiver, installation must be in accordance with TIL Installation and Operating Instructions Manual 03RE318, Rev. B, dated September, 2003, or later TC approved revision.

For the AMS-6000 Audio Mode Selector, installation must be in accordance with TIL Installation and Operating Instructions Manual 03RE325, Rev. N/C, dated June, 2003, or later TC approved revision.

For the TFM-66 VHF Low Band FM Transceiver, installation must be in accordance with TIL Installation and Operating Instructions Manual 03RE320, Rev. N/C, dated March, 2003, or later TC approved revision.



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For the TFM-556 VHF High/VHF Low/UHF Multi-band FM Airborne Transceiver, installation must be in accordance with TIL Installation and Operating Instructions Manual 03RE328, Rev. N/C, dated September, 2003, or later TC approved revision.

For the TDFM-7000 VHF/UHF Low/ UHF High/800 MHz Multi-band Transceiver, installation must be in accordance with TIL Installation and Operating Instructions Manual 05RE375, Rev. N/C, dated December, 2005, or later TC approved revision.

For the RC-7000, installation must be in accordance with TIL Installation and Operating Instructions Manual 06RE377, Rev. N/C, dated June 2006, or later TCCA approved revision.

For the TDFM-7300 30-50 MHz/VHF/UHF Low/UHF High/800MHz Multi-band Transceiver, installation must be in accordance with TIL Installation and Operating Instructions Manual 08RE389, Rev. A, dated July 2008, or later TCCA approved revision.

For the RC-7300, installation must be in accordance with TIL Installation and Operating Instructions Manual 08RE400 Rev. N/C, dated November 2008, or later TCCA approved revision.

For the TDFM-136A, installation must be in accordance with TIL Installation Instructions 09RE404, Rev. C, dated June 2009, or later TCCA approved revision.

- V. Instructions for Continued Airworthiness (ICA), as defined on Maintenance Data listed below, or later TCCA accepted revisions are required for these systems installation:

Maintenance of the TDFM-600/6000 Series VHF/UHF Low/ UHF High/800 MHz Multi-band Transceiver, and RC-6000 Remote Control Head must be in accordance with Technisonic Industries Limited Instructions for Continued Airworthiness MMS02090-1 Rev. A, accepted 12 Dec. 2003, or later TCCA accepted revisions.



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Maintenance of the TFM-530 and TFM-566 VHF/VHF Low FM Transceiver must be in accordance with Technisonic Industries Limited Instructions for Continued Airworthiness MMS03055-1 Rev. N/C, accepted 07 Oct. 2003, or later TCCA accepted revisions.

Maintenance of the AMS-6000 Audio Mode Selector must be in accordance with Technisonic Industries Limited Instructions for Continued Airworthiness MMS02090-1 Rev. A, accepted 12 Dec. 2003, or later TCCA accepted revisions.

Maintenance of the TFM-66 VHF Low Band FM Transceiver and TFM-556 VHF High/VHF Low/UHF Multi-band FM Airborne Transceiver must be in accordance with Technisonic Industries Limited Instructions for Continued Airworthiness MMS03099-2 Rev. N/C, accepted 05 Feb. 2004, or later TCCA approved revisions.

- VI. A copy of this Certificate and the ANAC Approved Model List (AML) for CHST No. 2009S11-07 shall be maintained as part of the permanent records of the modified aircraft.

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AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - ANAC

ANAC APPROVED MODEL LIST
FOR CHST 2009S11-07

Item	Aircraft Make	Aircraft Model	Type Certification Number
1	Bell Helicopter Textron Canada	204 B, 205 A-1	H1SW (FAA)
2	Bell Helicopter Textron Canada	222, 222 B, 222 U, 230, 430	8107 (ANAC)
3	Bell Helicopter Textron Canada	206 A, 206 B, 206 L-1, 206 L-3, 206 L-4	H2SW (FAA)
4	Bell Helicopter Textron Canada	407	9603 (ANAC)
5	Bell Helicopter Textron USA	214 B, 214 B-1	8007 (ANAC)
6	Bell Helicopter Textron USA	212	H4SW (FAA)
7	Bell Helicopter Textron USA	412	8103 (ANAC)
8	Costruzioni Aeronautiche G. Agusta S.P.A	A109 A, A109 A II	9003 (ANAC)
9	Enstrom Helicopter Corporation	480	9411 (ANAC)
10	Eurocopter Deutschland GMBH	BO105 C, BO105 S	H3EU (FAA)
11	Eurocopter Deutschland GMBH	BK117 A-3, BK117 A-4, BK117 B-1, BK117 B-2	9209 (ANAC)
12	Eurocopter France	EC 120 B	1999T04 (ANAC)
13	Eurocopter France	SA341 G	H6EU (FAA)
14	Eurocopter France	SA318 C	7H1 (FAA)
15	Eurocopter France	AS332 L, SA330 J	7902 (ANAC)
16	Eurocopter France	AS350 B	H9EU (FAA)
17	Eurocopter France	AS350 B1, AS350 B2, AS350 B3, AS350 BA	8812 (ANAC)
18	Eurocopter France	SA365 N	8405 (ANAC)
19	Eurocopter France	AS355 F, AS355 F1, AS355 F2	8809 (ANAC)
20	MD Helicopters, Inc. (MDHI)	500 N, 600 N	9204 (ANAC)
21	MD Helicopters, Inc. (MDHI)	369, 369 HS, 369 D, 369 E	H3WE (FAA)
22	Robinson Helicopter Company	R44	9402 (ANAC)
23	Sikorsky Aircraft	S-61 N	1H15 (FAA)
24	Sikorsky Aircraft	S-76 A, S-76 C	7906 (ANAC)

Note: The manufacture, installation and maintenance of parts must be performed according to the documents listed on items III, IV and V of Limitations and Conditions.

ANAC Approved: _____


Ademir Antônio da Silva

Gerente-Geral, Certificação de Produto Aeronáutico
(General Manager, Aeronautical Product Certification)


FLÁVIO L. L. MOUTINHO

ANAC Approved Date: **12 Nov. 2009**

Revision: **I.R.**