DATE	SYM	RELEASE	Au th.	DR	CK
05-17-00	-	RELEASE	DQ	DF	AM
03-08-01	-	DCN 1603	DQ	DF	PW
07-31-01	A	DCN 1757	DQ	DF	RJ
08-14-02	A	DCN 2052	DQ	DF	PW
08-05-03	A	DCN 2246	[illegible]	[illegible]	[illegible]

ARTEX AIRCRAFT SUPPLIES, INC.
14405 KEIL ROAD NE, AURORA, OR 97002

DRAWING NO: 571-0999-01

DATE: 05-17-00

APPROVED BY: [illegible]

REVISION: A

DESCRIPTION:

SPECIAL INSTRUCTIONS FOR ELT'S PROGRAMMED FOR 24-BIT AIRCRAFT ADDRESS USING "AUTO-PROGRAMMING" FUNCTION

NOTES:

1) This is the cover sheet for the 571-0999-01 document. It is not to be used as part of the document, and is stored in a separate file: "09990101A2in the \engineer\drawings\571\ 571-0999-01\ directory. The print master for the actual instruction is saved as "571-0999-01A2 within the same directory. Instruction 571-0999-01 is used with the C406-2, C406-2HM, B406-4, G406-2 and G406-4 models of 406 MHz ELT's.

2) Print document on standard 20# paper. (8 1/2 x 11"). *

3) Color: Light Blue (exact shade may vary but should be light colored).

4) Staple sheets in upper left-hand corner.

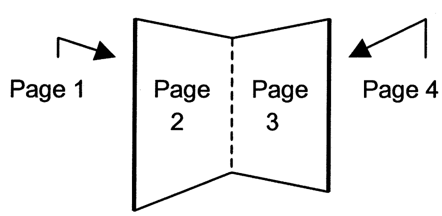
5) Print Format: Double-sided, black ink.

NOTE: The print master is printed on white paper and is single sided. The print master may also be provided electronically by either e-mail or disk for purposes of printing out of house.

* **NOTE:** Document may also be printed on 20# 11 x 17" paper.

Color : Light Blue (exact shade may vary but should be light colored).

Print double-sided in black ink with pages 2 and 3 on front and pages one and 4 on back side. Fold in half to form booklet.



A Chelton Group company

SPECIAL INSTRUCTIONS FOR ARTEX 406 MHz ELT's PROGRAMMED FOR 24 BIT AIRCRAFT ADDRESS USING "AUTO-PROGRAMMING" FUNCTION

APPLICABILITY: This instruction is applicable to all revisions for each ELT model listed below:

C406-2 (453-5000)	**C406-2HM (453-5001)**	**B406-4 (453-5004)**
C406-3 (453-5006)	**G406-2 (453-5102)**	**G406-4 (453-5012)**

This instruction applies only to these models.

PURPOSE: To ensure the correct registration of 406 MHz ELT's programmed using the "auto-programming" feature of the ELT/NAV Interface Series (Artex P/N 453-6500 or 453-6501).

DESCRIPTION: This instruction will inform the installer of any Artex ELT using an ELT/NAV Interface to "auto-program" the ELT with the 24-Bit Aircraft Address how to verify the 15 digit Hex ID used to register the ELT and is intended as a supplement to the ELT Installation and Operation Manual.

COMPLIANCE: Perform check as soon as possible after installation of ELT. The steps outlined in this instruction **MUST** be performed to ensure proper registration of the 406 MHz ELT. While this instruction is intended to apply mainly to new installations, any installation where the accuracy of the original testing and registration is in question should also have the steps outlined in this procedure performed.

MATERIALS: Sartech Test Set (Artex P/N 453-0131 or equivalent), Test Coax Cable (Artex P/N 611-9010 or equivalent), in-line 30-dB atternuator (500-3000 or equivalent). These materials are contained in Artex Kit 455-9010 (Sartech Beacon Test Set Kit).

REFERENCE: This document may be used in lieu of Artex Instruction Sheet 571-9010.

PUBLICATIONS AFFECTED: 570-5000, 570-5003, 570-5004, 570-5012, 570-5100,570-4602,570-6501

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INSTRUCTIONS: The installation of an Artex 406 MHz ELT programmed for 24 Bit Aircraft Address protocol requires the use of an Artex ELT/NAV Interface (453-6500 or 453-6501) when the "auto-program" function is desired. This type of installation requires that the aircraft's unique 24 Bit Address (sometimes referred to as the "octal code") be wired to the P1 (31-pin) connector of the ELT/NAV Interface. When properly connected, the ELT/NAV Interface will automatically program the ELT with this address. It is required that the installer test the 406 MHz output to determine the new programming of the ELT as expressed by the 15 digit Hexadecimal ID. This 15-digit number is used to register the ELT with the appropriate 406 MHz ELT registration authority. In the US, the National Oceanic and Atmospheric Administration (NOAA) maintains a database of registered ELT's. **The 15-digit number used for 24-bit long message registration purposes is not to contain position data and should end with the 5 digits "FFBFF".**

The following steps should be taken to properly test the 406 MHz output:

NOTE: Any extended testing of the ELT should be performed inside of an RF screen room or container.

1. After the ELT and ELT/NAV Interface installation is complete and all wiring has been checked, apply power (+28 Vdc) to the ELT/NAV Interface (the ELT will remain **OFF**). The aircraft address will be automatically programmed into the ELT within the next 30 seconds. Monitor the ELT for the next 2 minutes. If the ELT/NAV Interface is unable to program the address to the ELT, the light on the ELT and cockpit panel will begin to flash rapidly after 2 minutes. If this error occurs, clear the ELT by cycling the switch from **OFF** to **ON** and back to **OFF**. This error occurs when either of these two conditions exists:

    1) The ELT is not programmed as a long message 24-bit address unit and is not able to accept the aircraft address. Verify that "999" follows the part number on the ELT product label.
    2) There is a wiring error between the ELT/NAV Interface and the ELT. Verify the wiring.

2. If no error occurs, the ELT has been programmed with the new aircraft ID. The ELT now needs to be checked to determine the new 15 digit Hex ID that needs to be labeled and registered. Ensure that the ELT/NAV Interface is powered **OFF** at least 1 minute before testing of the ELT begins. This will ensure that position data will not be included as part of the 406 MHz transmission. Latitude and longitude should not be checked at this time. **NOTE:** Verification that the ELT is receiving valid navigation data from the ELT/NAV Interface is checked as part of the "self-test" whenever the ELT is turned OFF after being activated. With the ELT/NAV Interface and the navigation source active, the ELT will give 5 flashes at turn off if no navigation data is being received by the ELT.

3. Disconnect both antenna coax cables at the ELT.

4. Terminate 121.5 MHz (BNC) output with a 50-ohm terminator. (See Figure 1).

5. Connect Test Coax (611-9010) to 406 MHz (TPS) output.

6. Connect 30-dB atternuator (500-3000) to input of Sartech Tester.

7. Connect BNC end of Test Coax to 30-dB attenuator.
   WARNING: Use of Test Set without 30-dB attenuator may damage Test Set.

8. Press "ON" button on Test Set keypad. Main menu will appear as shown below:

SARSAT BEACON TESTER		
Recv	**V**iew	**Q**uit
Erase	**S**etup	**O**utput

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9. Press “R” on Test Set to receive the 406 MHz signal. Activate ELT by placing local switch to **“ON”**, allow the ELT to transmit for approximately 2 seconds (or 3 sweeps of the 121.5 MHz tone) and then move the ELT local switch to **"OFF",** the "self test" function of the ELT is used for these models of ELT to read the programming. **NOTE:** The ELT light will blink once after turn off, pause and then flash 5 times to indicate that no navigation data is present- this is normal.

10. Watch the screen on the SARSAT Tester, when a 406 MHz signal is received the tester will beep and the screen will show “Decoding Message”.

11. If the SARSAT Tester receives a good signal the receiver will beep again and show “S'Test OK” and then return to the original screen shown above.

12. If the Tester doesn’t receive a good signal, repeat Step 9, the 406 MHz signal transmits the "self test" every time the ELT is turned "**OFF**".

13. Press “V” for View on the SARSAT Tester.

14. The Tester will show the following screen: (Note: Time and Date will vary)

↑ ↓ ← → F L Q	EP
Mesg #1	Received At
7:10:30 13 FEB 1999	
S' TEST OK	

15. Press the “right” arrow key → (upper right hand of key pad) to scroll to next screen which should show the following:

↑ ↓ ← → F L Q		EP
Mesg #1	Frequency:	
406.025 MHz		PASS
COUNTRY:	366	USA

The country and country code shown on this screen will need to be placed on the ELT product label.

16. Press the “right” arrow key → again to scroll to next screen which should show the following:

↑ ↓ ← → F L Q	EP
Mesg #1	96E3ADA9A5
7FDFFC7883F583E0FAA8	
ID: 2DC75B534AFFBFF	

The 15 digit ID will be the last line on the screen above (for this example "2DC75B534AFFBFF"). This is what needs to be on the label that is placed on the ELT and what is registered.

17. Press the “right” arrow key → again to scroll to next screen which should show the following

↑ ↓ ← → F L Q	EP
Mesg #1	STD LOC
ELT + EXT GPS	
AIRCRAFT # ADA9A5	

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The Aircraft # displayed on the last line is the Hexidecimal equivalent of the 24-bit address that the ELT/NAV Interface is strapped for (for this example "ADA9A5" is the same as octal 53324645).

18. There are additional screens that can be viewed but they are not required for purposes of this exercise and should be ignored.

19. To turn off the SARSAT Tester, press "Q" to get back to the main menu and then"Q" (for Quit).

Please note that the 15 digit hex code received in the example above ends with **"FFBFF"**. All ELT's programmed with Standard Location Protocol will end with **"FFBFF"**. 15 digit Hex ID's used for registration purposes of Artex 24 Bit Aircraft Address programmed ELT's should always end with **"FFBFF"**.

After obtaining the new 15 digit hex code from the steps performed above it is essential that the ELT be registered. Registration forms for the US can be obtained from Artex or by calling NOAA at 1-888-212-SAVE or visit the NOAA web site at www.sarsat.noaa.gov/ and click on "Beacon Registration Forms".

The ELT will also need to be labeled with this new 15 digit hex code. Enter the number in the space provided on the ELT product label or use the label (591-0999) provided in the install kit to place over any existing 15 digit hex code that may be on the ELT label. Enter country and country code in space provided on product label or use label 591-0429-01 (available from Artex) to place over any existing information.

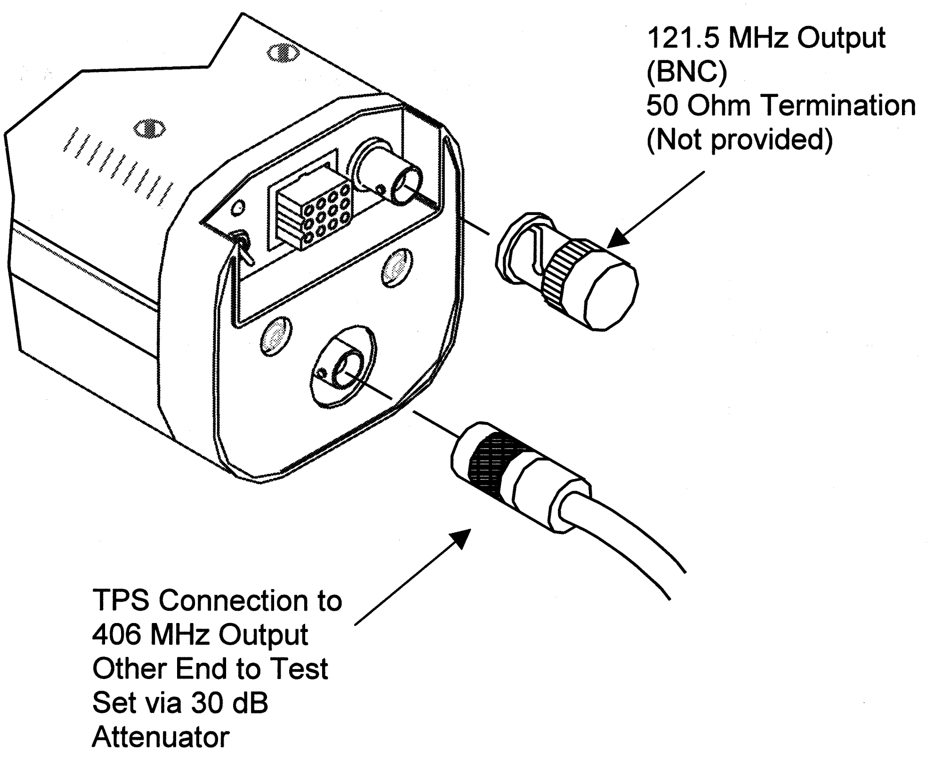

FIGURE 1

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