SERVICE BULLETIN
S.B. NO. TR-220 01/2011

Software Changes for Test Sets Containing Software Revision 4.10 or Greater

All TR-220 Multi-Function Test Sets

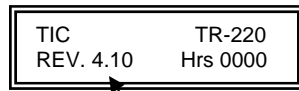| Date of Service Bulletin	Oct 11/11

REASON:

To alert owners and operators of the Tel-Instrument Electronics Corp. TR-220 Multi-Function Test Sets of a software change available.

Tel-Instrument Electronics Corp periodically updates the software and hardware to reflect customer requests, add enhancements, or to correct minor deficiencies. A new software release for the above mentioned Test Set will provide the Operator/Owner with changes allowing operators to test IAW RTCA DO- 260A, DO-240(2) (for Test Sets being upgraded from 4.10) and adding RTCA DO-260B testing capability for Test Sets already having revision 5.00 or greater.

1.   **EFFECTIVITY**

This Service Bulletin applies to all TR-220 Test Sets with software revision **4.10 or greater** only.

Operators can verify the internal software revision installed by turning *ON* the Test Set and observing the *START PAGE*, which is momentarily displayed on start up.

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TIC            TR-220
REV. 4.10      Hrs 0000
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Software Revision

If your Test Set display indicates software revision **4.10 or greater**, the Test Set is eligible for the upgrade. All other software revisions lower than **4.10** are not eligible for this upgrade.

2.   **SYNOPSIS/PURPOSE**

This Service Bulletin describes the added capabilities that were incorporated and instructions on how to have the Service Bulletin installed.

Tel-Instrument Electronics Corp. has upgraded the software to include the following new testing capabilities:

Added new capabilities and tests that fulfill the testing requirements for customers certifying aircraft equipped with ADS-B Transmitter/Receivers that require testing capability to comply with RTCA DO-260A/DO-240(2) and DO-260B.

Tests added for DO-260A/DO-240(2) Include but not limited too:

- BDS 0,5
- BDS 0,8
- BDC 0,9 Subnet 1, 2, 3, 4
- Velocity Hex
- DF 17 MS Address
- Interrogator Identifier
- Latitude, Longitude
- Airborne Squitter Status Bits – No Info, SPI, Alerts, Mode A 4096 Code
- Squitter Period, Squitter Type (Ext Squitter Airborne Position Report)
- TYPE 28 Report
- BDS 6,1
- TYPE 29 Report
- BDS 6,2 Target State and Status
- Type 31 Report (BDS 6,3)
- Horizontal Position Integrity Information

Tests added for DO-260B include but not limited too:

- o Aircraft Status Type 28 - Type 1 General Emergency Report and Type 2, Active RA
- o Type 29 – 6,2 Squitter TCAS/ACAS Operational Status, TCAS/ACAS RA, FMC/MPC/FCU Altitude, Pressure and Heading,
- o Type 29 6,2 ME Field, Squitter type, Target State and Status
- o Type 31 6,3 Aircraft Operational Status
- o Horizontal Position Status (Nap) Navigation Integrity Category (NIC) for DO-260B
- o Latitude/Longitude Compare for position, velocity and system accuracy.
- o ADS-B IN – Decode and display aircraft ADS-B RX capability in Type 31 Subtype 0.
- o GPS Antenna Offset.

3. CORRECTIVE ACTION

Work to be performed requires the replacement of the preprogrammed memory chip containing the current software revision and possible hardware changes based on the current configuration and manufacture date of the Test Set.

All Test Sets will be upgraded to software revision 5.30.

Field Kits will **NOT** be made available and all work must be performed by Tel-Instrument Electronics Corp or a *"CERTIFIED" repair* facility.

It is recommended that this Service Bulletin be installed during the Test Sets next scheduled calibration. If an owner/operator desires to have the upgrade incorporated before the next calibration cycle, see paragraph "a" for instructions.

a) **PROCEDURES**

Print a copy of this Service Bulletin and ensure a copy is sent with the Test Set when shipping. Test Sets should be sent to the following CERTIFIED Service Centers for upgrade:

Conus: **Tel-Instrument Electronics Corp.**
1 Branca Road
East Rutherford, NJ 07073

Europe: **Muirhead Avionics**
3 Square One Heathrow
Southall Lane
Southall
UB2 5NH
United Kingdom
[+44] 20-8571-3422
[+44] 20 8843 6902 (fax)

4. APPLICABLE FEES

Depending on the current revision status of your Test Set, nominal fees may apply for this upgrade; please contact Tel-instrument or their appropriate Certified Repair Center for pricing and delivery.

All shipping, customs and broker fees are the responsibility of the owner/operator. Additional charges may apply if repairs are required; an estimate of repair will be sent to each customer for approval before any repair above and beyond the software upgrade is completed.

a)   All Test Sets with will be charged a nominal fee to update the hardware.

b)   Some older Test Sets may incur an additional charge for hardware Upgrades.

c)   Charges may also apply for Test Set received which require repair before an upgrade is performed.

Please Contact your Distributor or Tel-Instrument for pricing.

5.   COMPLIANCE

Installation of this Service Bulletin is ***NOT*** mandatory.

6.   PUBLICATIONS AFFECTED

Tel-Instrument Operational Manual for the TR-220 Revision "F" or earlier. Those customers incorporating this software upgrade will be provided an updated Operational Manual, Revision "G", detailing the new tests performed once released.

7.   FURTHER INFORMATION

You may contact Tel-Instrument Electronics Corp. at any time for further information regarding this procedure and change.

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