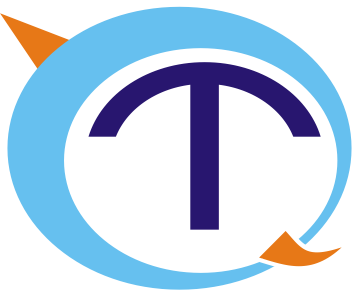


QTCS

Quick Turn Consultancy Solutions Private
Limited



Vision

**“Enabling Integrated Service for
Product Engineering & Manufacturing
Solutions”**



About Us

- Founding members have more than 100 man years of International and National working experience in the Electronic Industry between them
- Have working experience Electronics Industries right from the 90's
- Working with a customer base of over 100 from the length and breadth of product development life cycle .
- Have deep rooted contacts with the following segments
 - Horizontals: Design houses (independent and OEM's), EMS's and product manufacturing houses
 - Verticals: Telecom, Military, Computer, Mobile and Networking
- Understand the concept of Product development process integrating with supply chain
- QTCS Business Model allows to engage with the customer at the beginning of the product development stage through the PCB designs, proto and production fabrication and assembly services
- Strong knowledge on India EXIM (Export/Import) policy
- Excellent logistics and distribution network

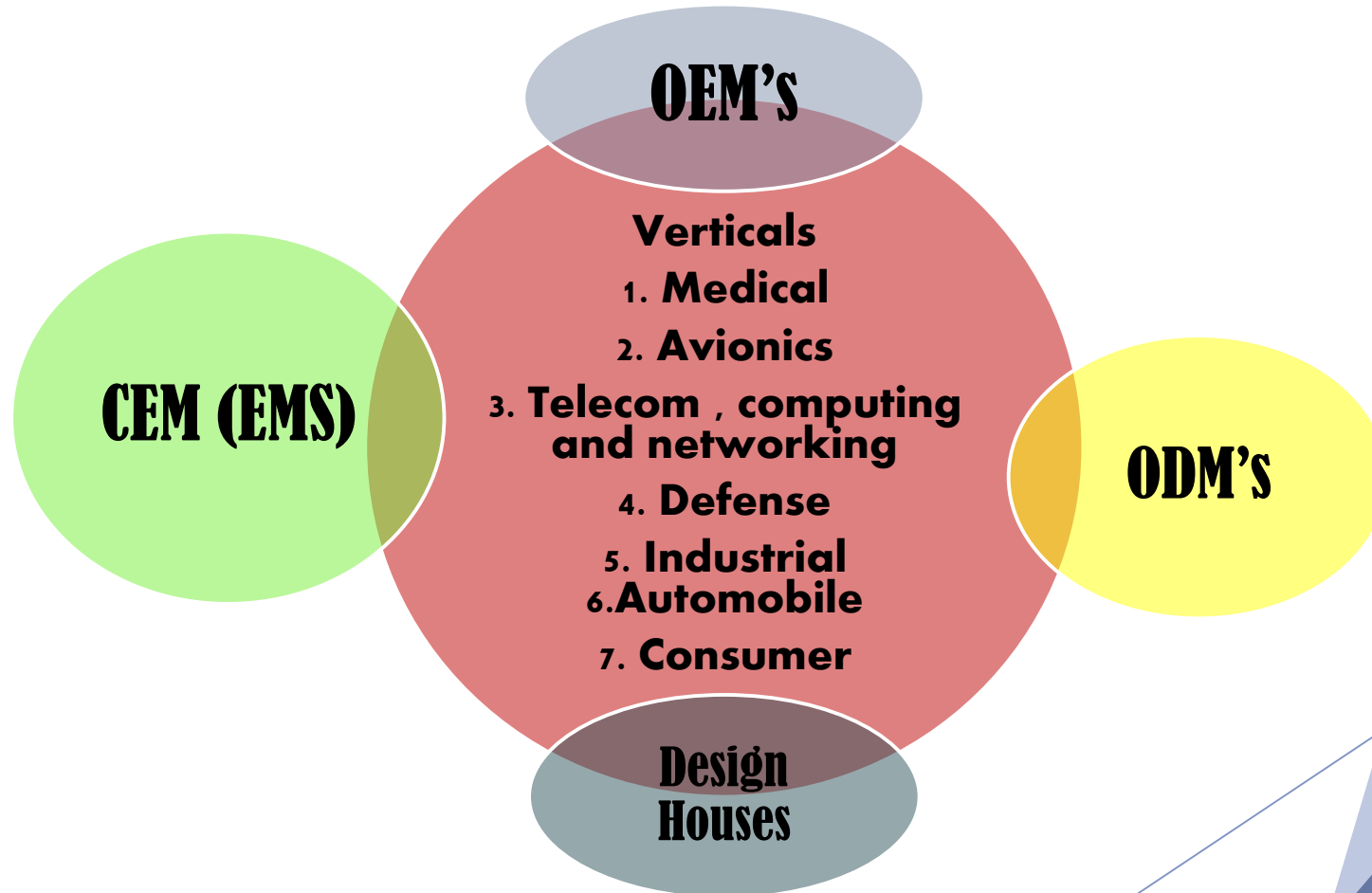


Future Plan

- Expand turnover and penetration of the Indian & SAARC market place
- Promote the total service concept and manage the supply chain of components and parts
- Use existing network to leverage portfolio
- Use references to attract new customers
- Attract western companies for available design expertise and boost manufacturing capabilities
- Build the image of the margin enabling B2B service provider



Market Segments





DATA SECURITY SOLUTIONS

▪ IT RELEATED

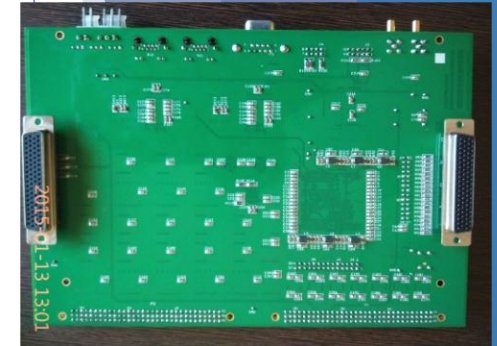
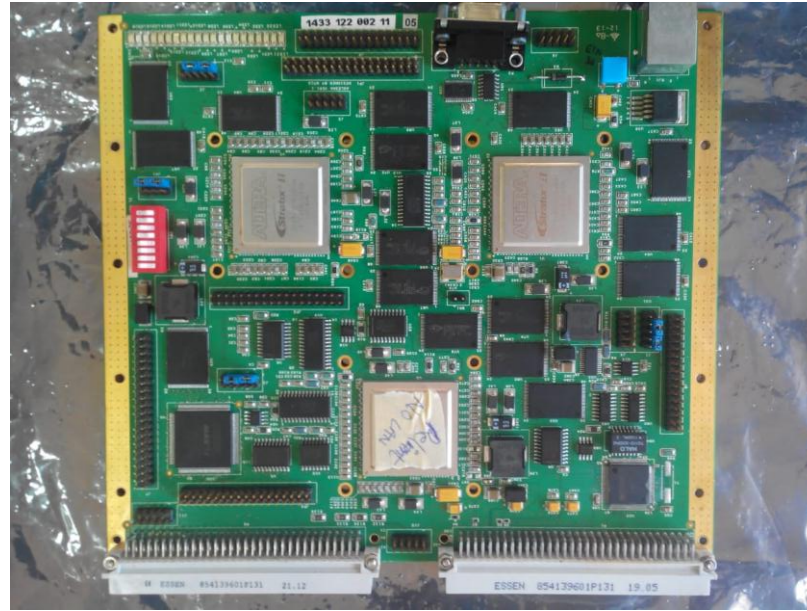
- Boot Encryption**
- Data Security Solutions**
- Geo Fencing (360° View Camera)**
- Virtual Fencing for Smart Phones and Smart devices**



QTCS Advantage

- Working experience with more than 200 customers in the Electronics Industries
- Represent couple of Fab house across the globe
- Certification
 - NADCAP
 - ISO9001& AS9100C
 - Fast Turn Around
 - IPC Class 3 Military
 - Latest Technology
 - ROHS

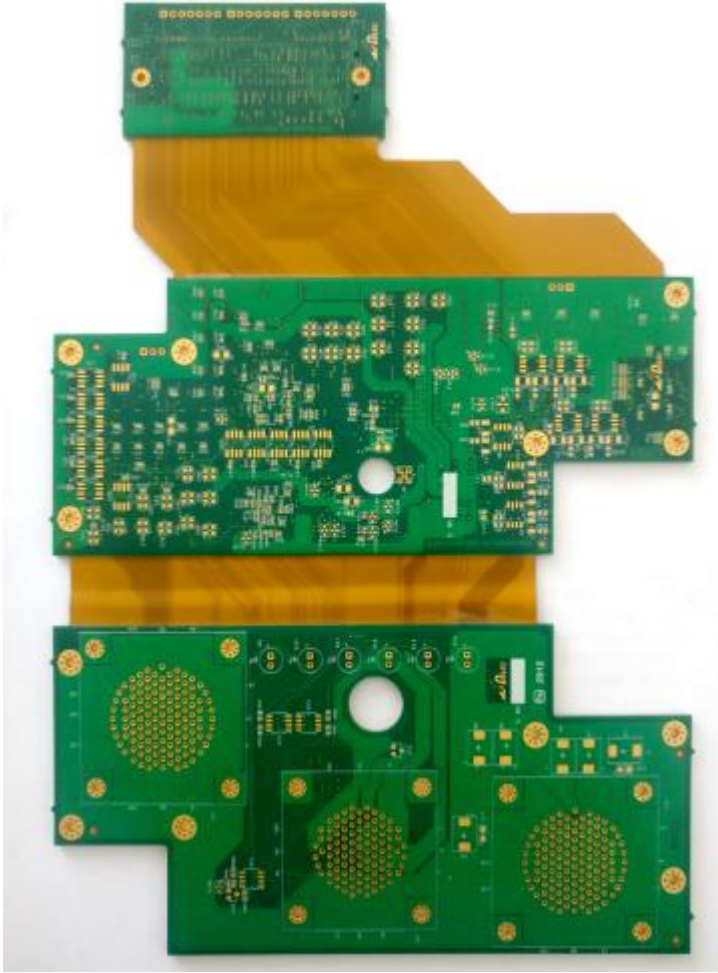
Aslesha Signal Processor PCBA and JIG



Aslesha is a multifaceted ground based S-Band 3D *Low Level Light Weight Surveillance Radar* for deployment in diverse terrains like plains, deserts, mountain tops and high altitude regions. Aslesha detects and tracks heterogeneous air targets, including helicopters, fighters and UAVs at low and medium altitudes. It provides accurate range, azimuth and height information for each target with electronically steerable multi-beam technology in elevation. The radar sweeps 360 degree in azimuth and 30 degree in elevation to provide air space awareness. Semi-distributed active aperture radar uses advanced VLSI and high-speed digital technologies like high efficiency T/R modules, DDS, digital receiver and programmable signal processor to provide 3D air space awareness with high accuracy, resolution and reliability.

Flexible Printed Circuit Boards

FOR DRDO and PSU





Fabrication and Assembly of
ANBDR_Tg Card for DARE



MDPC card for DRDO

Power supply board used for Medical equipment.



Mechanical box for ANBDR Card

Mechanical Solution



Thermal Management

Heatsink



**We are proud to be partnering with
Prudent for marketing their product
lines**

Prudent Products

SL NO	Product Name	Part no	Part of	Status	Remarks
Airborne LRUs					
1	Control and Conversion unit - 1TA	STA/1TA	LRU - FDR system of AN 32 aircraft	CEMILAC/RCMA approved	Around 30 units supplied to IAF
2	Amplifier and self test unit - 5TU	STA/5TU	LRU - FDR system of AN 32 aircraft	CEMILAC/RCMA approved	3 nos supplied
3	TCAS relay box	STA/32.30.7142.058.000	Sub system of Traffic Collision Avoidance LRU - AN 32 aircraft	CEMILAC/RCMA approved	3 nos supplied
4	IF Amp unit	STA/2.031.492	LRU - Part of DME Interrogator - AN 32 Aircraft	CEMILAC/RCMA approved	3 nos supplied
5	RF module	STA/2-248-152	LRU - Part of DME Interrogator - AN 32 Aircraft	CEMILAC/RCMA approved	Around 20 units supplied to IAF

SL NO	Product Name	Part no	Part of	Status	Remarks
Airborne LRUs					
6	Input Stage module	STA/2-027-132	LRU - Part of DME Interrogator - AN 32 Aircraft	CEMILAC/RCMA approved	Around 10 units supplied to IAF
7	Cockpit Temperature Senor (CTS)	4143 C 000	LRU - Part of Jaguar Aircraft	CEMILAC/RCMA approved	3 nos supplied
8	Yaw Damper unit - YDCU (Repair)	4889H2	LRU - Part of HAWK Aircraft	Repiar process approved by CEMILAC/RCMA	Around 40 nos repaired for IAF
9	Yaw Damper unit - YDCU (Indg item)	4889H2	LRU - Part of HAWK Aircraft	Final stage of Type approval	
10	Dual Anti collission Lamps with Driver	2LA002-760-00	LRU - Part of HAWK Aircraft	Final stage of Type approval	

SL NO	Product Name	Part no	Part of	Status	Remarks
Airborne LRUs					
11	Central warning panel display	KB921L560010	LRU - Part of HAWK Aircraft	Final stage of Type approval	
12	Communication managemant unit (CAMU) and 2 nos of ACP	T8102-16 and B8003-10	LRU - Part of HAWK Aircraft	Offered for type approval	
13	Cockpit Instrumentation Lighting panels - NVG compatible		LRUs - Helicopters	CEMILAC/RCMA approved	Around 15 sets supplied
14	TGT Amplifier (Repair)	VT1160-1	LRU - JAGUAR AIRCRAFT	Repiar process approved by CEMILAC/RCMA	Around 50 Nos repaired for

Ground Systems/Testers/Simulators

SL NO	Product Name	Part no	Part of	Status	Remarks
Airborne LRUs					
1	Vibro Meter Test Set	STA/UPIV 41-T	Tester to test and calibrate vibration monitoring system LRUS of onboard AN 32 aircraft		More than 20 testers supplied to IAF
2	Vibro Meter Test set	UPIV U	Tester to test and calibrate vibration monitoring system LRUS of onboard MI17,MI25 and MI 35 Helicopters		More than 10 testers supplied to IAF
3	ILS/VOR Beacon Simulator	MIM 70	Tester to test onboard ILS,VOR,Beacon marker receivers		More than 10 testers supplied to IAF
4	Marker Simulator	MIP 70	Tester to test onboard Beacon marker receivers		
5	Auto pilot tester	IVS-252	Tester to test on board Auto pilot system of KV 28 Helicopters		

SL NO	Product Name	Part no	Part of	Status	Remarks
Airborne LRUs					
6	Directional System Compass Tester	806 MG/UPKSI	Tester to test onboard LRUS of Gyro system of MIG 21 aircraft		
7	Auto Work Station (Engine tester)	ARM DK 30 (7Yu2.700.002)	Tester to test onboard engine of SU 30 aircraft		Around 19 testers supplied to IAF
8	Engine tester	UNICAT	Tester to test HAWK engine		
9	Pylon tester		Tester to tests pylons in Jaguar aircraft		More than 8 testers supplied
10	Alpha boxes tester		To tester alpha boxes in Jaguar aircraft		2 nos supplied



IS Prudent Communication
Systems (Pvt) Limited
ISO 9001:2015 CERTIFIED

Testers / Simulators

UNICATS TESTER

UNIVERSAL CONTROL AMPLIFIER TEST SET (UNICATS) is a ground tester designed specifically to check the parameters of Engine Control Amplifier (ECA) type CA5E50-3 series in engine of HAWK aircraft. It is designed using touch screen display with built in GUI software and mainly it performs Circuit test, Static Engine test, Running Engine test.

SPECIFICATIONS

- ✓ Input Supply : 28V DC
- ✓ HP Speed : 1% to 120% RPM, $\pm 0.1\%$ Accuracy
- ✓ LP Speed : 1% to 120% RPM, $\pm 0.1\%$ Accuracy
- ✓ T6 (TGT) : 125 to 825 deg °C ± 1 deg accuracy
- ✓ Thermocouple Resistance : 1 to 10 Ω $\pm 3\%$ accuracy
- ✓ Vibration : 0 to 130 microns in 30 to 400 Hz
- ✓ FCU solenoid : 0 to 600mA, 0 to 32V
- ✓ Ground resistance : 7K Ω threshold
- ✓ LP speed inject : 10 to 20000 RPM, 0 to 6Vpp into 470 ohms
- ✓ T6 inject : 125 to 825 deg c into 3 Ω
- ✓ T2 inject : -5 to 220 deg c into 7 Ω



TEST SET A

The Test Set 'A' (Model No T0113) is a ground TESTER and designed specifically to check the parameters of "Engine Speed Control Amplifiers" used with Adour Mk. 804 and Mk 811 engines used in Jaguar Aircraft. The TEST SET A facilitates to test the amplifier parameters on both static engine and running engine conditions.

The test set A performs following functions under Static engine Test

- ✓ Simulates temperature signal derived from engine TGT Thermocouples in the range of 250 to 750°C.
- ✓ Simulates NL speed signals derived from L.P shaft probe in the range of 25 to 110% rpm.
- ✓ Indicates current drawn by solenoid of fuel control unit (FCU) from engine control amplifier.
- ✓ Indicates the voltage fed to the solenoid of fuel control unit (FCU) from engine control amplifier.
- ✓ Measures Simulated TGT and NL speed.



The test set A performs following functions under running engine Test

- ✓ Measures the temperature produced by engine TGT thermocouples in the range of 250 to 750°C.
- ✓ Measures NL speed signal produced by the L.P. shaft speed probes over the range of 3,400 to 15,000 r.p.m (25 to 110%).
- ✓ Measures the NH signal produced by the H.P. shaft tachometer generator over the range of 6,200 to 17,000 r.p.m (40 to 110%).
- ✓ Indicates the current, produced by the engine control amplifier, to the FCU solenoid on a LCD display in the range of 0 to 0.8A, within 3% accuracy.
- ✓ Indicates the voltage, produced by the engine control amplifier, to the FCU solenoid on a LCD display in the range of 0 to 30Volts D.C within 3% accuracy.
- ✓ Testing of Redatum TGT and Redatum NL.

TECHNICAL SPECIFICATION:

- ✓ Temperature Simulation : 250 to 750°C
- ✓ NL speed simulation : 60 to 110%
- ✓ Solenoid Current Measurement
 - Range : 0.0 A to 0.9 A
 - Resolution : 0.001A
 - Accuracy : ±10mA

✓ Solenoid Voltage Measurement

- Range : 0 to 30V
- Resolution : 0.01V
- Accuracy : ±0.6V

✔ Temperature Measurement

- Range : 250 to 750°C
- Resolution : 0.5°C
- Accuracy : $\pm 2.0^{\circ}\text{C}$ from 630 to 650°C, $\pm 3.5^{\circ}\text{C}$ from 250 to 630°C, $\pm 3.5^{\circ}\text{C}$ from 650 to 750°C

✔ NL Measurement

- Range : 3400 to 14960 Hz (25 to 110%)
- Resolution : 0.1%
- Accuracy : $\pm 0.25\%$ from 25 to 70%, $\pm 0.1\%$ from 80 to 110%

✔ NH Measurement

- Range : 28 to 77 Hz (40 to 110%)
- Resolution : 0.1%
- Accuracy : $\pm 0.25\%$ from 40 to 70%, $\pm 0.1\%$ from 80 to 110%

✔ Redatum set facility : TGT and NL Redatum

✔ Gain test facility

ELECTRICAL SPECIFICATIONS

- ✔ Input power supply : 115V \pm 10%, 400Hz, single phase
- ✔ Current consumption : < 150mA

MECHANICAL SPECIFICATIONS

- ✔ Weigh of the unit : 10 Kgs (Max).
- ✔ Dimensions of the unit : 365x245x204mm (\pm 1mm)

ENVIRONMENTAL SPECIFICATIONS

- ✔ Storage Temperature : -40°C to +70°C
- ✔ Operating Temperature : -20°C to +55°C
- ✔ Humidity : 95% RH

PYLON TESTER

The PYLON TESTER is a portable equipment, automatic circuit analyzer/ground tester designed specifically to check the continuity of circuits at selected switching lines or loadings, to check the leakage current (Insulation Resistance) between each single line and all other lines and to carry out the functional tests of Pylons/Carriers of JAGUAR Aircraft. It operates at 230V±5% AC, 50Hz input supply.



SPECIFICATIONS

- ✓ Output and operating supply : 22/28 V DC at Max. Current 10 A
- ✓ Isolated supply output : 22V DC at Max. Current 2.1 A
- ✓ Auxiliary output : 25V AC, Max. Current 2 A, with input supply of 230V + 5%
- ✓ Continuity Test Ranges (At 28V DC Supply) : 7 Ω , 1 A. 1.5 Ω , 1 A / 5A
- ✓ Insulation Test Ranges (At 28V DC supply) : 0.5 M Ω and 5 M Ω
- ✓ Number of switching lines : 128
- ✓ Provides delay timing pulse to carry out the functional tests as required for Pylons/Carriers



ARMDK TESTER

The Automatic Work Station checks the serviceability of aero engine of SU-30 MKI aircraft by monitoring and recording various real time parameters related to engine and engine controller during aircraft ground run. The AWS is also used during scheduled adjustments, maintenance/repair services and other operations dealing with maintenance of engine without connecting any additional test instruments. However, additional sensors are installed during engine performance checks.

The AWS performs following functions during aircraft ground run

- ✓ Measures and displays engine parameters in a dedicated GUI page
- ✓ Measures and displays engine controller (KRD-99) parameter in dedicated GUI page
- ✓ Displays established and standard profile with respect to time in a GUI page in graphical format
- ✓ Generates warning signal based on measured parameters and the same is displayed in a separate page
- ✓ Measures engine vibration, AAGB & GTD vibration by installing additional vibration sensors (Part of ARM DK-30) on the aircraft
- ✓ Measures oil pressure & breather pressure by installing additional pressure sensors (Part of ARM DK-30) on the aircraft
- ✓ Simulates few signal commands
- ✓ Records the measured data at a regular intervals
- ✓ Performs analysis of the stored data

The AWS also facilitates to check the serviceability of additional sensors which are part of the ARM DK-30 system and also to calibrate the aircraft engine parameters.



TECHNICAL SPECIFICATION

The following engine parameters are monitored, recorded and displayed:-

- ✓ Engine Speed N1, N2, N1corr, N2corr.
- ✓ Position of IG, GV HPC, Jet Nozzle Diameter.
- ✓ Temperature T4, T4 corr.
- ✓ Engine Vibration in mm/sec.
- ✓ Breather Pressure (Kg/cm²), Oil Pressure (kg/cm²)
- ✓ Duty Cycle S1, S8.
- ✓ REHEAT, NO COOL caption.
- ✓ Start up parameters – Start light, 15% N2.
- ✓ Single commands: DECEL, VT Start, Failure IG, ntc, FAIL- KRD.
- ✓ Timer - displays time from moment of start.
- ✓ Stop watch - With software controlled stop watch

The AWS generates various warnings based on monitored parameters and the same is displayed in a separate page with arrival and departure time. The AWS presents the established and standard modes in graphical format with respect to time. Also, the AWS is equipped to simulate P0, M, T4, N1, N2, T1 & BPZ signals on demand.

Airborne LRUs

ANTI-COLLISION LAMP

The Anti Collision Lamp is the part of Anti collision system and is powered by strobe light power unit. Both the upper and lower Anti-collision light units in Hawk Aircraft are connected to the strobe light power unit through two cable assemblies. The xenon tubes are ignited by the ignition impulse generators in the strobe light power unit through high voltage oscillations. The flash energy generated by the strobe light power unit to drive xenon tube is about 30 to 40 Joules at a flash rate of 90 ± 10 flashes/min. The Anti collision lamp is categorized as safety critical item.



BRIEF SPECIFICATION

- ✓ Part No : PCS-2LA002-760-00
- ✓ Output colour : Red
- ✓ Lamp type : Xenon
- ✓ Field of coverage (horizontal) : 360°
- ✓ Field of coverage (vertical) : $\pm 30^\circ$
- ✓ Mass : 0.42Kg (Max)
- ✓ Overall Dimension : 160mm (L) X 77mm (W) X 85mm (H)
- ✓ Material (base) : Aluminum to Spec 6061 T6
- ✓ Dome material : Polycarbonate. (Red colour)
- ✓ Sealing material : Silicon rubber
- ✓ Finish : White colour paint as per DTD 5567A
- ✓ No of light source : 1
- ✓ Flash frequency : 0.75 ± 0.083 Hz
- ✓ Light intensity : > 400 cd/m²
- ✓ Peak value of light intensity : > 600 cd/m²
- ✓ Light intensity in OFF condition : $< 30\%$ of peak value
- ✓ Beam width : $> 60^\circ$

COCKPIT TEMPERATURE SENSOR

The Cockpit Temperature Sensor is designed to sense the air temperature of air conditioning inlet pipeline and close/ open relay contacts depending on the sensed temperature. The Cockpit Temperature Sensor used in Jaguar Aircraft.

SPECIFICATIONS

- ✓ Thermistor used, with sense range from -55°C to 300°C.
- ✓ Electrical Supply : 22-29V DC, (28V DC Nominal)
- ✓ Maximum Current Consumption : 50mA at 28V DC
- ✓ Temperature Range for Lower Limit : 19°C ± 1°C
- ✓ Temperature Range for Upper Limit : 25°C ± 1°C
- ✓ Routing input supply to External Unit : On detection of Upper Limit
- ✓ Removal of input supply to External Unit : On detection of Lower Limit
- ✓ Storage Temperature : -54°C to +90°C
- ✓ Operating Temperature : -35°C to +70°C
- ✓ Humidity : 95% RH

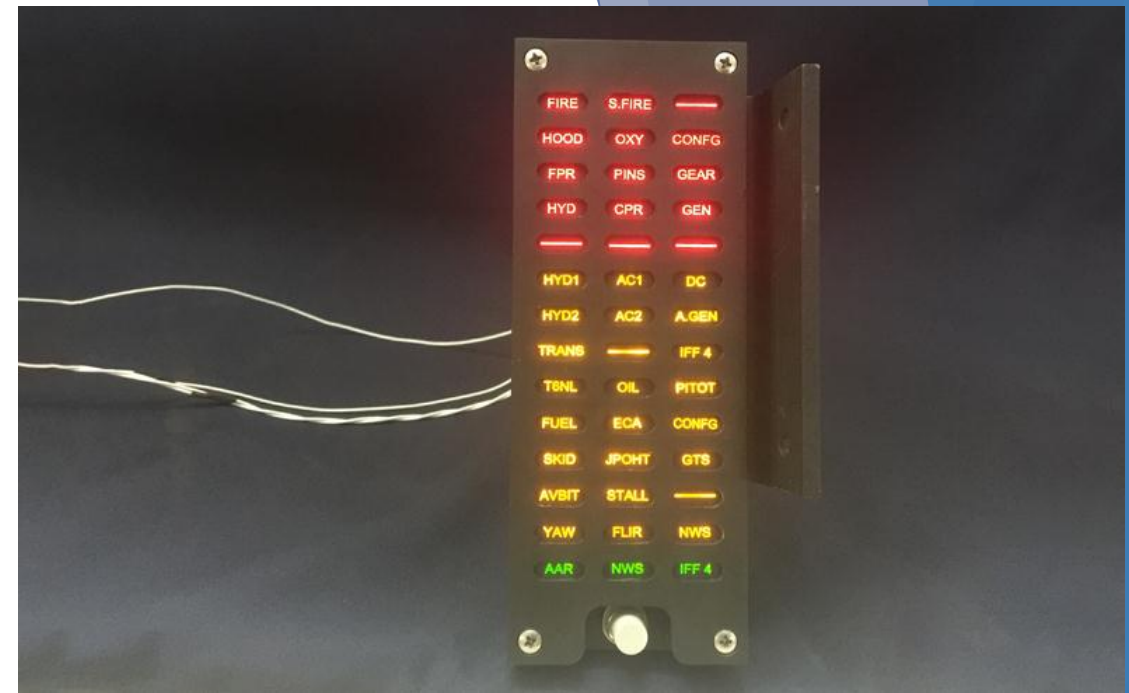


INDICATOR UNIT OF CENTRALISED WARNING SYSTEM

The Indicator Unit of Centralised Warning System provides the indication of the warning status of associated aircraft services.

The Indicator Unit of Centralised Warning System is installed in the cockpit of HAWK aircraft. The Indicator Unit consists of three columns of indicator lights with 14 lights in each column. Each light has two LED'S connected in parallel. This indicator unit receives 42 numbers of warning signals in the form of discrete signals from the Control unit of Centralised warning system.

The Indicator unit provides the visual indication of all 42 warning status of associated aircraft services. The top panel of the unit contains 15 red, 24 amber and 3 green display windows marked with associated warning captions. A push button is provided on the front panel of the indicator unit in order to route the 28V power supply back to control unit. The input and output signals are terminated in a 55 pin circular connector. The Indicator Unit of Centralized Warning System is categorized as flight critical item.



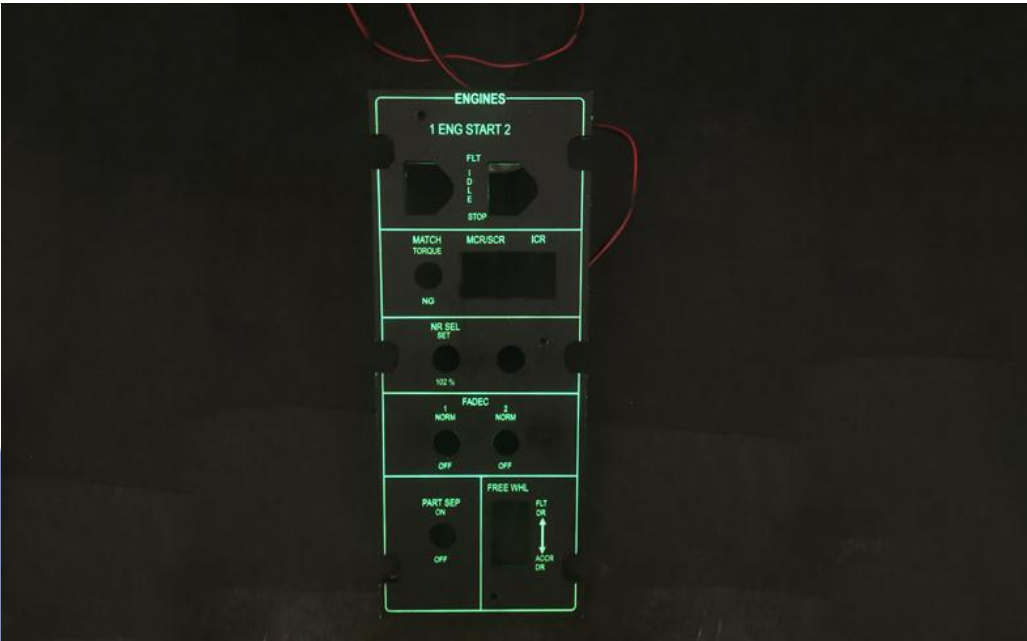
TECHNICAL SPECIFICATIONS

- ✓ Operating voltage : 28V D.C
- ✓ Maximum Current Consumption : 20 mA per signal(MAX)
- ✓ Warning caption backlight : LED's (15 Red, 24 Amber, 3 Green)
- ✓ Indicators : 2 LEDs per signal
- ✓ Dimension : 145(L), 55mm (W), 74.5mm(H)
- ✓ Weight : 500 ± 50 Grams.
- ✓ Material : Aluminium to Spec 6061 T6 or equivalent
- ✓ Transparent material : Acrylic Sheet as per MIL-PRF-8184
- ✓ Finish : Black Anodizing as per MIL-A-8625 REV F

COCKPIT INSTRUMENTATION LIGHTING PANEL

The Lighting Panels are intended to provide illumination for various controls /switches in the cockpit consoles of Light combat Helicopter (LCH). These panels will provide proper ambient/visibility to the pilot for operating various controls during day/night operation of LCH. The lighting panels will be form fit and provide uniform illumination to the Panels

COCKPIT INSTRUMENTATION LIGHTING PANEL



Sl. No	Description	Compact Diaphragm
1	Top Plate	4.87mm thick Aircraft Grade Clear polycarbonate Sheet/ Markrolon FAR Grade FAR.25.853 polycarbonate sheet.
2	PCB	1.2 mm thick FR4 glass/epoxy sheet as per LCSO specification.
3	LEDs	Surface Mount / through hole green LEDs (as per NVIS requirement).
4	External Finish	Matt Black
5	Top Legends/Markings	Engraved on Top as per the legends and dimensions in the drawings. Painted white as per the requirements.
6	Operating Voltage	+28 ± 3V DC
7	Photometric measurements (a) Light Intensity (b) Chromaticity co-ordinates	Luminance should not be < 343 mcd (At +28V) as per MIL-STD-3009 The range of values ,U=0.088,v=.543 ,r=.037 as per MIL- STD-3009 The measurement done in a dark room

CABLE LOOM TESTER

SYSTEM PURPOSE

The Cable Continuity Tester is an Automatic tester designed specifically for testing Cable Harness for checking specifications such as Continuity, Insulation and Dielectric strength.



SYSTEM SCOPE

The Cable continuity tester performs the following functions:

- ✓ The Automatic Tester has the testing capacity of $n \times 500$ lines with High Voltage Contacts expandable in steps of 500 points
- ✓ The configuration is distributed to make the system modular and easily maintainable.
- ✓ The system conducts the Continuity test at relevant points with test parameters from 3V DC to 28V DC at a current of 0.005 A to 2 A with a tolerance level of + 1%.
- ✓ The tester performs the Insulation test between specified lines or specified connectors or entire system with test parameters from 30V DC to 1500V DC, from Insulation resistance range of 100K Ω up to 200M Ω with a tolerance level of + 3% for a period of approximately 2 seconds.
- ✓ Also, the system performs the Dielectric strength test, parameters from 500V AC to 1000V AC peak volts with a tolerance level of + 2.5% for a period of approximately 2 seconds.
- ✓ The system measures the Resistance in the range of 1 Ω and 10M Ω . 2 wire/4-Wire method is adopted for low resistance measurement.
- ✓ The tester is also capable of checking the Diodes, Indicators (Lamps), free ends and energizes relays, switches.
- ✓ It also has the ability to check the Capacitance in the range of 10pF to 5000 μ F.



TECHNICAL SPECIFICATION:

☑ Continuity / No continuity Test Measurement

- Voltage range : 3 V DC to 28 V DC
- Current rating : 0.005 A to 2 A
- Tolerance level : + 1 %

☑ Insulation Test Measurement

- Voltage range : 30 V DC to 1500 V DC
- Insulation Resistance range : 100K Ω to 200M Ω
- Tolerance level : + 3 %
- Period : Approximately 2 seconds

☑ Dielectric Strength Measurement

- Voltage range : 500 V AC to 1000 V AC peak volts
- Tolerance level : + 2.5 %
- Period : Approximately 2 seconds

☑ NL Measurement

- Range : 3400 to 14960 Hz (25 to 110%)
- Resolution : 0.1%
- Accuracy : ± 0.25 from 25 to 70%, ± 0.1 from 80 to 110%

☑ Resistance Measurement range : 1 Ω to 10M Ω

☑ Capacitance Measurement range : 10p F to 5000 μ F

☑ Diode Test Facility, Provision to Energizes relays, switches

☑ Free end test , Indicators (Lamps) Test facility

ELECTRICAL SPECIFICATIONS

- ✓ Input power supply for the tester : 230V at 50Hz, single phase

APPLICATIONS

- ✓ To measure Automatically the continuity at relevant points and declare Open/Short/misconnections
- ✓ To measure the Insulation and Dielectric Strength of the unit under test.
- ✓ To check the resistance, capacitance.
- ✓ To energize relays and switches.
- ✓ To check the diodes, indicators (lamps), free end.

WIRING ANALYSER

The wiring analyser is basically an electronic continuity tester used to test the errors in connectivity of heavily wired back panels, motherboards, Cable looms etc. For the above purpose it has got the following units/modules.

- Control Unit
- Scanner & Interface modules
- Application Software loaded Desktop PC / Laptop computer
- Printer
- Stack box
- Interface cables and daisy cables
- Relay extender box
- Mechanical enclosure

The system operates on input supply of 230V 50Hz AC. The required DC supplies are derived from 230V internally.

CONTROL UNIT.

The control unit is a portable table mount Unit. The front panel has got connectors to connect the unit to PC and scanner/Interface boards. Power ON/OFF switch is also housed on the front panel. The rear panel houses power supply connector and fuse.

The power supply units 230V to +18V, +5V and +18V to +10V are fixed on the bottom plate of the control unit, and the RS-232 to RS-485 converter is fixed on the front panel of the control unit.

INTERFACE/SCANNER MODULES.

The interface modules house the required quantity of scanner modules. All the necessary electronics/hardware is in the scanner modules. The interface module also houses the suitable connectors which provide interconnectivity between the scanner board and the target system to be tested.

The extender boards are used for interconnection between the interface/scanner module and the target system's motherboard.

Each interface module has got connectors to interconnect, by using daisy chain cable assemblies, and suitable mating connectors to connect with the target system to be tested.



TECHNICAL SPECIFICATION

- ✓ Testing Capacity : Each scanner board can test 128 points, Max test point 10000 nodes
- ✓ Exciting Test Voltage : 10 to 11 V DC
- ✓ Power Supply : 230V/50 Hz+/-10%.
- ✓ Software : User friendly GUI software (Windows Based) with different menus and sub menus
- ✓ PC interfacing : Any PC / Laptop with Intel 486 / Pentium Processor, colour monitor with high resolution
- ✓ Operating system : windows 2000/XP
- ✓ User Intervention : User can operate either by keyboard or Mouse
- ✓ Test Data Creation : By manual wire list entry or by self-learn method
- ✓ Printer : A4 size, LaserJet
- ✓ Operating Temperature : 0°C to +50°C
- ✓ Storage temperature : -40° to +70°c
- ✓ Humidity : 95% at +45°C
- ✓ Power consumption : 24W

AUTOMATIC TEST EQUIPMENT

ATE FOR MONICA

Testing Capacity to Test 4 MONICA cards
FPGA & ARM (32-Bit) processor based logic design to handle real time acquisition with optimum performance level in the time domain.

Facility to monitor System health status through LED indication on the front panel as well as in the monitor display

Facility to monitor Discrete Signals (Short circuit signal (KS), impact contact (AK) etc.) on the front panel

Modular Plug in construction



UNIQUE EQUIPMENT MACHINE

The Unique Equipment machine is a PC based Automatic Test equipment to test RF fuses. There are two similar equipment, one for testing fuses before foaming and another one to test after foaming. Both the equipments are same except the parameters for pass/fail criteria are different and are loaded in the respective PCs accordingly.

Each equipment consists of following major sub-assemblies

- ✓ Industrial PC with add on cards – National instrument make
- ✓ Modulation Analyser - Spectrum Analyser – Anritsu make model no MS2711E
- ✓ Interconnection board assembly
- ✓ Power supply assembly.
- ✓ Digital Filter box assembly
- ✓ Anechoic box assembly
- ✓ Printer
- ✓ UPS
- ✓ Interconnecting cable assembly



Items sl. No 1 to 4 are housed in a 19 “rack assembly. Item sl. No 5 to 8 are standalone units which are kept outside the rack assembly. Item sl no 9 is set of interconnecting cable assemblies to interconnect various sub-assemblies as required. The GUI is built with Lab view software

Navigation Systems

DISTANCE MEASURING EQUIPMENT –DME 100P

Distance Measuring Equipment (DME) provides pilots with distance (slant range) between the aircraft and ground station. Signals transmitted between an aircraft and a DME ground beacon enables the aircraft to accurately determine its distance from the ground beacon. DME is one of the primary navigation aids in an airways system.

For maximum performance and safety, the DME is designed with the latest state of the art technology featuring completely independent transponders and dual monitoring systems.

For ease of maintenance, the parameters of all the modules are easily configurable and viewable in the respective front panel displays.

DME 100P can handle over 100 aircrafts simultaneously.

DME 100P FEATURES:

- ✔ Wideband performance.
- ✔ Easy installation and configuration.
- ✔ Flexible RF chain.
- ✔ State of the art design.
- ✔ FPGA based base band processing and monitor systems.
- ✔ Microcontroller based modules with access to all system parameters.
- ✔ Local and remote operating facility.
- ✔ Independent Monitoring in two channels.
- ✔ Ease of maintenance.
- ✔ BITE facility to test transponder.
- ✔ Monitor points for trouble shooting.
- ✔ System health Indication.
- ✔ Front panel LED's to provide system summary status at a glance.
- ✔ Powerful Remote monitoring and Maintenance (RMM) system.
- ✔ Independent dual transponder in Main/Standby mode.
- ✔ Plug in modules for easy accessibility.
- ✔ Meets relevant parameters of ICAO Annexure 10 specification.

TECHNICAL SPECIFICATION

General	
Compatibility	With all exiting DME Interrogators
Handling Capacity	Over 100 Aircrafts
Frequency Range	252 Channels (962 MHz to 1213 MHz)
Dimension	600mm (w) X 600mm (D) X 1250mm (H)

Transmitter	
Peak Power	100W Peak (nom.)
Pulse Shape	Rise/Fall:< 3 μ S Duration: 3.5 \pm 0.2 μ S
Frequency Stability	\pm 0.002%
Pulse Pair Spacing	X Mode: 12 \pm 0.2 μ S, Y Mode: 30 \pm 0.2 μ S
Transmission Rate	800 to 2700 PPS

Receiver	
Sensitivity	Better than -95dBm
Selectivity	Better than 75 dB
Reply Delay	50 μ S

Monitored Parameters	Alarm Threshold
Reply Delay	$\pm 0.4 \mu$ S (Adjustable up to $\pm 1.0 \mu$ S)
Reply Pulse spacing	$\pm 0.4 \mu$ S (Adjustable up to $\pm 1.0 \mu$ S)
Reply Efficiency	< 67 % (Adjustable between 60 to 70 %)
Reply Peak power	3 dB Down from Nominal Peak Power

Power Supply	
Input	230V \pm 10%, 50Hz AC / 40V to 60V DC
Power	Less than 350 Watts

Environmental	
Temperature	-10°C to +55°C
Relative Humidity	95%

L & S Band

L,S BAND TELEMETRY RECEIVERS

- ✓ Frequency of operation 1450MHz in L band,
- ✓ Frequency of operation 2.2 to 2.3 GHz in S band
- ✓ AM/FM telemetry signal reception
- ✓ -85dbm sensitivity



S BAND VIDEO RECEIVER

- ✓ Video Receiver developed to receive video signals from unmanned aircrafts
- ✓ Frequency of operation 2.2 to 2.3 GHz
- ✓ FM video signal reception





Looking forward

Thank you

For More details Please send an
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