Excerpted Maintenance Schedules

for

Non-Federal NavAids & Associated VisAids

Approved for External FAA Use

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ALS Maintenance Schedule

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This excerpt is a schedule of periodic performance checks and maintenance activities.
It reflects the *maximum* permissible intervals.

The FAA adheres to the following maintenance schedules. We advise that non-federal sponsors do the same with respect to the schedule that applies to your system. As for the actual maintenance procedures and applicable tasks (i.e. "performance checks" and "maintenance tasks") sponsors must refer to the manufacturer's documentation.

ALSF-2
Performance Checks

(Return to TOC)

As Required:

a. Check ALS monitor circuit to tower

b. Check ALS load monitor for each loop

c. Check SFL monitor

Weekly: Make visual operational checks for all lights, including flashers, on all brightness steps

Monthly: Make visual operational checks of all lights, including flashers, on all brightness steps

Quarterly:

a. Check and record input voltage

b. Check and record input kilowatts

c. Measure and record CCR output current

d. Check and record loop voltage

e. Measure and record flasher control input voltage

f. Check and record load voltage microamperes (where applicable)

g. Check and record elapsed time meters (steady-burning lights)

h. Check and record elapsed time meters (flashers)

i. Check brightness step changing time

Annually:

a. Check vertical and horizontal angular alignment of all light fixtures

b. Check vertical and horizontal alignment of all light fixtures

c. Check ALS 15-minute timer for Brightness step 5 at the tower

ALSF-2
Other Maintenance Tasks

As Required:

a. Open and clean ALS fixtures (elevated and semi-flush), including flasher units

b. Inspect and clean any ALS system unit, including unit-associated junction boxes, during any maintenance for unit repair

Monthly:

a. Visually check for damaged or misaligned lamps and cleanliness

b. Check the approach line-of-sight clearance for vegetation and other obstructions

Annually:

a. Check metallic light support structures. Repair if necessary

(1) Check all metallic light supports for rigidity

(2) Check for secure couplers, fasteners, welds, and missing hardware

(3) Check the security and integrity of all electrical components

(4) Inspect light supports for obvious vertical and horizontal misalignment

(5) Inspect structures for rust, rot, loose paint, or corrosion

b. Check all LIR light support structures. Repair as necessary

(1) Proper guy tensions (if applicable)

(2) Rot and corrosion

(3) Tightness of all bolts, screws and nuts

(4) Scraped or peeling paint and superficial damage to fiberglass components

(5) Plumbness of LIR structure, perpendicularity of T-bar, and obvious misalignment

(6) Moving parts for binding and clearance

(7) Lubricate moving parts (if applicable)

c. Inspect winch cable.

d. As applicable, lubricate:

(1) Winch for mounted-on-ground (MG) low-impact resistant (LIR) lifting device

(2) Winch for mounted-on-steel tower (MS) LIR lifting device

(3) Jack stand for MG LIR

e. Check regulators for proper oil level and leaks (if applicable)

f. Clean substation compartments, observing safety precautions

g. Check operation of oil circuit breaker mechanism (if applicable)

h. Check all lighting arrestors, ground connections, electrical connections, and safety devices associated with power distribution equipment at terminal poles, substations, and transformer pads. Visually inspect electrical connections for signs of overheating

i. Check all main power switching equipment

j. Inspect all relays

k. Open and clean all ALS fixtures (elevated and semi-flush) including flasher units, to maintain full light output

l. Service timer motor and timer contacts (if applicable)

m. Check number and elevation angle data at each light station, and proper signage for the system and unit installation

n. Check power transfer for Category II/III conditions

o. Lubricate series loop cutouts

Every 3 Years:

a. Measure insulation and conductor resistance of ALS series loop cables. Compare measurements with previous readings.

b. Check insulation resistance of all Steady Burning and Flasher Light Power Cable(s), Monitor and Control Insulated Cable cables. Compare with previous readings.

c. Check dielectric strength and condition of insulation oil in the regulators and switchgear (if applicable).

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MALS / MALSF / MALSR
Performance Checks

(Return to TOC)

Monthly: Make visual operational checks of all lights, including flashers, on all brightness steps

Semi-Annually:

a. Measure and record control cabinet input voltage

b. Measure and record lamp voltage transformer output

c. Measure and record flasher control input voltage (as applicable to system configuration)

d. Check and record elapsed time meter

Annually:

a. Check all fixtures for vertical and horizontal alignment

b. Check remote control function

MALS / MALSF / MALSR
Other Maintenance Tasks

(Return to TOC)

As Required:

a. Change all Type 1 (elevated) sequenced flasher lamps in accordance with the manufacturer's instruction manual

b. Change all Type 2 (semi-flush) sequenced flasher lamps in accordance with the manufacturer's instruction manual

c. Open and clean all elevated and in-pavement ALS fixtures (including flasher units) to maintain full light output

Monthly:

a. Visually check for damaged or misaligned lights or filters

b. Check the approach line-of-sight clearance for vegetation and other obstructions

Annually:

a. Check metallic light support structures. Repair if necessary

b. Check all low-impact resistant (LIR) light support structures. Repair if necessary

(1) Proper guy-wire tensions (if applicable)

(2) Rot and corrosion

(3) Tightness of all bolts, screws, and nuts

(4) Scraped or peeling paint and superficial damage to fiberglass components

(5) Plumbness of LIR structure, perpendicularity of T-bar, and obvious misalignment

(6) Moving parts for binding and clearance

(7) Lubricate moving parts (if applicable)

c. Inspect winch cable, winch, and portable lifting device. Lubricate winch mounted-on-steel tower (MS) LIR, portable lifting device, and jack stand (if applicable)

d. Inspect and clean, if required, interior of all cabinet mounted flashing units

e. Check safety devices, ground connections, lightning arrestors, and safety conditions of power distribution equipment terminal poles, light supports, and substation transformer pads

f. Check fuse holders, circuit breakers, and contacts. Visually inspect electrical connections for signs of overheating

g. Inspect all relays

h. Service timer (if applicable)

Every 3 Years: Check conductor and insulation resistance of all power and control cables. Compare with previous readings

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ILS Maintenance Schedule

(Return to TOC)

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Localizers
Performance Checks

(There are no "Other Maintenance Tasks.")

(Return to TOC)

a. Monthly. Measure and record a line entry of normal equipment parameters for each set of equipment installed.

b. Quarterly.

(1) Measure and record normal ground check (both equipment, if dual).

(2) Measure and record monitor alarm points

(3) Verify local & remote monitor shutdown function of each set of equipment installed.

(4) Perform control unit test, if applicable.

c. Semiannually. Measure and record antenna system phasing. (Can cause HMI)

d. Annually.

(1) Measure and record RF frequencies

(2) Measure & record:

(a) Shutdown

(b) Restoration delays, as appropriate, and if applicable

(Restoration delay is for CAT 2 or higher)

(3) Measure and record auto-restart

(4) Measure and record sideband null (Can cause HMI)

(5) Measure and adjust standby monitor

(6) Measure and record the following BITE parameters, if applicable:

(a) Power output

(b) VSWR

(c) Modulation percentage

(d) Difference in depth of modulation (DDM)

(e) Frequency separation

e. As Required - *Preceding a flight inspection with monitors*, perform the following checks:

(1) Measure and record modulation

(2) Measure and record power levels

(3) Measure and record antenna system phasing (Can cause HMI)

(4) Verify dual equipment matching

(5) Measure and record normal ground check

(6) Verify A-G transceiver operation

(7) Perform BITE Power Output Alignment Procedure, if applicable.

f. As Required - *Post flight inspection*, when establishing new references, perform the following checks:

(1) Measure and record reference ground check

(2) Measure and record updated monitor references

(3) Establish new TPRs

g. As Required – *In General:*

(1) Measure and adjust monitor system phasing

(2) Following replacement of any module containing BITE circuitry, perform all applicable BITE verifications, if applicable.

(Return to TOC)

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Glideslopes
Performance Checks

(There are no "Other Maintenance Tasks.")

(Return to TOC)

a. Monthly. Measure and record a line entry of normal equipment parameters for each set of equipment installed.

b. Quarterly.

(1) Measure and record ground check (end-fire only) (Can Cause HMI)

(2) Measure and record monitor alarm points

(3) Verify local & remote monitor shutdown function of each set of equipment installed.

(4) Perform control unit check

c. Semiannually. Measure and record antenna system phasing (Can cause HMI)

d. Annually.

(1) Measure and record RF frequencies

(2) Measure & record:

(a) Shutdown

(b) Restoration delays, as appropriate, and if applicable
(Restoration delay is for CAT 2 or higher)

(3) Measure and record auto-restart

(4) Measure and adjust standby monitor(s)

(5) Measure and record the following BITE parameters, if applicable:

(a) Power output

(b) VSWR

(c) Modulation percentage

(d) Difference in depth of modulation (DDM)

(e) Frequency separation

e. As Required - ***Preceding a monitor flight inspection*** perform the following:

(1) Measure and record modulations

(2) Measure and record power levels.

(3) Measure and record antenna system phasing (Can cause HMI)

(4) Measure and record antenna power ratios

(5) Verify dual equipment matching

(6) Measure and record ground check (EFGS only) (Can cause HMI)

(7) Verify A-G transceiver operation

(8) Perform BITE Power Output Alignment Procedure, if applicable

f. As Required - ***Post flight inspection*** when establishing new references, perform the following:

(1) Measure and record far-field phasing reference values (Can cause HMI)

(2) Measure and record updated monitor references

(3) Establish new TPRs

(4) Measure and record reference ground check (EFGS only) (Can cause HMI)

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Markers
Performance Checks

(There are no "Other Maintenance Task.")

(Return to TOC)

a. Semiannually.

(1) Measure and record RF power

(2) Measure and record modulation

(3) Measure and record monitor alarm points

(4) Measure and record automatic shutdown

b. Annually.

(1) Measure and record frequencies

(2) Measure and record the following BITE parameters, if applicable:

(a) Power output

(b) VSWR

(c) Modulation percentage

(3)Verify remote maintenance monitor data

(Return to TOC)

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Other ILS Maintenance Tasks

(Return to TOC)

Subsection 1. ILS Facilities

(Return to Sub-TOC)

Monthly. Perform equipment time update for facilities with remote set capabilities.

Quarterly.

a. Check all warning and critical area signs.

b. Check vegetation control.

c. Inspect for environmental changes.

Semiannually. Perform equipment time update, if applicable.

Annually. Clean and inspect all equipment.

As Required. Check test equipment calibration due dates, as noted on calibration labels, and send out for calibration, if needed.

Subsection 2. ILS Antennas

(Return to Sub-TOC)

Annually.

a. Measure and record VSWR at transmitter.

b. Check EFGS air system integrity.

As Required. Measure and record VSWR at antenna feed lines.

Subsection 3. ILS Transmission Lines

(Return to Sub-TOC)

Annually. Inspect RF cables.

As Required. Measure RF cable insulation and DC resistance.

Subsection 4. ILS Standby Batteries

(Return to Sub-TOC)

Quarterly

a. Inspect batteries.

b. Measure battery system float voltage.

Annually

a. Perform backup battery power check.

b. Inspect battery rack.

(Return to TOC)

NDB Maintenance Schedule

(Return to TOC)

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Performance Checks

1. Semiannually.

a. Measure and record antenna current.
b. Measure and record monitor alarm points.

2. Annually.

a. Measure and record frequencies.
b. Check voice/identification quality.
c. Measure and record modulation.
d. Check auto shutdown.
e. Check automatic reset.

3. As Required.

a. Measure the leakage resistance of the transmission lines.

Other Maintenance Tasks

1. Annually.

a. NDB Standby Batteries:

(1) Perform backup battery power check.
(2) Inspect batteries.

2. Semiannually.

a. Measure battery system float voltage.

3. As Required.

a. Verify that the Voltage Standing Wave Ratio (VSWR) is within required limits after a period of severe weather involving lightning strikes in the area of the NDB.

b. Inspect and clean antenna.

c. Inspect for loose cable connections.

d. Inspect battery rack.

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RVR Maintenance Schedules

(Return to TOC)

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RVR
Performance Checks

(Return to TOC)

Bi-weekly.

(1) TX Window Contamination
(2) RX Window Contamination
(3) ALS Window Contamination
(4) Monitor device status, i.e., DPU, ALS, VS, RLIM
(5) Record system time on TPR

Monthly.

(1) Check system parameters using maintenance data terminal (MDT), i.e. MPU, DPU, ALS, VS, RLIM
(2) Check DPU health LEDs
(3) ALS Window Contamination
(4) VS Window Contamination

Quarterly.

(1) Execute system diagnostics (MDT), i.e., DPU, SIE, ALS, VS, RLIM
(2) Verify ALS and record values on a TPR (calibrate if necessary)
(3) Verify VS and record values on a TPR (calibrate if necessary)
(4) Check RLIM operation

Semiannually/Annually.

(1) Test ALS SIE batteries under load
(2) Test VS SIE batteries under load
(3) Test RLIM SIE batteries under load
(4) Check SIE de-ice heater voltage
(5) Check limits
(6) Record RLIM CS measurement on TPR
(7) Check Data Recorder

Other Maintenance Tasks

As Required.

(1) Clean ALS windows
(2) Clean VS windows
(3) Clean CD glass (if necessary)
(4) ALS Sensor. Apply a new coat of spider paint (if necessary) to the sensor hood
(5) VS Sensors. Apply a new coat of spider paint (if necessary) to all sensor hoods
(6) Check the RVR product accuracy
(7) Inspect SIE Battery Compartment
(8) RLIM Calibration

Quarterly.

(1) ALS Calibration
(2) VS Calibration

Semiannually.

(1) Inspect SIE battery & battery compartment for leakage of acid, & clean as needed.
(2) Inspect all cables & cable connections for damage or corrosion, &repair as necessary.
(3) Inspect battery box pressure valve and repair as necessary

Annually.

(1) Archive Data

Every Two Years.

(1) Replace the SIE batteries
(2) VS mechanical alignment check
(3) Visually inspect VS cable for cracks in cable jacket, cuts in cables, exposed shielding or wires
(4) Visually inspect ALS cable for cracks in cable jacket, cuts in cables, exposed shielding or wires

Every Five Years.

(1) Replace the DPU batteries
(2) Replace Data Recorder batteries

(Return to TOC)

VOR & VOR/DME Maintenance Schedules

(Return to TOC)

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Conventional VOR

(CVOR)

Performance Checks

(Return to TOC)

a. Quarterly. At the VOR site, the RMC site, or other remote location, perform the following checks:

(1) Measure and record the TPR parameters automatic ground check and the error spread.

(2) Perform trend check

(3) Measure and record the following parameters from the BV screen on the TPR: azimuth angle, 30-Hz modulation, 9960-Hz modulation, 9960-Hz deviation, and the field intensity.

(4) Check J4 screen

b. Semiannually: Verify primary battery operation

c. Annually. At the VOR site, perform the following check: Measure and record the TPR parameter master oscillator frequency

d. Annually. At the VOR site, perform the following check: Measure test generator analog-to-digital reference voltage

e. Annually. At the VOR site, perform the following checks:

(1) Check transmitter certification data

(2) Test monitor

(3) Check monitor certification data

(4) Measure and record the TPR parameter carrier frequency

(5) Measure identification tone frequency

(6) Measure and record the carrier power – IOT versus wattmeter error on the TPR

(7) Measure test generator azimuth output

(8) Measure monitor clock frequency

(9) Measure test generator clock frequency

(10) Measure antenna RF level detector

Conventional VOR
(CVOR)

Other Maintenance Tasks
Click here to view Other Maintenance Tasks

(Return to TOC)

Doppler VOR
(DVOR)

Performance Checks

(Return to TOC)

a. Quarterly. At the Doppler VOR site, RMC site, or other remote location, perform the following checks:

(1) Perform trend check

(2) Measure and record the following parameters from the BV screen on the TPR: azimuth angle, 30-Hz modulation, 9960-Hz modulation, 9960-Hz deviation, and the field intensity.

(3) Check J4 screen

b. Semiannually. At the DVOR site, perform the following check: Verify primary battery operation

c. Semiannually. At the VOR site, perform the following: Measure and record the TPR parameter BCPS output voltages.

d. Annually. At the DVOR site, perform the following checks:

(1) Check the transmitter certification data

(2) Run monitor test

(3) Check monitor certification data

(4) Run automatic sideband antenna VSWR measurement test

(5) Measure and record the TPR parameter carrier frequency

(6) Measure identification tone frequency

(7) Measure and record the carrier power – IOT versus wattmeter error on the TPR

(8) Measure test generator azimuth output

(9) Measure monitor clock frequency

(10) Measure test generator clock frequency

(11) Measure antenna RF level detector

e. Annually. At the DVOR site, perform the following checks: Measure and record the TPR parameter master oscillator frequency.

f. Annually. At the DVOR site, perform the following check: Measure test generator analog-to-digital reference voltage

CVOR & DVOR
Other Maintenance Tasks

(Return to TOC)

a. Annually. At the VOR/DVOR site, perform the following checks:

(1) Verify system alarm and shutdown

(2) Check interconnecting wiring. Inspect for cracked insulation, weak spots, or bends indicating internal breaks

(3) Clean or replace air filters

(4) Verify the spacing and connections on the antenna polarizing rods per commissioning data

(5) Visually inspect antenna system

b. Annually. At the VOR/DVOR site, perform the following checks:

(1) Measure and record the TPR parameter VOR transmitter filter bank assembly output ripple voltage

(2) Measure and record the TPR parameter monitor digital circuit card assembly battery voltage

(3) Perform general cleaning. Clean all exposed external surfaces. Remove dust accumulated internally

c. As Required – Part I. Perform the following checks:

(1) Check operating parameters

(2) Check monitor alarm parameters

(3) Check transmitter certification parameters

(4) Check monitor certification parameters

(5) Check fault history

(6) Verify RCO operation

(7) Check the RCO system

(8) Antenna RF level detector

d. As Required – Part II. Perform the following checks:

(1) Measure monitor radial

(2) Check VSWR of VOR transmission lines

(3) Locate VOR RF feed lines' real impedance points

(4) Check VOR transmission lines leakage resistance and attenuation.

(5) Check VOR/DVOR system antenna alignment and spacing.

(6) Check VOR/DVOR course realignment

(7) Check VOR antenna system balance

(8) Check VOR bridge rejection properties

(9) Perform VOR redundant logic testing

(Return to TOC)

TACAN
Performance Checks

(Return to TOC)

a. Quarterly. At the TACAN site, the RMC site, or other remote location, perform the following checks:

(1) Perform trend check

(2) Measure and record the following parameters from the BT screen on the TPR: reply delay, pulse spacing, reply efficiency, power out, 15-Hz azimuth angle, and the 135-Hz azimuth angle

b. Semiannually. At the TACAN site, perform the following:

(1) Verify primary battery operation

(2) Check rotating assembly balance

c. Annually. At the TACAN site, perform the following checks:

(1) Check transponder certification data (on both A and B coder/decoder)

(2) Check monitor certification data

(3) Check monitor interrogation generator test data.

(4) Measure and record the receiver test data on the TPR

(5) Check the transponder test data. Measure and record the TPR parameter transponder pulse width

(6) Check and record the TPR parameter antenna rotation period

(7) Measure and record the TPR parameter output frequency

(8) Measure and record the TPR parameter monitor synthesizer frequency

(9) Measure RF interrogation generator output levels

(10) Measure video test generator output

(11) Measure power output

(12) Measure azimuth calibrator accuracy

(13) Measure monitor clock frequency

(14) Measure coder/decoder clock frequency

(15) Measure and record the TPR parameter waveform peak voltage

TACAN
Other Maintenance Tasks

a. Annually. At the TACAN site:

(1) Measure and record the TPR parameter circuit card assembly battery voltage

(2) Verify system alarm and shutdown

(3) Clean or replace filters

(4) Perform general cleaning, cleaning of terminal strips, cleaning of coaxial cable connectors and inspection of air filters. Clean or replace filters as required.

(5) Measure and verify the monitor voltage

b. As Required. Perform the following checks:

(1) Verify system state

(2) Check maintenance alerts

(3) Check TACAN monitor alarm parameters

(4) Check TACAN transponder certification parameters

(5) Check fault history from RMC

(6) Verify TACAN antenna heater operation at facility

(7) Verify monitor antenna heater operation at facility

(8) Check adjustment of TACAN courses and establishment of monitor reference radial

(9) Complete lubrication task

(10) Check operation of transmit antenna heaters

(11) Perform antenna speed control checks

(a) Verify operation of 65-second, 2-second and 5-minute timers.

(b) Observe proper operation of panel meters and correct indication of lamps.

(c) Ensure that speed indication and error Voltage show nominal indications.

(12) Replace any RTA-2 antenna central-array rotating bearings as needed.

TACAN
Low Power Antenna

Other Maintenance Tasks

(There are no "Performance Checks.")

(Return to TOC)

Annually.

(1) Antenna trigger period

(a) 15 Hz

(b) 135 Hz

(c) 1350 Hz

(2) Antenna trigger amplitude

(a) 15 Hz

(b) 135 Hz

(c) 1350 Hz

(3) Antenna 540-kHz oscillator frequency

(4) Antenna power supply

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DME Maintenance Schedule

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DME/DMER
Performance Checks

(Return to TOC)

a. Quarterly. At the DME site, the RMC site, or other remote location, perform the following checks:

(1) Perform trend check

(2) Measure and record the following parameters from the BT/BD operator screen on the TPR: reply delay, pulse spacing, reply efficiency, and power out

b. Semiannually. At the DME site, perform the following check: Verify primary battery operation

c. Annually. At the DME site, perform the following checks:

(1) Check transponder certification data (on both A and B coder/decoder)

(2) Check monitor certification data

(3) Check monitor interrogation test data

(4) Measure and record the receiver test data on the TPR

(5) Check transponder test data. Record the TPR parameter transponder pulse width.

(6) Measure and record the TPR parameter output frequency.

(7) Measure power output

(8) Measure monitor clock frequency

(9) Measure and record the TPR parameter monitor synthesizer frequency.

(10) Measure RF interrogation generator output levels

(11) Measure video test generator output

(12) Measure coder/decoder clock frequency

(13) Measure and record the TPR parameter waveform peak voltage

DME/DMER
Other Maintenance Tasks

a. Annually. At the DME site perform the following checks:

(1) Check DME system alarm and shutdown

(2) Clean or replace air filters at facility

(3) Check interconnecting wiring. Inspect for cracked insulation, weak spots, or bends indicating internal breaks

(4) Perform general cleaning. Clean all exposed external surfaces. Remove dust accumulated internally

(5) Measure and record the TPR parameter digital circuit card assembly battery voltage.

(6) Measure and verify the monitor voltage

(7) Measure and record the TPR parameters DME output regulator voltages.

(8) Measure and record the TPR parameter DME DC output voltages

(9) Measure and record the TPR parameters DME DC output

(10) Check exhaust fan operation

(11) Check the blowers, if the DME has them

b. As Required. Perform the following checks:

(1) Verify system state

(2) Check maintenance alerts

(3) Check DME monitor alarm parameters

(4) Check DME transponder certification parameters

(5) Check fault history

(6) Check front panel

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Facility Center Processing Unit
(FCPU)

Other Maintenance Tasks
(There are no Performance Checks)

(Return to TOC)

a. Annually. Verify the FSK output level of communication circuit card assembly

b. As Required.

(1) Verify the receive level of the FSK tones

(2) Verify the receive level of the PTT tone (2994)

(3) Check FCPU maintenance alerts

RMC-F/RSCE
Performance Checks

(Return to TOC)

RMC-F: Remote Monitor & Control Facility
RSCE: Remote Status and Control Equipment

a. Annually.

(1) Measure composite signal transmit level at RMC-150B

(2) Verify hybrid transformer balance at RMC-150B

(3) Measure the RMC-F/150B clock frequency

b. As Required.

(1) Verify the normal operation of the RMC-F or RSCE equipment

(2) Verify the transmit level of the push-to-talk (PTT) tone from the RMC-F

(3) Verify the receive level of the FSK tones

(4) Send intercom message

RMC-F/RSCE
Other Maintenance Tasks:

Annually: Clean and lubricate printer

(Return to TOC)

Uninterruptible Power Supply
Other Maintenance Tasks

(There are no Performance Checks)

(Return to TOC)

a. Semiannually. Verify the normal operation of the RMC-150B UPS system

b. Annually. Measure the float voltage and check battery connections

General/Miscellaneous
Performance Checks

(Return to TOC)

a. Semi-Annually. Perform the following:

(1) Measure the power subsystem inputs and outputs

(2) Record the float voltage TPR parameter

b. Semiannually. Measure and record the TPR parameter BCPS output voltages.

c. Annually. Perform the following: Measure the FCPU clock frequency

d. Annually. Measure and record the TPR parameter power conditioner clock frequency

General/Miscellaneous
Other Maintenance Tasks

a. As Required. Perform the following checks:

(1) Verify system state
(2) Check maintenance alerts
(3) Check FCPU parameters
(4) Check analog environmental sensors
(5) Check sensors' analog-to-digital converter output
(6) Check discrete environmental sensors
(7) Clean or replace air filters
(8) Measure and record the TPR parameter float voltages

b. Annually:

(1) Verify environmental ICU sensors

i. Verify operation of the following:

1. Remote air-conditioning on/off
2. Remote building heating on/off
3. Remote engine generator start/stop

ii. Clean relative humidity probe filter.

(2) Verify operation of the following monitors (if sensor is applicable at site):

i. AC voltage
ii. AC current
iii. Primary power frequency
iv. Facility temperature
v. Equipment room temperature
vi. Relative humidity
vii. Engine generator oil pressure
viii. Engine generator coolant temperature
ix. Engine generator battery cranking voltage
x. Engine generator battery charger current
xi. Engine generator fuel level
xii. Engine generator start time
xiii. Engine generator room temperature
xiv. Engine generator load on/off
xv. Engine generator on/off
xvi. Engine generator over-speed alarm
xvii. Engine generator over-temperature alarm
xviii. Engine generator low oil pressure alarm
xix. Engine generator over-crank alarm
xx. Engine generator fuel level alarm
xxi. Engine generator room fire alarm
xxii. Load on/off commercial power
xxiii. Commercial power on/off
xxiv. Intrusion alarm
xxv. Equipment room fire alarm
xxvi. Equipment room air flow on/off
xxvii. Equipment room air flow alarm
xxviii. Equipment room heater on/off
xxix. Air-conditioning on/off
xxx. Mountaintop pit overflow water alarm
xxxi. TACAN antenna vibration alarm

(3) Perform the following checks:

i. Check standby power inverter operation
ii. Measure BCPS power supply bridge & capacitor module assembly output ripple voltage
iii. Measure & record the TPR parameters power conditioner capacitor assembly output ripple voltage
iv. Measure power conditioner heatsink assembly output switching waveform
v. Measure FCPU circuit card assembly battery voltage
vi. Measure 5 output regulator voltages
vii. Measure and record the TPR parameter output voltages
viii. Measure and record the TPR parameter output voltages.

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