APPENDIX I

LIST OF ACRONYMS

ACDS — advanced combat direction system.
ACRO (or CRO) — auxiliary cathode readout.
ALT key — alternate key.
A/N — alphanumeric.
APA — all points addressable.
AM — amplitude modulation.
ASTAB — automated status board.
ASW — antisubmarine warfare.
BC — broadcast.
BDU — basic display unit.
BER — bit error rate.
BITE — built-in test equipment.
BPS — bits per second.
C2P — Command and Control Processor.
CAG — central automated status board generator.
CCAEP — computer-controlled action entry panel.
CDB — central data buffer.
C-DITEG — common digital television graphics generator.
CDS — combat direction system.
CED — console electronic drawer.
CEG — central equipment group.
CGA — color graphics adapter.
CIGARS — console internally generated and refreshed symbols.
CIU — computer interface unit.
CONICS — circles and ellipses.
CP — clock pulse.
CPS — cycles per second.
CRO — TV monitor.
CRT — cathode-ray tube.
CTRL — control.
dB — decibels.
DCC — display control console.
DCI — direct computer interface.
DDEU — digital data entry unit.
DDI — (1) digital data indicator; (2) digital display indicator.
DITEG — digital television graphics generator.
DIV — diversity.
DLRP — Data Link Reference Point.
DMU — display multiplexer unit.
DRAC — digital radar azimuth converter.
DSC — digital scan converter.
DTS — data terminal set.
EDAC — error detection and correction.
EF word — external function word.
EGA — enhanced graphics adapter.
EMI/RFI — electromagnetic interference/radio frequency interference.
EPROM — erasable, programmable read-only memory.
ESC key — escape key.
FM — frequency modulation.
GUI — graphic user interface.

HF — high frequency.

HVPS — high voltage power supply.

HZ — hertz.

I/O — input/output.

IFF/SIF — identification, friend or foe/selective identification feature.

JTIDS — Joint Tactical Information Distribution System.

J-SERIES MESSAGE — The fixed format messages containing tactical data and commands that are used to exchange information over the JTIDS system.

JU — JTDS Unit.

LCD — liquid crystal display.

LCLV — liquid crystal light valve.

LED indicator — light-emitting diode indicator.

LINK-4A — The tactical digital data link for controller-to-controlled aircraft communications.

LINK-11 — The tactical digital data link for communications among a multiple number of units.

LINK-16 — The tactical digital data link for communications among a multiple number of units. This link is a secure, jam resistant, nodeless, high-capacity link that uses the JTIDS terminal.

LSB — Lower Side Band.

LSD — large screen display.

LVPS — low voltage power supply.

MDA — Monochrome Display Adapter.

M-SERIES MESSAGES — Link-11 messages.

NCS — Net Control Station.

NCT — Net Cycle Time.

NICP — Network Interface Control Program.

N-SERIES MESSAGES — The “normalized” messages exchanged between the C2P computer and the ADCS computer.

NTDS — naval tactical data system.

ODR — output data request.

OJT — on-the-job training.

OSC — operations summary console.

PA/SG — pulse amplifier/symbol generator.

PC — personal computer.

PEFT — peripheral equipment functional test.

PIO — peripheral I/O

PIXEL — picture element.

PMS — planned maintenance system.

POFA — programmed operational functional appraisal.

PPI — plan position indicator.

PPLI — precise participant location and identification.

PPU — projection plotting unit.

PROM — programmable read-only memory.

PU — participating unit.

RAC — radar azimuth converter.

RAM — random access memory.

RC — Roll Call.

RDDS — radar data distribution switchboard.

RELNAV — relative navigation.

RF — radio frequency.

RGB — red, blue, green.

ROM — read-only memory.

ROM BIOS — ready-only memory basic input output system.

R-SERIES MESSAGES — Link-4A messages from the controlled aircraft that are sent in response to a control message.
SAC — sonar azimuth converter.
SCG — sensor converter group.
SDDS — sensor data distribution switchboard.
SG — symbol generator.
SRAC — synchro radar azimuth converter.
SVGA — super video graphics array.
TDM — tactical DITEG module.
TDS — tactical data system.
TFT — thin film transistor.
TMG — test message generator.
TN — track number.
TQ — track quality.
TSLO — third salvo lock out.

TTL — transistor-transistor logic.
TVC — television converter group.
TVSC — television scan converter.
UHF — ultra-high frequency.
USB — upper side band.
V/C word — velocity/category word.
VDT — video display terminal.
VFK panel — variable function key panel.
VGA — video graphics array.
V-SERIES MESSAGES — Link-4A control messages sent from the controlling station to the controlled aircraft.
VSS — video signals simulator.
XGA — extended graphics array.
APPENDIX II
REFERENCES USED TO DEVELOP THE TRAMAN

NOTE: Although the following references were current when this TRAMAN was published, their continued currency cannot be assured. Therefore, you need to be sure that you are studying the latest revision.

AN/PRC-113, Harris RF Communications 31R2-2PRC113-1, 1680 University Avenue, Rochester, New York, NY, (no date).

AN/PRC-117, Harris RF Communications 31R2-2PRC117-1, 1680 University Avenue, Rochester, New York, NY, (no date).


Communications Link Interoperability Planning System (CLIPS), Systems Integration and Test Division, Naval Electronics Systems Command, Engineering Activity, St. Inigoes, MD, 1988.


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