DEPARTMENT OF THE ARMY SUPPLY BULLETIN

CYCLIC OVERHAUL OF SELECTED ELECTRONICS EQUIPMENT

Headquarters, Department of the Army, Washington, D.C.
5 February 1971

1. Purpose. This bulletin established the procedure governing cycle overhaul or calibration of selected Electronics Command items.

2. Scope. Certain types of equipment, because of size, complexity, and cost of equipment, require special handling. Such equipment is generally of the fixed or semifixed installation type. In most cases, the supply of replacement sets is limited and in order to effect replacement, depots will maintain a "float stock" for cycling purposes.

3. Procedure. Equipment of this nature when requiring replacement, will be processed by a "Cyclic Overhaul" procedure as outlined in the appendixes to this bulletin. The procedure for obtaining replacement of Radar Set AN/TPS-ID/G is presented in this bulletin as appendix I. Appendix II sets up procedures for cyclic overhaul and obtaining replacement of Radar Sets AN/FPS-36 and AN/FPS-56; appendix III is for Interrogator Sets AN/TPX-26 and AN/TPX-27; appendix IV is for Radar Set AN/TPS25; appendix V is for Radar Set AN/MPQ-4A; appendix VI is for Radar Set AN/FPN-40; appendix VII is for Radar Set AN/TPN-18; appendix VIII is for Radar Set AN/TPN-8; appendix IX is for Radar Sets AN/MPQ-1OA, and Azimuth Elevation Range Records RD-54/TP (U/W AN/MPQ-1OA).

4. Comments. Any comments or queries concerning the contents of this bulletin should be directed to the US Army Electronics Command, Director for Maintenance, ATTN: AMSEL-ME-NMP-O, Fort Monmouth, N.J. 07703.

APPENDIX I
CYCLIC OVERHAUL OF RADAR SET AN/TPS-ID/G

1. Criteria for Cyclic Overhaul. Radar Sets AN/ TPS-1D/G in the hands of using activities which meet one or more of the following criteria should be considered as candidates for replacement:

a. Sets which have been in continuous operation for a period of 2½/ years or longer.

b. Sets which have more than 6,000 operating hours on running time meters or operator logs and have been in use 2 years or longer.

c. Sets which require excessive field maintenance or require constant adjustment or parts replacement due to deterioration under unusual climatic or environmental conditions.

2. Requisitioning Replacements. When a radar set becomes worn or otherwise unserviceable to the extent outlined above, replacement procedure should be initiated by the using activity as follows: a. Obtain inspection and final determination of the need for replacement either by a qualified inspector from the supporting Army field maintenance shop or by an equipment representative from the USAECOM Technical Assistance Field Office.

b. If there is a need for replacement for quantity in use utilize available float assets 2nd return unserviceable equipment to prime depot. Requisition replacement for float asset in A/W AR-725-50.

c. If there is a need for replacement for quantity in use and there is no float asset available prepare a requisition referring to this bulletin, Include in the requisition the serial # of the equipment to be re

placed and a statement by the Inspector certifying to the need for replacement.

d. Forward the requisition to USAECOM
Supply Operations Division
Requisition Mgmt Br
ATTN: AMSEL-DD-FR.

3. US Army Electronic Command. The NICP, upon receiving a requisition for a replacement set. *will forward the requisition to a depot prime(r for repair of this equipment as follows: a. For using activities in the Military District of Washington and First, Second, Third, Fourth and Fifth Army Areas excluding Wyoming, Colorado and New Mexico, requisitions will be forwarded to Tobyhanna Army Depot.

b. For using organizations in the Sixth Army) Area and Wyoming, Colorado, and New Mexico, requisitions will be forwarded to Sacramento Army' Depot.

4. Action by Sacramento and Tobyhanna Army Depots. These depots upon receiving requisitions from NICP will ship a replacement set from stock to the using activity. Requisitions for replacement sets will ordinarily be processed in the order received; however, replacements required for on-site ARADCOM units will be given priority over other replacement requirements.

5. Installation of Replacement Sets. a. Using activities upon receipt of a replacement set will remove the unserviceable equipment and install the replacement set, obtaining technical assistance from supporting Army field maintenance shops or by an Electronics Command (ECOM) Regional Maintenance Representatives as may be required.

b. Unserviceable sets will be packed in the same crates in which the replacements were received and referred immediately to the receiving depot for disposition instructions.

6. Depot Processing Of Unserviceable Sets. a. The depot will furnish immediate disposition instructions to the using activity, citing transportation funds.

b. The receiving depot will place the unserviceable equipment in CRC-6.

7. Replacement of Components. Where it is mutually agreed between the using command and the receiving depot that replacement of certain components of Radar Set AN/TPS-ID/G is more practicable and economical than replacing the entire set, the using activity will requisition only those components which are to be replaced, combining on a single requisition all components required for replacement in a specified radar set. Subsequent requisitioning shipment, installation, disposition, and overhaul procedure will be as described above, substituting components for sets.

APPENDIX II
RADAR SETS AN/FPS-36 and AN/FPS-56

1. Description of Radar Set. a. Radar Set AN/ FPS-36 is an extended range version of Radar Set AN/TPS-1D obtained by applying Modification Kit MK-304/PTS-1D to a Radar Set AN/TPS-1D and adding an Azimuth and Range Indicator IP-345/ TSP-1D in accordance with MWO 11-1167-9. A complete description of the AN/FPS-36 is contained in TM 11-5840-201-10.

b. Radar Set AN/FPS-56 is used for dual channel operation with changeover facilities to a single antenna in order to provide "hot standby operation." A complete description of this unit is contained in TM 11-5840-238-10. Radar Set AN/FPS-56 consists of components of Radar Set AN/FPS-36 and Radar Set AN/FPS-1D which have been modified by Modification Kit, Electronic Equipment MK-384/TPS1D. Instructions for modifying the equipment are contained in MWO 11-5800-203-1.

2. Criteria for Cyclic Overhaul. The antenna and antenna base of the AN/FPS-36 and AN/FPS-56 and the changeover system of the dual installation can be maintained indefinitely at field level by repair or replacement of components. The balance of the set 2 should be considered as a candidate for replacement when: a. The set has been in continuous operation for a period of 212 years or longer without overhaul.

b. The set has more than 6,000 hours on running time meters or operator logs and has been in use 2 years or longer.

c. The set requires excessive field maintenance because of deterioration under unusual environmental conditions.

3. Requisitioning Replacements. When an AN/FPS36 or AN/FPS-56 becomes unserviceable to the extent described above, replacement procedure should be initiated by the using activity in accordance with procedures for requisitioning replacement prescribed in paragraph 2 of Appendix I, this supply bulletin.

4. US Army Electronic Command. The NICP upon receiving a requisition for replacement equipment, will forward the requisition to a depot primed for repair of this equipment as follows: a. For using activities in the Military District of Washington and First, Second, Third, Fourth, and

Fifth Army Areas excluding Wyoming, Colorado, and New Mexico, requisitions will be forwarded to Tobyhanna Army Depot.

b. For using organizations in the Sixth Army Area and Wyoming, Colorado, and New Mexico, requisitions will be forwarded to Sacramento Army Depot.

5. Action by Sacramento and Tobyhanna Army Depots. These depots, upon receiving requisitions from NICP, will ship replacement equipment from stock to the using activity. Requisitions for replacement equipment will ordinarily be processed in the order received; however, replacements required for on-site ARADCOM units will be given priority over other replacement requirements.

6. Installation of Replacement Sets. a. Using activities upon receipt of replacement equipment will remove the unserviceable equipment and install the replacement equipment, obtaining technical assistance from supporting Army field maintenance shops or by an Electronic Command (ECOM) Regional Maintenance Representatives as may be required.

b. Unserviceable equipment will be packed in the same crates in which the replacements were received and referred immediately to the receiving depot for disposition instructions.

7. Depot Processing of Unserviceable Equipment.

a. The depot will furnish immediate disposition instructions to the using activity, citing transportation funds.

b. The receiving depot will place the unserviceable equipment in CRC-6.

8. Replacement by Components. Where it is mutually agreed between the using command and the receiving depot that replacement of certain components of Radar Set AN/FPS-36 and AN/FPS-56 is more practicable and economical than replacing the entire set, the using activity will requisition only those components which are to be replaced, combining on a single requisition all components required for replacement in a specified radar set. Subsequent requisitioning, shipment, installation, disposition, and overhaul procedure will be as described above, substituting components for sets.

APPENDIX III
CYCLIC OVERHAUL OF INTERROGATOR SETS AN/TPX - and AN/TPX-27

1. Criteria for Cyclic Overhaul. Interrogator Set AN/TPX-26 and AN/TPX-27 in the hands of using activities which meet one or both of the following criteria should be considered as candidates for replacement: a. Sets which have been in continuous service for 3 years or longer.

b. Sets which require excessive field maintenance or require constant adjustment or parts replacement due to deterioration under unusual climatic or environmental conditions.

2. Requisitioning Replacements. When an interrogator set becomes a candidate for replacement, the using activity should follow the procedures prescribed in paragraph 2, Appendix I, this supply bulletin.

3. US Army Electronic Command. The NICP, upon receiving a requisition for a replacement set will forward the requisition to a depot primed for repair of this equipment as follows: a. For using activities in the Military District of Washington and First, Second, Third, Fourth and Fifth Army Areas excluding Wyoming, Colorado and New Mexico, requisitions will be forwarded to Tobyhanna Army Depot.

b. For using organizations in the Sixth Army Area and Wyoming, Colorado and New Mexico, requisitions will be forwarded to Sacramento Army Depot.

4. Action by Sacramento and Tobyhanna Depot. A depot upon receiving a requisition will ship a replacement set from stock to the using activity. The depot will also furnish immediate disposition instructions to the using activity for the old set, citing transportation funds. The unserviceable set when received will be placed in condition reservation code 6 at the depot.

5. Installation of Replacement Sets. Using activities, upon receipt of a replacement set, will remove the unserviceable equipment and install the replacement set, obtaining technical assistance from the supporting Army field maintenance shop or by an Electronics Command (ECOM) Regional Maintenance Representatives as may be required. Unserviceable sets will be packed in the same containers in which the replacements were received and referred immediately to the receiving depot for disposition instructions.

6. Depot Processing of Unserviceable Equipment.

a. The depot will furnish immediate disposition instructions to the using activity, citing transportation funds.

b. The receiving depot will place the unserviceable equipment in CRC-6.

7. Replacement by Components. Where it is mutually agreed between the using command and the receiving depot that replacement of certain com-

ponents of the interrogator sets is more practicable and economical than replacing the entire set, the using activity will requisition all components required for a specified interrogator set. Subsequent shipment, installation and evacuation will be as described above, substituting components for sets.

APPENDIX IV
CYCLIC OVERHAUL OF RADAR SETS AN/TPS-25

1. Criteria for Cyclic Overhaul. Radar Set AN/ TPS-25 in the hands of using activities which meet one or both of the following criteria should be considered as candidate for replacement:

a. Sets which have been in continuous service for 2 years or longer.

b. Sets which require excessive field maintenance or require constant adjustment or parts replacement due to deterioration under unusual climatic or environmental conditions.

2. Requisitioning Replacements. When a Radar Set AN/TPS-25 becomes a candidate for replacement, the using activity should follow the procedures prescribed in paragraph 2, Appendix I, this Supply Bulletin.

3. US Army Electronics Command. The NICP upon receiving a requisition for a replacement, will forward requisition to a depot primed for repair of this equipment as follows:

a. For using activities in the Military District of Washington and First, Second, Third, Fourth and Fifth Army Areas excluding Wyoming, Colorado, and New Mexico, requisitions will be forwarded to Tobyhanna Army Depot.

b. For using organizations in the Sixth Army Areas and Wyoming, Colorado and New Mexico, requisitions will be forwarded to Sacramento Army Depot.

4. Action by Sacramento and Tobyhanna Army Depot. Sacramento and Tobyhanna Army Depots upon receiving a requisition authorizing release of the equipment will ship a replacement set from stock to the using activity. The depot will also furnish immediate disposition instructions to the using activity for the old set, citing transportation funds. The unserviceable sets when received by the depot will be placed in Condition Reservation Code 6, Marked for: Inspection and stock.

5. Installation of Replacement Sets. a. Using activities upon receipt of replacement equipment will remove the unserviceable equipment and install the replacement equipment, obtaining technical assistance from supporting Army field maintenance shops or ECOM Regional Maintenance Representatives as may be required.

b. Unserviceable equipment will be packed in the same crates in which the replacements were received and referred immediately to the receiving depot for disposition instructions.

APPENDIX V
CYCLIC OVERHAUL OF RADAR SETS AN/MPQ-4A

1. Criteria for Cyclic Overhaul. Radar Set AN/ MPQ-4A in the hands of using activities which meet one or more of the following criteria should be considered as candidates for replacement:

a. Sets which have been in continuous service for one year or longer without overhaul.

b. Sets which have more than 4,000 hours on running time meters or on operator logs.

c. Sets requiring excessive field maintenance, constant adjustment or parts placement due to deterioration under unusual climatic or environmental conditions.

d. When there is reasonable belief that elevation or leveling calibration has been destroyed. Reasonable belief will be based on, but not restricted to the following:

(1) Significant damage to either the telescope or spirit level.

(2) Results of azimuth checks indicate an error of + or ( ) 2 mils between the optical and electrical azimuths of a permanent echo, and this difference cannot be accounted for by the field correction factor.

(3) Errors in weapon or impact locations believed to be due to antenna radiation pattern errors.

e. Sets which have encountered damage or wear affecting the placement or operation of the scanner and/or reflector.

2. Requisitioning Replacements. When a radar set becomes a candidate for replacement, the using activity should follow the procedures prescribed in paragraph 2, Appendix I, this Supply Bulletin.

3. US Army Electronics Command. The National Inventory Control Point upon receiving a requisition for replacement equipment will take appropriate supply action.

4. Installation of Replacement Sets. a. Using activities upon receipt of replacement equipment will remove the unserviceable equipment and install the replacement equipment, obtaining technical assistance from supporting Army field maintenance shops

or by an equipment representative from the USAECOM Technical Assistance Field Office as may be required.

b. Unserviceable equipment will be packed in the same crates in which the replacements were received and turned in immediately to the Sacramento or Tobyhanna Army Depots, as applicable, Marked for: Inspection and Stock.

5. Action by Sacramento and Tobyhanna Army Depots. The unserviceable set when received by the depot will be placed in Purpose/Condition Code AF.

6. Replacement of Components. Where it is mutually agreed between the using activities and qualified inspector or by an equipment representative for the USAECOM Technical Assistance Field Office that replacement of certain components of the radar set is more practicable and economical than replacing the entire set, the using activity will requisition all components required for a specified radar set. Subsequent shipment, installation and evacuation will be as described above, substituting components for sets.

APPENDIX VI
CYCLIC OVERHAUL OF RADAR SET AN/FPN-40

1. Description of Radar Set. a. Radar Set AN/FPN40 is an extended-range version of Ground Controlled Approach Radar Set AN/FPN-33.

b. Identification friend or foe, (IFF), selective identification feature (SIF) and side lobe suppression (SLS) antenna are features added to the basic AN/ FPN-40 after integration with the AN/TPX-41 interrogator set as directed by MWO 11-5840-293-50/1.

2. Criteria for Cyclic Overhaul. Radar Set AN/ FPN-40, in the hands of a using activity, which meets one or more of the following criteria should be considered a candidate for replacement: a. The set has been in continuous operation for a period of 2½/2 years or longer without overhaul.

b. The set has more than 10,000 hours on running time meters or operator logs and has been in use 2 years or longer.

c. The set requires excessive general support maintenance because of deterioration under unusual environmental conditions.

3. Requisitioning Replacements. When an AN/ FPN-40 becomes unserviceable to the extent described in paragraph 2, replacement procedures are as prescribed in paragraph 2, Appendix I, this Supply Bulletin.

4. National Inventory Control Point. The NICP, upon receiving a requisition for a replacement set, will schedule the overhaul of the set to be turned in. Requisitions for replacement equipment will ordinarily be processed in the order received; however, replacements required in support of an FAA certified Approach Control Facility or those facilities providing radar advisory services to civil aircraft under an agreement with the FAA will be given priority over other replacement requirements.

5. Installation of Replacement Sets. a. Using activities, upon receipt or replacement equipment, will remove the unserviceable equipment and install the replacement equipment with technical assistance from their general support unit or in accordance with AR 700-4.

b. Unserviceable equipment will be packed in the same crates in which the replacements were received and shipped to the depot specified by the NICP.

6. Replacement by Components. Where it is mutually agreed between the using command and the NICP that replacement of certain components of Radar Set AN/FPN-40 is more practical and economical than replacing the entire sets, the using activity will requisition all components required for replacement in a specified radar set. Subsequent requisitioning, shipment, installation, disposition, and overhaul procedure will be as described above, substituting components for sets.

APPENDIX VII
CYCLIC OVERHAUL OF RADAR SET AN/TPN-16

1. Description of Radar Set. Radar Set AN/TPN18 is a lightweight Ground Controlled Approach (GCA) equipment used primarily tactical organizations in support of their aviation mission, and is an extended range version of Radar Set AN/TPN-8.

2. Criteria for Cyclic Overhaul. Radar Set AN/ TPN-18, in the hands of a using activity, which meets one or more of the following criteria should be considered a candidate for replacement:

a. The set has more than 8,000 hours on running time meters or operator logs and has been in use 2 years or longer.

b. The set requires excessive general support maintenance because of deterioration under unusual environmental conditions.

3. Requisitioning Replacements. When an AN/ TPN-18 becomes unserviceable to the extent described above, replacement procedures are as pre-

scribed in paragraph 2, appendix I, this Supply Bulletin.

4. National Inventory Control Point. The NICP, upon receiving a requisition for a replacement set, will schedule the overhaul of the set to be turned in. Requisitions for replacement will ordinarily be processed in the order received.

5. Installation of Replacement Sets. a. Using activities, upon receipt of replacement equipment, will remove the unserviceable equipment and install the replacement equipment with technical assistance from supporting Army general support maintenance shops in accordance with AR 700-4.

6. Replacement by Components. Where it is mutually agreed between the using command and the NICP that replacement of certain components of Radar Set AN/TPN-8 is more practicable and economical than replacing the entire set, the using activity will requisition only those components required for replacement, in a specified radar set. Subsequent requisitioning, shipment, installation, disposition and overhaul procedure will be as described above, substituting components for sets.

APPENDIX VIII
CYCLIC OVERHAUL OF RADAR SET AN/TPN-8

1. Description of Radar Set. Radar Set AN/TPN-8 is a lightweight Ground Controlled Approach (GCA) equipment used primarily by tactical organizations in support of their aviation mission.

2. Criteria for Cyclic Overhaul. Radar Set AN/ TPN-8, in the hands of a using activity, which meets one or more of the following criteria should be considered a candidate for replacement: a. The set has more than 8,000 hours on running time meters or operator logs and has been in use 2 years or longer.

b. The set requires excessive general support maintenance because of deterioration under unusual environmental conditions.

3. Requisitioning Replacements. When an AN/ TPN-8 becomes unserviceable to the extent described above, replacement procedures are as prescribed in paragraph 2, appendix I, this Supply Bulletin.

4. National Inventory Control Point. The NICP, upon receiving a requisition for a replacement set, will schedule the overhaul of the set to be turned in.

5. Installation of Replacement Sets. a. Using activities, upon receipt of replacement equipment, will remove the unserviceable equipment and install the replacement equipment with technical assistance from supporting Army general support maintenance shops or in accordance with AR700-4.

b. Unserviceable equipment will be packed in the same crates in which the replacements were received and shipped to the depot specified by the NICP.

6. Replacement by Components. Where it is mutually agreed between the using command and the NICP that replacement of certain components of Radar Set AN/TPN-18 is more practicable and economical than replacing the entire set, the using activity will requisition only those components required for replacement in a specified radar set. Subsequent requisitioning, shipment, installation, disposition, and overhaul procedure will be as described above, substituting components for sets.

APPENDIX IX
CYCLIC OVERHAUL OF RADAR SET AN/MPQ-10A AND AZIMUTH-' ELEVATION-RANGE RECORDER RD-54/T[(U/W AN/MPQ-10A

1. Criteria for Cyclic Overhaul. Radar Set AN/ MPQ-1OA and Azimuth-Elevation-Range Recorder RD-54/TP, in the hands of using activities, which meet one or more of the following criteria should be considered as candidates for replacement.

a. Equipments that have been in continuous service for 1 year or longer without overhaul.

b. Equipments that have more than 4,000 hours on running time meters or on operator logs.

c. Equipments that require excessive field maintenance, constant adjustment, or parts replacement because of deterioration under unusual climatic or environmental conditions.

d. When there is reasonable belief that elevation or leveling calibration on Radar Set AN/MP-1OA has been destroyed. Reasonable belief will be based on, but not restricted to, the following:

(1) Removal of or damage to either the telescope or the spirit level.

(2) Results of azimuth checks indicate an error

of + or -( ) 2 mils between the optical and the electrical azimuths of a permanent echo, and this difference cannot be accounted for by the field correction factor.

(3) Errors in weapon or impact locations believed to be due to errors in antenna radiation pattern.

e. Radar sets that have encountered damage or wear which affects the placement or operation of the scanner and/or reflector.

2. Requisitioning Replacements. When a radar set or recorder becomes candidate for replacement, the using activity should follow the procedures prescribed in paragraph 2, Appendix I, the Supply Bulletin.

3. US Army Electronics Command. The National Inventory Control Point, upon receiving a requisition for replacement equipment, will take appropriate supply action.

4. Installation of Replacement Sets.

a. Using activities, upon receipt of replacement equipment, will remove the unserviceable equipment and install the replacement equipment, with technical assistance either by a qualified inspector from supporting Army field maintenance shops or by an equipment representative from the USAECOM Technical Assistance Field Office, as may be required.

b. Unserviceable equipment will be packed in the same crates in which the replacements were received and turned in immediately to the Sacramento or Tobyhanna Army Depots, as applicable, marked for: Inspection and Stock.

5. Action by Sacramento and Tobyhanna Army Depots. The unserviceable equipment when received by the depot will be placed in Purpose/Condition Code AF.

6. Replacement of Components. Where it is mutually agreed between the using activities and the qualified inspector from the supporting Army field maintenance shops or the equipment representative from the USAECOM Technical Assistance Field Office that replacement of certain components of the equipment is more practicable and economical than replacement of the entire radar set or recorder, the using activity will requisition all components required. Subsequent shipment, installation and evacuation will be as described above, substituting components for radar sets or recorders.

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General United States Army,
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

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29-600
29-610
29-620
29-630
29-640
29-670
29-427

NG: State AG (3)
USAR: None
For explanation of abbreviations used, see AR 310-50.

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THE METRIC SYSTEM AND EQUIVALENTS

'NEAR MEASURE

. Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

'VEIGHTS

Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 lb.
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

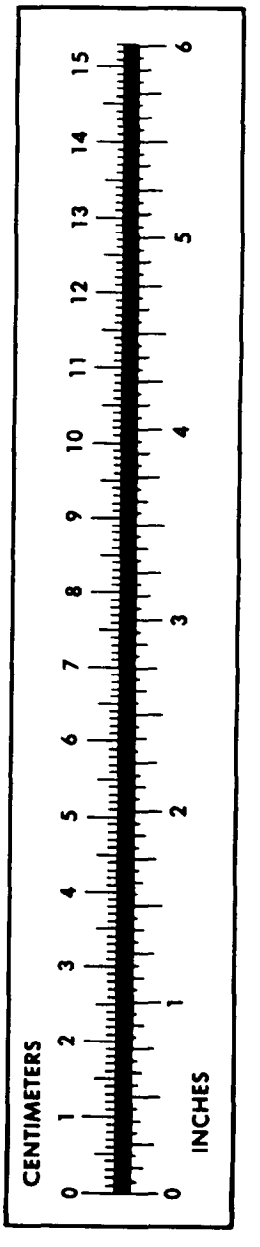
TEMPERATURE

5/9(°F - 32) = °C
212° Fahrenheit is evuivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5C° + 32 =°F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
ıts	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
ers	Gallons	0.264
ms	Ounces	0.035
ograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
lometers per Liter	Miles per Gallon	2.354
meters per Hour	Miles per Hour	0.621



PIN: 022498-000