



# Reusable Diagnostic EKG Cables

English

## Product Description:

Diagnostic EKG cables are used to convey electrocardiographic signals of a patient from the electrodes to an electrocardiograph. FMT cables have device side connectors and wiring configurations for different electrocardiograph manufacturers. Diagnostic EKG cables have leadwires with 4.0 mm banana, 3.2 mm straight pin, snap or grabber patient termination. Use the *FMT Diagnostic EKG Cables Cross Reference Guide* to determine the appropriate cable for your needs.

**E100/XXX** Diagnostic EKG cable with fixed leadwires.

**E101/XXX** Diagnostic EKG cable with detachable leadwires.

**E103/XXX** Diagnostic EKG cable with detachable lead sets (GE Multilink type).

**E104/XXX** Diagnostic EKG cable with detachable lead sets (GE Multilink 12SL type).

**E105/XXX** Diagnostic EKG cable with detachable lead sets (PHILIPS M1949A type).

**E106/XXX** Diagnostic EKG cable with detachable lead sets (Meditronic / Physio Control type).

**E107/XXX** Diagnostic EKG cable with detachable lead sets (Schiller type).

## Instructions for Use:

- 1- Connect the EKG cable connector to the ECG connector of the electrocardiograph.
- 2- Before applying the electrodes, ensure the patient skin is clean, dry and properly prepared.
- 3- Attach leadwires to the electrodes. Ensure the leadwires do not pass twist stress onto electrodes.
- 4- Apply the electrodes firmly on prepared sites, using the "ECG Lead Placement" chart shown below.
- 5- Ensure the leads conform the body contours and no strain is placed on the electrodes.

## Warnings:

- To prevent shock hazard do not connect to any power outlet.
- When connecting and disconnecting pull on the plug itself, not on the cable.
- Never expose cables to strong ultra-violet radiation.
- Before using the cables and plugs, carefully check that they show no damage or abnormality.
- Keep the EKG cable connectors as far as possible from electromagnetic sources such as the power transformer of an electro medical device. Also avoid placing the EKG cable alongside the power cord of an electro medical device.
- Do not sterilize EKG cables and leadwires by autoclave, radiation or steam.
- Dirty, compromised or unprepared skin may cause incorrect ECG readings. Using previously opened or out of date electrodes may degrade the ECG signal quality. ECG electrodes should be removed from their sealed package immediately prior to use.
- Always ensure that the patient is kept motionless during 12 lead ECG signal acquisition and analysis.
- To avoid a shock hazard and interface from nearby electrical equipment, keep electrodes and patient cables away from grounded metal and other electrical equipment.
- As with all medical equipment, carefully route cables to reduce the possibility of patient entanglement or strangulation.
- Keep EKG cable leadwires away from moving parts that might pinch or crush them.
- This product should be connected and activated by qualified medical personnel only.
- Do not use damaged EKG cables. Dispose damaged cables according to local laws and regulations for medical waste.
- For further information and warnings please read the instructions accompanying the EKG device.
- EKG cables can only be considered as protected against defibrillation if it is marked with below "Defibrillator Protected" symbol.



## Cleaning, Disinfection and Sterilization:

FMT EKG cables are sold NON STERILE. Clean and disinfect the cables before first use.

**Warning:** Before cleaning or disinfecting the cables, disconnect it from the EKG device.

**Warning:** Clean or disinfect the EKG cables before attaching to a new patient.

**Warning:** EKG cables should be cleaned of overburden prior to disinfection or sterilization to improve the effectiveness.

## Cleaning:

EKG cables may be cleaned by wiping with a cloth dampened with a solution of warm water and mild detergent or ordinary alcohol free hand soap. Please do not clean with hard or frictional materials, clean with plastic cleaning brushes. After cleaning, rinse by wiping with a clean dampened cloth. Be sure to rinse thoroughly. Dry the cable by wiping all surfaces with a clean, dry gauze pad. Do not use wet cables. Do not immerse the cables. When wiping clean, hold the cable in one hand at the cable yoke and wipe the cable toward the plug or the connector. Excessive pressure could stretch the cable jacket and break the internal wires, destroying the cable. If the cables are sunk in the disinfectants, oxidation in the metal parts of the connectors or sockets may occur. Avoid contact with strong, aromatic, chlorinated, ketone, ether, or ester solvents. The cable plugs should not be immersed into any kind of liquid. Do not clean in Ultrasonic baths.

## Disinfection:

Cables may be disinfected by washing with 70% isopropanol, ethanol, activated dialdehyde (Cidex) or sodium hypochlorite (bleach diluted 1:10 minimum in water). After washing, cables should be rinsed thoroughly with water and then dried with clean cloth.

**Note:** FMT does not make any claims as to the efficacy of these chemicals for infection control. Please consult your hospital's Infection Control Officer for applicable disinfection policies.



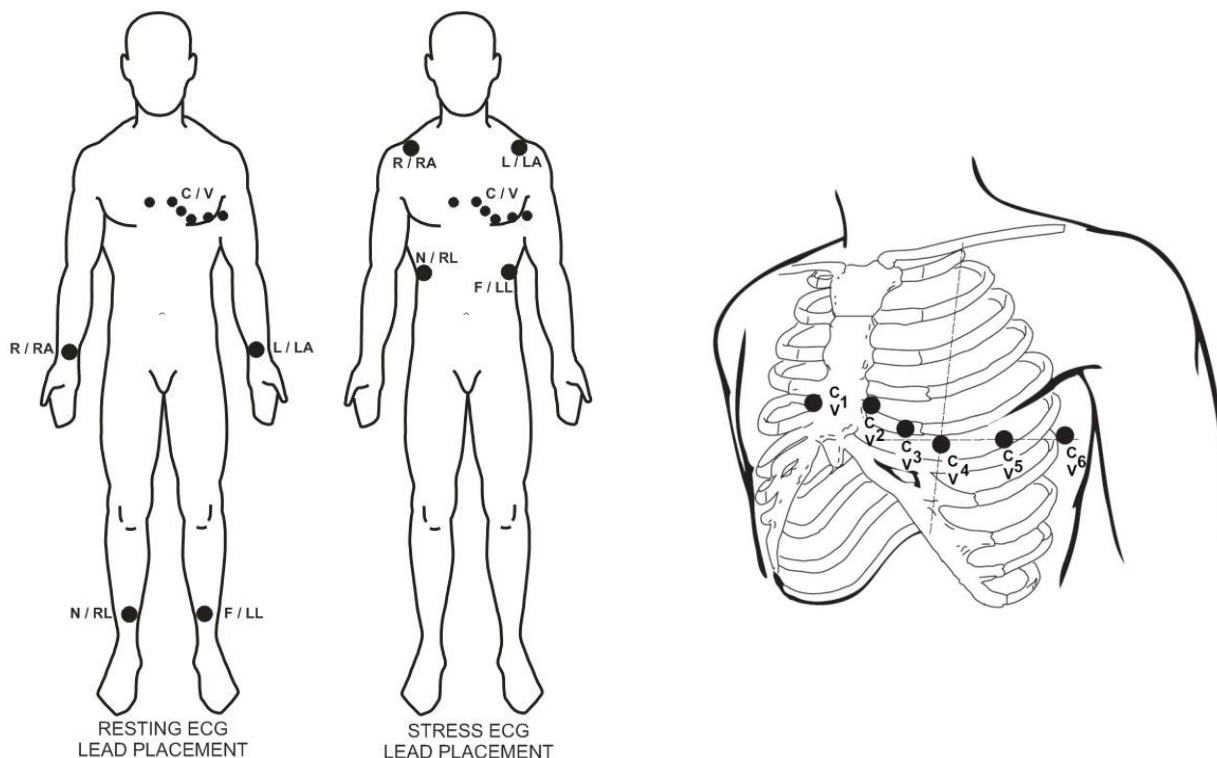
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## ECG LEAD PLACEMENT CHART

| IEC COLOR CODE |        | AHA COLOR CODE |        | LOCATION  |  |
|----------------|--------|----------------|--------|---|--|
| Lead           | Color  | Lead           | Color  | RESTING EKG   | STRESS TEST  |
| R              | Red    | RA             | White  | Right Arm, avoiding bony prominences.                                   | Right and left mid-clavicular line, just below the clavicle.                         |
| L              | Yellow | LA             | Black  | Left Arm, avoiding bony prominences.                                    |  |
| F              | Green  | LL             | Red    | Left Leg, avoiding bony prominences.                                    |  |
| N              | Black  | RL             | Green  | Right Leg, avoiding bony prominences.                                   | Lower edge of rib cage, or at the level of the umbilicus at the mid-clavicular line. |
| C1             | Red    | V1             | Red    | Fourth intercostals space at right margin of sternum.                   |  |
| C2             | Yellow | V2             | Yellow | Fourth intercostals space at left margin of sternum.                    |  |
| C3             | Green  | V3             | Green  | Midway between position C2 (V2) and position C4 (V4).                   |  |
| C4             | Brown  | V4             | Blue   | Fifth intercostals space at junction of left midclavicular line.        |  |
| C5             | Black  | V5             | Orange | At horizontal level of position C4 (V4) at left anterior axillary line. |  |
| C6             | Purple | V6             | Purple | At horizontal level of position C4 (V4) at left mid-axillary line.      |  |



### Sterilization:

We recommend sterilizing the cables only as required by your hospital's policy to avoid long term damage.

Ethylene oxide (EtO) is the preferred sterilization method for EKG cables. EKG cables can be sterilized with ethylene oxide (EtO) at a maximum temperature of 50°C (122°F). After sterilization, cables must be safely and thoroughly ventilated before handling or use. FMT recommends an aeration time of 12 hours minimum to dissipate residual EtO in the cable below 250 ppm.

### Warranty:

EKG cables are under six (6) months warranty against material and workmanship defects from the date of original purchase. In warranty period, METKO will be responsible for repairing the cable or change the cable free of charge if the defect is proven. This warranty does not extend to any product that has been subject to misuse, wrong sterilization, neglect or accident; or that has been damaged by causes external to the product; or that has been used in violation of the operating instructions supplied with the product.

The complained product should be sent to our company for checking and identifying the problem. Please indicate the problem and owner's name in detail. The products which are not defined as "Hygienically convenient" will be sent back without any operation.

### Storage:

Storage Temperature : 0°C - 50°C (32°F – 122°F)

Relative Humidity : 20 - 80% (not condensing)

Atmospheric Pressure: 500 - 1600 mbar

During the storage the products should be protected from sun light. It is recommended to store the products in original packages until the first use.

The information in this instruction insert has been carefully checked and it is believed to be accurate. In the interest of continued product development, METKO reserves the right to make changes and improvements to this insert and the product it described any time, without notice or obligation.

**Caution: Federal Law (U.S.A.) restricts this device to sale by or on the order of a physician.**

FMT® is a registered trademark of METKO Ltd.

All FMT products are Latex free.



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