From Austria

Welcome!

to the

Mobile Care Unit

TMA Medical® Medical assistance anywhere anytime
About TMA Medical

• Founded 1993 – until 2000; R&D for several clients in the medical field.
• 2001 until 2003 R&D plus distribution of diagnostic devices in the European market.
• 2004 Own R&D and S&M development Mobile Care Unit (MCU).
• 2004 Medica Düsseldorf Exhibition in Germany - Launching MCU to the market
## Mobile Care Unit - Examinations

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Lead ECG simultaneous</td>
<td></td>
</tr>
<tr>
<td>Pulse Oximetry</td>
<td></td>
</tr>
<tr>
<td>Blood Monitor</td>
<td>Lipids, Glucose, Ketones</td>
</tr>
<tr>
<td>Blood Glucose</td>
<td></td>
</tr>
<tr>
<td>Urine analysis</td>
<td></td>
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<tr>
<td>Videoscope ORL &amp; Dermatology</td>
<td></td>
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<tr>
<td>Color Vision</td>
<td></td>
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<tr>
<td>Visual acuity Test</td>
<td></td>
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<tr>
<td>Audiometer</td>
<td></td>
</tr>
<tr>
<td>Video Consultation</td>
<td></td>
</tr>
<tr>
<td>NIBP</td>
<td></td>
</tr>
<tr>
<td>Spirometer</td>
<td></td>
</tr>
<tr>
<td>Health Scale &amp; BMI</td>
<td></td>
</tr>
<tr>
<td>Hematology</td>
<td></td>
</tr>
<tr>
<td>Rapid Tests</td>
<td>(HIV, Malaria, Hepatitis ...)</td>
</tr>
<tr>
<td>S.A. Defibrillator</td>
<td></td>
</tr>
<tr>
<td>Ultrasound</td>
<td>3.5 to 12 Mhz probes</td>
</tr>
<tr>
<td>Digital Camera</td>
<td></td>
</tr>
<tr>
<td>White Blood Cell count</td>
<td></td>
</tr>
<tr>
<td>Point of Care CD4</td>
<td></td>
</tr>
</tbody>
</table>

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## MCU – Basic configurations

<table>
<thead>
<tr>
<th>Models</th>
<th>12 Lead ECG simultaneous</th>
<th>NIBP</th>
<th>Pulse Oximetry</th>
<th>Spirometer</th>
<th>Blood monitor</th>
<th>Audio meter</th>
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</thead>
<tbody>
<tr>
<td>Mini</td>
<td>√</td>
<td>√</td>
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<td></td>
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<tr>
<td>Basic</td>
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<td>√</td>
<td></td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check-up</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Cardiac</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Cardiac-check</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Standard</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Screening</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
<td></td>
<td>√</td>
</tr>
</tbody>
</table>
Mobile Care Unit – User interface
Mobile Care Unit – User interface

- Touch screen operation
- Multilingual setting (Spanish, English, French)
- User friendly – intuitive operation
- Interpretation and normal values for most of examinations

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Mobile Care Unit – User interface

User interface license according to examinations selected in the MCU unit
Mobile Care Unit – Main features

• Wide range of medical examinations
• User friendly operation touch screen panel
• Portable, ideal for remote areas, emergency
• Remote diagnostic/ Video consultation
• Secured operation system/ Remote access support
# Mobile Care Unit - Packaging

- Soft bag textile
- Rugged size on demand
- Rugged polycarbonate
Mobile Care Unit - Packaging

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Mobile Care Unit – SDD

- **SDD** – Solid State Drive
  - Memory chip/ Flash memory
  - No movement
  - Data access time 50 times faster than HDD

- **HDD** – Hard Disk Drive
  - Magnetic coating
  - Rotating at high speed
  - Fragile to shocks
Mobile Care Unit – 12 Lead ECG
Mobile Care Unit – 12 Lead ECG

- 12 Lead ECG simultaneous – 16 bits
- Fast electrodes positioning with ECG belt
- Electrodes patient contact indicator
- Software interpretation
Mobile Care Unit – Digital

Patient: Drobik Heinz (Patient ID: 2012042501)

05.06.2012 05:12
05.06.2012 05:08
05.06.2012 05:04
05.06.2012 01:21
25.04.2012 04:02
Mobile Care Unit – Ultrasound

- PC based / USB probes
- Black and White image
- Remote US possible
- Various probes available

<table>
<thead>
<tr>
<th>Application</th>
<th>Focal Zone</th>
<th>Pulse Frequencies</th>
<th>End-Fire Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal</td>
<td>4 cm to 20 cm</td>
<td>3.5 and 5 MHz</td>
<td>90</td>
</tr>
<tr>
<td>Vascular</td>
<td>0.5 cm to 4 cm</td>
<td>24, 15, 12 and 7.5 MHz</td>
<td>60</td>
</tr>
<tr>
<td>Small Parts</td>
<td>0.5 cm to 4 cm</td>
<td>24, 15, 12 and 7.5 MHz</td>
<td>90</td>
</tr>
<tr>
<td>Trans-Vaginal</td>
<td>0.5 cm to 4 cm</td>
<td>24, 15, 12 and 7.5 MHz</td>
<td>90</td>
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<tr>
<td>Trans-Rectal</td>
<td>0.5 cm to 4 cm</td>
<td>24, 15, 12 and 7.5 MHz</td>
<td>90</td>
</tr>
</tbody>
</table>

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Mobile Care Unit – Ultrasound
Mobile Care Unit - Ultrasound

- Carotid-thyroid (SP)
- Liver - kidney
- Ovary
Mobile Care Unit - Video scope

Dental  Mouth  Ears  Skin  Nose

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Mobile Care Unit - Defibrillator

- Compact
- Located in MCU unit
- For external use
Mobile Care Unit - Defibrillator

Dimensions: 133 mm x 126 mm x 35 mm (l x w x h)
Weight: 490 g
Defibrillation waveform: Pulsed biphasic - MULTIPULSE BIOWAVE®
Energy*: Configurable from 1 to 120 J (adults), from 1 to 70 J (children)
Automatic recognition when children pads are connected.
Manual mode (option): Override of the AED mode to define energy level and shock delivery. Charging is commenced with the blue ANALYSIS button and the shock delivered with the orange SHOCK button.
Power supply: Li-MnO₂ cell
Screen: Screen: LCD 60 x 40 mm, high resolution with LED background lighting, text display, ECG display (configurable).
Defibrillation electrodes: Adults: 64 cm² surface area per electrode.
Paediatric: 28 cm² surface area per electrode. Electrode cable length: 1.40 m
Standards: The unit complies with all relevant standards for patient safety and operating conditions.
Memory: Mini SD card (option) for ECG and event recording
Software update: Via interface from PC / laptop

* The energy levels of the unit are defined by the unit software configuration.
Mobile Care Unit - Compliance

• All medical devices are CE Medical approved according to MDD 42/93/EEC (and additional FDA for some devices)
• Original of medical devices: Europe/ USA/ Japan
• ISO 134585 certified

TMA Medical® Medical assistance anywhere anytime
Mobile Care Unit - Synchronization
Mobile Care Unit - Transmission

- Mode of transmission:
  - LAN, WLAN, Wi-Fi, PSTN Satellite
  - Via VPN encrypted RAS (static IP mandatory)
- No necessity to be permanently online
- Transmission performed when the network is identified
Mobile Care Unit - Synchronization

• Homogeneous electronic medical record
• Data saved offline or online
• Various possibilities of data synchronization with the Data center:
  – Automatic: according to setting period (1 to x minutes)
  – Forced: manual input to perform immediate synchronization
  – Urgent: synchronization of a specific selected medical result
Mobile Care Unit – Receiver

- **Receiving station:** dedicated Touch Screen PC configured with MCU Viewing License
- **Server:** i.e. central database
- **Consulting Physician**
Mobile Care Unit – Receiving Station

- Viewing all synchronized examinations
- Remote access to a particular MCU on field
- Remote control and operation of MCU on field
- Online examination (i.e. ECG, Ultrasound....)
Mobile Care Unit – Mobile Health Unit

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Mobile Care Unit – Support

VPN Support for:
- Remote service
- Update software
- Operator training assistance

Medical assistance anywhere anytime
MCU – Field of application

- Remote areas/ Rural Medical Centers
- Army: Emergency / Check-up of candidates)
- Tele Healthcare / Cardiology patient monitoring
- Mobile Doctors, Mobile Nurses screening and/or diagnostic
- Elderly Houses preventive and routine screening
- Developing Country Humanity use Preventive medicine screening of population and/or diagnostic
MCU – Field of application

- Occupational medicine screening of workers
- Offshore / Oil & Gas platforms experts diagnosis
- Correction Houses security gaps
- GP’s Network with Hospital specialists second opinion diagnostic
- Hospitals - home care follow-up after hospitalization
- Immigration health services
Mobile Care Unit – Worldwide
Greetings!

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