

## High-Frequency (Light) Borehole-Radar System Ramac from Mala Geoscience Packing List

- 1)  Radar control unit (Ramac surface GPR system) (Old or New CU2 is O.K.).
- 2)  Laptop computer with acquisition software, manuals, logbook and protocol sheets.
- 3)  Backup system; zip, jaz, or CD-writer and blank disks.
- 4)  Control unit batteries, 12v adapter, battery chargers, fast chargers for antennas, antenna charging cables, and power-strip.
- 5)  Parallel computer data cable (straight thru), trigger/beeper, long encoder cable(s).
- 6)  Two tripods; one with digital encoder and other with analog depth encoder.
- 7)  Toolbox with fiber-optic cleaning supplies, electrical tape, needle-nose pliers, etc.
- 8)  100 MHz transmitter and receiver antennas (with built in batteries).
- 9)  Antenna battery / turn-on plugs, plug wrench, allen screws, allen wrenches.
- 10)  150 and 115 m fiber-optic kevlar-reinforced cables with 4 fiber optic conductors.
- 11)  Strain relief ties or biners for fiber-optic cables.
- 12)  Two to three tarps to coil and uncoil cables, stakes, hammer, and ratchet-straps to fix tripods.
- 13)  Well-head shive(s) for boreholes with tall risers.
- 14)  Gel cell batteries and chargers for laptop computer.
- 15)  Table, chairs, easy-up.
- 16)  Spare single fiber optic cables from receiver cable-head to transmitter with strain relief.
- 17)  Antenna forks (2-3) with safety lines.
- 18)  Surface radar antenna control electronics and radiating elements for trouble-shooting.
- 19)  Fiberglass metric measuring tapes and plastic stakes.
- 20)  Cleaning supplies: paper towels, decon bottles, liquinox, etc.
- 21)  One KW generator for laptop, charging batteries, etc.; with gas can and extra gasoline.
- 22)  Site work lights (halogen), extension cords, power strips.
- 23)  E-tape and conductivity meter.
- 24)  PSE: Gloves, hard-hat, goggles, rain-gear, flashlights, first-aid, etc.
- 25)  Shipping cases and coolers for air-freight shipping via FedEx.