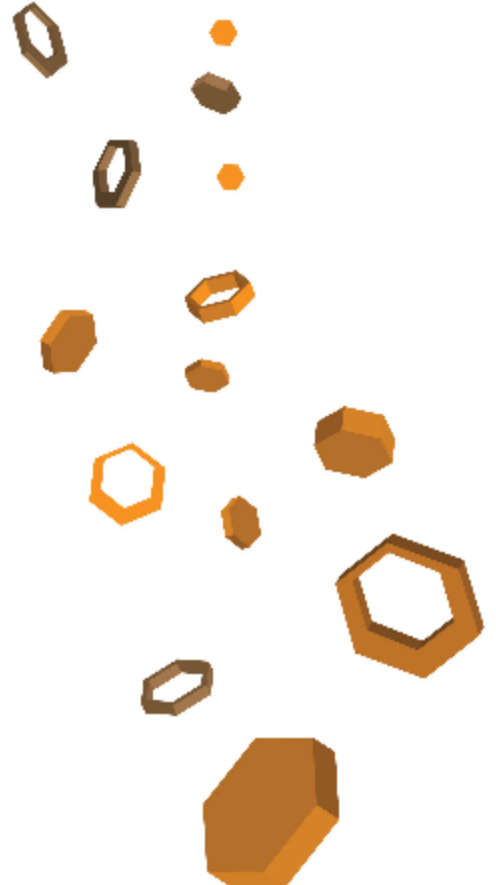# Q U I C K   R E F E R A N C E   G U I D E

Comb
COMMUNICATIONS

PLEASE ENTER
UNIT CODE

Comb
COMMUNICATIONS

POWERED BY

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INDEX

MAJOR COMPONENT LIST

1. Microphone
2. Plastic Enclosure
3. LED Lighting (Std White led)
4. Back Plate mounting holes
5. Main PCB
6. Battery (12v 0.8AH)
7. Transformer (15v 1amp)
8. Non Key alike barrel lock
9. Display (Blue writing white backlight)
10. Metal Keypad
11. Speaker (45Ω 1w)
12. Stainless Steel Front plate
13. Gooseneck mounting hole
14. Enclosure mounting hole
15. Stainless steel back plate
16. Gooseneck with mounting
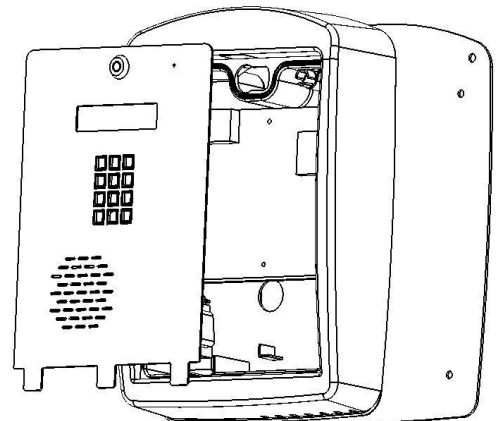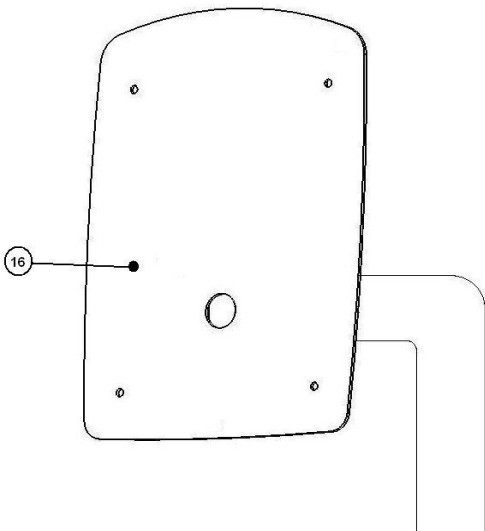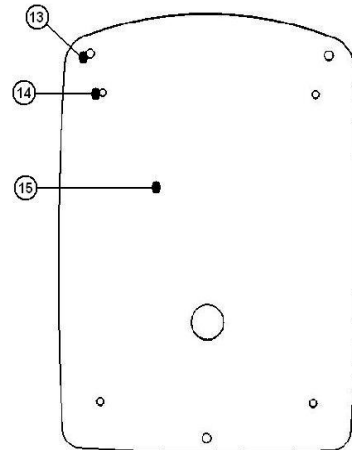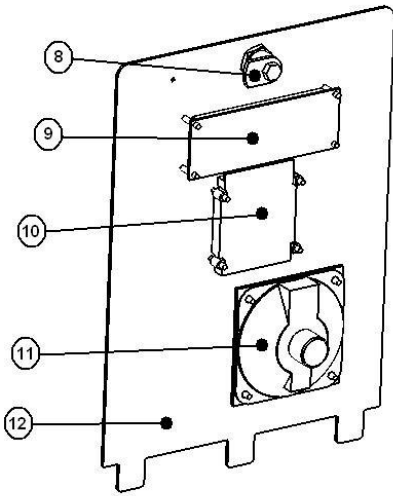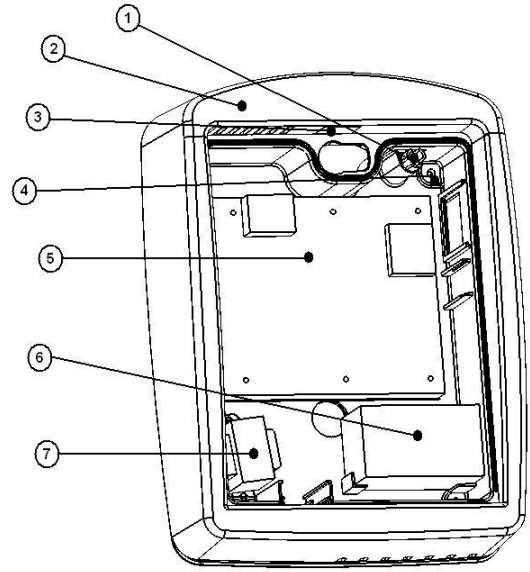
# WALL MOUNTING INSTRUCTIONS

Remove the front plate from the plastic enclosure.
Unscrew the back plate from the enclosure.

Screw the back plate to the wall. It is recommended that an 8mm Nail in anchors be used.
Bring 220v AC cabling in through the middle hole.

Once back plate is securely in place,
screw the plastic enclosure to the
back plate, feeding the cable though
the middle hole, with the 4 mounting
screws provided.

Replace the front plate.
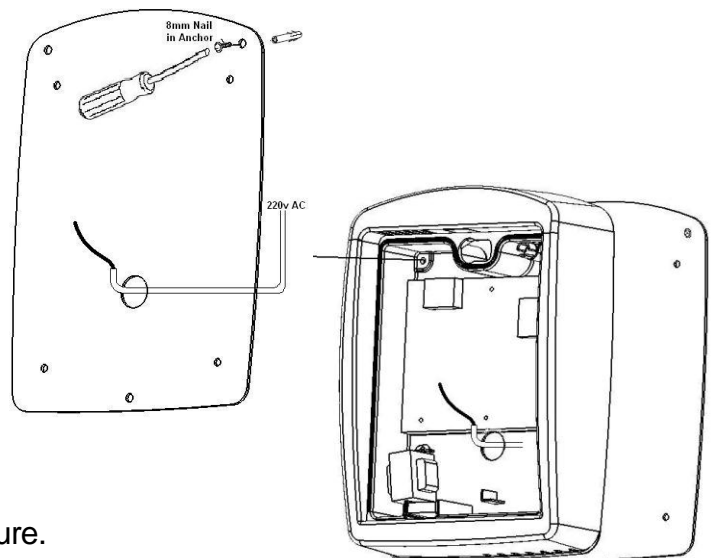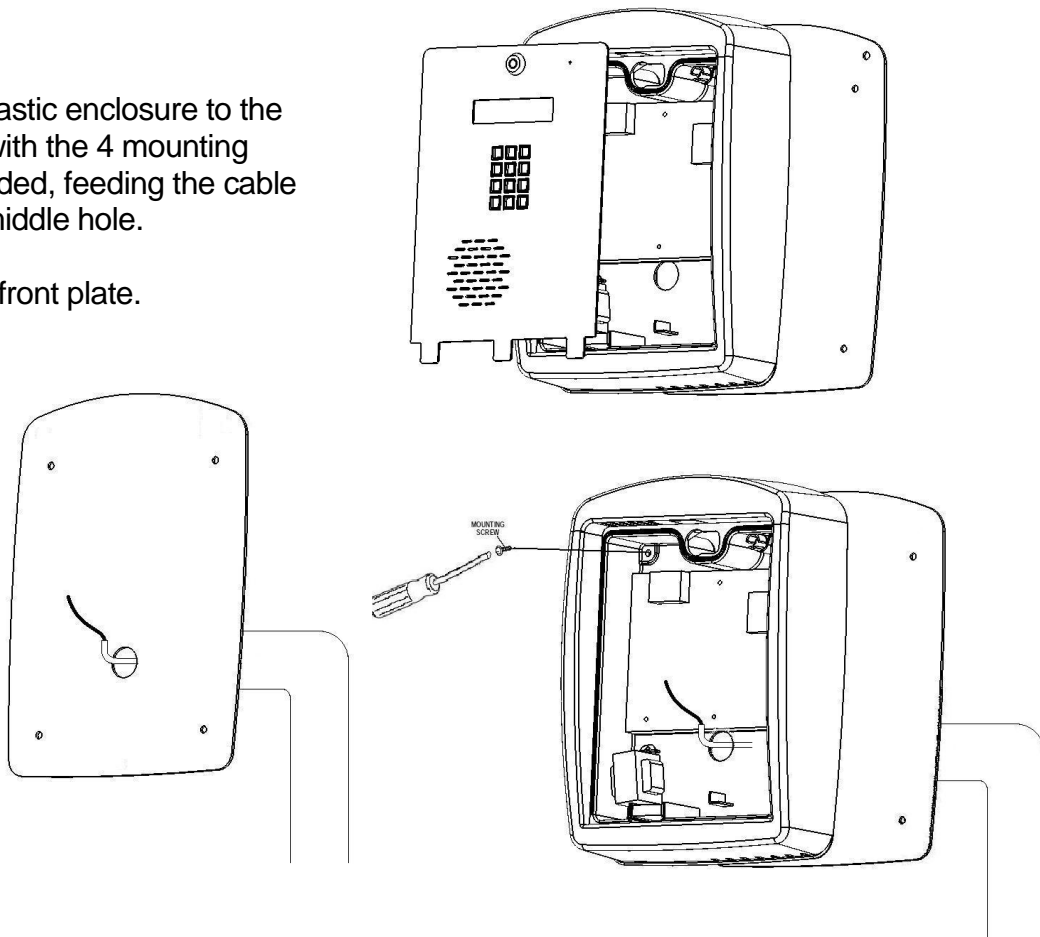
FITTING A GOOSENECK

Remove the front plate from the plastic enclosure.
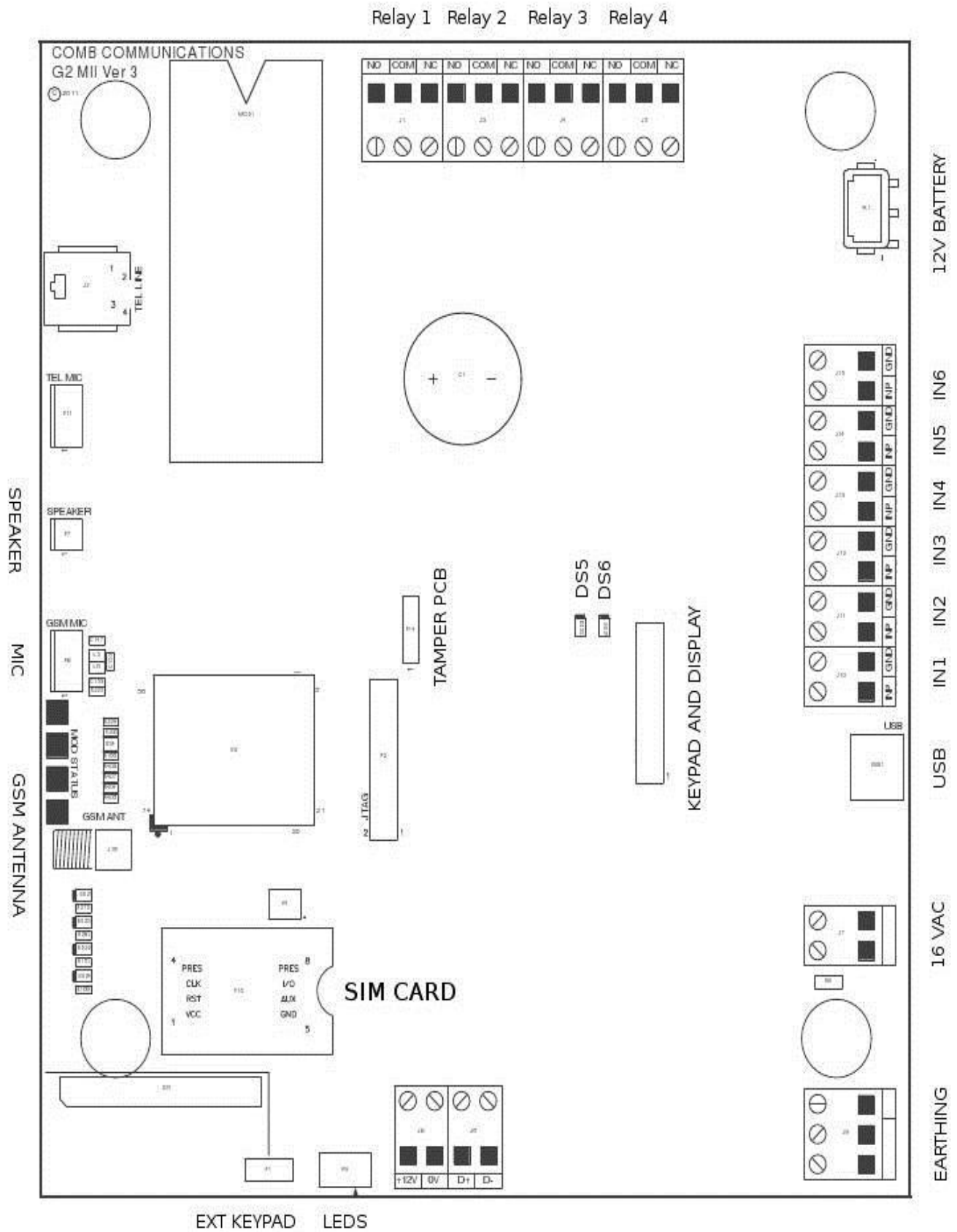Unscrew the back plate from enclosure.

Plant the gooseneck securely into the ground
and ensure that 220v ac is fed through the
 centre hole.

Screw the plastic enclosure to the
gooseneck with the 4 mounting
screws provided, feeding the cable
though the middle hole.

Replace the front plate.

PCB LAYOUT DIAGRAM

HOW TO WIRE YOUR SYSTEM

The M2 unit is supplied with some wiring in place. Before wiring the unit ensure that the Battery is unplugged and that the 220V mains supply is not powered. Refer to the PCB diagram.

RELAYS and INPUTS (Defaults)

1. Main Gate Trigger – Wire to Relay 1, the relay has NO and NC contacts
2. Pedestrian Gate Trigger - Wire to Relay 1, the relay has NO and NC contacts
3. Exit Control - Wire to Relay 1, the relay has NO and NC contacts
4. Input Triggers – Wire Input triggers to the Inputs IN1 to IN6; configure these INPUTS via the Website

GSM ANTENNA

Connect the GSM antenna. The Antenna may be extended with GSM cable extensions. Please also refer to the section on GSM Antenna installation.

FRONT PLATE

Insert the frontplate teeth into the plastic enclosure and connect up the following connectors:
1. Keypad and display harness, Flat ribbon cable
2. Speaker cable – 2 pin connector
Note the Microphone connector, LED illumination and 16 VAC should already be in place

EXTERNAL KEYPADS

The external keypads are connected to the 4 way screw terminals labelled, "+", "-", "FRX" and "CH2", wire these terminals to the corresponding terminals on the keypads. Up to 2 keypads can be wired in parallel to the screw terminals.

SIMCARD

The MK II can operate with a SIMCARD or embedded SIMCHIP. Make sure that the SIMCARD is working by placing it inside a regular cell phone and making or receiving a call. If operating from a SIMCARD ensure that the SIMCARD is in place and the sliding tray is securely latched.

Should you wish to use the SIMCHIP instead, please contact Comb - communications to have this service activated? You may be asked for the SIMCHIP ICCID, use the *#0010 supervisor code to access this 20 digit number. **Please note** that the *#0010 command works on the current SIM device, so remove the regular SIMCARD, type *#0004 to reboot and then type *#0010 to get the SIMCHIP CCID.

POWER

1. Wire the 220VAC mains to the lightning protection unit, observe the earth and   polarity. Apply the mains power.
2. Connect the battery to the battery connector.

SYSTEM CHECKS

The MK II will now boot up and after about 1 minute is ready to operate. Make sure the installation is good by checking the following:

GSM signal : type *#0002. The signal should be between 17 and 31. If not you may need a better GSM antenna or the GSM antenna wiring is faulty. Try to re-orientate the Antenna.
BATTERY: type *#0005 to check the battery voltage, it should be between 13.0V and 14.5V.

MKII ID

Use the supervisor code *#0008 to obtain the unit ID. This 8 character number is required to setup the unit on the website.

Refer to the Mk II user manual to configure and test your system.

REBOOTING the MKII

Should the MKII unit fail to respond or "hang-up" The MK II can be rebooted from the front panel with a supervisor code *#0004. If the keypad is not responsive, remove the battery plug and remove the mains power or 16VAC power for 10 seconds then re-apply.

ANTENNA INSTALLATION GUIDELINES

The M2 Intercom requires a Multi-band GSM antenna. This will differ for your Country of installation. Proper GSM antenna installation is essential for correct system performance. Various options are provided for different scenarios for cable length and antenna gain. The provided antenna is suitable for most applications.

When installing the GSM antenna the following guidelines must be adhered to
The GSM signal strength (accessed from the keypad via *#0002
command should be between 16 and 31. Lower than 16 is a poor GSM signal and will impair the M2 system performance.

- The maximum GSM cable length should not exceed 10m, and should be kept as short as possible. Longer runs will require the use of higher gain antennae

- The GSM antenna can be extended from its standard length with a Comb-approved RF cable extensions. This will ensure proper RF impedance matching and signal quality. Do not extend the GSM antenna by joining cables with solderd

- High Gain GSM antennae may be used to boost the signal strength

- The Antenna must not be installed inside any metal box or mesh cage as this will degrade the RF performance

- Always try to re-orientate or elevate the antenna if the signal strength is low

- Try reduce physical access to the antenna for the purposes of reducing vandalism attempts. Mount the antenna inside the secured premises

SUPERVISOR CODES

Supervisor codes are available on the B1000 and G2 models.

Code	Description
*#0000	Display all supervisor codes
*#0001	Firmware version
*#0002	GSM signal strength
*#0003	Synchronise the Unit.
*#0004	Keypad reboot.
*#0005	Battery voltage.
*#0006	Configuration method.
*#0007	Modem initialization
*#0008	PCA Serial number.
*#0009	Manual configuration if enabled.
*#0010	ICCID number
*#0011	Modem IMEI number

SUPPORT

Please feel free to email our support department at support@comb-communications.com should you need any assistance in this regard