



M6 QUICK START GUIDE

Figure 1
M6 Front Panel Features



TUNERS

Indicators show broadcast band, frequency, active zone and mono/stereo

MASTER POWER SWITCH

When pressed in, the M6 permits zones to be turned ON and OFF by keypad

INDICATOR LIGHT

Blue indicates the master power switch is ON and one or more zones are active. Red is STANDBY

ZONE STATUS LEDs

LED indicators and labels: Six blue LEDs indicate that one or more zones are currently active

M6 FEATURES

M6 Multi-Zone Audio Amplifier/Controller (Refer to **Figure 2**)

The M6 is a six-zone, eight-source Audio Amplifier/Controller. It serves as the “brains” of the entire keypad system. The M6 provides audio switching for eight sources with 30 watts per channel per zone.

Also includes two built-in AM/FM Tuners that allow programming of up to 10 station presets per tuner per zone, this ultimately allows tremendous flexibility in that different users can have different favorite stations programmed in different zones.

EXPANSION PORTS

RJ45 jacks provide for connection of specialized RS485 controlled products and for looping to additional M6 controllers for zone expansion capability. Another function of these ports is that you can control installed system components with bi-directional data via touch panels or computers using RS232 protocol. Requires the Proficient Control Module.

CONTACT CLOSURE

Provides a single pole dry relay contact to activate any device that can be controlled or triggered by a switch closure. The closure can be programmed within **Proficient Editor** to be activated by keypad presses, Command Library IR, or within macros for Momentary, Toggle and Open/Close Paired operations. Spring-loaded terminals accept wire sizes from 28 to 14 AWG. Internal relay contacts are rated at 2A/30V AC or DC.

L & R PRE-OUT JACKS

These RCA jacks provide line level audio outputs for driving external power amplifiers for additional rooms within zones, where needed.

PHONE PAGE IN JACK

This jack provides input porting for audio feeds from door mikes or other forms of phone or doorbell paging. The jack is programmable by **Proficient Editor**, to turn on as events, when triggered by the DOORBELL/STATUS IN Jack.

RS-232 DATA I/O

Communication port.

DOORBELL/STATUS IN 1 & 2 JACKS

These 3.5mm mini phone trigger inputs work in conjunction with the PHONE PAGE IN jack. When triggered, the phone inputs can be turned on as programmed by **Proficient Editor**. If audio paging is not required, these **1 & 2** jacks may also be programmed as **STATUS inputs** for power management of source or zone components. They accept input levels of 3V to 30V AC or DC for the trigger ON condition. The voltage level must drop below 1V AC or DC for the OFF condition.

CONTROL PORT & FIRMWARE UPGRADE SWITCH

3.5mm 4-circuit mini phone jack allows several control functions. All system programming is accomplished via this port using **Proficient Editor** in conjunction with the mating **Transfer Cable**. It also accommodates factory firmware updates in conjunction with the **FIRMWARE UPGRADE OFF/ON Switch**. Be sure to leave this switch in the **OFF** position at all times, except, as instructed within **Proficient Editor**, when you are doing a firmware update. Such updates ensure that you can always have the latest functionality improvements in the field.

COMMON IR OUTPUT & HI/LO SWITCH

3.5mm mini phone jack provides a common IR output derived from all of the zone IR inputs and from keypad initiated IR commands derived from the internal IR library. High or low IR power output is set by means of the **HI/LO switch**. Set it to the **LO** setting when driving standard low power emitters (i.e, Proficient IR single flasher). Set it to the **HI** position when driving a high power emitter (i.e, a blaster) for teaching IR commands into learning remotes. **Caution:** The **HI** position will damage or destroy low power emitters!

COMMON STATUS OUT PORT

This 3.5mm mini phone jack will go high (+12V DC) when any zone is turned ON and will go LOW (under 1V DC) when the last zone is turned OFF. The max. output of this jack is 100 mA at 9.5V DC.

ANTENNA AMP PORT

Antenna Amp: One, F-type terminal connects to Proficient Antenna Amp only. The Antenna Amp must be located as close to the antennas as possible. Connect the AM and FM antennas as shown on the Antenna Amp, and then connect the Antenna Amp to the M6 with a run of RG type coaxial cable.

CAUTION: Do NOT connect an antenna directly to the Antenna Amp terminal. There is DC voltage present to power the Antenna Amp Connection of dipole antenna will cause a short circuit.

IR OUT JACKS

These 3.5mm mini phone jacks, one for each source, provide dedicated IR output to specific source components. When a source is selected on a keypad, IR function commands are routed directly to that source. This prevents cross-control interference between two or more sources that have identical IR commands.

IR LOOP JACKS

These six 3.5mm mini phone jacks, one for each source, are provided exclusively for zone expansion capability when using two or more M6 controllers. They permit the source IR signals from the added zones to be carried to the source component emitters.

L & R AUDIO IN & LOOP JACKS

These RCA jacks – four for each source – provide audio signal inputs and buffered loop outputs, for each source. The buffered outputs can be used to drive local components or loop the signals to the source inputs of other M6 controllers when using them for zone expansion.

IEC TYPE AC

Mains receptacle and fuse mates with included AC power cord. Also houses the rear panel replaceable AC mains fuse (T5AL 250V for 120V, and T2.5AL 250V for 230V/240V)

VC-NVC SWITCH

The audio output from the PRE-OUT jacks can either be controlled by the internal volume control of the M6 (**VC** position) or be a fixed line level output in the no volume control (**NVC** position). In either case, the tone control remains available for room “EQ” settings.

KEYPAD ZONE INPUTS

These RJ45 terminals allow for easy connection of the inter-room wiring from keypads in the various rooms. Normally this is accomplished using CAT5 cable with home-run lengths of up to 1000’.

L & R SPEAKERS TERMINALS

These 4-circuit plugable screw-down terminals accept wire sizes from 14 to 28 AWG. They allow quick connection of the internal amplifiers to stereo pairs of speakers in the various zone rooms.

IR OUT

This 3.5mm mini jack, one for each zone, provides dedicated Zone IR output initiated from the respective zone inputs. They may control specific zone components when you want to prevent the control of it from the other zones.

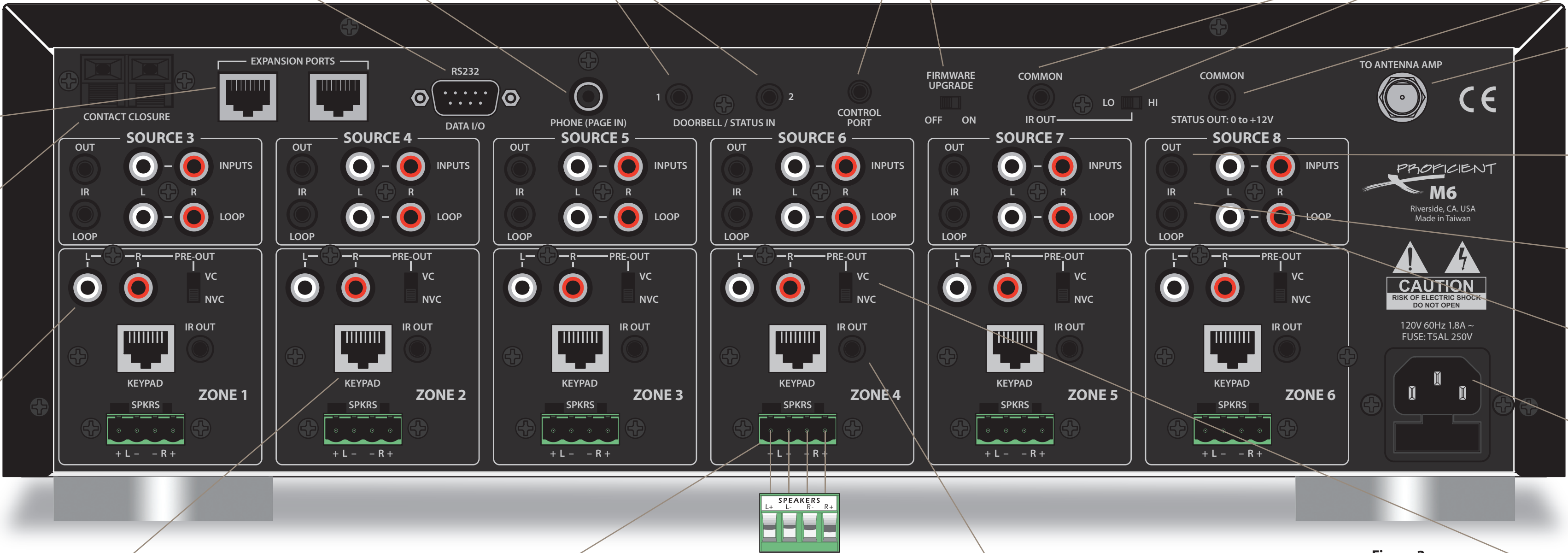


Figure 2
M6 Rear Panel Features

CONFIGURE THE KEYPAD BUTTONS

- 1. The keypads have a pre-installed set of buttons in place. These may not match the source and function arrangements you need or desire. To change them, release the tabs on each end of the keypad, **Figure 3**, and remove the decorator insert panel, exposing the key buttons, **Figure 4**.
- 2. Starting with the Zone 1 PMKIR (master keypad), and using the extra buttons supplied, if needed, move and place the source and function buttons in the arrangement you want. See **Figure 5**. When you finish the arrangement, replace the decorator insert panel over the buttons, being careful to see that the buttons align correctly with the panel openings. Press the panel down until the tabs “snap” into place.
- 3. Repeat these steps for each of the other zone master keypads. Each zone can have its own unique configuration... but, it is best to keep them as similar as possible to simplify programming and operation.
- 4. In the same way, configure the buttons on the numeric and function keypads (not included) that you may chose to use in some zones.
- 5. Connect all keypads to their assigned zones on the M6 as shown in **Figure 13**. Be sure to strip then connect the various colored CAT5 leads to the correct terminals on each keypad end. Refer to **Figure 10**.

Figure 3 Release Tab

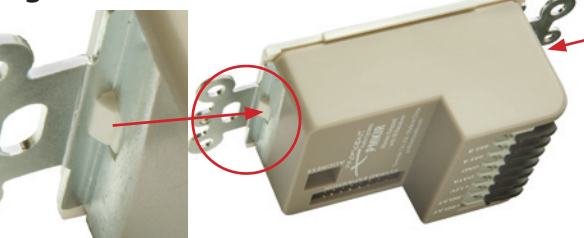


Figure 4 Remove Decorator Insert Panel



Figure 5 Moving and Placing Buttons



Figure 6 Ribbon Cable – PMKIR Right



Figure 7 Ribbon Cable – PMKIR Left



Figure 8 RJ45 Adapter

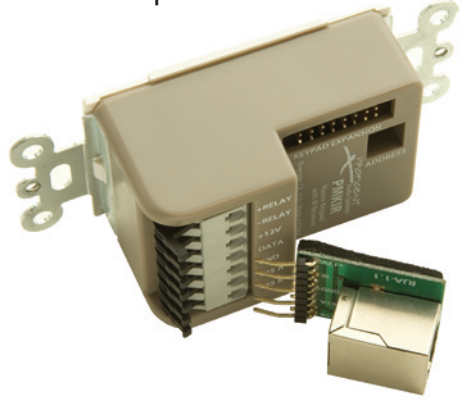


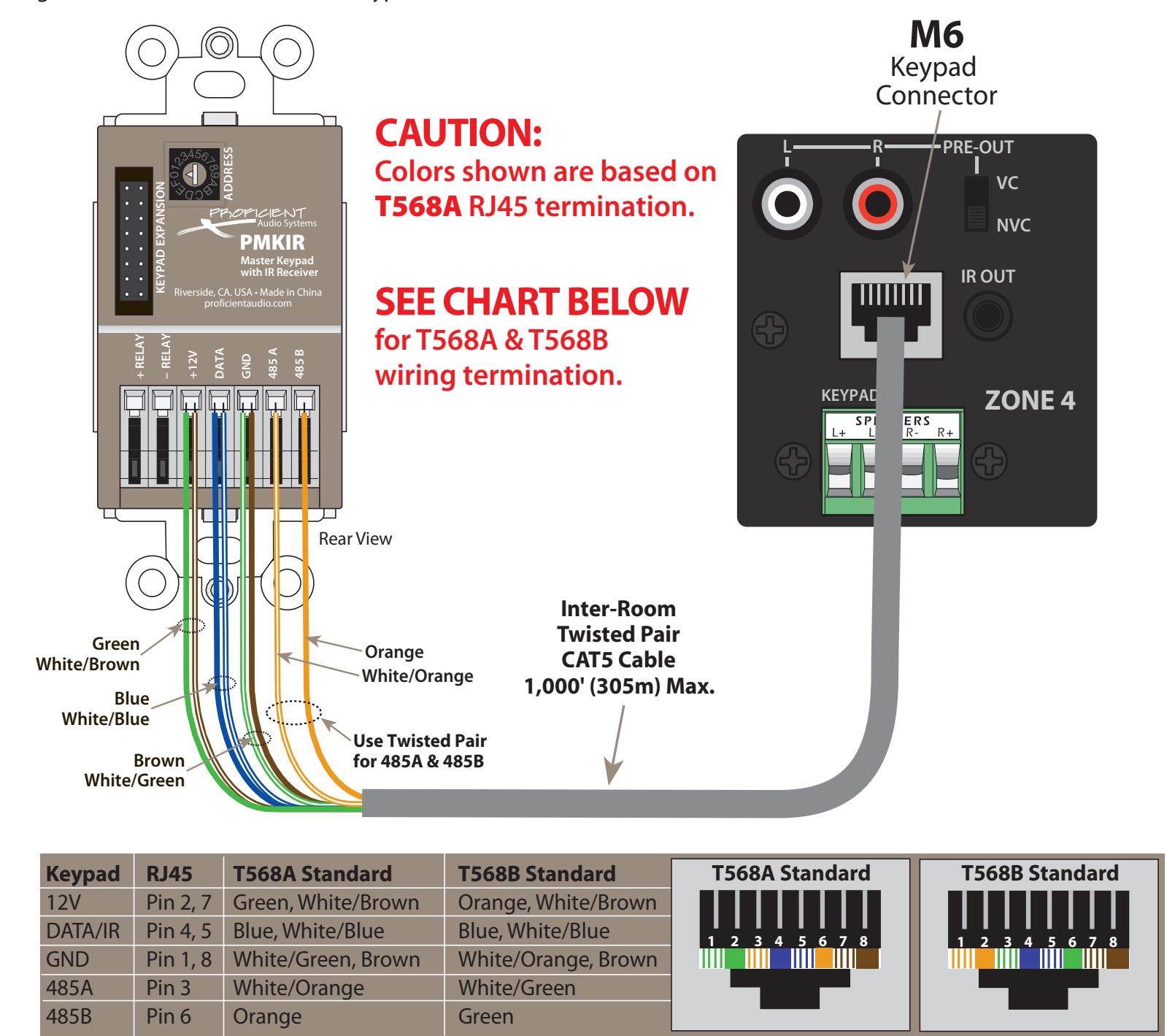
Figure 9 RJ45 Attached to Keypad and CAT5



KEYPAD HOOKUP

The numeric and function keypads will not work on their own. They must be connected to a master keypad using the ribbon cable supplied (included with each model). The cable is symmetrical so it can be connected with the red striped side up or down, to best fit the configuration. **Figure 6** shows it connected so that the PMKIR master keypad will be to the right of the PNK numeric and PFK function keypads when mounted, whereas **Figure 7** places the PMKIR to the left.

Figure 10 Using CAT5 Cable to Connect PMKIR Keypads to M6



ANTENNA AMP

The Antenna Amp provides remote connection for the AM and FM antennas used with the M6. The Antenna Amp can be located up to 100' away from the M6 and other systems components, reducing RF interference thereby improving reception noise. Lengths longer than 100' can be used, but expect reduction in tuner sensitivity in proportion to length. (Refer to **Figure 11**)

1. FM/AM To M6 – One F-type terminal connects to the Antenna Amp terminal on a M6 Panel via RG6 coaxial cable. FM and AM broadcast reception is output from this terminal and fed to the appropriate tuner section (AM or FM) inside the M6. Tuner 1 and Tuner 2 are both fed from this connection.

Note: The Antenna Amp is phantom powered via this terminal from the M6, so the run of RG6 must be an unbroken run with no splits or RF amplifiers.

2. Flange Screw Holes – Two, screw holes for mounting the Antenna Amp to a stud or wall surface.

3. AM Antenna Terminal – Two, spring clip terminals for connecting the included AM Loop Antenna. **Polarity:** non-critical.

4. FM Antenna Terminal – One F-Type terminal for connecting the included balun and FM Dipole Antenna, a 75Ω RG6 coax feed to an outdoor antenna or cable systems that carries FM Signals.

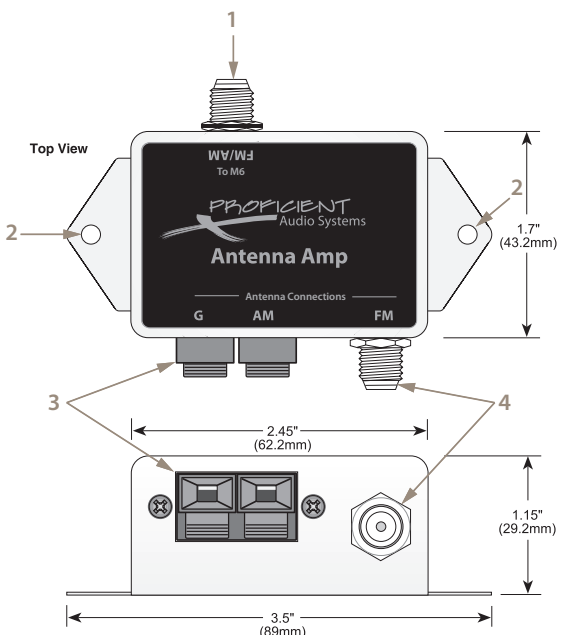


Figure 11 Antenna Amp

TUNER SETUP CONNECTIONS

A) Install the included FM Dipole or high quality directional antenna for best reception, normally this will be in an attic space as high as possible. If an outside antenna is connected to the product, be sure the antenna is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

C) Connect both antennas to the Antenna Amp, as indicated on the Antenna Amp, use the included balun for FM connect if necessary.

D) Use RG6 quad-shield coaxial cable, (up to 100' in length), to connect the Antenna Amp to the ANTENNA AMP Terminal on the M6, utilizing male 'F-type' connectors.

Note: The antenna connections MUST be made using the included Antenna Amp Do NOT connect any antenna directly to the ANTENNA AMP terminal on the M6 as damage may result. There is DC voltage present to power the Antenna Amp.

B) Install the AM Loop antenna in close proximity to the FM antenna. Note: The further the AM antenna

is located away from the electronic equipment, the better the AM reception will be. Various electronic devices emit RF noise. That noise is most likely to degrade performance of reception in the AM band.

M6 INTERNAL TUNER SETUP

The M6 has two built-in AM/FM Tuners that allow programming of up to 10 station presets per Tuner per Zone.

TUNER PRESET PROGRAMMING

(Refer to **Figure 12**)

- A)** On Tuner 1, press the 'ZONE' button, display will show 'ZONE CHANGE'
- B)** Use the 'TUNING -/+ ' to select the desired Zone. Push 'ZONE'
- C)** Select AM or FM
- D)** Use the 'TUNING -/+ ' to select the desired Station / Frequency
- E)** Select Stereo/Mono for the selected Station
- F)** Double click a preset button to select **preset** bank 1-5 or 6-10
- G)** Push and Hold desired Preset Button for three seconds, until memory changes to the selected frequency.

Each Zone's presets require programming by Tuner and by preset. That is, all presets in all Zones are individually set.

- H)** Repeat steps D-H for the remaining presets for the Zone.
- I)** If multiple Zones will be programmed with the same presets, you can copy one Zones presets to other Zones
 - 1) Select Zone with Presets entered
 - 2) Press and Hold 'ZONE', display will show 'Zone # Preset Copy To'
 - 3) Use the Tuner +/- to select desired destination Zone
 - 4) Press 'Zone'
 - 5) Display will indicate 'DONE'
- J)** Repeat steps A-I for Tuner 2



Figure 12 M6 Tuners

SYSTEM CONNECTIONS AND CONFIGURATION

Factory Default System

As mentioned earlier, the M6 comes with a set of six pre-configured PMKIR keypads, one for each zone. In addition, the M6 is pre-programmed at the factory with a default project so that the system will function “right out of the box.” The installer can use this default as a base on which to build customized projects. The default project has the following functionality: (Refer to **Figures 13 & 14**)

- 1. Six Source keys: TNR1, TNR2, SAT, CD, CD2, MP3
- 2. Six Function keys: BASS, TREB, MUTE, PWR, VOL UP, VOL DOWN
- 3. The six Source keys are set as Zone ON keys and are programmed to select the M6 rear panel Audio Source inputs as follows:

TNR1 = Tuner 1, TNR2 = Tuner 2, SAT = Audio Source 3, CD = Audio Source 4, CD2 = Audio Source 5, MP3 = Audio Source 6. In addition, a Mute Off command is programmed under each Source key.

- 4. The six Function keys are programmed as follows:
BASS: 1st press changes Vol UP/Down to Bass Up/Down. 2nd press = Bass Flat.
TREB: 1st press changes Vol Up/Down to Treble Up/Down. 2nd press = Treble Flat.

Volume Up command. Also serves as Bass or Treble Up after first pressing BASS or TREB keys.

Volume Down command. Also serves as Bass or Treble Down after first pressing BASS or TREB keys.

NOTE: While in the Treble or Bass tone modes, the selected Source button will blink at a medium rate, to indicate the tone setting mode. The tone setting mode is defeated by one press of any button other than the Tone and Volume buttons.

MUTE: Set for Internal Preamp Muting. Toggles ON/OFF. Pressing Source and Volume buttons also un-mutes. During Mute, selected source key blinks slowly.

PWR: Set as Zone Power OFF. Will NOT turn the zone ON. Press and Hold for two seconds turns all zones OFF (Whole House).

Whole House/Party Mode

5. All zones are set for Whole House/Party Mode capability Whole House/Party Mode: Forces all zones to the same source and allows volume and mute functions to operate all zones in unison.

- To engage Whole House/Party Mode, press and hold a desired Source button for longer than four seconds. During press and hold, source button blinks rapidly (busy).
- Release button when blinking stops. Source button then turns Amber in color, indicating system is now in Whole House/Party Mode.
- Source selection, Volume Control and Mute functions will now operate in all zones from the initiating zone only.
- To transfer Whole House/Party Mode control to another zone, above steps are repeated from the desired zone.
- To cancel Whole House/Party Mode, press and hold a Source button from the initiating zone for longer than four seconds (until blinking stops).

NOTE: Zones other than the initiating zone will have red active Source buttons and will operate as normal independent zones.

6. Priority is set to ON for all zones. This means that commands from any keypad in any zone will execute, regardless of previous command executions in other zones.

7. When a zone is first turned on, the volume will be at a default medium background level. After that, it will come on at the last volume used prior to zone turn OFF.

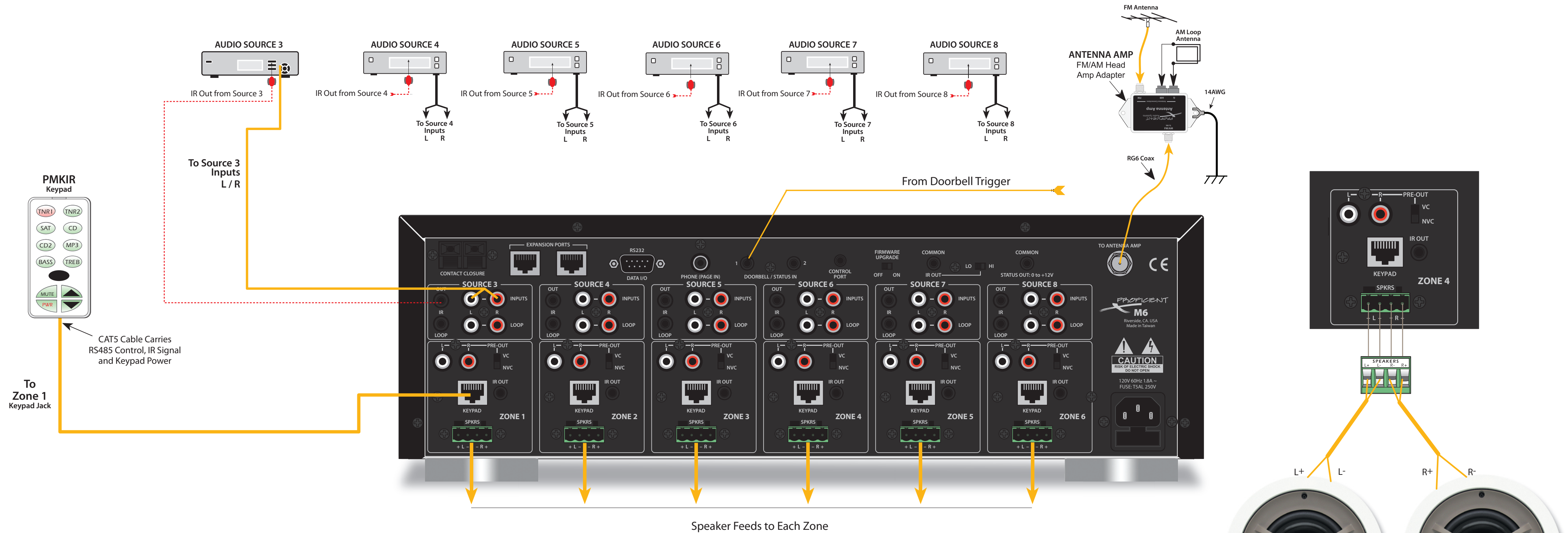


Figure 13

A TYPICAL M6 KEYPAD CONTROLLED SYSTEM

A TYPICAL M6 INSTALLATION

Perhaps the best way to become familiar with the M6/keypad system is to show its application in a typical installation. **Figure 13** shows a PMKIR keypad (included) controlling the M6 and related source components in a six-zone application.

NOTE: The system in **Figure 13** is given to illustrate the basics on how to configure and program a system, not to show all aspects of such an installation. For instance, for simplicity, the speakers in each zone are not shown in **Figure 13**, even though such components would be required for a complete working system.

NOTE: Maximum recommended lead length for the keypads with CAT5 cable is 1000' (305m).

The recommended steps to install such a system would be as follows:

1. Pull all wiring for the keypads, speakers, etc., from the various zone rooms (home runs) to a central equipment area.
2. Set up and make all the necessary audio connections from the source components to the M6, the amplifiers to speakers in rooms, etc.
3. Make sure all system components function first, with their own remote controls, before configuring the keypads.
4. Flasher placement: Locate each source component's IR Sensor window. Place emitters on each of the source components and plug them into the corresponding Source IR Outputs on the M6.

M6 SPECIFICATIONS

Audio Sections	
Rated Power/Channel (RMS, 2 channels driven into 8 Ω)	30 Watts, 20Hz - 20kHz
THD (at rated power)	< 0.7%
Power/Channel (RMS, 2 channels driven into 4 Ω)	45 Watts @ 1kHz
Input Sensitivity (For rated power @ max VC)	300 mV
Input Impedance (source inputs)	> 22 kΩ
Input Overload (source inputs)	2.5 V
Output Voltage @ Pre-Outs (w/300 mV @ source inputs)	1.7 V, VC Setting, VC Max 810 mV, NVC Setting
Output Impedance (pre-outs)	< 300 Ω
Frequency Response (@ 1 watt @ 8 Ω)	20Hz - 20kHz ± 1.5dB
Channel Separation	> 50dB @ 10kHz
Crosstalk Between Sources	> 65dB @ 10kHz
S/N Ratio (re: rated output, IEC A, source inputs shorted)	> 95dB ,VC 20dB below FCW
Bass Control Range	±10dB @ 100Hz
Treble Control Range	±10dB @ 10kHz

FM Tuner Sections	
Tuning Range	87.5MHz - 108MHz
Usable Sensitivity (IHF, 98.1MHz)	12dBf Mono
Sensitivity (50dB quieting, 98.1MHz)	18dBf Mono, 45dBf Stereo
S/N Ratio (65dBf, 98.1MHz)	75dB Mono, 65dB Stereo
Frequency Response (Mono or Stereo)	35Hz-15kHz ±3dB
Separation (@ 1kHz, 65 dBf)	>40dB
THD (1kHz, 65dBf, 98.1MHz)	0.15% Mono, 0.2% Stereo
Capture Ratio (45dBf)	2.0dB
Alternate Channel Selectivity	65dB

AM Tuner Sections	
Tuning Range	520kHz - 1710MHz
Sensitivity (20dB Quieting, 1000kHz loop antenna)	750 μV/m
Selectivity (@ S/N 20dB, ±10kHz)	30dB
S/N Ratio (400kHz, 10mV/m Input @ 1000kHz, 30% Mod)	46dB
THD (400Hz, 10mV/m Input @ 100kHz, 30% Mod)	0.7%
Image Rejection (1400kHz)	38dB

Control Sections	
Contact Closure (dry)	2A, 30V AC/DC Max
Phone Page In – Voltage/Impedance	Audio Line Level, > 22 kΩ
Doorbell/Status In 1 & 2, 3V - 30V AC or DC	10 mA @ 12V AC/DC
Common IR Out – HI (high power) – LO (emitter power)	9 V Active High, 82 Ω (110 mA Peak) 9 V Active High, 670 Ω (13 mA Peak)
Zone IR Outs – Voltage/Impedance	9.2 V Active High, 620 Ω (13 mA Peak)
Source IR Outs (and loop) – Voltage/Impedance	11.5 V Active High, 390 Ω (29 mA Peak)
Common Status Out (0-12V DC)	9.5 V @ 100 mA

General	
Power Consumption No Signal (idle)	50 Watts
Power Consumption @ 1/8 Rated Power (3.75 watts/channel)	110 Watts
Line Ratings (120V AC version)	120V AC, 1.8A
Rear Panel Fuse (120V AC version)	T5AL 250V
Line Ratings (230V AC versions)	230V AC, 0.9A
Rear Panel Fuse (230V AC versions)	T2.5AL 250V
Dimensions (H x W x D)	5 13⁄16" x 17 1⁄8" x 15 1⁄2" 148mm x 435mm x 394mm
Weight	29 lbs (13 kg)

Limited Two-Year Warranty

Proficient Audio Systems ("Proficient") warrants to the original retail purchaser only ("you") that this product will be free from defects in materials and workmanship for a period of two years (the "Warranty Period"), subject to the limitations and exclusions set out in this Limited Warranty. This warranty is not transferable to subsequent owners of the product. If you discover a defect in material or workmanship within the Warranty Period, you can obtain warranty service by contacting Proficient during the Warranty Period at 877.888.9004 or techsupport@proficientaudio.com or by sending the product to Proficient at 940 Columbia Avenue, Riverside, CA 92507 or to the dealer from whom you purchased the product. Defective products must be shipped, prepaid and insured, together with proof of purchase. Warranty service requests made without proof of date of purchase will be denied. Freight collect shipments will be refused. It is preferable to ship this product in the original shipping container to lessen the chance of transit damage. In any case, the risk of loss or damage in transit is to be borne by the purchaser.

If, upon examination by Proficient or its authorized dealer, it is determined that the unit is in fact defective, Proficient will, at its option:

- Repair or replace the product at no additional charge; or
- If the model is no longer available and can not be repaired effectively, replace the unit with a current model of equal or greater value. In some cases where a new model is substituted, a modification to the mounting surface may be required. If mounting surface modification is required, Proficient assumes no responsibility or liability for such modification.

Proficient will bear the cost of returning the repaired or replaced product to you, freight prepaid. All replaced parts and product become the property of Proficient Audio Systems. The foregoing is your sole and exclusive remedy for breach of warranty. If the product is not found to be defective, Proficient will contact you to arrange for return of the product to you, at your expense.

- EXCLUSIONS:**
- This Warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, or service, repair or modification of the product by unauthorized dealers. This Warranty also excludes normal cosmetic deterioration caused by environmental conditions.
 - This Warranty will be void if:
 - the Serial Number on the product has been removed, tampered with or defaced.
 - the product was not purchased from an authorized dealer.

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ATTENTION TO OUR VALUED CONSUMERS:
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For technical inquiries, please call 877.888.9004 or email us at techsupport@proficientaudio.com. We are available to assist you every weekday, except holidays, between the hours of 7:00 a.m. and 5:00 p.m. PST.

M6 AUDIO CONTROLLER WITH KEYPAD SYSTEM

The Proficient M6 System consists of four subsystems. First, the **keypads** themselves can be configured in many key icon arrangements and placed in a one, two or three gang set-up to meet virtually any client requirement. They are connected via convenient CAT5 cable with home-run lengths of up to 1000' (305m or longer, if heavier gauge wire is used) to the centrally located M6 Multi-Zone Audio Amplifier/Controller located near the controlled equipment. The **M6** contains the "brains" of the system, taking

key location data from the keypads to trigger the actual controlling IR, RS232 and RS485 commands that are passed to all of the installed system components. Programming is accomplished by the use of **Proficient Editor**, a Proficient developed Windows software system. A fourth item, the optional **Command Interface** (sold separately), is an installer's tool for learning and teaching special IR commands that are not included in the **Proficient Editor** internal library.

KEYPAD CONFIGURATIONS

The M6 System comes with six single gang PMKIR pre-configured keypads, one for each zone as shown for the single gang version in **Figure 14**. The cover plates and the other configurations are optional.

Each keypad comes with a set of factory installed "default buttons" plus a good variety of additional buttons. The default buttons can be easily changed to meet the needs of the installation.

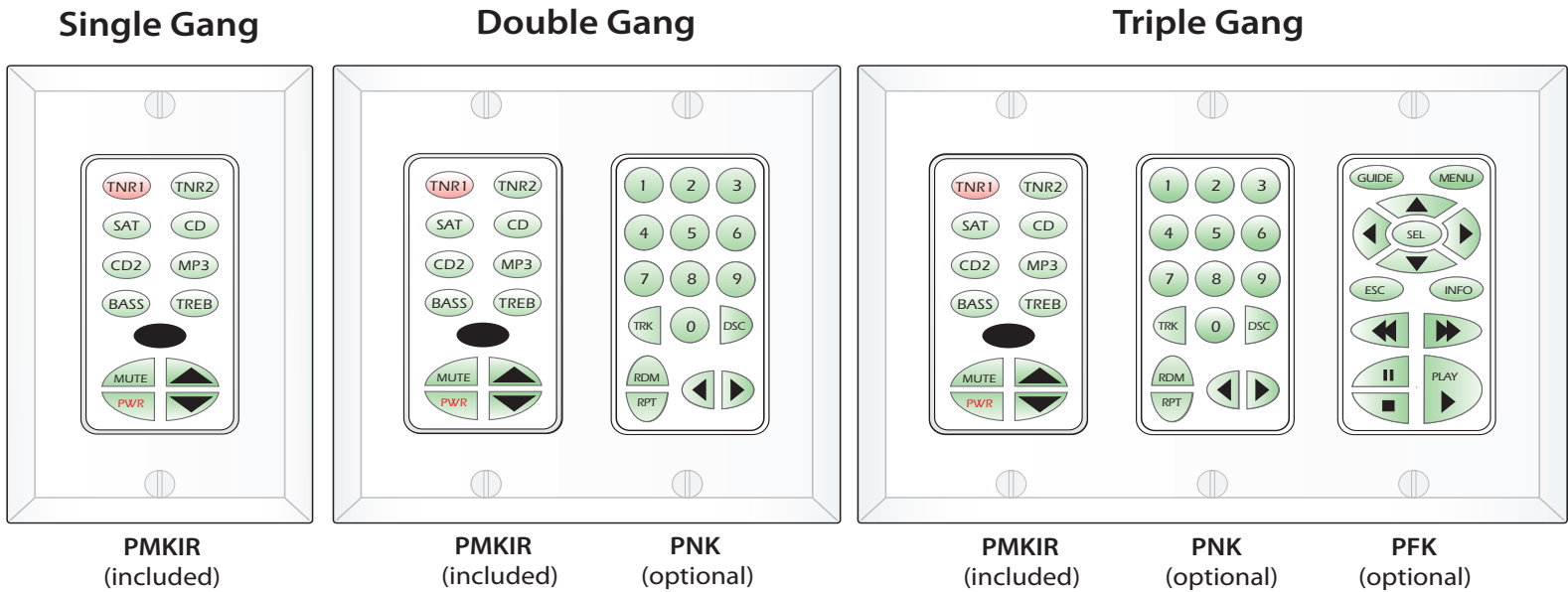


Figure 14
Keypad Configurations

KEYPAD FEATURES

The keypads come in four basic modules. **PMKIR** (12 buttons) and **PMK** (13 buttons) are the master keypads and must be used in each system. As mentioned earlier, the M6 comes with a pre-configured version of the PMKIR, for the convenience of the installer. It is usable right "out of the box" in conjunction with a default project that is factory

programmed into the M6. The PMKIR includes an IR receiver and has one less function button, but is otherwise identical to the PMK. The **PNK** Numeric (16 buttons) and **PFK** Function (14 buttons) keypad modules can be thought of as "slaves" to the PMKIR / PMK (they will not work alone), providing additional key locations for numeric and function commands.

KEYPAD FEATURES CONTINUED

(Refer to **Figure 15**)

1. PMKIR Source/Function Buttons – Six of this set of eight buttons are programmed as source select for the M6. When the system is off, all buttons have a background green color. When a source button is pressed, it turns to a low-level red color to show that it is the active source and the system is on.

2. Keypad Expansion Terminal – This 16-pin header terminal is used to inter-connect the optional numeric and function keypad modules for expansion as needed. A ribbon cable is packed with each module for making these connections.

3. Address Switch – A unique hex address must be set for each master keypad when connected on a common bus within a single zone. Unique addresses are not required zone-to-zone. It provides up to 16 addresses (0 to F).

4. Snap Tabs – These tabs hold the decorator style insert panel to the metal mounting plate and are easily released for custom changing of the buttons.

5. Mounting Plate – Standard plate allows the keypad module to be attached to standard in-wall

J-Boxes using the two screws provided. Allows attachment of standard decorator type cover plates (also screwless snap-on plates).

6. IR Receiver Lens – Version PMKIR includes Proficient's exclusive ANS IR receiver, built-in. It allows the use of a handheld remote for control of system components.

7. Connection Terminals – for CAT5 home-run termination. **+Relay** and **– Relay** - for future use. **+12V** – Powers the keypad, including the internal IR receiver on model PMKIR. Includes reverse voltage protection. **Data** – Sends IR control signals for control of system components. **GND** – Return for power, IR signal and data. **485 A / 485 B** – Balanced, bi-directional system communications data.

8. Function Buttons – These lower four buttons (can be programmed for any function except source select.

9. Numeric and Function Buttons – Require programming via **Proficient Editor**. All buttons glow background green and can be configured to go off after a set time, or stay on via **Proficient Editor**.

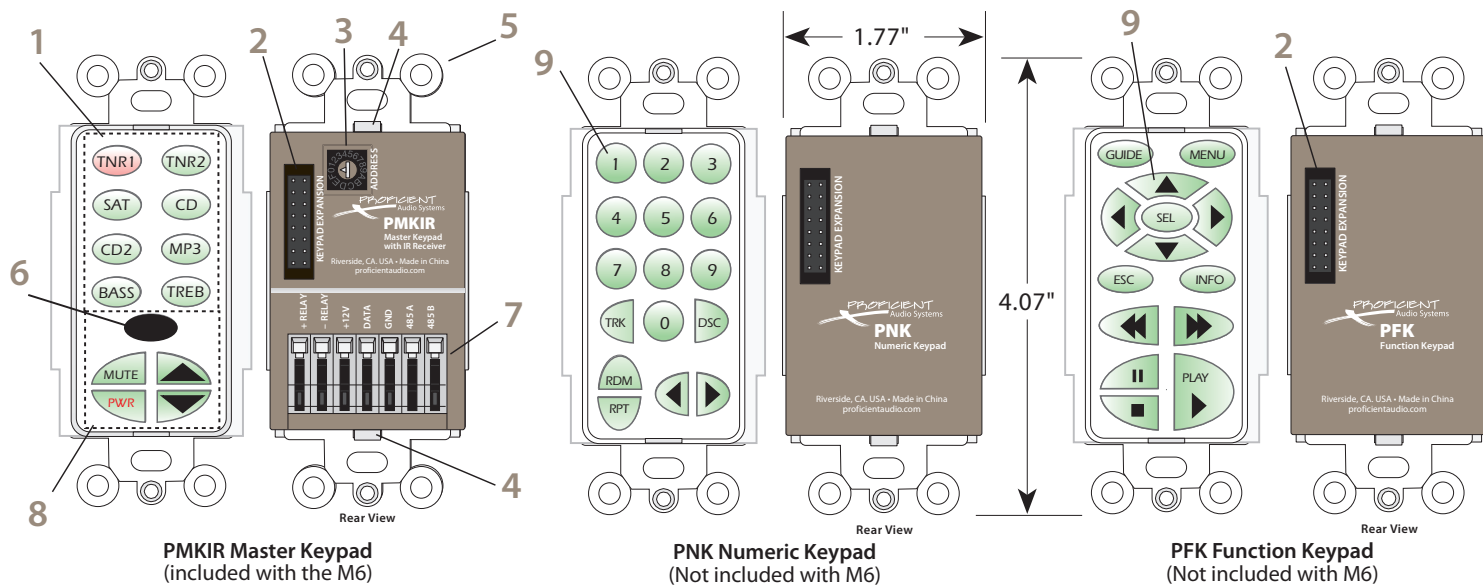


Figure 15
Keypad Features