



MultiPAL A/B SWITCHES
MODELS MP-AB-XXX

Models Covered:

MP-AB-D25	RS-232 / RS-530 Female, 25 Leads Supported
MP-AB-M34	V.35 Female, 19 Leads Supported
MP-AB-T1	T1 (DB-15) Female, 6 Leads Supported
MP-AB-RJ8	RJ45, 8 Wire, All Leads Switched
MP-AB-TB8	Screw Terminal Blocks, 8 Leads Switched
MP-AB-BNC	Coaxial BNC (50-92 Ohm) 10MHz Max.

QUICK START

1. Plug a phone line into the jack marked LINE
2. Plug Common, A and B circuits into the connectors marked COM, A and B
3. Connect the A/C wall mounted adapter to the jack marked POWER, then plug into an outlet
4. Call the phone number connected to the unit. The switch will answer with "PAL READY"
5. Enter '1' The switch will respond with ' 1 A'
6. Enter '#' The switch will switch to B and respond with '1 B'
7. Repeat steps 5 and 6 until you are bored, then hang up.
8. Read the rest of the manual

GENERAL DESCRIPTION

The MultiPAL A/B switches models above (referred together as MP-AB) allow an operator with a tone dial telephone to access, interrogate and control a remote A/B switch. The MP-AB, switches a Common circuit between two circuits designated A and B. A front panel switch on the MP-AB allows manual local setting to the A or B position. The unique MultiPAL controller allows the switch to be placed in series with any normal telephony device (phone, fax, modem, etc.). Normal calls can pass transparently through MP-AB; only when you enter a DTMF (touch tone) code, will the MP-AB respond and allow switch control.

To operate the switch, place a telephone to the dial line connected to the unit. The MP-AB provides three call answer modes and several security options. When the call is validated, The MP-AB will read off the current status of the switch and then prompt the caller to change the switch position. When a change is made, the new status is repeated and additional changes can be made. When no more changes are required, the caller can hang-up, or send an additional code to access any extension device connected to the MP-AB.

REF: K4MP-AB_V971103X.DOC

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PROGRAMMING

Understanding THE MP-AB's Many Operational Features

All user programmable settings are made prior to placing the MP-AB in service using a standard tone dial telephone connected to the MP-AB's extension port (EXT). These settings are stored in non-volatile memory and will not be lost when power is removed. To enter the programming mode; disconnect the telephone line, and connect a standard tone dial telephone to the extension jack (EXT). Lift the receiver and the MP-AB will prompt "*PAL Ready*". Now press the # key twice and the MP-AB will respond with "*Program*". The MP-AB is now ready and eager to be programmed. When a correct program entry is made, the MP-AB responds "*OK*", if an error is made on entry, the MP-AB responds "*Error*".

Many of Multi-Pal's features have been pre-programmed at the factory. These can be changed by following the instruction below and referring to the programming summary on page 4.

MP-AB's Security Modes

The MP-AB can be set to respond to calls with or without the caller entering a preset security code to gain access to the control functions or ringing to the extension. The MP-AB can be set to require a security code for control functions only (type 1) or security for both control and access to ring to the extension. (Type 2) Type 0 is no security code required. These features are explained for each of the Call Answer Modes listed below. In the Answer and Prompt mode, if a code is required and the wrong code is sent, the MP-AB will respond "*Error*".

Call Answer Modes

The MP-AB has three ways to answer incoming calls. The mode selected will depend on what you want the caller to hear and how secure you want the system to be. In all cases, the number of rings before the MP-AB answers the call, security codes required for the MP-AB to accept operating commands, and how the call is passed on to the Extension Port, can all be selected prior to use.

Normal Answer Mode, Ring Back

In this mode, the MP-AB will answer the call and generate a normal ringback signal. This signal sounds like the one you hear when the phone company is ringing any phone. A standard ringback cycle consists of 2 sec. of ring tone followed by 4 sec. of quiet. During the quiet times, between each 2 sec. ring, the MP-AB listens for tone digits (DTMF) sent by the caller. If, after two ringback cycles, (12 sec.) no valid tones are heard, the MP-AB will ring the Extension Port.

Use the Normal Answer Mode if: Voice or Fax calls are being made to the device on the MP-AB's Extension Port and you don't want the caller to know that the MP-AB is there.

If no security code is required, entering any tone digit during the two quiet times will wake the MP-AB up. Wait for the MP-AB to respond "*PAL Ready*" before entering operating commands, see page 4. If the MP-AB is set for security on control only, (type 1), the code may be entered during any of the quiet times to gain access to the MP-AB's control functions. If the correct code is entered, wait for the MP-AB to respond "*PAL Ready*" before entering operating codes. If the wrong code or no code is entered, the MP-AB will ring to the extension. If the MP-AB is set for control and ringing to the extension security, (type 2), and if the wrong code, or no code is entered, the call will be terminated, dropped by the MP-AB. After placing the MP-AB in the programming mode, (##) enter 6 plus 0 followed by the '*' key to set the MP-AB in the Ring Back mode.

Answer and Prompt Mode (factory default)

If no security code is required, the MP-AB answers the call and issues a voice prompt *"PAL Ready"*. If security is required, a voice prompt *"Enter Code"* is sent. The caller may now enter the security code, or if no security code is required, any control digit may be entered. If no control tones are received in 6 seconds, the MP-AB will ring the extension when no security code for ringing to the extension is required.

Use the Answer and Prompt Mode if: you want to know exactly when to enter security and control codes.

If the MP-AB is set for security on control only, type 1, the code may be entered when prompted to gain access to the MP-AB's control functions. If the correct code is entered, the MP-AB will respond *"PAL Ready"*. If the wrong code is entered, the MP-AB responds *"Error"* and the sender may try once more before the extension is rung. If the MP-AB is set for control and ringing to the extension security type 2, if the wrong code is entered twice, or no code is entered, the call will be terminated, dropped by the MP-AB. In the program mode to set the MP-AB for the Answer and Prompt mode, enter 6 plus 1 followed by '*' key.

Answer And Quiet Mode

The MP-AB will answer the call and be quiet for six seconds, waiting for control codes. If none are received within 6 seconds, the MP-AB will ring the Extension.

Use the Answer and Quiet Mode if: You want more secure control of power and the shortest time before the extension is rung.

If the MP-AB is set for security on control only, (type 1), the code may be entered during the 6 seconds quiet time to gain access to the MP-AB's control functions. If the correct code is entered, the MP-AB will respond *"PAL Ready"*. If the wrong code is entered, the MP-AB does not respond, and the extension will be rung. If the MP-AB is set for control and ringing to the extension security, (type 2), and the wrong code is entered, or no code is entered, the call will be terminated, dropped by the MP-AB. With the right code, the MP-AB answers *"PAL Ready"*. To program the MP-AB for the Answer and Quiet mode, enter 6 plus 2 followed the '*' key.

Number of Rings before The MP-AB Answers the Call (Default = 2)

The MP-AB can be set to answer calls after it detects a set number of rings from 1-6. To program the number of rings, enter 2 followed by the desired number, followed by the '*'. Example . To have the MP-AB answer in 4 rings, in the program mode, enter 2 4 '*'. The MP-AB responds *"OK"* if the entry was accepted, *"Error"* if not.

Number of Rings to the Extension (Default = 4)

The MP-AB can be set to ring the extension a number of times before the call is terminated. Enter 7 plus the desired number, 1-6 followed by the '*'. Example : 74 '*'. Will ring extension four times.

Security Mode (Default = no security)

The security modes are set by entering 5 plus 0, 1, or 2 '*'. 0 = no security, 1 for control only, and 2 for security for all functions, control and extension ring.

Example: to set for security on control only. Enter 51 '*'.

Setting a Security Code (Default = 123)

To program a security code, enter the '#' key followed by up to six number characters, followed by the '*' key. Example; to set a security code of 3451, enter #3451 '*'. The MP-AB responds OK if entry is accepted or Error if not.

MULTIPAL PROGRAMMING SUMMARY

Feature	Enter	Options & MP-AB's Response Prompts
Lift receiver on Extension with no phone line connected		"PAL Ready"
To Enter Programming Mode	##	"Program"
Answer Mode	6 n *	0= Normal Answer, Ringback 1= Answer & Prompt (Default) 2= Answer & Quiet
MP-AB Answers Call on # of Rings	2 n *	n = Number of Rings, 1-6 (Default = 2)
MP-AB Rings to the Extension	7 n *	n = Number of Rings, 1-6 (Default = 4)
Security Type Select	5 n *	0= Security Off (Default) 1= Security for Control functions Only. 2= Full Security, control & extension ring.
Security Code	# n...*	n... = up to six digits. Default Example: for Security Code 123 enter #123*

n =The Number to Enter. * = end of this program instruction

When each full programming command is entered correctly and accepted by the MP-AB, it will respond "OK" if accepted or "ERROR" if not accepted. If an error is made, the program step may be repeated.

Example: To program the number of rings (from 1 to 6) before MP-AB answers a call. In the programming mode, enter the digit 2 followed by the desired number of rings, followed by the ★ to end this program instruction. (2 + 3 + *) will program MP-AB to answer in three rings. MP-AB will respond "OK".

MULTIPAL OPERATING COMMANDS

After the MP-AB has answered a call, and depending on the answer and security mode previously selected, the following commands may be entered to operate the MP-AB.

1 Report Status of Switch

The MP-AB will report '1 A' or '1 B' as indicated by the current switch position. The MP-AB will also report 'ERROR' if the controller cannot set the switch into the desired position.

Change Status of Switch

The MP-AB will toggle the switch position and report the new status.

0 Ring Extension

The MP-AB will ring the EXT port. No additional switch commands will be accepted by MP-AB

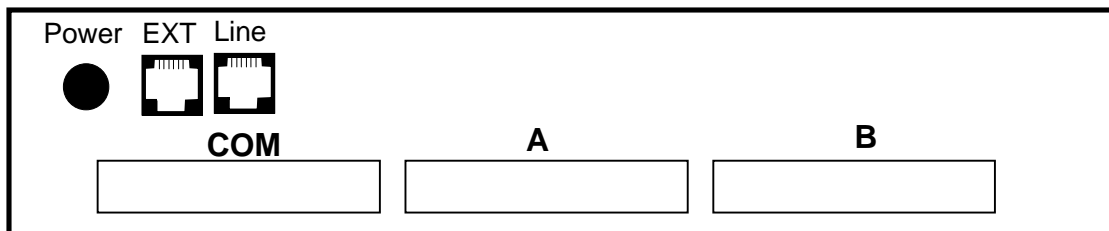
Manual Control

The MP-AB provides a three position toggle switch on the front panel. In the PAL position, the switch will be controlled as described above. In the A or B position, the switch will be locked in the position selected. Remember to return the switch to the PAL position to allow remote dial-in control

Positive Feedback

The MP-AB monitors the position of the A/B switch and reports its actual status. If the status detected does not match the command given over the phone, the MP-AB will report an 'ERROR' This is most likely due to the manual switch being placed in the A or B position.

CONNECTIONS TO MULTIPAL



MultiPAL MP-AB, Rear Panel

Power: Connect the Wall Mounted Supply, included with the MP-AB

Line: Connect the Telephone Line

EXT: Connect any telephone device (optional)

COM, A, B Connect the Common, A and B circuits.

MP-AB-D25 Three Female 25 pin D-subminiature Connectors, 23 leads switched, Pins 1 Frame Ground and 7 Signal Ground are Passed Through

MP-AB-M34 Three Female M34 Connectors, 17 Leads Switched, Pins A Frame Ground and B Signal Ground are Passed Through

MP-AB-T1 T1 (DB-15) Female, 6 Leads Supported

Pin Designation

1	Transmit Tip
9	Transmit Ring
3	Receive Tip
11	Receive Ring
2	Shield Ground
4	Shield Ground

MP-AB-RJ8 8 Position 8 Wire Modular Jacks, All Leads Switched

MP-AB-TB8 Screw Terminal Blocks, 8 Leads Switched
AWG 22 through AWG 28

MP-AB-BNC Coaxial BNC (50-92 Ohm) 10MHz Max.

TECHNICAL SUPPORT, RETURNS & WARRANTY

Dataprobe Technical Support is available 8:30AM to 5:30PM ET to assist you in the installation and operation of this product. To obtain Technical Support call our Tech Support Hotline at 201-967-8788, or Email us at tech@dataprobe.com. Please have the following information available when you call:

- Model of Product
- Serial Number
- Data of Purchase
- Name of Seller (if other than Dataprobe)

If you purchased this product through an **Authorized Dataprobe Reseller**, you should contact them first, as they may have information about the application that can more quickly answer your questions.

WARRANTY

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship for a period of One Year from the date of initial purchase. If the product should prove defective within that period, Seller will repair or replace the product, at its sole discretion.

Service under this Warranty is obtained by shipping the product (with all charges prepaid) to the address below. Seller will pay return shipping charges. Call Dataprobe Technical Service at (201) 967-8788 to receive a Return Materials Authorization (RMA) Number prior to sending any equipment back for repair. Include all cables, power supplies and proof of purchase with shipment.

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