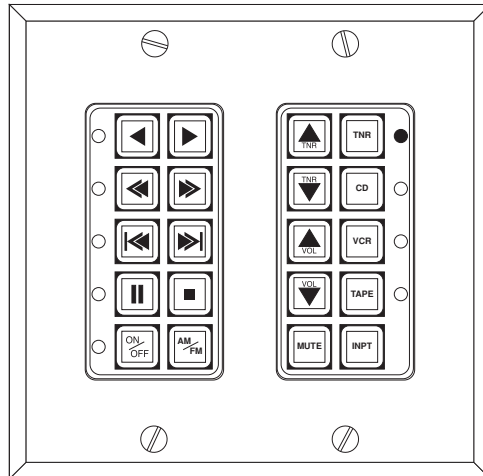


INSTALLATION INSTRUCTIONS

730 SMART PAD™



INTRODUCTION

The Model 730 Smart Pad is an in-wall mounted, universal programmable remote controller.

- It will learn, store and repeat 64 different function codes. It can also be programmed to repeat strings of codes in a sequence (macro) at the touch of one key.
- The Smart Pad functions like the URC-1 Learning Remote Controller. If you are familiar with the URC-1's operation, then programming the 730 will be easy.
- It is designed for use with the all compatible Xantech Connecting Blocks, Controllers, Power Supplies and Emitters.
- The Smart Pad may be mounted in a dual-gang electrical junction box. Although it may share box space with other infrared or audio/video devices, **it must not be mounted in any box containing 120 or 240-volt switches, receptacles or wiring!**
- The 730 is packaged with four mounting screws and an assortment of adhesive-backed plastic symbols for identifying the keys.
- Unlike other wall-mounted key pads, the 730 allows you to decide the key location for all functions. We recommend planning the key location of each function before inserting the plastic symbols into the key recesses. Once the plastic inserts are placed into the keys, it is very difficult to remove them without causing damage.
- To complete any installation, a dual-gang decorator-style wall plate is required, available on the market, or from Xantech.

RED INDICATOR LAMPS - see Figure 1

PROGRAM - Lights when the recessed PROGRAM button on the sub-panel is pressed.

CONFIRM - Lights when a command has been memorized while in the PROGRAM mode. Also lights when a key is pressed that contains an IR command.

DELETE - Blinks on and off when the DELETE button on the sub panel is pressed.

ERROR - Lights only when an error occurs in the learning process or when trying to send an unprogrammed command.

OUTPUT - Lights to indicate when infrared commands are being sent, but only lights if there is continuity in the output circuit. If a connecting block or emitter is defective (open), the OUTPUT lamp will not light.

BANK - Indicates which of the four memory banks has been selected by the adjacent bank select keys.

FRONT SUB-PANEL

BUTTONS

(Use pencil point or toothpick to press D and R buttons)

- P** PROGRAM - begins learning mode
- S** SEQUENCE - begins sequence mode programming
- D** DELETE - erases only selected command.
- R** RESET - erases all stored commands.

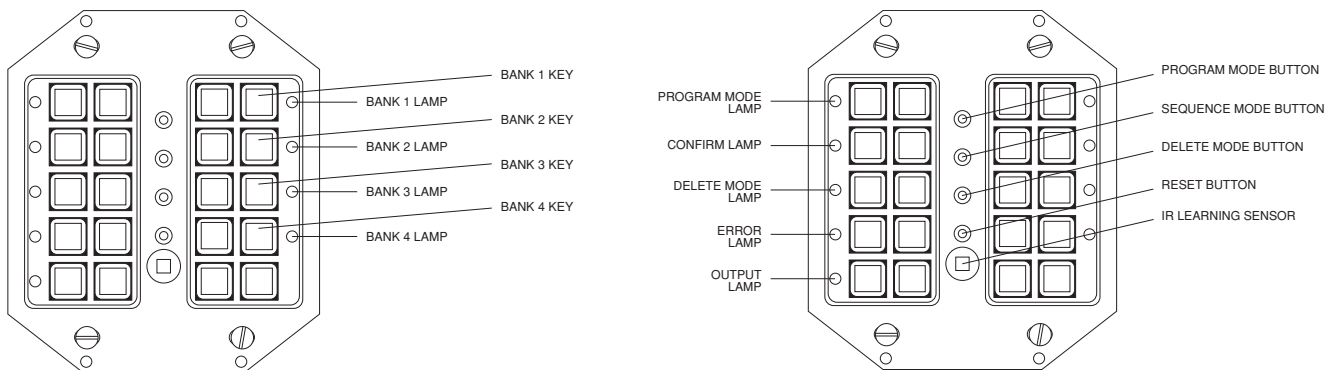


Fig. 1

IR LEARNING SENSOR

The sensor is used for receiving IR commands from hand held remote controllers for programming only. This sensor **will not** repeat IR commands through the system.

CONNECTIONS

The 730 utilizes the same connection scheme as Xantech IR receivers (Ground, IR Output and +12 volts). Treat the 730 as if it were another IR receiver. The same connecting blocks, power supplies, and emitters used with the IR receivers will operate with the 730. See **Figure 2** for a typical system.

PLEASE NOTE: The 730-00 Smart Pad will not operate with the 2-wire Phantom Power connection!

The three-conductor wiring used should consist of either stranded, solid, twisted, shielded or unshielded cable. Wire size is not critical, although we recommend at least 24-gauge for runs up to 150 feet, 22-gauge up to 400 feet, 20-gauge up to 1000 feet, and 18-gauge up to 2500 feet.

Typically, a 789-44 Connecting Block may be used to terminate the cable at the equipment end of the system. It provides a jack for the power supply and jacks for up to four single or four dual emitters. For more hints on systems operation, configuration and installation, refer to the installation instructions provided with the connecting blocks you use.

PROGRAMMING

Before programming the 730, press the BANK 1 selector key. The BANK 1 lamp will light. Press the RESET button. This will clear any data stored during factory testing. Do not push this key again unless you wish to erase ALL of the programming information that you have entered. There is no way to restore this information except by reprogramming.

- STEP A - Press the PROGRAM button. The PROGRAM LED will light.
- STEP B - Place the hand-held remote controller one to four inches from the front of the 730 pointing directly at the IR Learning Sensor. (The 730 must receive the infrared output from the hand-held remote in order to memorize its commands).
- STEP C - Press **and hold** the key that you wish to program.
- STEP D - Press the desired key on the remote controller briefly; usually the same amount of time as when you use the remote directly. The PROGRAM lamp will flash while it is storing the information. When stored, the CONFIRM lamp will light. You can now release both keys. The CONFIRM lamp will turn off.

You have now programmed one function; one key on the 730 has been programmed to send the same infrared command as the key that you have pressed on the hand-held remote controller. Steps C and D must be repeated for each command that you wish to store. Sixteen (16) different functions may be stored in this manner for each of the four (4) banks. **NOTE- Commands can not be stored under the four bank selector keys.** These four keys can only be used for selecting the bank.

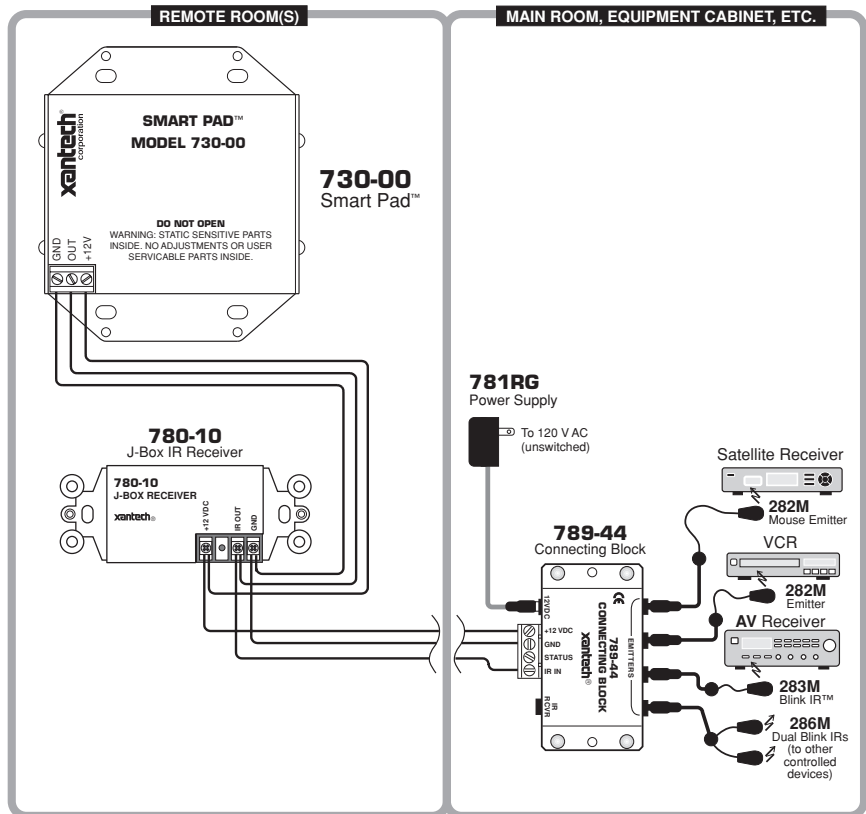


Fig. 2

After programming the last function, press the PROGRAM button again. The PROGRAM lamp will turn off. Press any of the keys that you have programmed. The CONFIRM and the OUTPUT lamps will flash and the audio/video equipment will execute the command.

NOTE: On rare occasions, a condition which we call “lock-up” may occur. The PROGRAM lamp will flicker continuously and pressing the PROGRAM button will have no effect. **To clear a lock-up, unplug the power supply for about one minute.** The internal lithium battery will retain all programming.

ERROR LAMP AND EXTENDED MEMORY

Some remote control codes such as those used by Pioneer require more memory than is normally allocated by the 730’s microprocessor. When you try to program one of these long 32-bit codes, the PROGRAM lamp will flicker and will be followed by a very short flash of the ERROR lamp. The flash of the ERROR lamp is so short that you may not notice it the first time it occurs. If this happens, no command will be stored in memory. **To store these commands, you must go through Steps C and D twice!** The 730 will then allocate four times as much memory on the second pass as it did on the first. If one command from a hand-held remote controller requires extended memory, the other commands from that controller will also require extended memory in most cases.

DELETE BUTTON

The DELETE button can be used to erase any programmed command. The PROGRAM lamp on the front panel **must not be lit.** If it is, press the PROGRAM button. The PROGRAM lamp will turn off. Press the DELETE button. The DELETE lamp will blink continuously. Press the key that has been programmed with the command that you wish to erase. The DELETE lamp will turn off. You may now reprogram the key.

SHORT COMMANDS

Some commands, such as Channel Up and Channel Down, may skip channels or cause other multiple actions if memorized at full length. If a key on the original hand-held remote controller requires only a short tap for its command to be properly executed, and results in multiple actions if the key is pressed too long, only a short burst of it should be stored in the 730. Step D should be modified as follows:

STEP D - Press the key on the remote controller that you wish to store and **hold it in only as long as you usually press it when controlling the audio/video equipment directly.** Release the controller’s key. The PROGRAM lamp will flash while it is storing the information. Release the key on the 730 after the CONFIRM lamp lights. The CONFIRM lamp will turn off.

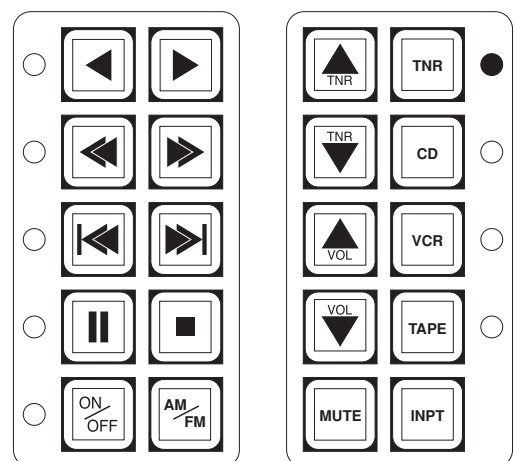
SEQUENCE (MACRO) FUNCTION

Each key can store up to ten separate commands that have been previously stored on other, individual keys. A single push of one of these keys can then be used to send out these commands to trigger various components in a programmed sequence. The key chosen for a sequence cannot be used to store an IR command in that bank. However, the key can be used to store an IR command in another bank. The sequence function does not actually store the individual IR commands. It only stores the locations of the commands in the sequence. The location can be in any bank. **Individual function key commands must be programmed into the 730 before programming a sequence.**

In order to explain the use of sequencing, several examples of key pad configuration, without sequencing, will be discussed below.

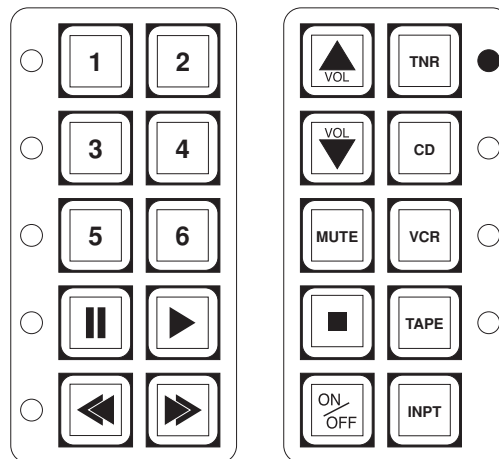
In figure 3 the key pad shows four banks labeled **TNR**, **CD**, **VCR**, and **TAPE**. Below these four keys is a button labeled **INPT**.

Figure 3



When the bank select is in the TNR mode, the user selects this input on the receiver by pushing the **INPT** key. Some receivers switch between AM and FM with a single button. That is provided on this pad by the **AM/FM** key. If the user then wants to play the CD, the **CD** bank is selected, the **INPT** key is pushed and the ► button is pushed. This example doesn't show any sequencing. Figure 4 shows another example without sequencing. This example is a variation of Figure 3. Again, we show four banks with an **INPT** select button. However, the user wants to select which CD to play from the CD changer and also to select FM presets. The 6 keys on the upper left pad now show numbers 1 - 6. The user does not have as many transport functions but it is still adequate. We still have || (pause), an ► (play). The ◀◀ and ▶▶ symbols will be both forward and reverse for various transports and also will serve as the tuner up and tuner down keys. **MUTE**, ■ (stop), and **ON/OFF** were moved over to the right key pad.

Figure 4

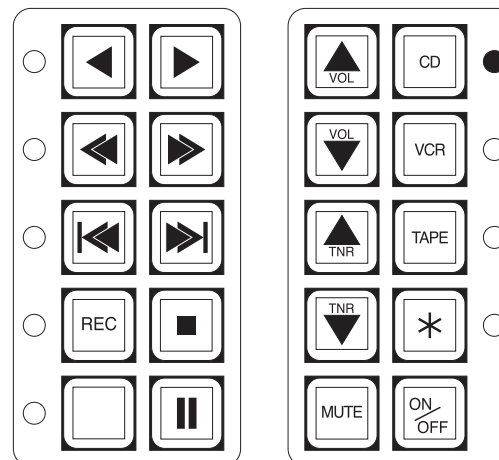


The following example shows how sequencing can automate some of the above functions for the user. While sequencing adds more complexity for the installer, it greatly simplifies the operation of the system for the user.

Figure 5 shows the final symbols installed. This program for the 730 functions as follows:

- Press **CD** key to select the CD bank.
- Press **▲** or **▼** keys to adjust audio level.
- Press **MUTE** key for audio mute.
- Press ► key for CD play.
- Press ◀◀ or ▶▶ keys for CD scan in either direction.
- Press ◀◀◀ or ▶▶▶ keys for CD skip forward or skip reverse.
- Press ■ key for CD stop.
- Press || key for CD pause.
- Press **▲** or **▼** keys for instant access to the tuner.

Figure 5

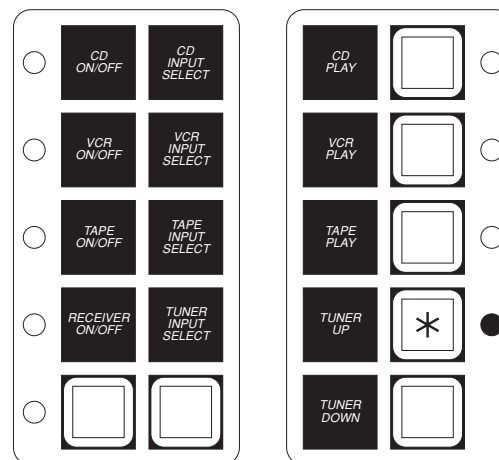


The **VCR** and **TAPE** banks give the user the same functions but for control of VCR and Tape instead of CD. **▲**, **▼**, **MUTE**, **▲** and **▼** are always available regardless of the bank selection.

Sequence functions reduce the number of keys the user pushes to initiate a series of actions. For instance, when pushing the ► key while in the **CD** bank, the **internal sequencer** sends an IR command to the AM/FM receiver to select the CD input and then sends an IR command to the CD player to go into the Play mode.

These **basic IR commands must be stored somewhere** and for this example, we have chosen to assign the **fourth bank** this task. This **“blind”** bank is selected by pushing the * key. The actual commands may not resemble the final symbols you put on the keys so we recommend that you use our **worksheet**

Figure 6



pads for record keeping. Program the following IR commands on the indicated keys in the fourth “**blind**” bank. See Figure 6. The commands will eventually become part of a sequence on banks **CD**, **VCR**, and **TAPE**. (Refer to Programming section for instructions on basic IR command learning functions.)

BLIND BANK (BANK 4) COMMANDS

CD On/Off, CD input select on receiver, CD play, VCR On/Off, VCR input select on receiver, VCR play, Tape On/Off, Tape input select on receiver, Tape play, Receiver On/Off, Tuner input select on receiver, Tuner Up, Tuner Down.

Go to BANK 1, which we have designated “**CD**”. See Figure 7. Program the IR commands shown on this figure such as the receiver’s volume UP and DOWN, MUTE, and various CD commands. Ignore the Sequence commands until after all of the actual IR commands are programmed.

SEQUENCE PROGRAMMING

Program Sequence “A” on BANK 1 (“**CD**”) as follows:

1. Select BANK 1 (“**CD**”)
2. Push Program Mode button
3. Push Sequence Mode button
4. Push key designated “**SEQ A**”
5. Select BANK 4
6. Push key designated “Tuner input”
7. Push key designated “Tuner Up”
8. Push Sequence Mode button
9. Push Program Mode button.

You have created a sequence on BANK 1 that the user will see as “**▲**”. It will automatically switch the AM/FM receiver into the tuner mode and cause the tuner to tuner UP. You can decide whether **▲** means manually tuning or scanning the Pre-sets when you initially program the original IR commands.

Program sequence “B” in the same manner, except use “Tuner Down” in step 7.

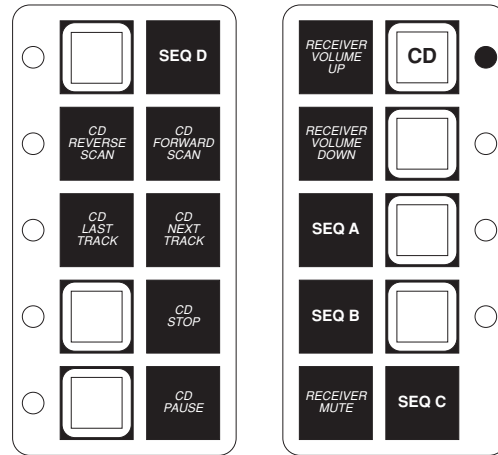
Sequence “C” is optional. This sequence turns all components either ON or OFF.

Program Sequence “D” on BANK 1 as follows:

If you are going to program Sequence “D” right after you have finished Sequence “B” or “C” you do not have to come out of the Program mode after Sequence “B” or “C”. In other words proceed to step 8 and then enter the sequence mode by pushing the Sequence mode again. Proceed through steps 4 through 8 with the same keys and buttons except use the “CD Input Select” and the “CD Play” keys this time.

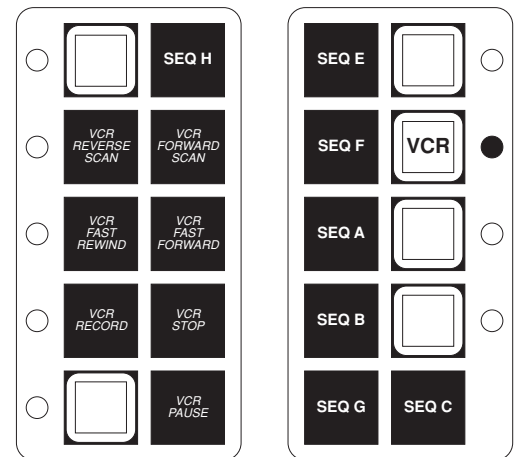
Figures 8 and 9 show the programming for the **VCR** Bank and the **TAPE** bank. Proceed as in the previous examples.

Figure 7



SEQ A - Bank 4 : Tuner Input + Tuner Up
 SEQ B - Bank 4 : Tuner Input + Tuner Down
 SEQ C - Bank 4 : RCVR On/Off + CD On/Off + VCR On/Off + Tape On/Off
 SEQ D - Bank 4 : CD Input Select + CD Play

Figure 8



SEQ E - Bank 1 : Receiver Volume Up
 SEQ F - Bank 1 : Receiver Volume Down
 SEQ G - Bank 1 : Receiver Mute
 SEQ H - Bank 4 : VCR Input Select + VCR Play

Notice that the key in the lower left hand corner has been left blank. Depending on the needs of the user, this key could be programmed for such commands as the following:

OPEN - This would eject the CD tray, the VCR tape, etc.

AM/FM - Used to select between AM and FM on some tuners.

EQ - Used to turn an Equalizer on or off on some receivers.

The location of some keys could be changed. For example, the **AM/FM** key might be located to the right of the **MUTE** key as it relates more closely to the tuner keys.

PROGRAMMING TIPS

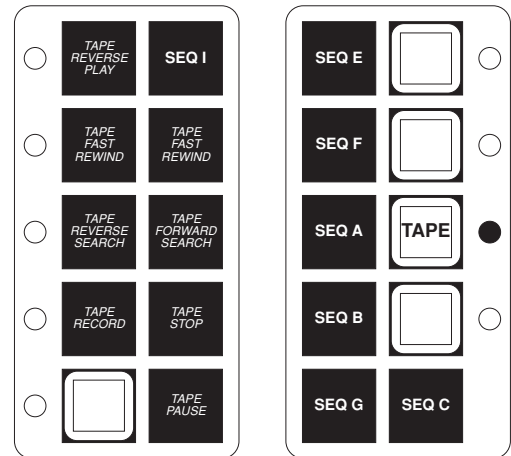
Execution Times:

- Some units can not execute commands quickly. Therefore, we suggest when storing commands in a Sequence, place them alternately so more time is given for certain units. You may even store "dummy" commands to use up time in the sequence.
- Actual execution times for a full 10 command sequence can vary from 1 or 2 seconds up to 5 seconds or more, depending on the code length of various manufacturer's commands.

A Word About Batteries:

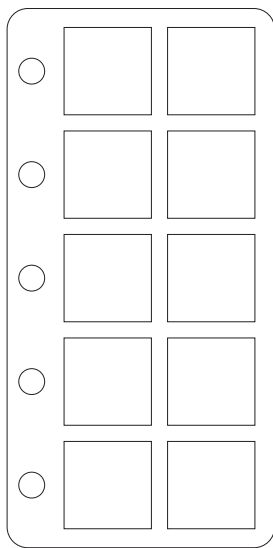
- The 730 most easily learns commands from other remote controls when they have strong batteries. As the teaching remote controller battery weakens, the strength of its signal weakens which makes it more difficult for the 730 to learn the command.
- If you have any difficulty with the 730 learning commands, make certain you have fresh batteries in the teaching controller.

Figure 9



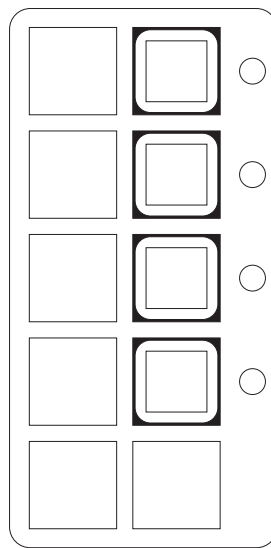
SEQ I - Bank 4 : Tape Input Select + Tape Play

WORKSHEET



JOB _____

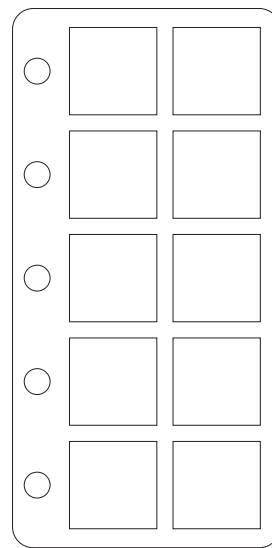
LOC _____



BANK# _____

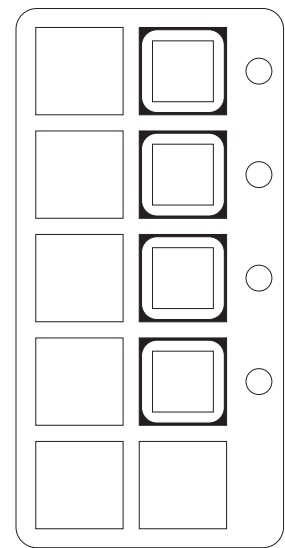
DATE _____

WORKSHEET



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BANK# _____

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