# R-30M

## WILDLIFE TELEMETRY RECEIVER

# Operating Manual

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1-714-998-3021 EXT 101 or 1-800-854-0547 EXT 101

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## R-30M FEATURES

- 144-174MHz Continuous frequency coverage, fully synthesized, in 100Hz steps
- 999 Memory channels with a unique retune feature for adjusting memory channel frequencies
- Scanning of all 999 memory channels, 5 scan lists, and individual channel lockout
- Fully programmable with keypad, no computer required
- Backlit LCD display and keypad
- .5ppm TCXO for superior temperature stability with no frequency drift
- Peak reading (0-99) sample and hold meter with programmable hold time responds to 5ms wide pulses
- Cloning of all memory channels between receivers, no computer required

## R-30M SPECIFICATIONS

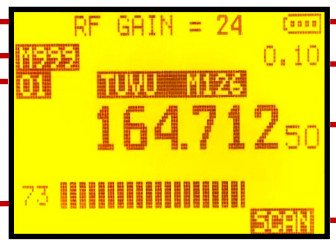
- RF attenuator: -80dB of RF attenuation in 24 steps, plus -40dB of audio attenuation, for -120dB total
- Channel steps (programmable): 100Hz, 500Hz, 1kHz, 5kHz, 10kHz, or 100kHz
- Receiver mode: CW
- Antenna impedance: 50 ohms
- Antenna connector: BNC female and SMA male for supplied rubber duck
- Battery: 7.5v rechargeable Li-ion snap-on battery pack with spare supplied for extended operation
- Dimensions: 4.25" (108mm) x 2.30" (59mm) x 1.30" (33mm) excluding protrusions
- Mass: 8 ounces (225 grams)
- Price (including all accessories): $795.00 including free ground Continental USA shipping

**WARRANTY**

The R-30M Receiver is warrantied to be free of defects in materials and workmanship for a period of one (1) year from the date of purchase.

# R-30M (144-174 MHz)
## and R-10M (215-225 MHz) RECEIVERS

**DISPLAY SHOWN IN MEMORY MODE**




RF GAIN LEVEL (0-24)

MEMORY CHANNEL NUMBER (001-999)

CHANNEL LISTS NUMBER FOR SCANNING (01-05)

SIGNAL STRENGTH READING WITH BAR GRAPH (0-99)

BATTERY CAPACITY

STEP SIZE (kHz)

FREQUENCY (MHz)

SCANNING ON

SHOWN WITH SUPPLIED BNC ADAPTER

ON/OFF VOLUME

**DISPLAY SHOWN IN FREQUENCY MODE**

MENU KEY

UP KEY

DOWN KEY

EXIT / BACKSPACE KEY

SCAN KEY

RETUNE AND #8 KEY

PASSED CHANNEL AND KEYPAD LOCK / UNLOCK KEY

**LEFT SIDE VIEW**

TOGGLES BETWEEN MEMORY MODE AND FREQUENCY MODE

INCREASE RF GAIN LEVEL

DECREASE RF GAIN LEVEL

BOTH JACKS USED FOR CLONING CABLE OR HEADPHONE ADAPTER CABLE

USB-C JACK FOR CHARGING ONLY

**RIGHT SIDE VIEW**

SHOWN WITH RUBBER BOOT REMOVED

## OPERATING THE R-30M

**FREQUENCY MODE OPERATION (SINGLE FREQUENCY OPERATION)**

Make sure the battery pack is charged before use. See DESCRIPTION OF SUPPLIED ACCESSORIES on PAGE 9 for battery charging details, battery installation, and a general description and use of all supplied accessories. Turn on the receiver with the orange ON/OFF VOLUME knob and turn it clockwise to a comfortable listening level. The receiver has two modes of operation. The first is the FREQUENCY MODE which allows simple operation and display of a single frequency. To access it, push the upper (larger) KEY on the left side of the receiver. This KEY will toggle the receiver back and forth between the FREQUENCY MODE and the MEMORY MODE. If no MEMORY CHANNELS have been added to the receiver, pushing this KEY will always revert the receiver to the FREQUENCY MODE.

To enter a new frequency, do the following. The display will show the last frequency entered in large numbers. Enter the new frequency using the numbered keypad. As an example, to enter 148.5047MHz, push 1,4,8,5,0,4,7. Do not enter the decimal point. After the last digit is entered, the receiver automatically stores the new frequency. If you make a mistake, push the EXIT KEY to BACKSPACE over the mistake and then re-enter the correct number. You can modify the new frequency using the UP or DOWN KEY. Each push will step the frequency UP or DOWN in the STEP that was last programmed in MENU item #01 on PAGE 12. The selected STEP will also show on the display under the BATTERY CAPACITY ICON in the upper right corner. The display should show 0.10 (kHz not shown) which is the same as 100Hz.

The two lower small KEYS on the left side of the receiver control the RF GAIN. Push the upper small KEY to INCREASE the RF GAIN. Push the lower small KEY to DECREASE the RF GAIN. The RF GAIN reading on the top line of the display will show 0-24 as these KEYS are pushed. Holding down either, will quickly scroll through all the RF GAIN settings. The highest RF GAIN number (24) raises the receiver gain to maximum. The lowest RF GAIN number (0) lowers the receiver to a loss of about -80dB which is used for very close-in direction finding.

The BATTERY CAPACITY ICON in the upper right corner of the display is an approximate indication of remaining battery capacity. Four bars is a fully charged battery while one or no bars is a discharged battery that needs charging.

On the bottom line of the display, the signal strength reading and bar graph show the relative signal strength of the incoming signal (0-99). This reading is not changed by the audio level set by the VOLUME control. It will capture transmitter pulses as narrow as 5ms and will hold this peak reading for 0-99 seconds as programmed in MENU item #11 on PAGE 16.

Holding down (long pushing) the F KEY in the bottom right corner of the keypad for 5 seconds will lock the keypad. A # sign will show in the upper left corner of the display indicating that the keypad is locked. When locked, only the upper (larger) KEY on the left side which toggles between FREQUENCY MODE and MEMORY MODE and two lower small KEYS which control the RF GAIN, will be active. To turn off the keypad lock feature, hold down the F KEY for 5 seconds and the # sign will extinguish.

The display backlight can also be programmed ON or OFF with MENU item #08 on PAGE 15.

Beep can also be programmed ON or OFF with MENU item #09 on PAGE 16.

**MEMORY MODE OPERATION**

Use this mode to store individual frequencies (1-999) so they can be easily accessed later. Frequencies are always entered first in the FREQUENCY MODE before they can be transferred to the MEMORY MODE.

Start by saving your frequencies into MEMORY CHANNEL numbers one at a time.

**1**. Enter a frequency as described in FREQUENCY MODE OPERATION above.
**2**. Push the M KEY once to enter the MENU mode.
**3**. Push the UP or DOWN KEY to select Menu item #02 which is CHANNEL SAVE.
**4**. Push the M KEY again and the two right facing arrows will appear.
**5**. Push the UP or DOWN KEY until the display shows the MEMORY CHANNEL number you wish to enter that frequency into. Alternately, you can enter the 3 digit channel number using the numbered keypad.
**6**. Push the M KEY again and SURE? will appear.
**7**. Push the M KEY again to save that frequency into that MEMORY CHANNEL number.

CHANNEL NAME allows you to add a 10 character description above the frequency when in the MEMORY MODE. To add a name, refer to MENU item #03 on PAGE 13.

CHANNEL DELETE allows you delete a MEMORY CHANNEL. To delete a MEMORY CHANNEL, refer to MENU item #04 on PAGE 14.

CHANNEL LISTS allows you to assign a CHANNEL LIST number (01-05) to a MEMORY CHANNEL. To assign a CHANNEL LIST number, refer to MENU item #05 on PAGE 14. CHANNEL LISTS are used with the SCAN feature as described below.

To access your saved frequencies that have been entered into MEMORY CHANNELS, push the upper (larger) KEY on the left side of the receiver to toggle it to MEMORY MODE. They can be stepped through manually using the UP or DOWN KEY. They can also be scanned as described below.

SCAN can be accessed by briefly pushing the SCAN KEY in the upper right corner of the keypad and de-activated by briefly pushing it again. When in SCAN, the SCAN icon will appear in the bottom right corner of the display.

If you have assigned CHANNEL LISTS using MENU item #05, you may select which of them you would like to be included in the SCAN sequence. This is explained in LISTS TO SCAN which is MENU item #06 on PAGE 15.

SCAN DWELL TIME can be changed by using MENU item #07 on PAGE 15.

PASSED CHANNELS will allow you to remove MEMORY CHANNELS from the SCAN sequence. Its use is described in MENU item #12 on PAGE 17.

CLONING allows you to duplicate the entire memory contents of one unit (DONOR) into the other unit (TARGET). The complete CLONING PROCEDURE is fully described on PAGE 18.

RETUNE is a very useful feature of the receiver. It allows you to change the frequency of a MEMORY CHANNEL up or down in 100Hz steps either temporarily or permanently (until you want to change it again). To use the RETUNE feature make sure the receiver is in the MEMORY MODE and then select a MEMORY CHANNEL you wish to change, using the UP or DOWN KEY, while listening to the receiver audio. Long push the "8" KEY (with the R for RETUNE next to it) and the word "Retune" will appear on the display to the right of the MEMORY CHANNEL number. Use the UP or DOWN KEY to change the frequency shown in 100Hz steps. If you long push the "8" KEY again, "Memory Updated" will show on the display and your new frequency will be substituted for the previous MEMORY CHANNEL frequency. If you don't long push the "8" key again after changing the frequency, the old frequency of that MEMORY CHANNEL will not be changed.

## ACCESSORIES SUPPLIED WITH R-30M RECEIVER

1- Drop-in wall charger 110v-240vac 50/60 Hz

1- 12vdc car charger with 2 standard USB ports

1- Standard USB to USB-C cable

2- 1600ma batteries (1 on radio, 1 in plastic box)

1- Plastic box for spare battery and belt clip

2- Belt clips

1- Wrist strap

1- Earphone adapter cable (3.5mm female)

1- Cloning cable

1- Rubber duck antenna

2- BNC female to SMA female antenna adapters

1- 5' RG58A/U coax cable with BNC male plugs

1- Operating Manual

## DESCRIPTION AND USE OF SUPPLIED ACCESSORIES

### DROP-IN WALL CHARGER

This is a fast charger and the main charger for the receiver batteries. It will charge a completely discharged battery in about 4 hours. It plugs into any 110v-240vac 50/60Hz source. Leave the receiver off during charging. When plugged into an AC power source and no receiver inserted, the LED will be GREEN. When a receiver with battery or a battery without receiver is inserted in the top of the charger, the LED will turn to RED until the battery is fully charged. When the battery is fully charged, the LED will turn back to GREEN. The charged battery, with or without receiver, can be left in the charger for a week or so without damage to either.

### CAR CHARGER WITH 2 STANDARD USB PORTS AND ADAPTER CABLE TO USB-C

The supplied car charger can be plugged into a 12v-24vdc cigarette lighter jack, generator, or battery. When powered up, it supplies standard 5vdc USB power. Make sure the receiver is turned off while charging. This is because the charger generates considerable interference in the receiver and charging power is diverted from the battery to the receiver. Plug the standard USB end of the supplied adapter cable into one of the 2 jacks on the charger and the other end into to USB-C port on the right side of the receiver. Make sure battery is attached to the receiver. Lift up the bottom end of the rubber boot with a fingernail to expose the USB-C charging port and pop it back in after charging to keep water out. When the USB-C plug is inserted into the receiver and power applied, the blue LED on the top of the receiver in front of the antenna jack will illuminate. The adapter cable can also be plugged into a computer or any USB port to charge the receiver battery. Please note that this charging method using the USB-C port will only PARTIALLY charge the battery and is for emergency charging only. It can partially charge the battery in less than an hour. The battery can only be completely charged with the supplied drop-in wall charger.

### BATTERIES

Two 1600ma Lithium battery packs are supplied. One is attached to the receiver and the other is a spare in the supplied plastic box. Each battery will provide about 12 continuous hours of operation. When the receiver is not in use, make sure it is turned off to conserve battery power. Keep the spare charged and with you in its plastic box in case the main battery dies. To remove the battery pack from the receiver, push in and up on the latch button on the bottom of the battery pack. To attach the battery pack, slide it forward on the rails until it locks into place. If you put the receiver in a pocket with keys or coins, and the two charging contacts on the back of the battery pack accidentally get shorted together, the battery pack electronics will automatically disconnect the battery to protect it. Turn the receiver off and back on to reset this protection circuit. Do not disassemble the battery pack or discard it in a fire.

**BELT CLIPS**

Two belt clips are supplied with each receiver, one for each battery. To install, squeeze the retainer spring on the clip while inserting it into the slide on the back of the battery pack. Slide in the clip until it clicks into place. To remove, use a fingernail to squeeze the top of the spring while sliding back on the belt clip to remove it from the battery pack. This is easier done with the battery pack removed from the receiver. The extra belt clip can be stored with the spare battery pack in the supplied plastic box.

**WRIST STRAP**

The supplied wrist strap, if used, is attached to the top of the receiver in back of the antenna jack.

**EARPHONE ADAPTER CABLE**

The supplied earphone adapter cable allows a headset with a standard mono or stereo 3.5mm plug to be used with the receiver. Pry the upper end of the rubber boot away from the receiver case using a fingernail. This rubber boot is on the right side of the receiver and it covers the two jacks used for the headphone adapter cable or the cloning cable. Align the smaller 2.5mm plug with the upper 2.5mm jack and the larger 3.5mm plug with the lower 3.5mm jack. Push in carefully to start and use a little extra finger pressure when seated to ensure a tight fit. Be sure to snap the top end of the rubber boot back on when the cable is removed to keep water out.

**CLONING CABLE**

The supplied cloning cable allows duplication of the entire memory contents of one unit (DONOR) into the other unit (TARGET). Please see the CLONING PROCEDURE on PAGE 18 for complete instructions on its use.

**RUBBER DUCK ANTENNA**

The supplied rubber duck antenna serves as a non directional antenna for close-in use when a yagi is not needed. It has a SMA female plug that plugs into the SMA male jack on the top of the receiver. If the BNC female to SMA female adapter is installed on the receiver, use your fingers to grip its base and unscrew it counter clockwise. Then screw on the rubber duck antenna finger tight clockwise until it is seated.

**BNC FEMALE TO SMA FEMALE ANTENNA ADAPTERS**

Two BNC female to SMA female antenna adapters are supplied. One attached to the receiver and a spare.
To remove it, use your fingers to grip its base and unscrew it counter clockwise. To put it back on, screw it in clockwise until it bottoms out. Finger tight only so it can be removed if desired.

**RG58A/U COAX CABLE WITH BNC MALE PLUGS**

A 5' coax cable is supplied to connect the receiver to your yagi antenna.

## DESCRIPTION AND USE OF THE 13 MENU ITEMS

The 13 MENU items allow the receiver to be customized for each user's needs. The MENU KEY (M) allows access to the MENU. Push it once to put the receiver in the MENU mode. The 13 MENU screens can be scrolled through by pushing the UP or DOWN KEYS. The top line of each MENU screen shows the name of the memory item selected. The bottom line of the display shows the MENU item number (01-13). The MENU can be exited anytime by pushing the EXIT/BACKSPACE KEY or by turning the receiver OFF and back ON with the orange ON/OFF VOLUME knob on the top of the receiver. All of the 13 MENU items are accessed in the same way, which is:

**1**. Push the M KEY to access the MENU mode.

**2**. Push the UP or DOWN KEY to scroll through the 13 MENU items.

**3**. Push the M KEY again and the two right facing arrows will appear.

**4**. Push the UP or DOWN KEY to select from the possible choices.

**5**. Push the M KEY again to select that choice.

**6**. Push the M KEY again if asked to by SURE?.

Below is a complete description and how to access each of the 13 MENU items.

### #01 STEP

Push the M KEY once to enter the MENU. The first item is STEP. If the screen displays a MENU item other than STEP, use the UP or DOWN KEY to select STEP which is MENU item #01. This MENU item allows you set the frequency STEP the receiver uses only in the FREQUENCY mode but not in the MEMORY mode. The possible STEPS are 100 Hz, 500 Hz, 1 kHz, 5 kHz, 10 kHz, and 100 kHz. The default of 100 Hz should almost always be selected. To change the STEP to other than 100 Hz, push the M KEY again and two right facing arrows will appear. Use the UP or DOWN KEY to select a different STEP. Pushing the M KEY again stores that STEP which can be changed any time using this procedure. If this is the only change needed to the MENU, push the EXIT KEY to exit the MENU.

**#02 CHANNEL SAVE**

The receiver has two modes of operation. The first is the FREQUENCY MODE and the second is the MEMORY MODE. The two modes are toggled back and forth using the upper (larger) key on the left side of the receiver. If the MEMORY MODE is empty, pushing this key always reverts the receiver to the FREQUENCY MODE. CHANNEL SAVE is used to shift a frequency that has been entered in the FREQUENCY MODE into a memory location so it can be accessed in the MEMORY MODE. To enter a frequency in the FREQUENCY MODE, do the following. With the receiver ON, push the upper (larger) key on the left side of the receiver to make sure it is in the FREQUENCY MODE. The display will show a frequency in large numbers with no channel name above it and no memory channel number or channel list number to the left of it. Enter the desired frequency using the numbered keypad. As an example, to enter 148.5047MHz, push 1, 4, 8, 5,0,4,7. Do not enter the decimal point. After the last digit is entered, the receiver automatically stores that frequency. If you make a mistake, push the EXIT KEY to BACK-SPACE over the mistake and re-enter the correct number. You can modify the entered frequency using the UP or DOWN KEY. Each push will STEP the receiver UP or DOWN in the STEP that was programmed in MENU item #01 above. The selected step will also show on the display under the battery icon in the upper right corner. The display should show 0.10 (kHz not shown) which is the same as 100 Hz. To save that frequency, do the following. Push the M KEY once to enter the MENU mode. Push the UP or DOWN KEY to select MENU item #02 which is CHANNEL SAVE. Push the M KEY again and the two right facing arrows will appear. Push the UP or DOWN KEY until the display shows the CHANNEL NUMBER you wish to enter that frequency into. Alternately, you can enter the 3 digit channel number using the numbered keypad. Push the M KEY again and SURE? will appear. Push the M KEY again to save that frequency.

**#03 CHANNEL NAME**

CHANNEL NAME allows you to add a 10 character description above the frequency when in the MEMORY MODE. To add a name, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY to get to CHANNEL NAME which is MENU item #03. Push the M KEY and the two right facing arrows will appear. Push the UP or DOWN KEY to select the CHANNEL NUMBER you wish to add a CHANNEL NAME to. Push the M KEY again and 10 underlined dashes will appear or the current CHANNEL NAME assigned to that CHANNEL NUMBER. The cursor will be under the first dash. Push the UP or DOWN KEY until the correct character appears. The UP or DOWN KEY allows you to scroll through the upper and lower case alphabet, numbers 0-9, a space, and most characters. Holding down the UP or DOWN KEY allows you to speed scroll through the entire list of characters in both directions.

Push the M KEY again to store that character and move the cursor to the location of the next character to be entered. If you enter less than 10 characters, push the M KEY until the cursor is in the 10th position. Push the M KEY to store the new CHANNEL NAME and SURE? will appear. Push the M KEY once more to store the new CHANNEL NAME or the EXIT KEY if you decided not to. If no CHANNEL NAME has been entered for that CHANNEL NUMBER, CH-XXX will automatically be assigned.

**#04 CHANNEL DELETE**

Any MEMORY CHANNEL can be deleted with MENU item #04. This could be because you no longer want it in memory or you want to change the frequency stored in that MEMORY CHANNEL. In order to change the frequency stored in that MEMORY CHANNEL, you must first remove it with CHANNEL DELETE. It then can be added back with a new frequency by following CHANNEL SAVE (#02 above). To delete a MEMORY CHANNEL, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY until CHANNEL DELETE which is MENU item #04 is shown in the display. Push the M KEY again and the two right facing arrows will appear. Push the UP or DOWN KEY until the CHANNEL NUMBER or CHANNEL NAME shows in the display. Push the M KEY again and SURE? will appear. Push the M KEY again to delete the MEMORY CHANNEL or push the EXIT KEY if you decided not to.

**#05 CHANNEL LISTS**

This MENU item allows you to assign or change a CHANNEL LIST number (01-05) to any MEMORY CHANNEL. If no list number is assigned, that channel defaults to 00 and is only included in the SCAN sequence if ALL LISTS is selected in LISTS TO SCAN (#06 below). These 5 CHANNEL LISTS can be used to group any MEMORY CHANNELS together for later scanning. To assign a CHANNEL LIST number, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY to select CHANNEL LISTS which is MENU item #05. Push the M KEY again and two right facing arrows will appear. Push the UP or DOWN KEY to select which MEMORY CHANNEL number or name you want to add or change. Then push the number key (1-5) that you want to add that CHANNEL LIST number to. Push the M KEY again and Memory Saved will appear which stores that selection. The new CHANNEL LIST will show on the display as 01-05 under the MEMORY CHANNEL number (MXXX) on the left edge of the display.

**#06 LISTS TO SCAN**

Any MEMORY CHANNELS that have been assigned a CHANNEL LIST number (01-05) in #05 above, can be grouped together for scanning. If a CHANNEL LIST number has not been assigned, the default is 00. If 00 is assigned to a MEMORY CHANNEL, the default ALL LISTS must be selected if it is to be included in the SCAN sequence. To assign which CHANNEL LIST numbers are grouped together in a SCAN sequence, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY to scroll to LISTS TO SCAN which is MENU item #06. Push the M KEY again and the two right facing arrows will appear. Push the UP or DOWN KEY to select one of the 32 LIST number combinations for later scanning. ALL LISTS is the default which will allow ALL LISTS and 00 to be scanned. When you have made your selection, push the M KEY again to store your selection.

**#07 SCAN DWELL TIME**

SCAN DWELL TIME allows programming of how many seconds (1-30) in 1 second increments each MEMORY CHANNEL is monitored until stepping to the next MEMORY CHANNEL. A dwell time of 3-5 seconds is usual. To change the SCAN DWELL TIME, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY to scroll to SCAN DWELL TIME which is MENU item #07. Push the M KEY again and the two right facing arrows will appear. Push the UP or DOWN KEY to scroll through the options. Push the M KEY again to store the new time.

**#08 BACKLIGHT**

This MENU item allows only two options. The first is BACKLIGHT ON which keeps the LED BACKLIGHT ON at all times to illuminate the LCD display. This allows it to be viewed in total darkness and is the default. The second is BACKLIGHT OFF. The LCD display can not be viewed without some level of ambient light present. Turning the BACKLIGHT OFF is useful when viewing animals in darkness that might be spooked by the BACKLIGHT. Even with the BACKLIGHT programmed OFF, it is ON for the first 10 seconds everytime the receiver is turned ON. It is also ON as long as you are in the MENU mode but will turn off after 2 minutes of inactivity. To change the BACKLIGHT setting, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY to scroll to BACKLIGHT which is MENU item #08. Push the M KEY again and the two right facing arrows will appear. Push the UP or DOWN KEY to select either ON or OFF. Push the M KEY again to store the new setting.

**#09 BEEP**

The audible BEEP that occurs everytime a key is pushed anywhere on the receiver, except the upper large key on the left side of the receiver that toggles between the FREQUENCY MODE and the MEMORY MODE, can be programmed ON or OFF. The default is OFF. To change the BEEP setting, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY to scroll to BEEP which is MENU item #09. Push the M KEY again and the two right facing arrows will appear. Push the UP or DOWN KEY to select either ON or OFF. Push the M KEY again to store the new setting.

**#10 INFORMATION**

This MENU item shows the current firmware version number of each individual receiver. It also shows an accurate battery voltage reading on the bottom line. Nothing can be changed in this MENU item. To view it, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY to scroll to INFORMATION which is MENU item #10. Push EXIT when done viewing.

**#11 PEAK LEVEL TIME**

This is a very useful feature of the receiver. It allows you to choose how long you want the signal strength reading and signal strength bar graph to remain on the bottom line of the display showing the peak signal strength. The signal strength reading and bar graph display 0-99 relative signal strength. The reading is not changed by the setting of the VOLUME control. The signal strength reading and bar graph will capture pulses as narrow as 5ms and hold the reading for the time selected in this MENU item. You can select OFF (not recommended), 0-2 seconds in .1 second steps, and 2-99 seconds in 1 second steps. To select the desired PEAK LEVEL TIME, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY to scroll to PEAK LEVEL TIME which is MENU item #11. Push the M KEY again and the two right facing arrows will appear. Push the UP or DOWN KEY to select the desired PEAK LEVEL TIME. Push the M KEY again to store the new setting. Not only does this feature allow the use of transmitters with narrow pulse widths but also with slower pulse rates. Transmitters can use much smaller batteries and will be lighter and smaller or have longer operational lives.

**#12 PASSED CHANNELS**

If MEMORY CHANNELS have been programmed into the receiver, they can be scanned by pushing the SCAN KEY (upper right corner of the keypad) to start the SCAN. Pushing the SCAN KEY again stops the scanning process. When the receiver is scanning, the SCAN icon can be seen on the bottom line of the display against the right side. While the receiver is scanning, MEMORY CHANNELS can be taken out of the SCAN sequence by putting them in the PASSED mode. To do this, briefly push the F KEY (bottom right corner of the keypad) when in SCAN and the MEMORY CHANNEL you want locked out of the SCAN sequence is shown on the display. This will put a "P" above the smaller last two digits of the frequency shown on the display for that PASSED (locked out) MEMORY CHANNEL. That MEMORY CHANNEL will be PASSED over in the SCAN sequence. If you want to add PASSED MEMORY CHANNELS back into the SCAN sequence, briefly push the F KEY when scanning has stopped on that MEMORY CHANNEL and the "P" will be removed. The F KEY can also be pushed anytime a MEMORY CHANNEL is shown on the display when not in SCAN to add or remove the "P". This MENU item allows removing all the PASSED CHANNELS at once rather than individually. To remove all PASSED CHANNELS at once and add them back into the SCAN sequence, do the following. Push the M KEY to enter the MENU mode. Push the UP or DOWN KEY to scroll to PASSED CHANNELS which is MENU item #12. Push the M KEY again and the two right facing arrows will appear, Push the UP or DOWN KEY to select DELE (delete) ALL P (passed). Push the M KEY again and SURE? will appear. Push the M KEY again to add all PASSED CHANNELS back into the SCAN sequence.

**#13 DOWNLOAD MEMORY**

This MENU item is used in the cloning process which allows duplication of the entire memory contents of one unit (DONOR) into the other unit (TARGET). Its use is fully described in the CLONING PROCEDURE section on PAGE 18.

## CLONING PROCEDURE

Cloning allows you to duplicate the entire memory contents of one unit (DONOR) into the other unit (TARGET). All memory contents, if any, will be overwritten in the TARGET unit when cloning is complete. To start cloning, follow the procedure below.

**1.** Make sure the batteries are charged in both units.

**2.** Turn OFF both units.

**3.** Turn ON both units.

**4.** Plug the supplied cloning cable into both units.

A. Pry the upper end of the rubber boot away from the receiver case using a fingernail. This rubber boot is on the right side of the receiver and it covers the two jacks used for the headphone adapter cable or the cloning cable.

B. Align the smaller 2.5mm plug with the upper 2.5mm jack and the larger 3.5mm plug with the lower 3.5mm jack. Push in carefully to start and use a little extra finger pressure when seated to ensure a tight fit.

**5.** Push the MENU KEY (M KEY) on the TARGET unit once to enter the MENU mode. The MENU will show STEP and #01 on the bottom line of the display.

A. Push the DOWN KEY (DOWN ARROW KEY) once to put the MENU in DOWNLOAD MEMORY and #13 on the bottom line of the display.

B. Push the M KEY again and the display will show two right facing arrows.

C. Push the UP or DOWN KEY to scroll through how many memory channels you want to download from the DONOR unit into the TARGET unit. The choices are 0-99, 0-199, 0-299, 0-399, 0-499, 0-599, 0-699, 0-799, 0-899, or 0-999. The fewer channels chosen shortens the time it takes to download the memory channels from the DONOR unit into the TARGET unit. It takes about 20 seconds to download 0-99 memory channels and a little less than 4 minutes to download 0-999 memory channels.

D. Push the M KEY once more to start cloning. The white LEDs on the top of both units will blink during cloning and the TARGET units display will show the memory channels loading. When complete, END DOWNLOAD will briefly show on the display of the TARGET unit and both white LEDs will be off.

E. If NOT CONNECTED shows on the display and cloning does not start, repeat items 2,3,4, and 5 above in the proper order.

6. When cloning is complete, turn off both units and remove the cloning cable. Be sure to snap the top end of the rubber boot back on both units to keep out water.

7. Turn on the TARGET unit and check that all memory channels were downloaded . from the DONOR unit. If not, repeat the cloning procedure. This step is mandatory

# PURCHASE OF
# YAGI ANTENNAS

Yagi antennas can be purchased from:

AF Antronics, Inc.
2 North Main Street
Villa Grove, IL 61956-1517

e-mail: antronics@ATT.net

voice: 1-217-328-0800

Antenna model number to order: The antenna model number is Fxxx-3FB. The xxx is the desired center frequency of operation in MHz. As an example, F151-3FB would be an antenna with a center frequency of 151MHz. This antenna would have a bandwidth of + or - 3MHz and would cover 148-154Mhz. A model number of F166-3FB would cover 163-169MHz.

## SUPPLIER'S DECLARATION OF CONFORMITY

**MODEL : R-30M RECEIVER**

**FCC COMPLIANCE INFORMATION**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference including interference that may cause undesired operation. Changes or modifications not expressly approved by Communications Specialists, Inc. could void the user's authority to operate the equipment.

**INDUSTRY CANADA COMPLIANCE STATEMENT**

This device contains a license-exempt receiver that complies with Innovation, Science, and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

**RESPONSIBLE PARTY:**

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1442 E. LINCOLN AVE., #349, ORANGE, CA 92865
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