Digital Flight Scan

by *Regency*
the first name in solid state

Owner's Manual

PACKING LIST

1 - Receiver Unit
1 - AC Power Cord
1 - Telescope Antenna with Right-Angle Adapter
1 - Owner's Manual
1 - Warranty Card   To be filled out and returned to:

Regency Electronics, Inc.

7707 Records Street

Indianapolis, Indiana 46226

INDEX

PLEASE RECORD SERIAL NUMBER AND DATE PURCHASED:

SERIAL NO._____ DATE PURCHASED_____

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT
          EXPOSE THIS UNIT TO RAIN OR MOISTURE.

WARNING: Before using internal battery, please read
          Battery Section on page 6 .

DESCRIPTION

The Regency ACT-T-720A is a programmable 16-channel, AM monitor receiver. It is a double-conversion superheterodyne used to receive communications in the Aircraft band, 108-136 MHz.

The need for crystals has been eliminated by the use of computer type circuits which permit the frequency of each channel to be entered by a keyboard numbered like the one used on a telephone.

Any combination of one to sixteen channels may be scanned.

Manual selection of channels is available to permit continuous monitoring of any one channel.

Two "Priority" options are provided. Channel 1 can be programmed "Priority". In addition, any other channel, (2 through 16) can be programmed "Priority". These two "Priority" options may be used separately or in combination.

A search feature permits unknown frequencies to be located. Keyboard programming permits searching any segment of any the band, or the entire band if desired.

A variety of messages appear on the readout during programming and operation of the receiver.

The ACT-T-720A may be operated from 117 VAC or 12 VDC.

Provisions are made for external antenna and external speaker.

ACT–T–720A SPECIFICATIONS

Frequency Range......................... 108–136 MHz

Search Frequency··Increments:
    108–118 MHz................................. 50 KHz
    118–136 MHz................................. 25 KHz

Sensitivity (10 DB S + N/N at tune-up).......... 1 uv

Adjacent Channel Rejection.................... 55 DB

Spurious Rejection (except Primary Image)...... 55 DB

I.F. Frequencies....   1st IF: 10.7 MHz; crystal filter
                      2nd IF: 455 KHz; ceramic filter

Reference Oscillator
(Synthesizer)..................... Crystal Controlled

Scanning Rate......... approx. 16 channels per second

Search Scanning Rate
    108–118 MHz...................... 1.2 sec. per MHz
    118–136 MHz...................... 2.4 sec. per MHz

Scan Delay
    Normal....................... approx. 0.6 seconds
    With Delay Option.............. approx. 2 seconds

Search Delay...................... approx. 3 seconds

Audio Output....... 1 Watt @ 5%, or less, distortion;
                                2 Watts maximum

Speaker (Internal)................. 8 ohms; 3" square

Power Requirements.. 110–130 VAC, 60 Hz; 18 Watts max.
                     11.5–15 VDC; 9 Watts max.

Memory Saver Battery (optional).............. 9 volt,
                       transistor radio type

Display (Frequency and Message Readout)..... 7-digit,
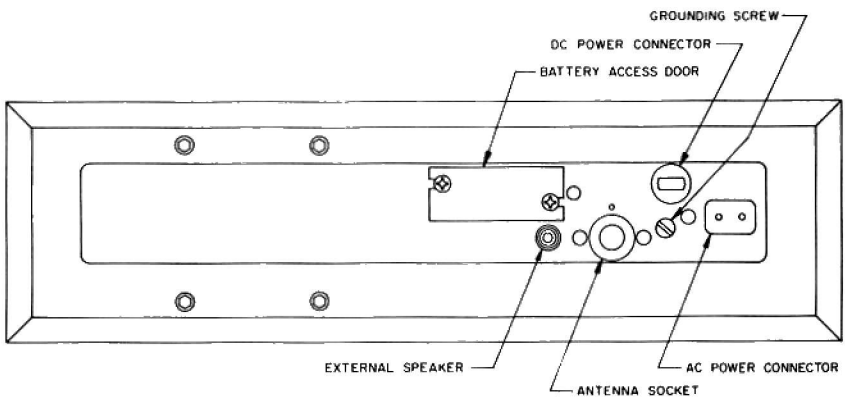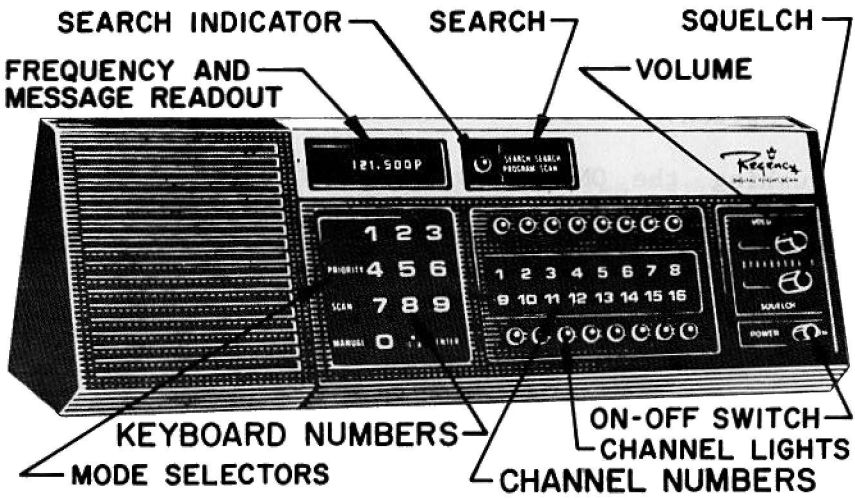   7-segment LED type

Semiconductors:
    Integrated Circuits............................ 20
    Transistors.................................... 30
Diodes (total)..................................... 34
    Rectifier...................................... 3
    Zener.. 1
    Varactor....................................... 4
    Light Emitting (LED)........................... 18
    Signal, Silicon................................ 6
    Signal, Germanium.............................. 2

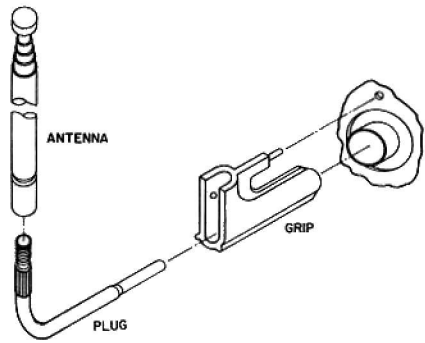FCC Certified.................... Part 15, Subpart C

UL Listed.......................... Radio Receivers,
                   Audio Systems and Accessories

Size........ 12 1/2" wide x 3 3/4" high x 9 3/4" deep

Weight..................................... 8 lbs.

SEARCH INDICATOR — SEARCH — SQUELCH

FREQUENCY AND — VOLUME
MESSAGE READOUT

121.500P   SEARCH SEARCH PROGRAM SCAN   Regency

SEARCH SEARCH PROGRAM SCAN

1 2 3
PRIORITY 4 5 6
SCAN 7 8 9
MANUAL 0 •/• ENTER

1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16

VOL

SQUELCH

POWER

ON-OFF SWITCH
KEYBOARD NUMBERS — CHANNEL LIGHTS
MODE SELECTORS — CHANNEL NUMBERS

GROUNDING SCREW
DC POWER CONNECTOR
BATTERY ACCESS DOOR

EXTERNAL SPEAKER
ANTENNA SOCKET
AC POWER CONNECTOR

REAR PANEL

ANTENNA

GRIP

PLUG

— 5 —

CONTROLS

ON/OFF Switch:

Pushing the ON/OFF Switch to the right applies power to the receiver. Power is applied to the memory circuits at all times when the power cord is plugged in. Turning the switch off will NOT cause loss of memory.

Volume:

Moving the Volume Control knob to the right will increase the sound from the internal speaker, or the external speaker if one is installed. Moving the control to the left reduces the volume.

Squelch:

The Squelch Control is used to remove the background noise between stations and to obtain proper scanning action. The control should be moved to the right until the scanner stops or noise is heard, and then to the left just enough to eliminate the noise and proper scan action is obtained.

BATTERY

A battery is not necessary for normal operation, however, a battery can be installed to prevent loss of channel frequency memory in the event of a power failure or the power cord is unplugged. Without a battery, power failure will cause loss of all memories and 121.5 MHz will be in all channels.

The battery is not supplied with the receiver. A new battery should be purchased and installed at the time the receiver is purchased. The battery is a 9 volt battery of the same type used in transistor radios. An alkaline battery, or heavy duty battery, is recommended because of their longer life in this type of operation.

Batteries suitable for use in this receiver are widely available at electronic stores and other places that carry a line of batteries.

A partial list of available batteries is:

Alkaline Batteries   Heavy Duty Batteries

   Eveready #522DB   Eveready 222
   Mallory MN1604   Burgess 2MN6

The battery should be replaced approximately once a year in normal use. If numerous power failures have occurred, or if the channels lose memory after a power interruption, the battery should be replaced. The battery should be installed while the receiver is plugged in. When done in this manner, there will be no loss of memory while replacing the battery.

NOTE: The battery is not intended for long term memory storage. If the unit is going to be unplugged for an extended period of time, it is recommended that the battery be removed. Also it is recommended that a dead battery be removed or replaced as soon as possible.

BATTERY INSTALLATION

The access cover on the battery compartment is held with 2 screws. One of these screws must be removed and the other loosened to remove the cover.

Insert the battery part way into the compartment with the terminals out. Press the snap connector onto the battery. Push the battery into the compartment and replace the cover.

HOME INSTALLATION

The receiver requires very little ventilation, however, warm areas near radiators or heating vents should be avoided.

Refer to the illustration on page 5 and assemble the telescope antenna and adapter. Make sure the plug is firmly seated in the plastic grip. Insert the adapter into the external antenna socket with the antenna straight up.

Plug the AC cord into the AC connector on the rear of the receiver. Plug the opposite end into a 117 volt AC wall outlet.

Install the battery as outlined on page 7. To conserve battery power, do not leave the receiver for any length of time without power applied.

If the receiver fails to operate properly, especially after a power failure, turn the unit off and then on again. Touch SCAN or MANUAL. If unit is still operating improperly, remove the battery and repeat the above steps.

MOBILE INSTALLATION

The ACT-T-720A will operate from any 12 volt, negative ground electrical system. A DC power cord, Regency part number MA-17, will be required. The DC cord should be connected to the battery, not through ignition switch.

A battery should be installed in the receiver to reduce the possibility of memory loss during engine starting.

If the scanner fails to operate properly after engine starting, turn the radio off and then on to restore proper operation. The electrical system in the vehicle should be checked to determine the cause of the low voltage.

Temporary mobile operation is possible by using a DC power cord with lighter plug attachment, Regency part number MA-18. This cord will permit the unit to

be operated while sitting on the seat. The telescope antenna will usually be sufficient for this type of operation.

A coupling harness, Regency part number MA-5, is available to allow the AM auto antenna to be used with the ACT-T-720A.

INITIAL POWER TURN–ON

When power is first applied, ALL 16 channels are programmed to 121.5 MHz, the aircraft emergency frequency.

The receiver will come on scanning all 16 channels.

Search Delay is pre-programmed for "Hold". See page 16 for detailed information on Search Delay programming.

PROGRAMMING

The switches on the touch panels are located under the number or letters. The switches are operated by applying light pressure with a finger directly on the number or letters. A slight "click" will be felt to indicate that the switch has operated.

Whenever a specific switch is referred to in the following instructions, it will be enclosed in a box. For example, the switch designated as MANUAL will be printed as MANUAL .

The frequency in any channel may be changed as desired.

The readout indicates the frequency whenever the scanner is stopped on a channel in either MANUAL or SCAN mode. The readout indicates continuously while in SEARCH SCAN.

PROGRAMMING CHANNEL FREQUENCIES

See page 5 for number locations.

Touch MANUAL . The scanner will stop and the readout will display the frequency in the memory of the channel indicated. If this channel has not been previously programmed, the frequency will be 121.5 MHz. It is not necessary to move the scanner to the channel to be programmed. If desired, the frequency in the memory of the channel to be programmed may be checked by touching its CHANNEL NUMBER .

Enter the desired frequency by touching the numbers on the KEYBOARD in the proper place. Be sure to enter the decimal point at the correct place. The frequency on the readout will turn off when the first number of the new frequency is entered. If a mistake is made in entry, touch MANUAL and start over.

Touch ENTER . If "Error" appears on the readout, the frequency is not in the Aircraft band (108-136 MHz). Touch MANUAL and enter a correct frequency.

Touch the CHANNEL NUMBER of the channel to receive the frequency entry. If the scanner is not on the selected channel, the indicator will immediately jump to the selected channel and the readout will indicate the frequency.

Repeat this procedure for each of the channels to be programmed.

When all desired channels are programmed, touch SCAN . If necessary, adjust the squelch control to obtain proper scan action. The channels that are not to be scanned may be turned off by touching the CHANNEL NUMBERS of these channels. The channels may be turned back on by touching the CHANNEL NUMBER again. Each time the CHANNEL NUMBER is touched, the channel will turn off and on alternately. Whenever a channel is turned either on or off, the scanner will jump to that channel and then resume scanning.

When channels are selected manually, an "L" will appear after the frequency on the readout on each channel that has been "locked out". The lockout indication applies only to Scan; the channels will be received when selected manually.

If an attempt is made to lockout all 16 channels, the last remaining channel will not turn off.

The frequency in any channel memory may be put into any other channel memory.

Touch MANUAL .

Touch the CHANNEL NUMBER of the channel containing the frequency to be put into another channel. The readout will indicate the frequency.

Touch ENTER .

Touch the CHANNEL NUMBER of the channel to receive the frequency entry. The channel light will jump to the channel and the readout will indicate the frequency. The frequency is not removed from the original channel, the frequency will be in both channels.

SCAN DELAY SELECTION

When the receiver is in SCAN mode, there are two scan delay times available. One of these is approximately 1/2 second, the other is approximately 2.0 seconds. When the 2 second delay is selected, a "d" will appear on the readout whenever the channels are being scanned. The scan delay is changed by touching DELAY . Each time DELAY is touched, the scan delay time will change from one to the other.

PROGRAMMING "PRIORITY"

Two "PRIORITY" channels are available. One of these must be Channel 1. The other may be any one of

the remaining channels (2 through 16). These two "PRIORITIES" may be used individually, or they may be used in combination. Whenever either "PRIORITY" alone is programmed "ON", and the scanner is stopped on an active channel, the "PRIORITY" channel will be sampled approximately once a second for activity. In this mode, the scanner will switch to the "PRIORITY" channel whenever a signal is received on that channel.

When both "PRIORITIES" are programmed "ON", and the scanner is stopped on another active channel, the PRIORITY channels are sampled alternately for activity. In this mode, the scanner will switch to Channel 1 if a signal is received on Channel 1, or to the other "PRIORITY" channel if a signal appears on that channel. However, while stopped on the second "PRIORITY" channel, Channel 1 will be sampled approximately once a second for activity. If a signal appears on Channel 1 during the time the scanner is stopped on the second "PRIORITY" channel, the scanner will switch to Channel 1. Thus, Channel 1 has preference. When the scanner stops on either "PRIORITY" channel, the readout will display the channel frequency followed by a "P".

No more than two "PRIORITY" channels may be programmed.

The receiver must be in SCAN mode or MANUAL mode to enter or remove the Priority feature.

The scanner does not have to be on Channel 1 to enter or remove Channel 1 Priority, it may be scanning or locked on any channel.

Any frequency in the band may be used as a Priority frequency in Channel 1. Make sure the desired frequency has been entered in Channel 1 before Channel 1 Priority is activated.

ENTER CHANNEL 1 "PRIORITY"

Touch PRIORITY . "Prior" will appear on readout.

Touch CHANNEL NUMBER $\boxed{1}$. If the receiver is in MANUAL mode, "Prior" will disappear on readout and be replaced with the channel frequency followed by a "P". If in SCAN mode, the channel will jump to the next channel and resume scanning.

REMOVE CHANNEL 1 "PRIORITY"

Touch $\boxed{\text{PRIORITY}}$. "Prior" appears on readout.

Touch CHANNEL NUMBER $\boxed{1}$. In MANUAL mode, "Prior" will disappear and be replaced with the channel frequency _without_ "P". In SCAN mode, the channel will jump to the next channel and resume scanning.

Each time $\boxed{\text{PRIORITY}}$ -Channel $\boxed{1}$ is touched, the CHANNEL 1 PRIORITY will alternately turn on and off.

ENTER "SECOND PRIORITY"
(Channel 2 through 16)

The second "PRIORITY" may be entered into any channel except Channel 1.

Any frequency in the band may be used as the priority frequency in the "SECOND PRIORITY" channel.

The scanner does not have to be on the selected channel to enter "SECOND PRIORITY", it may be scanning or locked on any channel.

Touch $\boxed{\text{PRIORITY}}$. "Prior" appears on readout.

Touch the CHANNEL NUMBER of the channel to be used for second "PRIORITY". In MANUAL, "Prior" will disappear on readout and be replaced by the channel frequency followed by a "P". In SCAN mode, the scanner will jump to the next channel and resume scanning.

REMOVE "SECOND PRIORITY"

Touch $\boxed{\text{PRIORITY}}$.

Touch the CHANNEL NUMBER .

Each time PRIORITY – CHANNEL NUMBER is touched, the "SECOND PRIORITY" will be turned "ON" and "OFF" alternately. The "SECOND PRIORITY" channel may be moved to another channel at any time by touching PRIORITY – NEW CHANNEL NUMBER .

PROGRAMMING "SEARCH" FREQUENCIES

Two frequencies are used in the Search Mode. These frequencies are designated "START" and "STOP" frequencies. The "START" frequency MUST be lower than the "STOP" frequency. After the "START" and "STOP" frequencies have been programmed and the Search is started, the unit will start searching at the "START" (lower frequency) and search towards the "STOP" (higher frequency). Upon reaching the "STOP" frequency, the Search will automatically go back to the "START" frequency and start over.

During Search programming, the Channel 1 or Channel 2 light will be on. The light will change from one to the other alternately each time SEARCH PROGRAM is touched. The frequency displayed by the readout will be the "START" frequency when Channel 1 light is on, and the "STOP" frequency when Channel 2 light is on. The readout will indicate the last frequency programmed into the search memories. If the search has not been previously programmed, the "START" frequency will be 108.000 MHz and the "STOP" frequency will be 135.975 MHz.

There are two Search Scan frequency increments used, depending upon the segment of the band that is being searched. From 108 to 118 MHz, a 50 KHz increment is utilized. A 25 KHz increment is used in the 118 to 135.975 segment. Any increment keyed in that does not match either of these two specified choices will automatically be corrected to a proper increment.

Programming the Search feature has no effect on the frequencies stored in the Channel 1 and Channel 2 memories for SCAN or MANUAL purposes, these are completely separate functions and memories.

ENTER SEARCH "START" FREQUENCY

Touch SEARCH PROGRAM on the Search panel. Channel 1 light will be on and the readout will display the frequency in the Search "START" memory.

Enter the desired frequency by touching the NUMBERS on the KEYBOARD in the proper order. Be sure to enter the decimal point at the correct place.

Touch ENTER . If "Error" appears on the readout, the frequency is invalid (out of band). Key in a correct or valid frequency and touch ENTER .

Touch CHANNEL NUMBER 1 . The frequency will be entered and the readout will indicate the frequency.

ENTER SEARCH "STOP" FREQUENCY

Touch SEARCH PROGRAM .

Enter the frequency by touching the KEYBOARD NUMBERS in the proper order. Be sure to enter the decimal point at the correct place. Touch ENTER . If "Error" appears on the readout, the frequency is invalid. Key in a valid frequency and touch ENTER .

Touch CHANNEL NUMBER 2 . The frequency will be entered and the readout will indicate the frequency.

SEARCH SCAN

Touch SEARCH SCAN to start the search.

If noise is heard and the readout indicates the START frequency, move the Squelch Control to the left just enough to eliminate the noise and touch SEARCH SCAN again.

If "Error" appears on the readout, the START fre-
quency is not lower than the STOP frequency. Touch
SEARCH PROGRAM . Key in a proper START, or STOP,
frequency and touch ENTER . Touch Channel 1 , or
2 , and touch SEARCH SCAN .

The Search may be stepped manually if desired.
Move the Squelch Control to the right until noise is
heard and the search stops. Touch SEARCH SCAN .
Each time SEARCH SCAN is touched, the search will
move one increment (50 KHz from 108 to 118 MHz; 25 KHz
from 118 to 135.975 MHz).

SEARCH DELAY PROGRAMMING

A choice of two modes of search delay is provided.
"Hold" and "Delay". With "Hold", the Search Scan will
remain on the active frequency indefinitely until
SEARCH SCAN is touched to restart the search. In
"Delay", the Search will move on approximately three
seconds after the signal goes away. Initially, the
delay feature is automatically programmed "Hold".

These two modes are selected by touching DELAY
while the Search is scanning. Each time DELAY is
touched, the delay will change from one to the other.

The mode that has been selected will be indicated
immediately on the readout. "Delay" is indicated with
the frequency followed by a "d". "Hold" is indicated
by the readout showing only the frequency.

OPERATION HINTS

Following the instructions presented thus far
should result in a properly operating receiver, how-
ever, there are, in addition to the specific instruc-
tions, some hints that may prove helpful and improve
the overall operation.

1. Set the Squelch Control halfway between threshold (the point where the noise just disappears) and the full left position. This setting will reduce any tendency the receiver may have to respond to undesired frequencies. Some experimenting with the Squelch Control setting is recommended to obtain the best results in any particular location.

2. If a desired signal appears to be received at more than one frequency, select the frequency that results in clearest reception (voice not garbled, least noise, etc.). This effect is most likely to occur on very strong signals.

3. In the Search mode, limit the search range to one megaHertz or even less. This will increase the chance of catching an unknown station while it is transmitting. The transmissions are usually short.

4. Select the Start and Stop frequencies of the Search mode to avoid known birdies. This may be done by limiting the range to be searched to small segments just above or below the birdies. This will help to avoid the search being stopped by undesired frequencies.

FUNCTION DESCRIPTIONS

The FREQUENCY READOUT will read the frequency whenever the scanner is stopped on a channel in either MANUAL, SCAN, or SEARCH. During programming, the frequency will disappear when the first number of the new frequency is touched.

The readout will indicate the frequency continuously in the search mode.

If "Error" appears on the readout during programming, the frequency to be entered is not the Aircraft band. The ERROR indication may be removed by touching

$\boxed{\text{MANUAL}}$, or it may be written over it with a new fre-
quency. "Error" will disappear when the first number
of the new frequency is touched.

The memories will accept three numbers AFTER the
decimal point. Whenever the numbers AFTER the decimal
point are invalid, the unit will round them to the
nearest valid frequency when $\boxed{\text{ENTER}}$ is touched.

If the decimal point is misplaced in a valid fre-
quency, the unit will move the decimal point to the
correct place.

KEYBOARD NUMBERS, zero through 9 and decimal point,
are used to enter frequencies into the channel
memories, and the "START" and "STOP" frequencies into
the search feature. The decimal point is shared with
the DELAY function.

CHANNEL NUMBERS, 1 through 16, are used to select
channels. The frequency in the channel memory will be
displayed when any channel is selected. If the chan-
nel has not been previously programmed, the frequency
will be 121.5 MHz.

CHANNEL NUMBERS 1 and 2 are also used when pro-
gramming the "START" and "STOP" frequencies into the
SEARCH feature. Programming the SEARCH frequencies
has no effect on the frequency in the channels 1 and
2 memory for SCAN and MANUAL functions.

$\boxed{\text{ENTER}}$ is used when programming frequencies into
the channel memories and the SEARCH memories.

$\boxed{\text{DELAY}}$, which is shared with decimal point, is used
to enter and remove the 2 second delay when in the scan
mode. The 2 second delay may be turned on at any time
in SCAN mode, whether scanning or stopped on a signal.
A "d" will appear on the readout when the scanner is
scanning. Each time $\boxed{\text{DELAY}}$ is touched, the 2 second
delay will turn ON and OFF alternately.

In SEARCH mode, DELAY is used to turn the three second "SEARCH DELAY" ON and OFF. The readout will show a "d" when the delay is turned on. When the "SEARCH DELAY" is "ON", the search will stop on an active frequency and remain for three seconds after the signal goes off, then resume searching. Without the delay turned on, the SEARCH will stop on an active frequency and remain indefinitely after the signal goes off, until SEARCH SCAN is touched to resume the SEARCH.
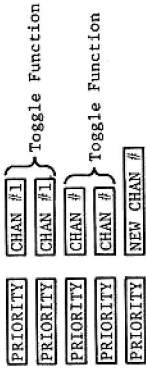
DESIRED ACTION	PRESS THE FOLLOWING KEYS AS INDICATED
Manual/Program Mode	MANUAL
Select Channel	CHAN # (Channel Numbers)
Program Channel	DIGITS★ (Keyboard Numbers)
Put one channel's frequency into another channel	CHAN # (Channel containing frequency) ENTER CHAN # (Channel Numbers) (Channel to receive frequency)
Scan Mode	SCAN
Deactivate (lockout) Channel	CHAN # CHAN # Toggle Function (Channel turns on and off alternately)
Activate Channel	
Activate Scan Delay (2 sec.)	•DELAY Toggle Function
Deactivate Scan Delay	•DELAY
Search Program Mode	SEARCH PROGRAM (Chan 1 or Chan 2 light will be on)
Program Search "START" (LO) Freq.	DIGITS* ENTER CHAN #1 (Chan #1 lights)
Program Search "STOP" (HI) Freq.	DIGITS* ENTER CHAN #2 (Chan #2 lights)
Verify Search Frequencies	SEARCH PROGRAM — — Toggle Function Chan #1 and Chan #2 alternately light
Search Scan Mode	SEARCH SCAN
Move Search Off Active Frequency	SEARCH SCAN (Also used to resume Search when Search hold (no delay) is activated)
Manually increment (step) Search Scan	SEARCH SCAN (Squelch open; Search moves one step each time is pressed)
Activate Search Delay (4 sec.)	SEARCH SCAN — — •DELAY Toggle Function
Activate Search Hold (no delay)	•DELAY
Move Frequency from Search to Channel	ENTER CHAN # (Must press ENTER while Search Scan is stopped)
Change Search's "START" or "STOP" Freq.	DIGITS* CHAN #1 or CHAN #2

Priority (Scan or Manual Mode)

Enter Chan #1 Priority   PRIORITY CHAN #1
Remove Chan #1 Priority   PRIORITY CHAN #1 } Toggle Function
Enter Second Priority   PRIORITY CHAN #
Remove Second Priority   PRIORITY CHAN # } Toggle Function
Move Second Priority to another channel   PRIORITY NEW CHAN #

DIGITS* = Desired Frequency (up to 6 digits plus decimal point)

ACT-T-720A PROMPTING MESSAGES

PROMPTING MESSAGE	EXPLANATION
Prior	SCAN or MANUAL Mode – Priority programming in process
P	SCAN or MANUAL Mode – Priority activated.
L	MANUAL Mode – Channel locked out in SCAN.
d (only while scanning)	SCAN Mode – SCAN delay selected.
d	SEARCH Mode – SEARCH delay selected.
Error	Invalid Frequency (not in Aircraft band).

BIRDIES

Every complex receiver has frequencies that are difficult or impossible to receive. These frequencies are called "Birdies". Three of these birdie frequencies that occur in the ACT-T-720A are:

112.700 MHz
122.950 MHz
134.100 MHz

In addition, there are other frequencies that have difficulty because of interference from T.V. stations, other receivers, and sources of man-made noise. These frequencies will vary from location to location and are therefore impossible to list. When this type of interference is encountered, the interference can sometimes be eliminated by moving the Squelch Control to the left, (increase squelch action).

TROUBLESHOOTING GUIDE

NOTE: Please perform the simple checks indicated for operation before returning the unit for service.

SYMPTOM / CHECK THE FOLLOWING ITEM:

SYMPTOM	OFF/ON Switch should be pushed to the right.	Power Cord (AC or DC) connection; also see Power Requirements.	DC Power Cord's Fuse – replace with 1.5 Amp fuse if blown.	Volume Control Setting – should be at least 1/3 to the right.	Squelch Control Setting – see page 6 for details.	Antenna – should be fully extended.	Stations too far away – External antenna may be needed.	Incorrect channel frequencies.	In MANUAL or PROGRAM mode – Touch [SCAN].	Channels locked out – see page 11.	Invalid frequency entry – see page 10.	No battery installed or dead battery – see page 7.	Must be in SCAN or MANUAL to enter "Priority"	Birdies – see page 22.
No channel lights, no sound	X	X	X									X		
Channel light, no sound				X	X									
No reception (no stations heard)					X	X	X	X	X					
Weak or poor reception						X	X							
Does not scan									X	X				
Error appears on readout											X			
Memory loss after power failure												X		
"Priority" will not enter													X	
Search scan stops on channel without stations														X

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