



Monitoring Military Flight Demonstration Groups MT's Annual Air Show Guide

By Larry Van Horn, MT Milcom/Assistant Editor, N5FPW

Courtesy Snowbirds

Air show! Nothing stirs up excitement more for the aircraft enthusiast than those two magical words.

Bottom line: there is nothing quite as thrilling as going out to one of the many public air shows across the country any given weekend and watching one of the military or civilian demonstration teams strut their stuff in front of thousands of airplane fanatics. But, if you add to the visual drama in front of you the element of monitoring the team's radio communications, you will experience a whole new perspective of the show that few attendees can realize or enjoy.

Since the new 2006 air show season starts in the second week of March, we present our seventh annual *Milcom* Air Show column in this issue. You will get the frequencies to monitor, air show radio equipment list, and the military flight demonstration team schedules for the upcoming air show season. (See page 52 for the continuation.)

FREQUENCIES

Where do you hear the action? 2005 did provide air show monitors with a few challenges, especially following the frequency changes of the Navy's Blue Angel team communications. But when changes were made by the teams and our annual list didn't have the new frequencies, seasoned veterans knew the right bands to search to find the new frequencies being used.

So what bands do veteran radio monitors search for new frequencies? You should concentrate on the bands listed below to locate air show activity in your area.

Milair Search Bands (MHz)

118.0-137.0 AM mode (AM) 25 kHz steps
Note: We have reports of a lot of new air show

activity in the new portion of the civilian aero band: 136-137 MHz. Be sure to check out this frequency range out for civilian and military demo aircraft communications

122.7-123.575	AM 25 kHz steps
138.0-144.0	AM/Narrowband FM (NBFM) 12.5 kHz steps
148.0-150.8	AM/NBFM 12.5 kHz steps
225.0-389.0	AM 25 kHz steps
389.0-400.0	AM/NBFM 25 kHz steps
406.1-420.0	NBFM 12.5 kHz steps

U.S. Navy Blue Angels

The U.S. Navy (USN)/Marine Corps (USMC) military team is represented on the air show circuit by the Blue Angels flying their F/A-18 Hornet aircraft. The other major piece of hardware in the squadron is their C-130 Hercules transport aircraft, affectionately known as "Fat Albert." It is the only Marine Corps aircraft permanently assigned to support a Navy squadron and is flown by an all-Marine Corps crew of three pilots and five enlisted personnel. "Fat Albert" flies more than 140,000 miles during the course of a show season.

After a wild 2004 season of searching for new Blue Angel team frequencies, the 2005 season was somewhat quieter in this regard. The primary UHF frequencies monitored during 2005 season included (MHz):

237.800
251.600
255.200
264.550
265.000
275.350
284.250
289.800
299.650
302.100
305.500
346.500

Aerial Refueling

<Fat Albert Secondary>
<Fat Albert Primary>
Maintenance

Aerial Refueling	289.800
Cross Country Air-Air	143.600 (AM) 237.800
	238.150 284.250
Tower-Comm Cart	173.825 (NBFM) May no longer be used
Tower Observer	143.000 (AM)

Other frequencies reported in past years, but not heard in the last year include:

236.450 238.150 249.625 254.500 256.250
262.850 263.350 264.350 273.300 286.000
302.150 307.700 381.000 MHz

U.S. Air Force Thunderbirds

The premier U.S. Air Force (USAF) flight demonstration team is known as the Thunderbirds. This team uses six F-16C Fighting Falcon aircraft, performing formation flying and solo routines. The four-aircraft diamond formation demonstrates the training and precision of Air Force pilots, while the solos highlight the maximum capabilities of the F-16. The pilots perform approximately 30 maneuvers in a demonstration. The entire show, including ground and air, runs about an hour and 15 minutes.

The frequency list below has been used by the teams over the last seven air show seasons. It should be noted that at some shows the 143.850 and 235.250 MHz roles are reversed from what is published below.

Frequency Usage

140.400	Support/Cross country air-to-air (AM)
141.850	Pre-take/Four ship/Diamond formation linked to PA system (AM)/Cross country air-to-air <Channel 2>
142.575	Program audio/Air-Ground communications (NBFM)
143.850	Diamond formation/Cross country air-to-air (AM) <Channel 1>



Courtesy Blue Angels

It has been reported that a new ground cart was in use by the team in 2005 and two new ground frequencies made their appearance last year - 139.8125 <Alpha> and 142.6125 <Bravo> MHz. The old 162-174 MHz frequencies are apparently no longer used and we have deleted all but one of them from our list. I encourage those of you with Signal Stalker and Close Call capability to watch the 138-144 MHz closely for new additional 12.5-kHz splinter frequencies being used by the team's ground crews.



Courtesy Thunderbirds

235.200 Thunderbird Control/ComCart
 235.250 Pre-Engine Start and Solo aircraft
 on/off show center <Uniform 1>
 322.950 Engine Starts/Solo aircraft (5-6) Air-Air
 <Uniform 2>

Maintenance/Ground teams (NBFM)

142.175
 143.900
 413.000 Digital
 413.025 Analog/digital <Channel 1>
 413.100 Analog/digital <Channel 2>
 413.250 Analog
 413.275 Analog
 413.350 Digital
 413.375 Digital

Other Military Flight Demo Teams

Both the Navy and the Air Force have other special flight demonstration units in addition to those units mentioned above. All transmissions are in the AM mode. An asterisk * indicates a new frequency used in 2005 and ** denotes a primary frequency.

Heritage Flight (F-15/F-16/F-86/P-51)
 122.475* 123.150* 127.150* 132.950
 136.575* 376.025* 384.550*

USAF A-10 Thunderbolt demonstration teams
 122.475* 123.150 123.475 136.575
 138.050 138.100 138.200 138.250 138.300
 138.475 138.500 139.625 139.725
 139.800 139.975 140.400 142.200 236.850
 269.900 305.400 327.700 341.500*
 343.000 343.000 384.550

USAF B-1B Bomber Flyover
 238.150

USAF B-2 Bomber Flyovers (509BW)
 388.850**

USAF B-52 Bomber Flyovers
 376.025

USAF F-15 Eagle demonstration teams
 122.775 123.150* 225.650 228.450 228.950
 232.150 233.525 234.600 236.150 236.550
 237.400 238.625 238.825 239.400 252.525
 252.575 252.775 254.675 257.075 258.375
 259.550 260.275 262.025 262.050 264.875
 264.975 266.550 268.175 275.675 276.675
 279.650 282.675 282.800 285.150 287.775
 292.725 296.925 298.350 301.525 303.950
 305.650 315.125 315.850 317.800 319.325
 325.325 325.725 325.775 330.125 333.550
 338.750 351.050 355.750 359.225 364.125
 376.025** 376.075 384.500 384.550**
 384.850 385.700 391.200 396.900 397.100
 399.750 399.850

US Air Force F-16 Fighting Falcon demonstration teams
 122.775 123.150 134.175 136.575 138.025
 138.100 138.150 138.200 138.250 138.475
 138.425 138.900 139.750 139.825 139.900
 139.925 139.975 140.375 141.600 227.700
 229.075 261.200 283.700 317.800 336.925
 344.900 376.025** 376.075 384.550**

US Air Force AETC T-6 Texan East Coast Team
 123.150 123.400 127.150* 138.400 283.700
 295.000* (Ground support team uses FRS radios)

US Air Force Combat search and rescue (SAR) demonstrations
 127.150* 138.100* 139.700 225.450
 236.000 242.000 251.900 252.800 259.000
 278.800* 280.500 282.800 287.500
 381.000 384.550

US Coast Guard aircraft/SAR demonstrations
 122.900 (SAR) 157.050 (Drug Interdiction demo)
 157.075 (Command Post)
 237.900 282.800 326.150 345.000
 379.050

US Navy S-3 Viking aircraft demonstrations
 263.400
US Navy SAR demonstrations
 242.500 282.000 283.100

Military Parachute Demonstration Teams

A new addition to our Military Parachute Demo teams list is the U.S. Special Operations Command Parachute Team based out of MacDill AFB in Florida. They were heard on the following frequencies: 122.450, 123.450, and (no, this is not a misprint) 151.625 MHz, a nationwide business itinerant frequency.

The colorful U.S. Navy Seal Parachute Team, the Leap Frogs, is a frequent visitor around the country at various sporting events and air shows. This team has been regularly reported on 270.000 (AM) and 407.500 MHz (NBFM 131.8-Hz PL tone) nationwide the last several years.

The U.S. Army has quite a few parachute teams that perform on the air show circuit. We have received reports for only two of the teams. We would appreciate reports on frequencies used by the following U.S. Army teams if you catch them performing this air show season.

All American Free Fall Team
 Fort Bragg, North Carolina, 82nd Airborne

Green Beret Parachute Team
 Fort Bragg, North Carolina

Screaming Eagles
 Fort Campbell, Kentucky, 101st Airborne Division

Black Knights
 US Military Academy, West Point, New York

Another addition to our list this year is the Silver Wings team. This is the Fort Benning, Georgia, Command Exhibition Parachute Team. They were heard last season using 34.650 MHz. In addition to the VHF low frequency, ground and safety teams were using 467.6125 MHz (FRS channel 10) for communications. There was also one report that the team was using an Intra Squad radio frequency of 397.500 MHz. (See our comments below about programming ISR, GMRS and FRS channels for air show monitoring.)

The U.S. Army Special Operations Command parachute team is known as the Black Daggers (see *MT Milcom* May 2004). Frequencies discovered for them during the last two seasons include: 123.450, 136.000, 136.500, 138.650, 237.300 and 238.150 MHz.

The premier U.S. Army Parachute Team is the Golden Knights is based out of Fort Bragg,

North Carolina. The team aircraft used during air shows is either the C-31A Friendship or UV-18A Twin Otter. Look for their communications on frequently reported frequencies of 123.400, 123.475 or 123.500 MHz. You should also keep 32.300, 32.400, 122.575, 124.875, 284.900 and 367.700 MHz plugged in for possible Golden Knight activity.

During 2001 and 2002 seasons I received several reports that the Golden Knights were using GMRS frequencies 462.625, 467.5625, and 467.6125 MHz. In addition to air show demo crews, vendors and other military ground units have also been heard using GMRS frequencies. You should make these frequencies part of your scanner load-out prior to the air show.

A	B	C
462.550	467.550	462.5625
462.575	467.575	462.5875
462.600	467.600	462.6125
462.625	467.625	462.6375
462.650	467.650	462.6625
462.675	467.675	462.6875
462.700	467.700	462.7125
462.725	467.725	
(462.675/467.675 National Emergency Frequency pair)		

Legend:

- A. Base station, Mobile relay, Fixed station, or Mobile station
- B. Mobile station, Control station, Fixed station operating in Duplex mode.
- C. Interstitial frequencies, base and portable simplex

We have received several reports of the ground pyrotechnics personnel from the Tora Tora Tora and Warbirds flight demonstration team using FRS radios for communications during shows. You will also find military monitoring enthusiasts attending an air show using FRS radios to coordinate meeting fellow monitors. Load up FRS frequencies below (NBFM mode) in your scanner or carry a FRS radio to the show, and you might make a new *Milcom* monitoring friend or two.

462.5625	Channel 1
462.5875	Channel 2
462.6125	Channel 3
462.6375	Channel 4
462.6625	Channel 5
462.6875	Channel 6
462.7125	Channel 7
467.5625	Channel 8
467.5875	Channel 9
467.6125	Channel 10
467.6375	Channel 11
467.6625	Channel 12
467.6875	Channel 13
467.7125	Channel 14

The government version of the Family Radio Service is known as the Intra-Squad Radio or ISR. As noted above, I have seen several reports over the last few years that these radios might be in use at air shows by military units, including the Civil Air Patrol (CAP). It might be a good idea to program these frequencies in your scanner as part of your air show load-out.

396.8750	Channel 1
397.1250	Channel 2
397.1750	Channel 3
397.3750	Channel 4
397.4250	Channel 5



Courtesy Silver Wings

397.4750 Channel 6
 397.5500 Channel 7
 397.9500 Channel 8
 398.0500 Channel 9
 399.4250 Channel 10
 399.4750 Channel 11
 399.7250 Channel 12
 399.9250 Channel 13
 399.9750 Channel 14

U.S. Civil Air Patrol Frequencies

Finally, you might want to program U.S. Air Force Civil Air Patrol frequencies in your scanner as well. We received several reports in 2005 of CAP frequencies, repeaters and simplex, being used as ground support at several air shows. Below is a starter list of CAP frequencies to load up for air show use.

There are supposed to be new additional VHF narrowband frequencies for CAP, but this civilian auxiliary organization (that was supposed to have a mission of educating young people in aerospace subjects) is now also performing homeland security missions and anti-narcotics surveillance missions, and has therefore classified all of their frequencies FOUO (For Official Use Only).

An even more disturbing fact about CAP is that Congress in February 2003 amended the Omnibus Crime Control and Safe Streets Act of 1968 to make members of the Civil Air Patrol eligible for Public Safety Officer death benefits in case they lose their lives during a homeland security CAP mission.

143.750 143.900 148.125 148.1375
 148.150 148.5375 148.975 149.5375

Civilian/Foreign Air/Parachute Demonstration Teams

The Canadian Forces Snowbird aircraft demonstration team (431 Air Demonstration Squadron) is another regular on the U.S./Canada air show circuit. The following frequencies have been recently reported for this popular aerial team:

123.325 227.600 242.600 245.500 245.750
 246.500 272.100 (Primary) 284.900 299.500
 333.300 340.100

A new Snowbird VHF frequency has now been noted in use during the last two seasons – 116.000 MHz (AM), but 272.100 is the only UHF frequency reported in 2005.

At most air shows the military flight demonstration units aren't the only performers. Civilian organizations, companies, and individuals sponsor a wide variety of aerobatic teams and parachutists to thrill the crowd. A wide variety of frequencies are used by these teams in the civilian aviation band. If you load your scanner with the following frequencies you shouldn't miss out on communications used by the civilian acts.

122.725 122.750 122.775 122.825 122.850
 122.875 122.925 122.950 122.975 123.025
 123.050 123.075 123.150 123.175 123.300
 123.325 123.350 123.400 123.425 123.450
 123.475 123.500 129.650 129.925 136.575
 136.975



Courtesy Snowbirds

Some specific frequencies reported to us for other foreign military and US civilian flight demonstration teams include:

Civilian Flight Demonstration Teams

Aeroshell Aerobatics Team 123.150
 Air Force Reserve Biplane (Ed Hammill) 123.150
 All American Firebirds Flight Demonstration Team 122.775
 Bud Light Air Force (ex- Coors Microjet) 122.925 123.350 123.475
 Firecat (Rich Perkins) 123.500
 Flying Colors Hang Glider Aerobatic (Dan Buchanan) 123.300
 French Connection Air Show 122.925 122.975 129.975
 Geiko Extra 300 – Tim Webber 123.150
 Ian Groom's FedEx Red Bull Aerobatic Team 122.725 122.775 122.825 122.925 123.150 123.350
 Jim LeRoy Bulldog Team 123.150
 Lima Lima Flight Team 123.150 123.175 123.425
 Manfred Radius Glider Aerobatics Team 123.150
 North American Jet Air Show Team 122.775 122.925 129.650 129.925
 Northern Lights Aerobatic Team 123.325 136.975
 Oreck Vacuum Cleaners Aerobatic Demo (Frank Ryder) 123.450
 Otto the Helicopter 123.150 123.300
 P-51 Mustang Flight Team 122.850 122.875 (Commemorative Air Force)
 Patty Wagstaff Air Shows Inc 122.750 123.475
 Pitts Special U.S. Air Force Reserve 123.150
 Rayban Gold Aerobatics Team 122.925
 Red Baron Stearman Squadron 122.725 122.775 123.150
 Red Eagles Flight Demo Team 123.150 123.425 123.475
 Sean Tucker Power Aerobatics 122.875 122.950 123.150 123.475
 SIAL Marchetti SF260 Debbie Gary 123.150
 Showcopters 123.150 134.700
 Sky Soldiers Demonstration Team (Army Aviation Foundation) 123.025 242.400
 Skytypers Team 122.775
 Swift Magic Aerobatic Team 122.775 122.925
 Team Red 123.350
 Tora Tora Tora Warbirds Team (Commemorative Air Force) 123.150 123.450 469.500 469.550

Foreign Military Flight Demonstration Teams

Asas de Portugal, Esquadra 103 (Wings of Portugal 103 Squadron) Flight Team 262.150
 Blue Eagles Royal Army Air Corps Flight Team (UK) 136.975
 Blue Tango Helicopters 123.600
 Brazilian Air Force Team (Brazil)

130.550 130.650 132.250
 British Army Red Devils Parachute Team (UK) 462.625
 Canadian Forces Skyhawks Parachute Jump Team (Canada) 123.000 294.700
 Falcons Royal Air Force Parachute Jump Team (UK) 255.100 465.100
 Frecce Tricolori Military Flight Team (Italy) 307.800 381.000
 Grasshopper Helicopter Team (Netherlands) 281.100
 Halcones Military Flight Team (Chile) 136.175
 La Patrouille Adecce Air Force Flight Team (France) 121.850 123.600 138.450 141.825 143.100 143.850 242.650
 La Patrulla Aguila Military Flight Team (Spain) 130.500 252.500
 Le Royal Jordanian Teams (Jordan) 123.500
 Les Breitling (Switzerland) 127.350
 Les Iskry (Poland) 123.600
 Marche Verte [Green March] (Morocco) 135.000 135.925 (Ground) 135.500 (Air-to-Air)
 Military Stars Flight Team (Turkey) 264.400 279.600
 Patrouille Suisse Military Flight Team (Switzerland) 288.850
 Red Arrows Royal Air Force Flight Team (UK) 242.200 242.050 243.450 253.450

In Closing

It is always difficult to predict what a new season will bring so I strongly encourage readers to watch the *Monitoring Times* website (www.monitoringtimes.com) for new frequency information. We will publish updates on our air show web page as we get new information from field reports during the season.

Finally, I would like to extend a sincere thanks to a record 97 contributors who shared their post show reports with us last year. I want to especially thank several overseas reporters who added new material to our foreign teams section. I deeply appreciate the time and effort each of you took to let us know what you heard at many of the air shows.

If you find this list useful and attend an air show in 2006, please pass along any frequencies that you monitor, whether it is on our list above or not. This will greatly help us keep this annual MT listing up-to-date. You can reach me via e-mail at larryvanhorn@monitoringtimes.com or by our snail mail address *MT Milcom*, 7540 Highway 64 West, Brasstown, NC 28902.

For 2006 air show SCHEDULES and recommended monitoring EQUIPMENT, please turn to *Milcom* on page 52.



Courtesy Snowbirds

Monitoring Military Flight Demonstration Groups Equipment and Schedules

The forepart to this guide for monitoring airshows starts on page 10 and addresses how to find the frequencies to monitor. Now we turn to two more critical requirements for successful monitoring – Where can you find an airshow, and what equipment will you need to listen in?

EQUIPMENT

Not Just Any Old Scanner

I am frequently asked which scanner I recommend for air show monitoring. While I don't have a favorite in this regard, I have prepared the list below as a purchase guide for receivers that meet all the requirements. Some scanners currently being marketed and almost all older scanners on the used market are *not* suited for air show monitoring. There are certain requirements your air show radio has to meet in order to successfully listen to the two major military aerial demonstration teams – the Blue Angels and the Thunderbirds.

If you are going to a Thunderbird show, you will need a scanner that can monitor the 138-150 MHz military land mobile band in the AM mode. Most of the older Uniden scanners cannot be used for air show monitoring due to their lack of independent transmission mode selection.

You will also need a scanner that has the 225-400 MHz military aeronautical band in it. Most of the action (especially for the Blues) will be heard in this military UHF portion of the spectrum. Adding this criterion to the mix of possible radios narrows down our choice for air show scanners even further.

The information below includes current Grove Enterprises stock codes/prices (if carried by Grove) for the items indicated, but does not include shipping or taxes (if applicable). Prices are subject to change without notice, so be sure to call the Grove order department at 800-438-8155 or visit www.grove-ent.com (or MT advertisers) for current pricing and availability.

Handheld Unit	Grove #	Price
Alinco DJ-X7	SCN03	\$179.95
Alinco DJ-X10T	SCN01	\$319.95
Alinco DJ-X2000T	SCN10	\$549.95
AOR AR-8200 Mk III	SCN51	\$589.95
Icom IC R-3	SCN07	\$349.95
Icom IC R-5	SCN02	\$199.95
Icom IC R-20	SCN20	\$519.95*
Radio Shack Pro-97	----	\$199.99
Uniden BC-296D	SCN42	\$489.95**
Uniden BR-330T	SCN30	\$279.95
Uniden BCD-396T	SCN47	\$524.95**

Handheld Listening Tip: If you are going to use a handheld scanner at the air show, there is another purchase you should consider – an extra set of charged batteries. Murphy's Law applies and nothing is worse than having your batteries die half way through the show with no replacements.

Base/Mobile Unit	Grove #	Price
AOR AR-3000AB	SCN26	\$1062.95
AOR AR-5000A+3B	RCV44P	\$2569.95
AOR AR-8600 Mk II	SCN11	\$889.95
JRC NRD-545	RCV21DS	\$1799.95
(Must order the optional ACC11DS VHF-UHF converter at \$349.95)		
Radio Shack Pro-2055	----	\$229.99
Uniden BC-898T	SCN44	\$209.95
Uniden BC-796D	SCN43	\$519.95**

Computer Hosted

Receivers	Grove #	Price
WinRadio WR-1550e	RCV47-E	\$549.95
WR-1550i	RCV47-I	\$499.95
WR-3150e	RCV48-E	\$1849.95
WR-3150i-DSP	RCV48-I	\$1849.95
WR-3500e	RCV49-E	\$2395.95
WR-3500i-DSP	RCV49-I	\$2395.95
WR-3700e	RCV50-E	\$2895.95
WR-3700i-DSP	RCV50-I	\$2895.95

* Per our MT review (November 2004), this unit has a lack of sensitivity from 280-295 MHz which does affect UHF military aircraft monitoring.

** Includes APCO-digital/trunk capability

SCHEDULE

2006 Performance Calendar

Note: If security levels increase in a base to Threat Condition "Bravo" or above, many military installations will not have public air shows. Consequently, demonstration schedules dates listed below are subject to change or cancellation without notice.

Demonstration Group Abbreviations:

BA	.....Navy Blue Angels
BD	.....Army Black Daggers
CF18	.....Canadian Forces CF-18 Hornet Demo Team
F15W	.....ACC F-15 West Coast Demo Team
F16W	.....Viper West F-16 Demo team
GK	.....Army Golden Knights
SB	.....Canadian Snowbirds
SW	.....Army Silver Wings
TB	.....Air Force Thunderbirds

Base Abbreviations

AB	.....Air Base
ACC	.....Air Combat Command
AFAF	.....Air Force Auxiliary Field
AFB	.....Air Force Base
ARB	.....Air Reserve Base
CFB	.....Canadian Forces Base
JRB	.....Joint Reserve Base
MCAS	.....Marine Corps Air Station
NAF	.....Naval Air Facility
NAS	.....Naval Air Station
TBD	.....To Be Determined

Dates Group: Locations

Mar 11	BA/F16W: NAF El Centro, CA
Mar 18-19	BA: Sacramento, CA; SW: Columbus, GA; F16W: Punta Gorda, FL
Mar 25-26	BA: TBD; TB: Ft Smith, AR
Mar 26	SW: Hamilton, GA
Apr 1-2	BA: NAS Kingsville, TX; TB/GK: Punta Gorda, FL; SW: Jasper, TX; F15W: St. Petersburg, FL; F16W: Davis Monthan, AZ
Apr 8	BA: Charleston AFB, SC; TB/GK: Maxwell AFB, AL
Apr 8-9	F16W: NAS Corpus Christi, TX
Apr 9	TB/GK: Columbus AFB, MS
Apr 15-16	F15W: Wilmington, NC
Apr 22	F15W: Shaw AFB, SC; F16W: Louisville, KY
Apr 22-23	BA: Louisville, KY; TB/GK: Tyndall AFB, FL
Apr 29	SW: Auburn, AL
Apr 29-30	BA/GK: NAS Atlanta, GA; TB: March ARB, CA; SB: Vidalia, GA; F15W: Ft Lauderdale, FL; F16W: Nacogdoches, TX
May 5-7	BA/SB/GK: Ft Lauderdale, FL; TB/CF18/GK: Langley AFB, VA; F16W: Temple, TX; F15W: MCAS Cherry Point, NC
May 10	SB: Pope AFB, NC
May 13	F16W: Shafter, CA
May 13-14	BA/GK: NAS Fort Worth, TX; TB: Robins AFB, GA; F15W: Tyndall AFB, FL; SB: New River, NC; GK: Dover AFB, DE
May 14	F16W: Van Nuys, CA
May 17	SB: Kingston, ON Canada
May 19-21	BA/GK: Andrews AFB, MD
May 20	TB: Altus AFB, OK
May 20-21	F15W: Millville, NJ; F16W: Selfridge ANGB, MI
May 20-22	SB: North Bay, ON Canada
May 21	TB: Dyess AFB, TX
May 24	BA: USNA, Annapolis, MD; St Thomas, ON Canada
May 24-26	F15W: Maxwell AFB, AL
May 26	BA: USNA Graduation Flyover, Annapolis, MD
May 27-28	BA/GK: Jones Beach, NY; TB: Cannon AFB, NM; SB: Virden, MB Canada; CF18: Tullahoma, TN

May 31	TB: US Air Force Academy, Colorado Springs, CO	Sep 9-10	BA: NAS Oceana, VA; TB/GK: McConnell AFB, KS; SB/CF18: Halifax, NS Canada; F15W: Clarinda, IA	Oct 13	SB: Moose Jaw, SK Canada
Jun 3-4	BA: Davenport, IA; TB/GK: Beale AFB, CA; F16W: McGuire AFB, NJ; SB: Portage Le Prairie, MB Canada; CF18: Southport, MB Canada	Sep 13	SB: Gander, NF Canada	Oct 14-15	BA/GK/F16W: MCAS Miramar, CA; F15W: Travis AFB, CA
Jun 4	F15W: Malmstrom AFB, MT	Sep 15-17	TB: Reno, NV	Oct 15	TB: Seymour Johnson AFB, NC
Jun 7	SB: Thunder Bay, ON Canada	Sep 16-17	BA/GK: Kansas City, KS; SB: Summerside, PE Canada; F15W/F16W: Mountain Home AFB, ID	Oct 21-22	BA: Goodyear, AZ; TB: Houston, TX; F16W: Edwards AFB, CA
Jun 9-11	GK: Janesville, WI	Sep 20	SB: LaTuque, PQ Canada	Oct 26	F15W: La Aurora, Guatemala
Jun 10-11	BA/SB/CF18: Quebec City, PQ Canada; TB: Hill AFB, UT; F15W: Rochester, NY	Sep 23-24	BA/GK: Lincoln, NE; TB: Rockford, IL; SB/CF18: Sarnia, ON Canada; F15W: Fort Worth, TX; F16W: Martinsburg, WV	Oct 28-29	BA: NAS Jacksonville, FL; TB: Edwards AFB, CA; F15W: Ilopango, El Salvador; F16W: Glendale, AZ
Jun 14	SB: Riv du Loup, PQ Canada	Sep 30-Oct 1	BA: Nantucket, MA; TB: Fort Worth, TX; SB: Redding, CA; F15W: Salinas, CA	Nov 1	F15W: Acapulco, Mexico
Jun 16-17	BA: Leeuwarden AB, Netherlands	Oct 4	SB: Mojave, CA	Nov 4	F16W: Keesler AFB, MS
Jun 16-18	F15W: Muncie, IN	Oct 7-8	BA/F16W: San Francisco, CA; TB: NAS Pax River, MD; SB/GK: El Paso, TX; F15W: San Angelo, TX	Nov 4-5	BA: Little Rock AFB, AR; TB: Lackland AFB, TX; F15W: Randolph AFB, TX
Jun 17-18	TB: NAS/JRB Willow Grove, PA; SB/CF18: Ottawa, ON Canada; GK: Whiteman AFB, MO			Nov 10-11	BA: NAS Pensacola, FL
Jun 21	SB: TBD			Nov 11-12	TB/F16W: Nellis AFB, NV; F15W: Stuart, FL
Jun 22-25	F16W/GK: Evansville, IN				
Jun 23-25	CF18: Borden, ON Canada				
Jun 24	SB: Oshawa, ON Canada				
Jun 24-25	BA: Barnes ANGB, Westfield, MA; TB/GK: North Kingston, RI				
Jun 25	SB: Borden, ON Canada				
Jun 28	SB: Cobourg, ON Canada				
Jul 1	TB/GK: Kirtland AFB, NM; SB: Ottawa - Canada Day				
Jul 1-2	BA: Traverse City, MI; F15W: Tinker AFB, OK				
Jul 3-4	TB: Battle Creek, MI				
Jul 4	SB: Battle Creek, MI				
Jul 8-9	BA/F15W: Pittsburgh, PA; TB/GK: Duluth, MN; F16W: Fargo, ND				
Jul 15-16	BA: Pensacola Beach, FL; TB/GK/F16W: Milwaukee, WI; F15W: Dayton, OH				
Jul 20	SB: Meadow Lake, SK Canada				
Jul 21-30	SW: Rantoul, IL				
Jul 22	TB: Grand Forks AFB, ND; SB/CF18: Yellowknife, NT Canada				
Jul 22-23	BA: Sioux Falls, SD; GK: Muskegon, MI				
Jul 23	TB/GK: Casper, WY; CF18: Peace River, AB Canada				
Jul 24	SB: Ft Smith, NW Canada				
Jul 26	TB: Cheyenne, WY; SB: Dawson Creek, BC Canada				
Jul 29	SB: Lethbridge, AB Canada				
Jul 29-30	BA: Dayton, OH; TB: Fairchild AFB, WA; F15W: McChord AFB, WA; F16W: Oswego, NY; CF-18 Lethbridge, AB Canada				
Aug 2	SB: Williams Lake, BC Canada				
Aug 4-6	BA: Seattle, WA; GK: Portland Hillsboro, OR				
Aug 5-6	SB/F16W: Comox, BC Canada				
Aug 6	GK: Buckley ANGB, CO				
Aug 11-13	SB/CF18: Abbotsford, BC Canada				
Aug 12-13	BA/GK: Elmendorf AFB, AK; TB: Scott AFB, IL; F15W: Minot AFB, ND; F16W: Klamath Falls, OR				
Aug 15	CF18: Rocky Mountain House, AB Canada				
Aug 16	SB: Rocky Mountain House, AB Canada				
Aug 18-20	BA/GK/F15W: Chicago, IL				
Aug 19-20	TB/GK: Burlington, VT; SB/CF18: Saskatoon, SK Canada				
Aug 23	TB/GK: Atlantic City, NJ				
Aug 25-27	F16W: Santa Maria, CA				
Aug 26	F15W: Ellsworth AFB, SD				
Aug 26-27	TB: Mt Comfort, IN; SB: St Catharines, ON Canada; CF18: Niagara Falls, ON Canada				
Aug 30	F15W: Atlantic City, NJ; SB: Brantford, ON Canada				
Sep 2-4	BA/GK: Cleveland, OH; TB: Gary, IN; SB/CF18: Toronto, ON Canada				
Sep 9	F16W: Cannon AFB, NM				



Welcome to the Micro Standard!

DJ-X7T Wide Range Pocket Size Communications Receiver
100KHz to 1.3GHz* Triple conversion AM/NFM; double conversion WFM, plus FM, SW, and TV

Once again, Alinco engineers have redefined miniature electronics technology. With its leading edge "credit card" size radios, Alinco proves performance and quality can be found in micro-size receivers. Now, you can put all the action on fire, public safety, aircraft, weather, Amateur Radio and many other exciting frequencies right into your pocket with this trio of high performance wide band receivers.

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DJ-X2000T Multimode Wide Range "Intelligent Receiver"
100KHz to 2.15GHz*

Experience monitoring on a whole new level with the DJ-X2000T "Intelligent Receiver". This triple conversion handheld receiver offers many unique features such as Flash Tune™ which locks onto nearby signals, Transweeper™ "bug" detector, and Channel Scope™ spectrum display. It also has 2000 memory channels, alphanumeric labeling, RF frequency counter, digital sound recorder, and receives AM, WFM, NFM, LSB, USB, CW and FM stereo.** Super extras include an on-line "help" feature, 20 scan programs, computer programmable capabilities (download free software from Alinco website), CTCSS decode, two level attenuator, field strength meter, and more!



DJ-X3TD Multimode Wide Range Communications Receiver
100KHz to 1.3GHz*
WFM mono and stereo, NFM, AM**

Small but powerful triple conversion receiver with excellent audio, SMA flex and internal ferrite bar antennas, large easy-to-read display, 700 memories, NiMH battery, four scan modes, and dry cell battery pack. Computer programmable with free control software from www.alinco.com

WWW.ALINCO.com

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Specifications subject to change without notice or obligation. *Cellular blocked in USA. Unblocked versions available to qualified users, documentation required. **Optional stereo headphones required.