

Chicago O'Hare Airport Communications Guide

14th Edition - June, 2005

c/o CARMA - The Chicago Area Radio Monitoring Association
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Frequency Information From CARMA Contributors
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Airport operations and configurations:

Regardless of how one measures traffic flow or aircraft movements, O'Hare airport remains one of the busiest in the world. O'Hare lies not only close to the nation's geographic center, but also as one of the major hubs of the nation's air traffic. Traffic flow affects not only the O'Hare passengers but also the flow of commercial air traffic across the country. As a result, O'Hare arrivals and departures are coordinated at several levels. Traffic flow, aircraft separation, scheduling, mechanical readiness, pilot and controller skill, weather and many other factors must all be carefully managed by airlines, ground crews, pilots, O'Hare tower controllers, the Chicago TRACON, the Chicago enroute air traffic control center (ARTCC) and even adjacent centers.

On an average day, the busiest hours for O'Hare arrivals are 7-9AM, 12-2PM, 3-4PM, 5-6PM and 7-8PM. The busiest hours for O'Hare departures are 8-9 AM, 3-4PM 5-6PM, and 7- 10PM. The slowest hours are between midnight and 4 AM. In general, arrival traffic has priority over departures to enable passengers to make connecting flights. During VFR conditions the arrival rate will usually range between 90 and 100 aircraft per hour. During periods of IFR weather the arrival rate can range from a maximum of 80 to possibly 40 or less if two arrival runways are not available. Factor in O'Hare departures and Midway traffic and on a good VFR day hourly counts of 300 IFR operations are not uncommon at the Chicago TRACON, located in Elgin.

O'Hare arrival traffic is first coordinated by adjacent ARTCC's and is vectored into the Chicago ARTCC for approach into O'Hare from the Southeast, Northeast, Northwest, and Southwest. Departure traffic is sent North, South, East or West. Southerly operations tend to be infrequent, due to congestion with Midway's airspace.

Inbound traffic to the southeast arrival fix utilizes two Standard Terminal Arrival Routes (STAR's)- KNOX STAR and KOKOMO STAR. Flights from the southeastern portion of the United States are routed via these STAR's, specifically flights originating from Indianapolis ARTCC, Atlanta ARTCC, Jacksonville ARTCC, Washington ARTCC, Miami ARTCC, plus the southern half of Cleveland and New York ARTCC's, and eastern half of Memphis ARTCC. When necessary, HALIE intersection is used as the primary holding fix for arrivals on the KOKOMO and KNOX STAR's. The OXI VOR, BEARZ, HALIE, SPANN, and WATSN intersections are commonly used to short-cut routes of flight to maintain or increase required in-trail spacing.

Inbound traffic to the northeast arrival fix utilizes the Pullman STAR. Flights from the east and northeast portions of the United States are routed via this STAR, specifically flights originating from New York ARTCC, Boston ARTCC, northern half of Cleveland ARTCC, Canadian, and European international flights. When necessary, PIVOT intersection is used as the primary holding fix for arrivals on the Pullman STAR. The PMM VOR, PIVOT, TADDS, STORY, and PAPPI intersections are commonly used to short-cut routes of flight to maintain or increase required in-trail spacing.

Inbound traffic to the northwest arrival fix utilizes the Janesville STAR. Flights from the northwestern portion of the United States are routed via this STAR, specifically flights originating from Oakland ARTCC, Salt Lake ARTCC, Seattle ARTCC, Minneapolis ARTCC, and Denver ARTCC. When necessary, TEDDY intersection is used as the primary holding fix for arrivals on the Janesville STAR. The DBQ VOR, JVL VOR, KRENA, and TEDDY intersections are commonly used to short-cut routes of flight to maintain or increase required in-trail spacing.

Inbound traffic to the southwest arrival fix utilizes the Bradford STAR. Flights from the southwestern portion of the United States are routed via this STAR, specifically flights originating from Los Angeles ARTCC, Albuquerque ARTCC, Fort Worth ARTCC, Houston ARTCC, Memphis ARTCC, and Kansas City ARTCC. When necessary, BENKY intersection is used as the primary holding fix for arrivals on the Bradford STAR. The ORD VOR, BENKY, NEWRK, and PLANO intersections are commonly used to short-cut routes of flight to maintain or increase required in-trail spacing.



Arriving traffic (Approaches):

Chicago ARTCC controllers assist pilots with descent through and navigation across their controlled sectors. As aircraft near their initial approach fixes they are handed off to the Chicago TRACON.

The Chicago TRACON is responsible for airspace from the surface up to and including 13,000 feet MSL and out to approximately a 35 NM radius of ORD. The facility operates 24 hours a day, 7 days a week, 365 days a year. Approximately 65 journeyman controllers are on staff, with 25 developmental controllers (trainees). There is also a support and management staff of approximately 50 people. Chicago TRACON handles in excess of 4000 IFR operations on a daily basis serving two primary airports, O'Hare and Midway. Most of these operations are confined to the hours of 6:00 AM and 8:30 PM.

O'Hare has over 100 possible runway configurations. However, only a few of them are efficient in terms of moving large quantities of aircraft in and out. Consideration is first given to wind and weather, then a decision is made based on the efficiency of the operation. The City of Chicago actually owns the runways at ORD and tells the FAA what runways are available for use. The Chicago O'Hare Air Traffic Control Tower Supervisor and the Chicago TRACON Front Line Supervisor will then determine which runway configuration best meets the traffic demand at that time. Ceilings, runway conditions (wet or dry), noise abatement considerations, staffing and traffic demand, among other things, all influence the decision. Other considerations include LAHSO (land and hold short operations), departure restrictions, and construction.

O'Hare usually lands on two runways between 7:00AM and 10:00PM, while the tower will depart on two or three runways. If traffic demands are such that additional arrival or departure runways are needed, the supervisors will coordinate any change. The primary goal of runway selection is to utilize a configuration that will allow the Tower and TRACON to move the most airplanes as quickly and efficiently as possible.

Dual converging runway approaches are utilized during VFR conditions. Simultaneous parallel ILS approaches are utilized during periods of IFR weather. Often times during VFR conditions a third arrival runway will be available for periods of peak traffic. However the third arrival runway is not available 100% of the time due to consideration for departure traffic.

Many times arrivals will incur several frequency changes in the Chicago airspace. They may be initially assigned to an Arrival Feeder position. This position will give an initial descent in the airspace, initial vectors toward the final, and possibly a speed restriction. Other times pilots are given directly to the Arrival controller. The Arrival controller will generally instruct the pilot to contact the Tower at the final approach fix. The Arrival controller is responsible for spacing on the final approach course to the outer-marker and may want to adjust aircraft speed to maintain proper separation. The exception to this would be simultaneous parallel ILS approaches in which case pilots are instructed to monitor the tower frequency approximately 16 to 20 miles from the airport and report reaching the outer marker. During these situations a Final Monitor Controller has the sole responsibility to ensure aircraft do not deviate from the final approach course and to maintain the proper interval until the Tower assumes that responsibility.

Most runways at O'Hare are authorized for reduced runway separation. Within 10 miles of the runway standard separation may be reduced from 3 miles to 2.5 miles between aircraft of similar characteristics excluding Heavy jets and B757's as the lead aircraft.

Speed control is a critical element utilized by Chicago Approach Control. Aircraft are expected to maintain their last assigned speed until issued another. This includes any speed issued by Chicago Center as they enter the Chicago Approach control airspace, often this may be 300 knots or greater. Arrival controllers also anticipate that they will maintain 250 knots when descended below 10,000 until assigned a speed. During heavy arrival periods traffic is generally handed-off from Chicago Center 7 miles in-trail, an unknown speed reduction could have serious implications. Speed assignment is extremely important once cleared for the approach given that aircraft are most often separated by the minimum.

Runways:**Runway 14R/32L**

Dimensions: 13000 x 200 ft. Surface: asphalt/concrete/grooved, in good condition
Visual slope indicator: 4-light PAPI
RVR equipment: touchdown, midfield, rollout
Approach lights: ALSF2: standard 2,400 foot high intensity approach lighting with centerline sequenced flashers (category II or III). MALSR: 1,400 foot medium intensity approach lighting with runway alignment indicator lights
Approaches: 14R: ILS CAT 1, 2, 3 / RNAV-GPS / NDB
32L: ILS / RNAV (GPS) / NDB

Runway 9R/27L

Dimensions: 10144 x 150 ft. Surface: asphalt/concrete/grooved, in good condition
Visual slope indicator: 4-light PAPI
RVR equipment: touchdown, rollout
Approach lights: MALSR: 1,400 foot medium intensity approach lighting with runway alignment indicator lights
Approaches: 9R: ILS / RNAV-GPS
27L: ILS / RNAV-GPS

Runway 14L/32R

Dimensions: 10005 x 150 ft. Surface: asphalt/grooved, in good condition
Visual slope indicator: 4-light PAPI
RVR equipment: touchdown, midfield, rollout
Approach lights: ALSF2: standard 2,400 foot high intensity approach lighting with centerline sequenced flashers (category II or III). MALSR: 1,400 foot medium intensity approach lighting with runway alignment indicator lights
Approaches: 14L: ILS CAT 1, 2, 3 / RNAV-GPS / NDB
32R: ILS / RNAV-GPS

Runway 4R/22L

Dimensions: 8075 x 150 ft. Surface: asphalt/grooved, in good condition
Approach lights: MALSR: 1,400 foot medium intensity approach lighting with runway alignment indicator lights.
MALSR: 1,400 foot medium intensity approach lighting with runway alignment indicator lights
Approaches: 4R: ILS / RNAV-GPS
22L: ILS / RNAV-GPS

Runway 9L/27R

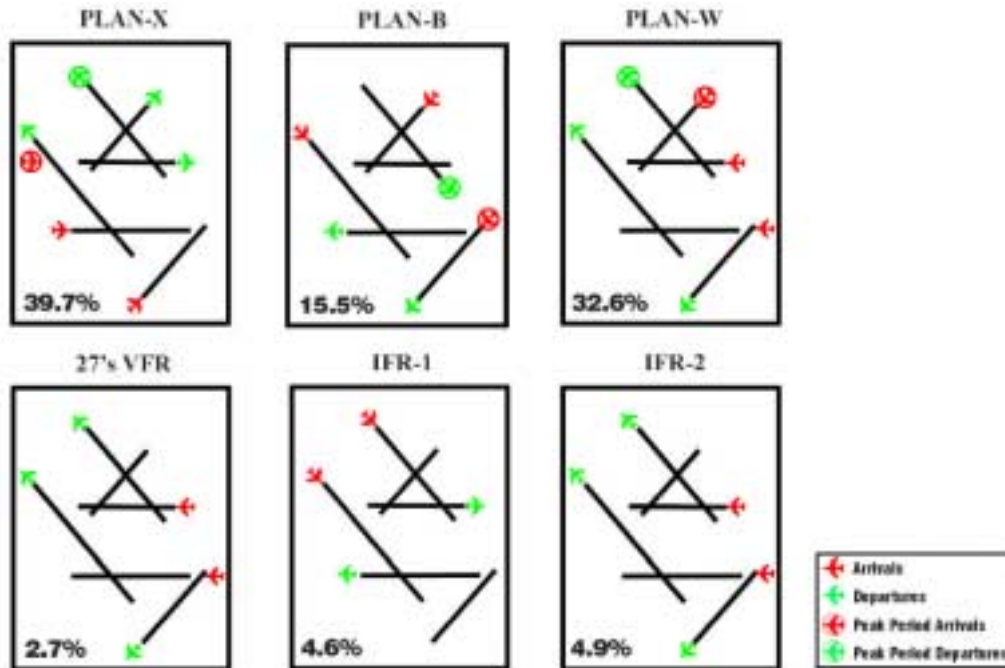
Dimensions: 7967 x 150 ft. Surface: asphalt/concrete/grooved, in good condition
Visual slope indicator: 4-light PAPI
RVR equipment: touchdown
Approach lights: MALSR: 1,400 foot medium intensity approach lighting with runway alignment indicator lights.
MALSR: 1,400 foot medium intensity approach lighting with runway alignment indicator lights
Approaches: 9L: ILS / RNAV-GPS / NDB
27R: ILS / RNAV-GPS / NDB

Runway 4L/22R

Dimensions: 7500 x 150 ft. Surface: asphalt/grooved, in good condition
Visual slope indicator: 4-light PAPI
Approach lights: MALSR: 1,400 foot medium intensity approach lighting with runway alignment indicator lights
Approaches: 4L: ILS / RNAV-GPS / Localizer
22R: ILS / RNAV-GPS / VOR

Runway 18/36: Decommissioned

Common runway configurations:



Plan X: Landing: 4R/9R/9L Departing: 32L (from T10) 4L/9L/32R

An optimum configuration which provides three arrival runways with minimal “hold short” requirements. This configuration allows three arrival runways even when the runways are wet. It can consistently yield over 200 operations per hour. Traffic departing 32L may incur a wake turbulence delay. Landing on triple converging runways, locally referred to as “tripping”, is something unique to O’Hare. These aircraft will be left on the ground (usually in the 9R pad) until the arrival demand diminishes enough to allow for additional spacing of the 9L arrivals. The same is true if a B757 or heavy aircraft land on 9L. An excellent configuration for handling high levels of arrival traffic, but departure efficiency is reduced, as there are no free roll departure runways available.

Primary departure runways are 32L from “T-10” and 4L. 9L may be used for departures if the spacing of arrivals on 9L is adequate. When arrival demand is high and arrival spacing is minimal on 9L, the runway is not available for departures. 4L is the most efficient for departures since the threshold is relatively close to the 9L landing threshold. Depending on wake turbulence considerations, it is possible to depart at least two aircraft on 4L between the 9L arrivals.

Plan B: Landing: 14R/22R/22L Departing: 27L/22L/9L/14L

This is a common configuration when winds are out of the south. It more easily lends itself to the staging and segregation of departing aircraft that are hampered by adverse weather and are either stopped or require reroutes.

Plan Weird: Landing: 22R/27R/27L Departing: 32L/32L(T10)/22L/32R

This is a very efficient configuration in that it provides three arrival runways with minimal impact to departing aircraft. LAHSO operations apply when landing 22R and 27R simultaneously. Generally, the 22R traffic will be required to hold short of 27R. The 22R hold short available landing distance is 6050 feet compared to 5700 feet of available runway for 27R holding short of runway 22R. Traffic landing on runway 22R or 27R frequently clear on the “Charlie” hi-speed. Once south of 27R, on “Charlie”, it is helpful if aircraft continue to taxi on “Bravo” taxiway. Additional traffic will often follow, and 27R must be clear for subsequent arrivals.

Plan Rodney: Landing: 9R/14R/22R Departing: 22L/9L/14L

This configuration requires the 14R arrivals to hold short of runway 9R for arriving traffic. It provides three arrival runways with minimal impact to departures.

Other runway configurations and notes:

Landing: 9R/14R/22R Departing: 22L/14L - A preferred configuration when conditions are VFR and the runways are dry. This is the only triple-converging configuration at O'Hare that has no restrictions on spacing for any arrival runway. With 2.5 mile spacing allowed on all 3 arrival runways, hourly arrival capacity can approach 120 aircraft. Unlike every other configuration, the departure runways, 22L and 14L are the two runways with the longest taxis from the terminals. With long taxi distances, departures can get out of the terminal areas, keeping gate areas clear for arrivals.

Runway 22L is the "free-roll" runway on this configuration and will get a majority of the departures. Normally all the westbound and southbound traffic will be assigned 22L along with occasional eastbound traffic. Northbound and some eastbound traffic will be assigned 14L. Westbound traffic is handled in the same airspace as all the traffic off the airports south of O'Hare, including Midway. The climb corridor is much narrower than normal because the 9R and 14R arrivals take up most of the west climb corridor airspace. Westbound traffic will normally have some sort of in-trail restriction so that the climb corridor does not get overloaded. 9R arrivals will have taxi routes different than when they land on 9R on any other configuration to keep arrival aircraft segregated from departure traffic.

Landing: 9L/9R Departing: 4L/22L/32R - Used when weather is below 700 feet and 2 miles and winds are out of the northeast at a velocity high enough to prohibit the use of 14L/R for landing. Primary departures are 32L from "T-10", 4L and possibly 22L if the wind is not a factor. If 22L is not available then departure efficiency is greatly reduced because there are no free roll departure runways. 4L is the most efficient for departures since the threshold is relatively close to the 9L landing threshold. Depending on wake turbulence considerations, it is possible to depart at least two aircraft on 4L between the 9L arrivals. If 22L is available, most of the departures will be assigned that runway since it is the only runway that does not intersect any arrival runway.

Landing: 14L/14R Departing: 4L/22L/27L - As visibility nears zero 14L and 14R are the usual arrival runways. Anytime the weather is below 700 feet and 2 miles, the use of converging dual approaches must be discontinued. The most efficient parallel runway operation for arrivals is 27L and 27R but if the wind does not allow that operation or if the airport needs to use Category III runways, the best alternative is 14L and 14R.

Departure runways may vary. For northbound, eastbound and sometimes southbound traffic, either 4L or 9L will be used. These departures will be released between the 14L arrivals so the spacing on final must be increased. Westbound traffic will depart 27L in the gaps provided between the 14R arrivals. Normally, at least 4-mile spacing is required on both arrival runways to make this configuration work. 22L would be the preferred departure runway since it does not intersect any arrival runway. Unfortunately, the low visibility that requires O'Hare to be on this configuration is the same visibility that requires Midway airport to land on runway 13C; the only runway equipped with RVR. When arrivals are being vectored to 13C at Midway, 22L at O'Hare is not authorized for departures.

Landing: 9R/14R/14L Departing: 4L/22L/14L - Only during strong east or southeast wind conditions is this airport configuration used. Since 14R and 9R intersect, during this operation LAHSO allows for 14R arrivals to land and hold short of 9R for arriving traffic. On other configurations, 14R arrivals are not allowed to land and hold short of 27L for departing or arriving traffic even though it is the same runway. Depending on the wind, departure runways will be 9L, 4L and 22L. All westbound traffic can expect 22L and all northbound traffic can expect 4L. Eastbound traffic might be assigned either 4L or 9L while southbound traffic may end up at 9L or 22L.

Landing: 14R/22R/27R Departing: 22L/27L - Seldom used, as it involves complex sequencing and vectoring by the Approach Control due to LAHSO rules. With good weather and winds out of the south or southeast, this could be a very effective configuration for both arrivals and departures. LAHSO requirements prohibiting certain aircraft from using either 22R or 27R has made it difficult to execute. The alternative would be landing 14R/22R/22L, which involves no LAHSO operations, but it is the absolute worst triple converging configuration for airport capacity. To help make the best use of arrival runways, on occasion the tower controller will ask 22L arrival traffic to circle and land on 27R. As long as the 22R arrival can hold short of 27R this is an extremely efficient use of runways. By doing this, runway 22L becomes a "free-roll" departure runway and capacity is greatly increased.

Landing: 32L/32R Departing: 4L/27L - Only with strong winds out of the northwest or all other runways being unusable is this configuration used. Departures vary depending on the reason for landing on both 32's. If strong north winds and good visibility are the limiting factors, 4L may be the primary departure. A secondary might be 32L with the arrivals spaced out to accommodate the departures. If wind is not a limiting factor and either 27R or 27L not available for arrivals due to equipment limitations, 27L would be a viable choice for departing traffic.

Landing: 27R/32L Departing: 27L/32R - Rarely used. With west or northwest winds and light arrival traffic this combination of runways works well. This configuration uses dual converging approaches, which eliminates the need to run simultaneous ILS approaches in marginal weather. Departures are from intersecting runways so efficiency is reduced. North and eastbound traffic would normally depart 32R. With minimal distance between the runway 32R threshold and landing runway 27R centerline, departing between arrivals is relatively easy. Departing south and westbound traffic off runway 27L, between the 32L arrivals, requires much more finesse since the intersections are more than a mile apart. To accommodate 27L departures, spacing between 32L arrivals must normally be increased to at least 4 miles. 27L departures must be ready to initiate take-off rolls as soon as a take-off clearance is received.

Landing: 22R/27L Departing: 22L/32L-T10/32R - This runway configuration has become more common since LAHSO took away the efficiencies of landing 14R and 22R during south or southwest wind conditions. The arrival advantages are the same for any other dual converging approach configuration but departure traffic is reduced. Eastbound traffic is sent though airspace that is shared with all eastbound traffic departing Midway Airport and restrictions may be placed on O'Hare traffic.

Primary departure runways are 22L & 32L from "T-10". 32L from "T-10" is a "free roll" runway while 22L departures must depart between the 27L arrivals. A limiting factor with the 22L departures is aircraft are not able to be put into position and hold while waiting for the 27L arrival to pass the intersection, because of the proximity of the threshold of 22L and the 27L landing clear zone. Take-off clearances on 22L will be issued when aircraft are waiting in line on the taxiway so pilots must be ready to initiate the take-off roll. When heavy aircraft land on 27L, there is normally enough space on final to depart at least two aircraft on 22L. Eastbound and southbound traffic will be assigned 27L and the departure will be sequenced between the 27L arrival traffic. Westbound and northbound traffic have several options including 32L from "M" or 32R.

Landing: 27L/27R Departing: 22L/32L-T10/32R - Works well with westerly winds and moderate arrival demand. As with any west-flow configuration, there is no third arrival runway available when the runways are anything less than "clear and dry". Landing on parallel runways is required anytime the weather is less than 700 and 2 so that missed approaches can be protected. During clear weather conditions, landing on 27R and 27L is desirable because it provides the airport with three departure runways. The airspace available for departures is expanded.

Departure runways are 32R, 32L from "T-10" and 22L. Normally, eastbound traffic will be assigned 32R, northbound and westbound traffic will be assigned 32L from "T-10" and southbound traffic will be assigned 22L. Just like any other runway configuration at O'Hare, these departure runway assignments may change frequently to help balance the number of planes at each runway. 32L from "T-10" is the only "free roll" runway so a higher percentage of planes will be assigned that runway to help keep overall taxi times consistent.

Misc. Notes:

Regardless of the runway configuration or ground taxi patterns in use aircraft are never permitted to stop on the taxiway bridges. There is insufficient room on the bridges to deploy passenger emergency evacuation slides.

747-400's or Airbus 340-600's cannot pass on taxiways A and B due to insufficient wingtip clearance.

Helipad H1 approach and departure paths run east-west.

Ground control and Tower:

Clearance Delivery - For aircraft without pre-departure clearance normally the first radio contact with O'Hare Tower is clearance delivery on frequency 121.600. At O'Hare over 99.9% of the traffic is IFR so it is not necessary for a pilot to specify that they are requesting an IFR clearance.

Ground Metering - Once flights are ready to taxi out for departure, pilots will contact ground metering on 121.675 and inform the controller of their call-sign, location on the airport and ATIS code. Tower controllers receive gate information on Pre-departure clearance displays but since terminal exit points sometime do not coincide with the actual gates, it saves a lot of confusion to verify exact locations when communicating with ground metering.

Ground metering may sound routine, but in reality it does a lot to help both ground controllers. Metering will normally place flight progress strips in front of the outbound ground controller in the order that aircraft call for taxi. When gate or taxiway congestion become factors for ground controllers, the metering controller will manipulate the order in which flight progress strips are placed to assist the outbound controller in moving key aircraft first.

Outbound Ground Control - In O'Hare Tower, this is probably the most demanding position to work because of the sheer volume of aircraft along with the job of getting each plane to the appropriate departure runway. In addition to assigning the runway, each plane must be sequenced at each runway so that departure fixes are alternated. Heavy or 757 aircraft will also be bunched together when possible to help expedite the overall departure rate off the airport. Alleys between the terminals need to be emptied to allow for arrivals to enter the gate areas. At times, the outbound ground controller will issue multiple taxi clearances at one time to expedite aircraft movements or to move a group of aircraft out of a common alley or port.

Once an aircraft is on its way to a departure runway and all other traffic conflicts or sequencing calls have been made, the pilot will be instructed to monitor the appropriate tower frequency. This frequency change may be done long before they get to the actual runway or sometimes it might even be included at the end of the initial taxi instructions. The sooner the pilot is able to switch over to the tower frequency the sooner he/she can get a feel for the pace that things are happening at the runways.

Inbound Ground Control - A single controller manages the flow of traffic away from the runways and directs aircraft to their appropriate gates or parking spot. This can be no easy task when traffic is landing on three different runways and arrival volume exceeds 100 aircraft per hour. Darkness or low visibility makes the task even more challenging. When congestion is a problem, a third ground control position will be opened. The third controller normally handles only landing aircraft which have no gate or parking area due to scheduling issues. Aircraft that have to be parked away from the terminals due to gate waits require at least double the workload. Radio transmissions increases exponentially when these aircraft have to be repositioned several times to accommodate other aircraft that are blocked by planes with no gates.

Tower/Local Control - There can be anywhere from one to three tower controllers working at one time and depending on the runway configuration, a frequency assigned to a single runway may change from time to time. The outbound ground controller will assign the appropriate frequency. Because O'Hare is a radar facility, controllers use radar separation. The only time controllers use time for separation is when mileage rules do not exist for certain operations. Controllers will use the minimum required distance between any two aircraft.

Because of LAHSO requirements, or the shared use of one runway by arrivals and departures some take-off clearances occur in a very small window of opportunity. Any unanticipated delay in commencing a take-off roll may result in a go-around or a completely missed departure gap between arrivals.

When departing in gaps between arrival traffic, it is sometimes imperative for the tower controller to prompt pilots to be ready to initiate the take-off roll with very minimal delay. Pilots may be told to "expect an immediate" or "start coming up on the power and be ready to go" as a way of making sure the cockpit crews are primed and ready to commence the take-off roll as soon as the controller issues the take-off clearance. This is not a controller trying to tell the pilot how to fly the airplane but simply a courtesy call to let the pilot know that an immediate take-off clearance will be coming shortly. The fewer surprises for the pilot, the better.

Air traffic control frequency listing:

000.257 NDB JOCKY	126.200 Tower pilot dispatch w/372.200 UHF
000.350 NDB DEANNA & Weather - ME	126.800 VFR Alternate, w/308.400 UHF
000.368 NDB LEAMMA - OH	126.900 Tower North, w/390.900 UHF
000.385 NDB INDDY	127.400 Departure South, w/269.500 UHF
000.394 NDB CHSTR - OR (Formerly ROAMY)	127.875 Arv/Dep Aux. Channel, w/398.950 UHF
000.414 NDB TAFFS - IA	127.925 Tower alternate
003.413 Arinc ramp check secondary	128.450 Approach West, w/284.000 UHF
005.574 Arinc ramp check primary	128.575 Arv/Dep Aux. channel
013.273 Arinc SELCAL check primary	128.650 Chicago ARTCC Des Plaines, w/298.900
017.946 Arinc SELCAL check secondary	132.175 Arv/Dep Aux. Channel, w/345.200 UHF
075.000 Marker beacons	132.700 Tower overload
108.000 VOR receiver test facility	133.100 VFR alternate, w/285.600 UHF
108.100 VOR receiver test facility	133.200 Chicago ARTCC Des Plaines, w/360.800
108.950 ILS beacon I-RVG RWY 32L	133.500 Class B Airspace South, w/371.900 UHF
109.100 ILS beacon	133.625 Arv/Dep Aux. channel, w/315.600 UHF
109.750 ILS beacon I-ORD RWY 14R	133.750 Class C radar advisory
110.100 ILS beacon I-FJU RWY 4R/I-LQQ RWY 22L	134.400 Departure North, w/308.400 UHF
110.500 ILS beacon I-JAV RWY 9L / I-IAC RWY 27R	& Class B Airspace Aux. channel
110.750 ILS beacon I-IDN RWY 32R	135.025 Approach Aux. East feeder
110.900 ILS beacon ACON I-OHA RWY 14L	135.075 Approach West feeder, w/381.450
111.100 ILS beacon I-MED RWY 9R/I-TSL RWY 27L	135.400 ATIS, w/269.900 UHF
111.300 ILS beacon I-RXZ RWY 22R/I-HNA RWY 4L	135.950 FAA ILS systems checks
112.000 VOR receiver test facility	243.000 Emergency Guard, w/121.500 VHF
113.900 VOR beacon - ORD	269.500 Departure South, w/127.400 VHF
118.400 ARSA South sector, w/388.000 UHF	269.900 ATIS, w/135.400 VHF
118.450 Ground Aux. channel	284.000 Approach West, w/128.450 VHF
118.925 Arv/Dep Aux. channel, w/288.050 UHF	285.600 VFR alternate, w/133.100 VHF
119.000 Approach East, w/393.100 UHF	288.050 Arv/Dep Aux. channel, w/118.925 VHF
119.250 Tower Emergency / Clearance Aux. channel	290.200 Class B Airspace North, w/120.550 VHF
119.350 Arv/Dep Aux. channel	298.900 Chicago ARTCC Des Plaines, w/128.650
119.575 Past use for ATIS relay	307.200 Departure West, w/125.400 VHF
120.250 Arv/Dep Aux, sometimes North VFR	308.400 Departure North, w/126.800 VHF
120.350 Chgo ARTCC Des Plaines, w/317.400 UHF	315.600 Arv/Dep Aux. Channel, w/133.625 VHF
120.550 Class B Airspace North, w/290.200 UHF	317.400 Chicago ARTCC Des Plaines, w/120.350
120.750 Tower South	337.400 Departure North, w/125.000 VHF
121.150 Arv/Dep/Ground Aux. channel	345.200 Arv/Dep Aux. Channel, w//132.175 VHF
121.500 Emergency Guard, w/243.000 UHF	348.600 Ground Inbound, w/121.900 VHF
121.600 Clearance delivery	348.650 Arv/Dep Aux. Channel, w/124.425 VHF
121.675 Ground Metering (Outbound initial contact)	360.800 Chicago ARTCC Des Plaines, w/133.200
121.750 Ground outbound	363.800 Approach Southwest, w/125.700 VHF
121.900 Ground inbound, w/348.600 UHF	371.900 Class B Airspace South, w/133.500 VHF
121.975 FAA Flightwatch, private	372.200 Tower pilot dispatch, w//126.200 VHF
122.000 FAA Flightwatch, commercial	381.450 Approach West feeder, w/135.075 VHF
122.950 Unicom - Signature flight services	388.000 ARSA South sector, w/126.050 VHF
123.025 Chicago helicopter advisory channel	390.900 Tower North, w/126.900 VHF
124.350 Arv/Dep Aux. channel	393.100 Approach East, w/119.000 VHF
124.425 Arv/Dep Aux. Channel, w/348.650 UHF	398.950 Arv/Dep Aux. Channel, w/127.875 VHF
124.700 Arv/Dep Aux. channel	
125.000 Departure North, w/337.400 UHF	
125.400 Departure West, w/307.200 UHF	
125.700 Approach Southwest, w/363.800 UHF	
126.050 ARSA South sector, w/388.000 UHF	

Approach Outer Marker Beacons (75.000 MHz)



Runway 4L: "LAPPS" GPS: N41 54 53.2 / W087 59 20.6 Site ID: HN
 Location: W Side of S. Addison Rd, S of West Interstate Rd, Addison
 Middle Marker: None
 Notes: 5.2 Nautical miles to field at 2,400 Feet. No NDB at site.



Runway 4R: "REKKS" GPS: N41 53 56.4 / W087 57 53.9 Site ID: FJ
 Location: W Side of Rte.83, 1 Mile South of North Ave, Elmhurst
 Middle Marker: N of Franklin, South of Sandra, in Bensenville railroad yard
 Notes: 4.4 Nautical miles to field at 2,200 Feet. No NDB at site



Runway 9L: "LANSE" GPS: N41 59 08.4 / W099 01 44.9 Site ID: JA
 Location: South shoulder of Elgin-O'Hare Expressway, East of Rte. 53, Itasca
 Middle Marker: On O'Hare airport grounds
 Notes: 4.9 Nautical miles to field at 2,300 Feet. No NDB at site



Runway 9R: "DEANA" GPS: N41 58 03.1 / W088 01 37.2 Site ID: ME
 Location: Rear of Serta Corp, Hawthorne Drive industrial park, East of Rte. 53, North of Nordic Avenue, Itasca
 Middle Marker: On O'Hare airport grounds
 Notes: 4.7 Nautical miles to field at 2,300 Feet. 350 KHz NDB/TWB, "ME"



Runway 14L: "LEAMA" GPS: N42 04 15.0 / W 087 59 40.0 Site ID: OH
 Location: S Side of W Kirchoff Rd, at S Kennicot Ave, Arlington Heights
 Middle Marker: Near Touhy & Mt. Prospect Roads
 Notes: 5.2 NM to field at 2,500 Feet. 368 KHz NDB Longwire, "OH"



Runway 14R: "CHSTR" GPS: N42 03 22.6 / W 088 00 26.3 Site ID: OM
 Location: Condos S/E of Elizabeth & Meadowbrook, Rolling Meadows
 Middle Marker: East of York Road, at RR Tracks at Arthur
 Notes: 5.2 Nautical miles to field at 2,400 Feet. 394 KHz NDB dipole, "OR"



(NO PICTURE AVAILABLE)

Runway 22L: "LAIKE" GPS: APROX N42 02.W / W097 47.9 Site ID: LQ
 Location: Storage facility East side of Waukegan, South of Dempster
 Middle Marker: Balmoral & Pearl, Rosemont
 Notes: 5.5 Nautical miles to field at 2,500 Feet. No NDB at site



Runway 22R: "RIDGE" GPS: APROX N 42 03 35 / W087 50 03 Site ID: RX
 Location: W End of Comm Ed yard, N of Golf, E of Milwaukee, Niles
 Middle Marker: South of I-90, East of Higgins, Des Plaines
 Notes: 4.5 Nautical miles to field at 2,200 Feet. No NDB at site



Runway 27L: "WILLT" GPS: APROX: N41 58 22 / W087 47 36 Site ID: OM
 Location: W Side of Natchez 2 Blocks N of Gunnison, School yard, Chicago
 Middle Marker: West of I-294, West of Lawrence Avenue
 Notes: 4.2 Nautical miles to field at 2,100 Feet. No NDB at site



Runway 27R: "TAFSS" GPS: APROX N41 59 23 / W097 47N 57 Site ID: IA
 Location: Rear of Taft High School, 6545 Hurlburt Ave, Chicago
 Middle Marker: E of Manheim, N of Kennedy Expressway, Cloverleaf trees
 Notes: 4.5 Nautical miles to field at 2,150 Feet. 414 KHz NDB dipole "IA"



Runway 32L: "JOCKY" GPS: N41 53.667 / W087 49.568 Site ID: RV
 Location: Woods W side of Thatcher, N of Chicago, River Forest
 Middle Marker: On O'Hare airport grounds
 Notes: 5.3 Nautical miles to field at 2,500 Feet. NDB dipole at site not in use



Runway 32R: "INDDY" GPS: APROX N41 54 29 / W087 48 41 Site ID: ID
 Location: Greenfield & Bonnie Brae, Fenwick High School, River Forest
 Middle Marker: On O'Hare airport grounds
 Notes: 6.0 Nautical miles to field at 2,650 Feet. No NDB at site

Midwest Enroute Air Traffic Control Centers:

Key:

ZAU - Chicago ZMP - Minneapolis ZKC - Kansas City ZID - Indianapolis ZOB-Cleveland
 L-Low Altitude H-High Altitude U-Ultra High Altitude A-All Altitudes

VHF	UHF	ALT	ARTCC	SITE	NOTE						
(none)	228.500	H	ZMP	Pierre	ANG Use	120.450	360.700	L	ZOB	Litchfield	
(none)	256.700	H	ZMP	Omaha		120.575	307.900	H	ZID	Brookville	
(none)	260.600	H	ZKC	Fairview	Confidential	120.600	298.925	L	ZOB	Mount Hope	Discrete
(none)	263.100	L	ZKC	Anthony		120.600	371.900	L	ZMP	Aberdeen	Discrete
(none)	269.150	L	ZKC	Decatur	Discrete	120.625	322.550	U	ZOB	Holland	
(none)	269.625	H	ZOB	Bloomington		120.650	299.600	L	ZID	Muncie	Discrete
(none)	272.700	A	ZAU	Chicago		120.775	298.950	L	ZOB	Chardon	Discrete
(none)	273.500	H	ZMP	Houghton		120.825	307.800	H	ZKC	Farmington	
(none)	278.800	L	ZOB	Algonac		120.850	322.350	L	ZMP	White Cloud	Discrete
(none)	281.425	L	ZOB	Litchfield	Discrete	120.900	377.100	A	ZMP	Intl Falls	
(none)	284.625	L	ZOB	Bloomington		120.975	343.950	H	ZAU	Rossville	
(none)	294.900	L	ZKC	Emporia	Confidential	121.050	397.900	L	ZMP	Princeton	Discrete
(none)	307.075	L	ZOB	Belmont		121.175	353.650	L	ZID	New Hope	Discrete
(none)	307.800	H	ZKC	Natoma		121.200	299.200	L	ZOB	Altoona	
(none)	316.450	U	ZOB	Wayland		121.250	269.600	L	ZKC	Saint Charles	Discrete
(none)	317.450	H	ZMP	Traverse City		121.250	322.500	L	ZMP	Iron Mountain	Discrete
(none)	317.450	H	ZOB	Moon Twnsp		121.325	246.000	L	ZID	London	
(none)	317.600	H	ZKC	Ponca City		121.325	246.000	L	ZID	London	
(none)	319.000	U	ZKC	Farmington		123.725	316.150	H	ZMP	Rhineland	
(none)	319.200	L	ZID	Rossville		123.750	354.000	L	ZAU	Aurora	Discrete
(none)	321.300	H	ZMP	Dickinson		123.775	263.050	U	ZID	Winchester	
(none)	321.300	H	ZMP	Houghton		123.800	343.700	L	ZKC	Topeka	Discrete
(none)	321.300	H	ZMP	Omaha		123.825	360.600		ZAU	Milwaukee Oak Crk	
(none)	321.300	H	ZMP	Pellston		123.850	393.000	L	ZAU	Lafayette	Discrete
(none)	321.300	H	ZMP	Sioux Falls		123.925	281.400	L	ZID	Merwyn	Discrete
(none)	323.100	L	ZKC	Saint Charles		124.100	269.000	L	ZMP	Sioux City	Discrete
(none)	323.200	A	ZAU	Chicago		124.100	353.700	L	ZKC	Richland	
(none)	324.100	H	ZKC	Gage	Confidential	124.200	270.300	H	ZMP	Jamestown	Discrete
(none)	350.350	A	ZAU	Rossville	MOA Ops	124.225	327.050	L	ZID	Portsmouth	
(none)	364.800	H	ZAU	Downers Grove		124.250	380.300	L	ZMP	Dickinson	Discrete
(none)	364.800	L	ZAU	Milwaukee		124.300	335.600	L	ZKC	Decatur	Discrete
(none)	369.250	H	ZOB	Moon Twnsp	Confidential	124.325	353.850	L	ZOB	Wayland	
(none)	369.900	H	ZOB	Detroit North	Confidential	124.400	317.700	L	ZMP	Mosinee	Discrete
(none)	369.900	H	ZOB	Mansfield	Confidential	124.400	322.400	L	ZKC	Natoma	Discrete
(none)	369.900	H	ZOB	Saginaw	Confidential	124.400	327.100	L	ZOB	Altoona	Discrete
(none)	369.900	H	ZOB	Wayland	Confidential	124.425	(none)	H	ZOB	Belmont	
(none)	378.100	L	ZKC	Fairview	Confidential	124.450	370.900	L	ZID	Zanesville	Discrete
(none)	380.600	L	ZOB	Algonac		124.525	319.800	L	ZID	Indianapolis	
(none)	385.500	A	ZAU	Chicago		124.550	398.900	L	ZAU	Bradford	
(none)	385.600	H	ZID	Marmet		124.575	335.600	H	ZID	Tri City	
(none)	387.100	L	ZKC	Garden City		124.625	394.100	A	ZID	New Hope	
118.050	239.000	L	ZMP	Brainerd	Discrete	124.775	269.450	L	ZID	Henryville	Discrete
118.050	282.200	L	ZMP	Saginaw	Discrete	124.875	353.750	H	ZMP	O'Neill	
118.150	354.100	L	ZAU	Ottumwa	Discrete	125.050	269.650	L	ZAU	Volk Field	
118.225	353.550	H	ZAU	Kankakee		125.050	284.700	L	ZAU	Milford	
118.350	344.800	L	ZKC	Anthony	Discrete	125.075	343.600	H	ZID	Zanesville	
118.400	299.200	L	ZKC	Columbia	Discrete	125.100	269.100	L	ZMP	Pierre	Discrete
118.425	(none)		ZAU	Unknown		125.100	323.100	L	ZAU	Milwaukee	Discrete
118.525	251.150	L	ZMP	Oscoda		125.200	(none)	A	ZAU	Chicago	
118.750	351.700	L	ZAU	Moline		125.200	263.100	L	ZOB	Dunkirk	Discrete
118.800	337.400	L	ZKC	Hutchinson	Discrete	125.200	269.400	L	ZKC	Garden City	Discrete
118.825	372.000	H	ZMP	Des Moines		125.225	343.600	H	ZAU	Dubuque	
118.850	321.300	H	ZMP	La Crosse		125.250	381.500	L	ZKC	Chillicothe	Discrete
118.900	319.100	L	ZMP	Minot		125.300	269.500	L	ZKC	Marion	Discrete
119.100	290.200	L	ZMP	Sawyer	Discrete	125.300	335.600	L	ZMP	Eau Claire	Discrete
119.225	307.250	L	ZAU	Leroy		125.375	370.850	L	ZAU	Rossville	Discrete
119.325	261.500	U	ZOB	Sandusky		125.475	269.450	L	ZMP	Alpena	
119.400	278.800	L	ZMP	Hastings	Discrete	125.500	323.100	L	ZMP	Darwin	Discrete
119.475	279.600	H	ZKC	Columbia		125.500	380.200	L	ZKC	Saint Louis	Discrete
119.525	269.175	H	ZMP	Lincoln		125.550	327.000	L	ZKC	Butler	Discrete
119.525	385.600	H	ZID	Charleston		125.550	370.900	L	ZMP	Green Bay	Discrete
119.550	251.100	L	ZID	Indianapolis	Discrete	125.550	398.900	L	ZID	Marietta	Discrete
119.600	290.400	L	ZMP	Omaha	Discrete	125.575	385.600	H	ZAU	Washington	
119.725	316.100	H	ZOB	Warren		125.600	281.500	A	ZMP	Bismark	Discrete
119.725	363.100	H	ZMP	Sioux City		125.600	281.500	L	ZMP	Jamestown	
119.850	362.300	L	ZAU	Fort Wayne	Discrete	125.650	306.950	L	ZMP	Des Moines	
119.875	269.500	H	ZMP	Redwood Falls		125.725	338.200	H	ZKC	Vandalia	Discrete
119.875	348.675	H	ZOB	Sandusky		125.875	338.350	L	ZOB	Wayland	
119.950	269.500	L	ZOB	Carleton	Discrete	125.900	327.100	L	ZKC	Saint Charles	
120.075	319.900	U	ZOB	Detroit North		125.975	254.300	H	ZAU	Jones	
120.125	256.800	L	ZAU	Kankakee		126.050	(none)	L	ZMP	Grand Island	
120.175	(none)	L	ZAU	Milford		126.100	269.200	L	ZMP	Alexandria	Discrete
120.200	323.200	L	ZKC	Emporia		126.125	319.100	H	ZAU	Grand Rapids	
120.225	269.350	H	ZAU	Jones		126.250	339.800	H	ZMP	Huron	Discrete
120.275	363.200	H	ZID	Portsmouth		126.325	269.100	H	ZAU	Fort Wayne	
120.350	317.400	L	ZAU	Des Plaines	Discrete	126.375	343.650	L	ZID	Winchester	Discrete
120.375	279.650	H	ZAU	Rockford	Discrete	126.400	317.700	L	ZMP	Marysville	Discrete
120.400	257.975	L	ZOB	Belmont	Discrete	126.450	276.400	L	ZMP	Hayward	Discrete
						126.525	244.575	H	ZOB	Algonac	Discrete
						126.575	253.500	L	ZID	London	Discrete

126.575	257.850	L	ZID	Bluefield	Discrete	132.900	279.500	L	ZKC	Chanute	Discrete
126.575	257.850	L	ZID	Lynch		132.900	290.500	H	ZKC	Springfield	
126.725	291.650	L	ZOB	Bradford	Discrete	132.900	338.300	L	ZMP	Traverse City	Discrete
126.725	291.650	L	ZOB	Dubois	Discrete	132.925	351.850	U	ZOB	Warren	
126.750	348.750	L	ZOB	Flint	Discrete	132.950	272.700	L	ZAU	Chicago Hts	Discrete
126.800	263.000	L	ZMP	Dupree	Discrete	133.050	278.500	H	ZID	Henryville	Discrete
126.875	(none)	A	ZAU	Chicago		133.075	263.050	H	ZMP	Redwood Falls	
126.925	319.150	U	ZID	Livingston	Discrete	133.075	276.400	U	ZOB	Moon Twnsp	
126.950	239.300	L	ZOB	Morgantown	Discrete	133.200	257.000	H	ZKC	Anthony	
126.950	379.200	A	ZKC	Gage	Discrete	133.200	360.800	L	ZAU	Des Plaines	
126.975	281.475	H	ZOB	Findlay		133.225	346.400	H	ZKC	Effingham	
127.000	387.100	L	ZAU	Oshkosh	Discrete	133.300	380.350	L	ZAU	Lone Rock	Discrete
127.050	319.800	L	ZAU	Des Moines		133.350	297.400	H	ZAU	Washington	
127.075	299.700	L	ZAU	Maple Park	Discrete	133.350	381.400	L	ZAU	Hampshire	Discrete
127.100	290.200	L	ZMP	Redwood Falls	Discrete	133.375	290.275	H	ZOB	Mansfield	
127.100	290.400	L	ZID	Portsmouth	Discrete	133.400	281.550	H	ZMP	Alexandria	
127.200	379.100	L	ZMP	Houghton	Discrete	133.400	323.100	L	ZKC	Maples	Discrete
127.225	(none)	H	ZKC	Saint Louis		133.425	360.750	U	ZAU	Monee	
127.275	327.500	L	ZKC	Jacksonville	Discrete	133.450	(none)	H	ZMP	Iron Mountain	
127.300	(none)	L	ZOB	Jackson	Discrete	133.450	281.400	H	ZKC	Garden City	
127.300	380.200	L	ZMP	Mason City	Discrete	133.550	(none)	L	ZMP	Ironwood	Discrete
127.350	278.300	A	ZMP	Fargo	Discrete	133.600	281.500	L	ZMP	Rhineland	Discrete
127.350	288.800	L	ZKC	Manhattan	Discrete	133.700	381.650	L	ZMP	Farmington	Discrete
127.400	269.600	L	ZID	Charleston	Discrete	133.725	290.700	U	ZKC	Quincy	
127.400	269.600	L	ZID	Marmet	Discrete	133.750	353.900	H	ZMP	Eau Claire	
127.475	291.700	L	ZKC	Farmington	Discrete	133.775	288.100	U	ZID	Zanesville	
127.475	346.350	L	ZOB	Wayland	Discrete	133.800	317.500	L	ZKC	Richland	Discrete
127.500	269.400	L	ZKC	Springfield	Discrete	133.875	351.900	H	ZOB	Saginaw	
127.550	263.100	L	ZAU	Goshen	Discrete	133.900	317.600	L	ZAU	Goshen	
127.600	279.600	A	ZMP	Minot	Discrete	133.950	281.400	L	ZAU	Dubuque	Discrete
127.600	363.200	L	ZAU	Downers Grove		134.000	288.300	L	ZMP	Fort Dodge	Discrete
127.650	(none)	L	ZMP	Escanaba	Discrete	134.000	290.800	L	ZKC	Liberal	Discrete
127.700	290.425	L	ZOB	Flint	Discrete	134.125	307.150	H	ZOB	Warren	
127.700	307.800	L	ZOB	Saginaw	Discrete	134.175	270.300	H	ZID	Terre Haute	
127.700	317.700	L	ZKC	Mount Vernon	Discrete	134.200	348.700	L	ZAU	Hampshire	
127.725	270.250	L	ZKC	Emporia	Discrete	134.225	282.300	H	ZMP	Marysville	
127.750	257.700	L	ZMP	Fairmont		134.225	307.300	H	ZID	Charleston	
127.775	285.500	H	ZAU	Dubuque		134.225	307.300	U	ZID	Marmet	
127.800	256.900	L	ZMP	Roseau	Discrete	134.250	263.100	H	ZMP	Mason City	
127.800	319.100	L	ZKC	Ponca City	Discrete	134.275	352.000	U	ZID	Henryville	
127.800	387.050	L	ZAU	Crown Point		134.300	335.900	H	ZKC	Hutchinson	
127.900	251.100	L	ZKC	Saint Joseph	Discrete	134.325	385.600	H	ZAU	Washington	
127.900	281.450	L	ZMP	Duluth	Discrete	134.475	254.275	L	ZOB	Moon Twnsp	Discrete
127.900	327.000	L	ZOB	Sandusky	Discrete	134.500	350.200	A	ZKC	Columbia	
128.000	385.500	L	ZMP	O'Neill	Discrete	134.550	290.500	A	ZMP	Duluth	
128.075	269.000	L	ZID	Rosewood	Discrete	134.600	354.050	L	ZMP	Pellston	Discrete
128.100	251.900	L	ZKC	Saint Louis		134.625	269.300	H	ZKC	Kirksville	
128.150	348.700	L	ZOB	Paris	Discrete	134.650	285.625	L	ZOB	Litchfield	Discrete
128.225	317.750	H	ZID	Winchester		134.675	(none)	H	ZKC	Liberal	
128.300	284.650	L	ZID	Evansville	Discrete	134.675	321.300	H	ZMP	Duluth	
128.300	291.700	L	ZKC	Oklahoma City	Discrete	134.675	323.200	H	ZID	Livingston	Discrete
128.375	290.300	H	ZID	Indianapolis		134.700	239.250	U	ZID	Merwyn	
128.400	(none)	L	ZKC	Farmington		134.700	279.500	H	ZKC	Topeka	
128.450	307.100	L	ZOB	Altoona		134.750	251.100	L	ZMP	Bemidji	Discrete
128.500	269.600	L	ZAU	Pullman	Discrete	134.750	291.700	L	ZAU	Milwaukee	
128.500	306.200	L	ZMP	Watertown		134.775	(none)	H	ZOB	Algonac	
128.600	282.325	L	ZKC	Edna		134.775	354.100	H	ZOB	Carleton	
128.600	363.000	L	ZMP	La Crosse	Discrete	134.800	317.500	H	ZMP	Pierre	
128.625	379.200	L	ZOB	Waterville	Discrete	134.850	352.000	L	ZMP	Swinns Valley	Discrete
128.650	298.900	L	ZAU	Des Plaines		134.900	317.700	L	ZOB	Mansfield	Discrete
128.750	346.300	L	ZMP	Omaha		134.900	363.200	L	ZKC	Salina	Discrete
128.800	354.100	L	ZKC	Tulsa	Discrete	134.950	287.900	L	ZAU	Grand Rapids	Discrete
132.050	317.400	L	ZMP	Sioux Falls	Discrete	135.000	306.900	L	ZMP	Mankato	Discrete
132.100	319.250	L	ZAU	Oshkosh		135.050	290.400	H	ZKC	Effingham	Discrete
132.125	363.075	H	ZOB	Altoona		135.100	291.725	L	ZOB	Findlay	Discrete
132.150	269.600	H	ZMP	Grand Forks	Discrete	135.100	307.200	H	ZMP	Hastings	
132.200	307.100	L	ZID	Terre Haute	Discrete	135.125	351.800	L	ZID	Brookville	
132.225	327.800	H	ZAU	Horicon		135.175	277.400	U	ZKC	Springfield	
132.250	269.200	L	ZOB	Algonac	Discrete	135.175	291.600	U	ZOB	Belmont	
132.250	285.400	H	ZKC	Emporia		135.350	273.600	H	ZAU	South Bend	Discrete
132.275	254.350	H	ZAU	Muskegon	Discrete	135.400	353.800	H	ZAU	Milford	
132.300	360.600	L	ZAU	Milwaukee		135.525	319.900	L	ZKC	Quincy	Discrete
132.325	252.000	A	ZKC	Kansas City		135.550	281.450	H	ZKC	Tulsa	
132.350	307.300	L	ZMP	Rochester		135.550	343.900	L	ZAU	Horicon	
132.400	323.200	L	ZOB	Waterford	Discrete	135.575	290.500	L	ZID	Merwyn	Discrete
132.425	336.400	H	ZMP	Pellston		135.575	323.150	L	ZKC	Sedalia	Discrete
132.450	371.950	L	ZOB	Sandusky		135.600	370.950	L	ZAU	Burlington	Discrete
132.500	258.100	L	ZAU	Kankakee		135.700	307.900	H	ZMP	Swinns Valley	Discrete
132.500	377.200	H	ZAU	Milford		135.725	(none)	H	ZOB	Litchfield	
132.525	379.900	H	ZID	Evansville	Discrete	135.750	338.300	L	ZAU	Downers Grove	
132.550	335.650	H	ZMP	White Cloud		135.750	353.950	L	ZAU	Danville	Discrete
132.600	370.900	L	ZKC	Kirksville	Discrete	135.775	279.550	H	ZMP	Des Moines	
132.750	263.000	H	ZAU	Horicon		135.775	306.900	H	ZOB	Holland	
132.775	269.050	U	ZID	Indianapolis	Discrete	135.800	282.300	L	ZID	Brookville	
132.800	328.400	L	ZAU	Cedar Rapids	Discrete	135.825	385.650	U	ZAU	Moine	
132.825	(none)	H	ZID	Zanesville		135.900	269.500	U	ZKC	Hutchinson	

Commercial airlines, terminals and company frequencies:

<u>Airline Name</u>	<u>Term</u>	<u>Arinc Freqs</u>	<u>Airline Name</u>	<u>Term</u>	<u>Arinc Freqs</u>
Aer Lingus	5	129.725	Iberia Airlines arrivals	5	
Aeroflot	5	131.400	Iberia Airlines departures	3	122.775
Aeromexico	Cargo		Independence Air	2	
Air Canada	2	129.425 130.475	JAL Japan Airlines	5	128.825
		131.625	Kalitta	Cargo	
Air China	Cargo		KLM Royal Dutch	5	129.725
Air France	5	129.025	Korean Air	5	129.725
Air India	5		Kuwait Airways	5	
Air Jamaica	5		LOT Polish Airlines	5	130.700
Airborne Express	Cargo	128.850 130.925	Lufthansa arrivals	5	
Alaska Airlines	3		Lufthansa Cargo	Cargo	
Alitalia	5	129.900	Lufthansa departures	1	130.125 131.300
American Airlines	3	128.975 129.225	Martin Air	Cargo	
(domestic)		129.325 129.675	Mexicana	5	130.325
		129.875 130.250	Nippon Cargo	Cargo	129.950 131.400
		130.650 130.750	Northwest Airlines Domestic	2	130.900 131.900
		131.325 131.875	Northwest Airlines Intl	5	
American Eagle	3	128.850 131.600	Pakistan International	5	
		131.625 131.825	Polar Air	Cargo	128.825 131.675
		131.975	Royal Jordanian	5	131.150
American Intl Arrivals	5		Ryan International	5	129.725
Asiana	Cargo		SAS Scandinavian Airlines	5	129.725
Atlas	Cargo		Singapore	Cargo	
Aviasca International	5		Southern Air Cargo	Cargo	
BMI British Midlands	5	129.725	Spirit Airlines	3	129.725 130.050
British Airways	5	131.100 131.300	Swiss International	5	131.525
CAL Airlines	Cargo		TACA Airlines	5	
Casino Express	5		Ted	1	
Cathay Pacific	Cargo		Transmeridian	5	129.725
Cayman Airways Intl	5		Turkish Airlines	5	131.400
Champion Air	5		United Airlines	1	128.900 128.950
Chautauqua	5	130.175			129.075 129.300
China Airlines	Cargo				130.150 130.225
China Cargo	Cargo				131.075 131.300
China Southern Airlines	Cargo				131.375 131.400
Continental Airlines	2	129.925 131.500	United Express	1	129.175 129.375
Delta Airlines	3	129.500 129.600			129.650 130.200
		131.225 131.875	United Express - Air Wisc	1	
Delta Comair	3	131.050 131.725	United Express - Republic	1	
DHL	Cargo	130.550	United Express - Skywest	1	
El Al International	5		United Express - Trans States	1	
Emery Air Frieght	Cargo		United International arrivals	5	
EVA Airways	Cargo		UPS	Cargo	129.425
Evergreen International	5	129.825	US Airways	2	129.800
FedEx	Cargo	131.925	USA 3000	5	
Gemini Air	Cargo				

Airline company frequencies:

122.775	Airport Group Intl	Flight Services	130.375	Signature Flight SupportE & F Gate Control
128.825	Japan Air lines	Flight Operations	130.400	All AIRINC Remotes
128.825	Polar Air Cargo	Maintenance	130.425	A.C.A.R.S. Unknown
128.850	American Eagle	Inbound Flight Ops	130.450	A.C.A.R.S F-5 Northwest Airlines
128.850	Airborne Express	Flight Operations	130.475	Air Canada Flight Operations
128.900	United	Load Planning	130.550	DHL Worldwide Flight Operations
128.925	Signature	Flight Services	130.625	(new license) Unknown
128.950	United	Gnd & Inbnd Maint	130.650	American Load Planning
128.975	American	"H" Gate Operations	130.700	Polish LOT Flight Ops via AMR
129.000	A.C.A.R.S	Unknown	130.725	TWA Flight Operations
129.025	Air France	Ground Operations	130.750	American Crew Scheduling
129.050	All International	Intl Gate Control	130.850	(new license) Unknown
129.075	United	Even# C Gates & Intl	130.900	Northwest Flight Ops Inbnd
129.125	A.C.A.R.S. F-3	Tertiary	130.925	Airborne Express Flight Ops
129.175	United Express Carriers	Flight Ops new freq	131.050	Delta Com Air Flight Operations
129.225	American	Kilo Maint Inbound	131.075	United B Gate Holding
129.300	United	Line Maint / Hangars	131.100	British Airways Flight Operations
129.325	American	Hotel Maint Gnd Ops	131.125	A.C.A.R.S F-4 United
129.350	All	AIRINC Remotes	131.150	Royal Jordanian Flight Ops
129.375	United Exp/Atl. Coast	Flight Ops	131.175	All (not at O'Hare) ARINC Remotes
129.400	All	AIRINC Remotes	131.225	Delta North Sector Enroute
129.425	United Parcel Service	Flight Operations	131.300	United B & E Gate Ops
129.425	Misc	Jetcom services	131.300	Lufthansa Via United Dispatch
129.450	All	AIRINC Remotes	131.300	British Airways Flight Ops
129.500	Delta & others	Atlanta radio remotes	131.325	American Atlas Ops Outbound
129.550	AMR/GSI	Flight Services	131.325	Globe Services Flight services
129.600	Delta	L Odd# Gates Inbnd	131.350	United Express Carriers Changing to 129.175
129.625	All Nippon	Flight Operations	131.375	United C Gate Flight Ops
129.650	United Express	Turboprop Ops	131.375	American Eagle Ops Manager/De-Ice
129.675	American	H Odd# & K Even#	131.400	United Dispatch / Psngr Serv
129.725	Scandinavian	Flight Ops - NACA	131.400	Aeroflot Flight Ops via UAL
129.725	Aer Lingus	Flight Ops - NACA	131.400	Turkish Air Flight Ops via UAL
129.725	Sun Country	Flight Ops - NACA	131.400	Nippon Air Cargo Flight Ops via UAL
129.725	Korean	Flight Ops - NACA	131.500	Continental Flight Operations
129.725	Virgin Atlantic	Flight Ops - NACA	131.525	American Trans Air Flight Operations
129.725	Spirit	Flight Ops - NACA	131.525	Swiss Air Flight Operations
129.725	Ryan Aviaton	Flight Ops - NACA	131.550	A.C.A.R.S. F-1 Primary
129.725	Transmeridian	Flight Ops - NACA	131.600	American Eagle Dispatch Dial-Up
129.750	KLM & Intl Charter	Flight Operations	131.625	American Eagle Ground Maintenance
129.800	U.S. Air	Flight Operations	131.625	Air Canada Flight Operations
129.825	Evergreen Intl	Flight Operations	131.650	All AIRINC Remotes
129.875	American	Hangar Maintenance	131.675	Polar Air Cargo Flight Operations
129.900	Alitalia	Flight Ops	131.700	Polish LOT Flight Operations
129.925	Continental	Flight Operations	131.725	Delta Comair Flight Operations
129.925	America West	Ops via/Continental	131.800	All (not at ORD) AIRINC Remotes
129.950	Nippon Air Cargo	Flight Operations	131.825	American Eagle Inbound Maint/Gates
130.025	A.C.A.R.S. F-2	Secondary	131.875	American / Delta L Even# & K Odd#
130.050	Spirit	Flight Ops	131.900	Northwest Dispatch & Remotes
130.125	Lufthansa	Flight Ops/Weather	131.925	Federal Express Flight Ops & DTMF
130.150	United	Odd# C Gates	131.950	American Outbound Flight Ops
130.175	Chautauqua	Flight Operations	131.975	American Eagle Ops Manager/De-Ice
130.200	United Express	Flight/Gate Inbnd	132.000	Ryan Aviation Flight Services
130.225	United	Aero Maintenance	136.700	A.C.A.R.S. User Unknown
130.250	American	Aero Maintenance	136.750	A.C.A.R.S. User Unknown
130.300	All (not at ORD)	AIRINC Remotes	136.800	A.C.A.R.S F-6 United
130.325	Mexicana	Flight Operations	136.850	A.C.A.R.S. User Unknown

ACARS Data Link Systems:

Aircraft Communications, Addressing and Reporting System data transmissions have replaced the majority of airline company voice radio communications. Many messages are generated automatically by sensors aboard the aircraft. Each message has a "message label" and in many cases the type of message represented by the label constitutes all of the information being relayed. Variations exist among different airline companies. Messages are pre-formatted.

ACARS VHF Frequencies:

129.125 Tertiary / O'Hare F3
130.025 Secondary / O'Hare F2 / ARINC Intl Flights
130.425 Auxilliary Channel for USA
130.450 NW Airlines-O'Hare F5 / USA Domestic
131.125 United Airlines / O'Hare F4
131.450 Primary Channel in Japan
131.475 Air Canada
131.525 Secondary Channel in Europe
131.550 Primary / O'Hare F1
131.725 Primary Channel in Europe
131.850 Europe New Channel
136.700 Active O'Hare - Unknown
136.750 Active, USA and Europe
136.800 United Airlines / O'Hare F6
136.850 SITA North American Channel
136.925 European ARINC Channel

ACARS Global Shortwave Network (HF DL):

Auckland: 13.352 10.084 5.583
Bahrain: 21.982 17.967 11.312 10.045 8.885
Barrow: 8.936 6.646
Bolivia: 21.997 13.315 11.318
California: 21.934 13.276 11.327 10.081 8.559 4.672
Guam: 11.306 8.927
Hat Yai: 17.928 13.270 6.535
Hawaii: 17.936 11.348 11.312 10.075 8.912
Johannesburg: 21.949 8.834 4.681
Krasnoyarsk: 13.321 10.087
New York: 21.934 17.919 13.275 11.315 8.912 5.523
Reykjavick: 15.025 11.184 8.977 6.712 5.720
Santa Cruz: 13.315
Shannon: 11.384 8.942 8.843 6.532 5.547
Other possible freqs: 17.919 11.348 10.084 8.843

MESSAGE LABELS / TYPES:

:: Frequency Change Request
00-Emergency Situation Report
10-American Airlines/Eagle Frequency Change
10-British Airways ARR (ETA) Report
10-British Airways FST Report
10-Fedex ATIS Request Message
11-Fedex In Range Arrival Report
14-General Aviation Free Text
15-General Aviation Position Report
16-General Aviation Weather Request
16-Fedex Position Report-AUTPOS
17-Northwest Airlines Position/Weather
1L-Atlantic Coast Airlines/United Express QF OFF
24-Northwest Airlines Weather Request
2S-Weather Request

2U-Weather
30-UPS Position Report
31-Northwest Airlines Weather Report
36-Northwest Airlines In Range Message
39-Northwest Airlines arrival/free text message
3F-UPS ETA Downlink Message
3G-UPS Free Text Message Format
3J-UPS Downlink Message
3S-UPS Downlink Message
3U-UPS Uplink acknowledgement
46-Pilot Report "Pirep"
47-747-400 Airway Position Downlink
48-Misc. Messages
49-Air Canada Status Reports
4A-Air Canada latest new format
4M-Air Canada Uplink to Cockpit Printer
4Q-Air Canada departure format
4R-OFF Air Canada-Specific Message Format
4X-Air Canada Frequency List
50-Possible HF DL Message router
51-Ground GMT Request
52-Ground UTC Request
54-Voice Contact Request
57-Alternate Aircrew Initiated Position Report
5D-ATIS Request
5P-Temp Suspension of ACARS Serv (reponse to Q6)
5R-Position Report
5U-Downlink Weather Request
5Y-ETA Revision
5Z-Airline Designated Downlink / Misc Msgs
7A-Engine Data (Aircrew Initiated)
7B-Misc Aircrew Initiated Msgs
80-Delta/Canadian specific 3C03 position report format
81-Aircrew Addressed Downlink - Airline Specific
82-Aircrew Addressed Downlink - Airline Specific
83-Aircrew Addressed Downlink - Airline Specific
84-SAS Free Text Message
85-Aircrew Addressed Downlink - Airline Specific
86-Aircrew Addressed Downlink - Airline Specific
87-Aircrew Addressed Downlink - Airline Specific
88-Aircrew Addressed Downlink - Airline Specific
89-Aircrew Addressed Downlink - Airline Specific
8X Uplink ATIS Information
A1-Deliver Oceanic Clearance
A3-Deliver Departure Clearance
A4-Acknowledge Departure Clearance
A5-Request Position Report
A6-Request ADS Report
A7-Forward Free Text to Aircraft
A8-Deliver Departure Slot
A9-Deliver ATIS Information

A0-ATIS Facilities Notification
 B1-Flight Plan Oceanic Clearance Request
 B2-Request oceanic Readback
 B3-Request Departure Clearance
 B4-Acknowledge Departure Clearance
 B5-Provide Position Report
 B6-Provide ADS Report
 B7-Forward Free Text to ADS
 B8-Request Departure Slot
 B9-Flight Plan Info Receipt Message or ATIS Info Req

C0-Message to all Cockpit Printers
 C#-Message to Cockpit Printer #
 CA-Printer Error
 CB-Printer Busy
 CC-Printer in Test Mode
 CD-Printer out of Paper
 CE-Printer Buffer Overrun
 CF-Printer Reserved Status
 F3-Dedicated Transceiver Advisory
 H1-Message to/from terminal
 HX-Undelivered Uplink report
 M1-IATA Departure Msg
 M2-IATA Arrival Msg
 M3-IATA Return to Ramp
 M4-IATA Return from Airborne Msg
 Q0-ACARS Link Test
 Q1-ETA Departure/Arrival Report
 Q2-ETA Report
 Q3-GMT Clock Update
 Q4-Voice Circuit Busy - Reply to 54
 Q5-Unable to process uplinked messages
 Q6-Voice-to-ACARS change over-Joining ACARS
 Q7-Delay message
 QA-Departure Report
 QB-Off report
 QC-On Report
 QD-Arrival Report / In Fuel
 QE-Out/fuel destination report

QF-OFF (Off/destination report) / Out Fuel
 QG-Returning to Gate Report
 QH-Out Report
 QK-Land Report
 QL-Arrival Report
 QM-Arrival Info Report
 QN-Diversion Report
 QX-Intercept, airborne subsystem unable to process
 RA-Command Response Uplink
 RB-Response of aircraft terminal to RA uplink message
 WX-Weather Report

United Airlines 5Z parameters:
 (Precedes message content)

/B1 Request Weight and Balance
 /B3 Request Runway Data
 /CD Weight and Balance
 /CG Request Pre-departure clearance (PDC)
 /CM Crew Scheduling
 /CS Customer Service
 /C3 Off message
 /C4 Flight dispatch
 /C5 Maintenance Message
 /C6 Customer Service
 /10 PIREP
 /C11 International PIREP
 /DS Late message
 /D3 Holding pattern message
 /D6 From-to +date
 /D7 From-to+Alternate+Time
 /EO In range
 /PW Position weather
 /RL Request Release
 /R3 Request howgozit message
 /R4 Request the latest POSBD
 /TC From-to-fuel
 /WB From-to
 /W1 Request weather - City

Several types of computer based software systems are available to enable the radio hobbyist to receive these data transmissions. Transmissions are extremely brief, so the user must "sit" on a single frequency with the radio's squelch open. Success in receiving these data transmissions is dependent on both the quality of the software or system and the filter parameters of the radio receiver in use. Line level, tape out, earphone or external speaker jack audio outputs from the receiver can usually be used, though volume levels can be critical. Joining an ACARS internet special interest users group will assist the hobbyist with understanding message content and learning more.

ACARS Software sources:

- <http://www.airnavsystems.com/ANAD/index.htm> (I recommend this software - editor)
- <http://www.geocities.com/CapeCanaveral/Cockpit/9870/acars.html> (Windows "WACARS" software)
- <http://www.acarsonline.co.uk/> (Windows)
- <http://www.acarsd.org/> (Windows & Linux)
- <http://www.blackcatsystems.com/software/multimode.html> (Apple Macintosh only - "Multimode" software)
- <http://www.arireggioemilia.org/download/ACARS/PCHF DL%20%28HF%29/> (PCHF DL.zip - Shortwave)

800 Mhz Arinc Trunked System:



Arinc operates a very low power 800 Mhz Motorola trunked system at O'Hare for airline company communications. It is a type two hybrid system. Some blocks within the system function as type one, and others as type two. In 2004 Arinc began to add Iden format digital radios as a system option. It adds capacity to the system, as a single channel can now carry five or six sets of voice communications, and provides a nationwide connect capability. Currently, Iden format communications cannot be monitored using hobbyist type radios, but many analog communications remain active. Arinc has stated all of their trunked systems were transitioned to type two format prior to adding Iden service, but it is our belief the O'Hare system continues to operate in hybrid mode. Most activity in lower system blocks is now gone, having made the move to Iden service. This includes the majority of International Terminal 5 users. The most commonly seen radio in Iden service at O'Hare is the Motorola R750+, shown at left.

System ID: 1216 Connect Tone: 83.72 Hz Uniden Fleet Map: B0-1, B1-5, B2-2, B3-2, B4/5-12, B6-2, B7-4

Apparently transitioned to Iden only service: 855.9375 855.0875 856.3375

Analog frequencies: 857.3375 858.3375 859.3375 860.3375
856.8875 857.8875 858.8875 859.8875 860.8875

Analog Talk Group ID's: (system supports I-Call direct connect in both analog and digital modes)

- 044-1 Shuttle Busses
- 201-1 Arinc radio technicians
- 307-3 Baggage handlers
- 307-4 Baggage handlers
- 400-1 American Airlines: 1A Flight Service / GSC Rep - International Services
- 400-2 American Airlines: 1B Zone 1 Proaact/Ops Manager Bag Team/Midnite/Nightrider-H/K/L Ops & Parking
- 400-3 American Airlines: 1C Zone 2 Proaact / K Mobile CC - C-CON at L Gates
- 400-4 American Airlines: 1D Zone 3 Proaact - C-CON at H/K Gates
- 400-5 American Airlines: 1E Zone 4 Proaact / H Mobile CC -Baggage
- 400-6 American Airlines: 1F Zone 5 Proaact / American Eagle to AA Ramp Connect - C-CON at H/K Gates
- 400-7 American Airlines: 2A Auto Maintenance / FAR Maintenance / Scrub Aircraft Maintenance
- 400-8 American Airlines: 2B De-Icing / IT5 Hardstand / R Service
- 400-9 American Airlines: 2C AA Mail / Air Freight Cargo Operations
- 400-10 American Airlines: 2D Aircraft Maintenance
- 400-11 American Airlines: 2E Cabin Services / Crew Services
- 400-12 American Airlines: 2F Passenger Service / Iberia Arrivals
- 400-13 American Airlines: 3A Emergency / Bag Room Maint / American Eagle to AA Ramp Connect
- 400-14 American Airlines: 3B ATO / Bag Room / Customer Service Manager
- 400-15 American Airlines: 3C Fueling - Fuel / Load / Weight
- 600-4 Active, probably American Airlines
- 601-3 American Airlines Security
- 601-4 American Airlines
- 601-6 American Airlines
- 610-2 American Airlines
- 610-3 American Airlines H gates routing
- 610-4 American Airlines
- 610-6 American Airlines
- 610-7 American Airlines
- 700-1 Lav, Cabins, Tugs, Bags, Catering, H/G Gates - probably American Eagle
- 700-2 American Eagle Base, Dispatch
- 700-3 American Eagle Base, Gate Operations
- 700-4 American Eagle C-Con H & K gates
- 700-5 Special Bags, animals, oversize, Zones 2 & 5 - probably American Eagle
- 700-6 Zone 5, Meals, Pusher Trucks, Hangar, bags, Gates: G9, G10, G12, G14A - probably American Eagle
- 700-7 Bag unload, Load Chief, A/C Maint, Zone 3, G18, G16 - probably American Eagle
- 700-13 Active, unknown

Other talk group activity is present on the system. The above is what has been observed recently.

Other Arinc FM land mobile frequencies are licensed at O'Hare but no activity has been observed to date. They include repeaters on: 451.7625, 452.0625, 452.1375, 452.2875, 452.4125 & 464.9750, and simplex mobile operations on 460.800.

City of Chicago Airport Communications:

City operations are almost always in a state of flux at O'Hare. The start of the O'Hare expansion project brings with it 5 new UHF repeaters dedicated to the task. Non-emergency service users are being transitioned to a new Apco P-25 format Motorola UHF digital trunked system. VHF, UHF and 800 Mhz users remain active, as well.

800Mhz Public Safety Motorola Type 2 TRS (low power) System ID: 1505 Connect Tone: 105.88 Hz
Frequencies: 856.7625 857.7625 858.7625 859.7625 860.7625 859.7125 860.7125

Talk Group ID's:

49616 Department of Aviation Dispatch (being transitioned to UHF trunked system - possible console patch)
49648 Tradesmen
49744 Construction
49808 Landside
49840 Emergency H
49872 Chicago Police Department
49904 Chicago Fire Department J radios
49968 Department of Aviation Police
50000 Emergency M
50032 Details and special operations
50064 Access control center and Department of Aviation security
50448 Tac
50480 Radio technicians
50512 HAW-0

The above radios exist in distinct groups at O'Hare: Public Safety radios, Tac radios, Trades radios, Snow radios, Lead vehicle radios and Radio Shop radios. Each has their own channel configuration.

470 Mhz Field Operations Motorola Type 2 Digital TRS System ID: 013F Connect Tone: 105.88 Hz
Frequencies: 478.9375 478.6875 478.5625 478.4125 478.112 477.9625 477.8125 477.4625 476.9875 476.5125

Talk Group ID's:

48	Dispatch AMC / Sander 1	304	Deicer 4
80	Operations	336	Deicer 7
112	Mechanical shop	368	Deicer 5 & 6 / Vammas 2
144	Broom 8 & Sander 3	400	Sander 10
176	Broom 9	432	Salters
208	Snow 1 (Ramp)	464	Radio shop
240	Snow 2	496	"Three-In-One" / Vammas 1
272	Deicer 3	4112	All-Talk talk group

Non-Trunked / Conventional City Systems:

000.8000 (AM) Parking Info TIS
072.5800 Data
088.1000 (WFM) Terminal Info TIS
153.8300 (156.7) CFD MABAS Fireground
154.2200 (156.7) CFD Administrative
154.2950 (91.5) CFD Fireground
155.4750 (000.0) CPD ISPERN Base
155.8350 (127.3) Department of Aviation
158.8050 (127.3) Department of Aviation - some radios patched to trunked systems
158.8950 (203.5) CFD Incident Command
173.2050 Data
173.2100 Data
173.3900 Data
173.9650 Data
453.5000 (000.0) City Pagers
460.4750 (107.2) CPD Zone 1 16th & 17th Districts (O'Hare jurisdiction)
476.3750 Building & Trades F1 - O'Hare Expansion Project
476.4500 Building & Trades F2 - O'Hare Expansion Project
476.6500 Building & Trades F3 - O'Hare Expansion Project
477.0375 Building & Trades F4 - O'Hare Expansion Project
478.7125 (D047) Building & Trades F5 - O'Hare Expansion Project

DHS, TSA and Homeland Security Notes:

Once a global haven for planespotters, anyone seen today observing airfield operations or otherwise acting in a manner deemed "suspicious" by the observer is likely to draw official inquiry and may end up being searched and/or detained. Gate areas are no longer open to non-ticketed visitors and only Terminal 5 offers any serious food or vending services to them. We have heard a photography permit is now required to take pictures on O'Hare property, at press time we were still investigating that option. Our hopes are that the world situation will eventually improve, and that the O'Hare expansion project will eventually include some type of observation facility. Sadly, we cannot currently recommend visiting O'Hare property or it's periphery for the purposes of casual observations.

The Transportation Security Administration has a heavy presence at the O'Hare terminals, especially Terminal 2. They operate under the auspices of the Department of Homeland Security, whose vehicles and staff are also sometimes seen. The often maligned TSA staff is charged with a vital, challenging and often difficult task. We encourage you to support their mission. Communications are in Apco P-25 digital format, mostly non-encrypted and operate simplex on these frequencies: 169.3000, 172.1500 & 172.9000.

TSA Radio Codes:

10-1	Breach	10-98	Deplaning
10-2	Good signal	10-99	VIP
10-4	Acknowledgement	10-100	Break Request
10-6	Standby	10-200	Reverse screening
10-7	Out of service		
10-8	In service	Code 1	Law Enforcement Officer Requested
10-9	Repeat	Code 2	Screener needs help
10-20	Location	Code 3	Medical Emergency
10-76	Enroute	Code 4	Supervisor needed
10-97	Radio check		

TSA Radio Callsigns:

Tom 2	Terminal Two Manager	Bravo 22	Bag Shift Manager 2 nd Shift
Sam 2	Passenger Shift Manager	Bravo 23	Bag Shift Manager 3 rd Shift
David 4A	CSS Checkpoint 4A	Charlie 2	CTX Supervisor
Adam 1	Administration Terminal Two	Charlie A	CTX North
Quebec 4A	Q Monitor Checkpoint 4A	Charlie B	CTX Central
Zebra 1-4	Bag Supervisors North	Charlie C	CTX South
Zebra 5-8	Bag Supervisors South	Sierra 1	Curbside ETD North
Bravo 2	Bag Shift Supervisor	Sierra 2	Curbside ETD South
Bravo 21	Bag Shift Manager 1 st Shift		

Any homeland defense related incident or circumstance on or involving the field brings a rapid, multi-agency response involving TSA, DHS, FAA, airline security staff and both city and federal agencies.

Any incident involving aircraft aloft will also involve the North American Air Defense Command's (NORAD) Northeast Air Defense Sector (NEADS). Illinois, Wisconsin and Indiana Air National Guard F-16 interceptors provide routine and threat level directed combat air patrols, and would be tasked with aircraft interception. The usual callsigns for the NORAD communications networks include Huntress, Northern Lights and Magic. Primary frequencies for Chicago combat air patrols (CAP) have included 228.900, 252.900, 260.900, 282.600, 320.600, 328.000, 335.950, 355.200, 364.200, 364.800 and 377.000, all in AM mode. Area F-16's on active missions typically employ frequencies in the 138.000 -to- 144.000 range, also in AM mode on 25 Khz steps for air to air tactical communications. NORAD NEADS also has a color-coded UHF channel plan. Known presets include:

Blue-01 288.200	Blue-13 260.900	Blue-25 324.000
Blue-02 285.200	Blue-14 265.400	Blue-31 364.800
Blue-03 338.800	Blue-15 271.000	Blue-33 387.000
Blue-04 326.400	Blue-17 282.600	Blue-40 300.125
Blue-07 364.200	Blue-19 288.400	Blue-55 320.900
Blue-09 228.900	Blue-20 295.800	Blue-60 321.300
Blue-10 234.600	Blue-21 362.300	Blue-60 364.800
Blue-11 252.000	Blue-24 320.600	

United Airlines: (Note: United has new consoles which permit cross patching of any of their communications)

VHF Flight Operations:

- 128.900 Load planning
- 128.950 Ground and inbound maintenance
- 129.075 Ramps and pushing at even numbered C Gates, International operations
- 129.300 Line Maintenance and hangars
- 129.350 Standard channel for Arinc contact
- 129.375 United Express (Atlantic Coast Airways)
- 130.150 Odd numbered C gates
- 130.200 United Express flight operations and inbound gate contact
- 130.225 In-flight maintenance contact
- 131.075 B Gates holding
- 131.300 B and E gates operations
- 131.350 United Express carriers - Chataqua, Skyway & others
- 131.375 C Gates operations
- 131.400 Dispatch, passenger services, security. Also provides dispatch services for other airlines under contract.

Conventional UHF radio Operations: (“Zone Nine” in trunked radios)

<u>CHANNEL</u>	<u>FREQ</u>	<u>CTCSS</u>	<u>MODE</u>	<u>USE</u>
F01	460.7250	(203.5)	Repeat	Ramp Frequency “A”
F01 T/A	460.7250	(203.5)	Simplex	Ramp Frequency “A” Talkaround
F02	464.3250	(203.5)	Repeat	Ramp Frequency “B”
F02 T/A	464.3250	(203.5)	Simplex	Ramp Frequency “B” Talkaround
F03	464.7750	(203.5)	Repeat	Ramp Frequency “C”
F03 T/A	464.7750	(203.5)	Simplex	Ramp Frequency “C” Talkaround
F04	460.7500	(203.5)	Repeat	Ramp Frequency “D”
F04 T/A	460.7500	(203.5)	Simplex	Ramp Frequency “D” Talkaround
F05	464.2125	(203.5)	Repeat	Zone 1 - Gates B1, B2, B3, B4, B5, B6, B7, B8
F05 T/A	464.2125	(203.5)	Simplex	Zone 1 Talkaround
F06	464.7125	(203.5)	Repeat	Zone 2 - Gates B9, B10, B11, B12, B14, B15, B16, B17, B18
F06 T/A	464.7125	(203.5)	Simplex	Zone 2 Talkaround
F07	464.3875	(203.5)	Repeat	Zone 3 - Gates C9, C11, C15, C17, C19, C21, C23
F07 T/A	464.3875	(203.5)	Simplex	Zone 3 Talkaround
F08	464.4625	(203.5)	Repeat	Zone 4 - Gates C1, C2, C3, C4, C5, C6, C7, C8
F08 T/A	464.4625	(203.5)	Simplex	Zone 4 Talkaround
F09	464.5625	(203.5)	Repeat	Zone 5 - Gates C10, C12, C16, C18, C20, C22, C24
F09 T/A	464.5625	(203.5)	Simplex	Zone 5 Talkaround
F10	464.6125	(203.5)	Repeat	Zone 6 - Gates C26, C27, C28, C29, C30, C31, C32
F10 T/A	464.6125	(203.5)	Simplex	Zone 6 Talkaround
F11	464.6375	(203.5)	Repeat	Zone 7 - Echo Air Canada trips, Gates E1, E2, E3, E3A
F11 T/A	464.6375	(203.5)	Simplex	Zone 7 Talkaround
F12	464.6625	(203.5)	Repeat	Zone 8 - Gates B20A, B20B, B22, B24
F12 T/A	464.6625	(203.5)	Simplex	Zone 8 Talkaround
F13	464.6875	(203.5)	Repeat	Zone 9
F13 T/A	464.6875	(203.5)	Simplex	Zone 9 Talkaround
F14	464.7375	(203.5)	Repeat	Zone 10
F14 T/A	464.7375	(203.5)	Simplex	Zone 10 Talkaround
F15	464.8125	(203.5)	Repeat	Zone 11 (also Dobb’s Foods F2)
F15 T/A	464.8125	(203.5)	Simplex	Zone 11 Talkaround
F16	464.8875	(203.5)	Repeat	Zone 12
F16 T/A	464.8875	(203.5)	Simplex	Zone 12 Talkaround
F17	466.3125	(203.5)	Simplex	Special Assignment 1
F18	466.3625	(203.5)	Simplex	Special Assignment 2
F19	466.3875	(203.5)	Simplex	Special Assignment 3
F20	466.4125	(203.5)	Simplex	Special Assignment 4
F21	466.4375	(203.5)	Simplex	Special Assignment 5
F22	466.4625	(203.5)	Simplex	Special Assignment 6
F23	466.5375	(203.5)	Simplex	Special Assignment 7
F24	461.5625	(203.5)	Repeat	Bag Match Manager
F24 T/A	461.5625	(203.5)	Simplex	Bag Match Manager Talkaround
F25	461.6375	(203.5)	Repeat	Bag Match Base
F25 T/A	461.6375	(203.5)	Simplex	Bag Match Base Talkaround
F26	464.5500	(203.5)	Simplex	International Special Assignment
--	461.0125	(203.5)	Repeat	Dobb’s International Food Services

New United Airlines Licenses and Systems:

WNCW235: 460.650 460.675 460.775 460.800 460.825 460.850 460.875

Note: -Other airlines are currently using the above frequencies at O'Hare

WMP1905: 452.050 452.100 452.150 452.200 452.225 452.275 452.625 452.750

WMPH226: 460.6875 460.7125 460.7375 460.7625 460.8125 460.8375 460.8625 460.8875

United Airlines UHF Trunked Radio System:

Frequencies: 476.3375 476.4875 476.5375 476.5875 476.6125 476.8125 477.0125
477.1125 477.1625 477.1875 477.2125 477.2375 477.2625 477.3125

Motorola UHF Type Two Trunked System: System ID: 6F1D Connect Tone: 76.60 Hz

Base Frequency: 476.3125 Spacing: 12.5 Khz Offset Channel Number: 380

<u>CH</u>	<u>TG</u>	<u>USER</u>	<u>ZONE/BANK</u>				
F01	16	SOC 1	Z1 - OO	F01	3216	Radio and phone technicians	Z3-MK
F02	48	SOC 2		---	3440	Active - use unknown	
F03	80	SOC 3		---	4648	Security	
F04	112	SOC 4		---	4752	A/C HVAC & Mechanical Services	
F05	144	SOC 5		F01	4816	Garage	Z4-GQ
F06	176	SOC 6		F02	4848	Pit Stop - Equipment Repair	
F07	208	SOC 7		F03	4880	Freight House	
F08	240	SOC 8		---	5712	Active - use unknown	
F09	272	SOC 9		---	5808	Active - use unknown	
---	288	Starters		---	5840	Active - use unknown	
F10	304	SOC 10		---	6192	Active - use unknown	
F21	336	Zone 1 group all call		---	6432	Active - use unknown	
F11	368	Terminal 2 Tower		F01	6448	Main Lobby customer service	Z5-CS
F12	400	Crisis Bags - gate E1		F02	6640	Terminal 5 customer service	
F13	432	Dobbs Food Service		F03	6480	C/B Gates Lobby customer service	
F14	464	Weather Center		F04	6608	Claim Area customer service	
F15	496	Zone 1 unit to unit channel 1		F05	6576	Terminal 2 gates customer service	
F16	528	Zone 1 unit to unit channel 2		F06	6512	B gates customer service	
F17	560	Great Lakes		F07	6544	C gates customer service	
F18	592	Air Canada communications		F08	6416	Customer service emergency	
F19	624	Air Wisconsin communications		---	6736	Customer service special bags	
F20	656	United Express communications		---	6768	Customer service	
---	912	Active - use unknown		---	6960	Customer service - B gates	
---	1040	Baggage operations		---	6992	Customer service	
---	1136	Bag Room		F09	7024	Customer service Aux. channel 1	
---	1280	Bags sectors 2 & 3		F10	7056	Customer service Aux. channel 2	
F01	1616	Transfer Bags Zone 1	Z2-CG	F01	8016	Mail House	Z6-FF
F02	1648	Transfer Bags Zone 2		F02	8048	Post Office	
F03	1680	Transfer Bags Zone 3		F03	8080	Freight House	
F04	1712	Transfer Bags Zone 4		F04	8112	Freight Supervisors	
---	1728	Transfer Bags operations		F05	8208	Group all call	
F05	1744	Transfer Bags Zone 5		F06	8240	Zone 6 freight unit to unit channel 1	
F06	1776	Transfer Bags Zone 6		F07	8272	Zone 6 freight unit to unit channel 2	
F07	1808	Transfer Bags Zone 7		---	8432	Active - use unknown	
F08	1840	Transfer Bags Zone 8		---	9584	Bag claim area access control	
F09	1872	Transfer Bags Zone 9		---	9600	Active - use unknown	
---	1888	Transfer Bags operations		F01	9616	Sorter mechanics	Z7-PV
F10	1904	Transfer Bags Zone 10 International		F02	9648	Terminal mechanics	
F11	1936	Product Sort communications		F03	9680	Hangar mechanics	
F12	1968	Positive Bag Match Channel		F04	9712	Cargo	
F13	2000	C9 Reroute (missed bags)		F05	9744	Cargo radio technicians	
---	2016	Active - unknown use		F06	9776	PMR	
F14	2032	Front Bag Room / Odd Bags		F07	9808	Zone 7 unit to unit channel 1	
F15	2064	T5MK		F08	9840	Zone 7 unit to unit channel 2	
F16	2096	Deice Alpha Team primary		F01	11216B	Gate mechanics	Z8-MM
F17	2128	Fuels		F02	11248C	Gate mechanics	
F18	2160	Deice Team secondary		F03	11280	Mechanics unit to unit channel 1	
F19	2192	Deice Team Aux. Channel 1		F04	11312	Mechanics unit to unit channel 2	
F20	2224	Deice Team Aux. Channel 2		F05	11344	Mechanics unit to unit channel 3	
F21	2256	Air Canada Bags		F06	11376	JL	
F22	2288	International Bags		F07	11408	Line operations	
F23	2320	Busses		F08	11444	Hangar operations	
F24	2352	Zone 2 group all call		F09	11472	Terminal 5 operations	
				F10	11504	Zone 8 group all call	

Other FM Land Mobile Radio Operations:

<u>Frequency</u>	<u>Tone</u>	<u>User & Notes</u>
45.36		IL Emer Management Agency
45.44		IL Emer Management Agency
151.6250		Parking lot escorts
151.9250	(71.9)	Allied Maintenance
153.3950		Lithonia Lighting
154.5700		Unknown hangar operations
154.6000	(186.2)	Parking lot escorts
155.2800	(000.0)	Hospital Emergency Network
162.2250		U.S. Postal facility maintenance
164.1000	(100.0)	U.S. ICE, repeats 162.925
164.3750		Postal flight loading
165.6125		FAA possible use
165.7125	(136.5)	FAA base/mobile simplex
166.1750		FAA/NTSB repeater
166.3750		U.S. Postal operations
166.4625		U.S. ICE
166.5875		U.S. ICE
167.2125	(167.9)	FBI B1/B2 repeats 163.9875
168.8250	(100.0)	U.S. ICE, repeats 162.900
171.9750		Postal flight loading
172.1750	(000.0)	FAA
172.9000		FAA repeats 169.300
172.9250	(136.5)	FAA repeats 169.325
172.9500	(136.5)	FAA repeats 169.350
408.0500	(192.8)	U.S. Postal operations
408.7500		U.S. Postal operations
411.4000	(123.0)	U.S. Postal Bldg Rpts 408.4750
411.4750		U.S. Postal maintenance
413.6000	(000.0)	Windshear detector telemetry
451.4500	(D365)	Cab line spotters
451.8375		Nippon Air Cargo
452.7375	(186.2)	Prospect Services cleaners
454.9500	(000.0)	UHF Airphone, w/459.950
454.9750	(000.0)	UHF Airphone, w/459.975
460.6500	(123.0)	United Express bag room
460.6500	(131.8)	US Air
460.6750	(100.0)	Prospect wheelchair service
460.6750	(107.2)	Bag & Agents possibly TWA
460.7000	(167.9)	Aircraft loaders airline unknown
460.7000	(94.8)	SAS & Mexicana
460.7500	(127.3)	Continental bags & agents
460.7750	(218.1)	American Eagle bags
460.8000	(123.0)	US Air
460.8250	(103.5)	Delta & Iberia
460.8500	(85.4)	Baggage operations
460.8500	(127.3)	Continental bags & agents
460.8750	(192.8)	Northwest at E gates
461.0625	(D074)	O'Hare Hilton
461.1125	(114.8)	Fedex cargo hangar
461.3375	(D047)	O'Hare Hilton
461.7750	(D143)	United Express Atlantic Coast
461.7875	(D265)	Fedex facility mechanics
462.000	(D205)	Signature courtesy vans
462.1250	(D411)	United Express Atlantic Coast
462.3750	(D411)	United Express operations
463.2250	(D712)	Standard Parking F1
463.4000	(151.4)	Wisconsin Limo busses
463.6500	(97.4)	Signature flight services

<u>Frequency</u>	<u>Tone</u>	<u>User & Notes</u>
463.6750	(97.4)	Carson's restaurants
463.7750	(D712)	Standard Parking F2
463.8250	(131.8)	Airport Group International
463.9250	(D311)	Budget Rent A Car
463.9875	(D411)	United Express
464.1625	(179.9)	U.P.S. air cargo
464.3250	(D331)	O'Hare Hilton housekeeping
464.3750	(186.2)	United Training Center
464.5000	(107.2)	MSI Security
464.5250	(156.7)	Terminal restroom maintenance
464.7500	(131.8)	CW Limo operations
464.9250	(D245)	O'Hare Hilton
464.9750	(D156)	Active unknown user
467.5125		G.P.S. Technicians
467.7375		Tone signalling
468.4625		Unknown data link
468.9375		Active unknown user simplex
469.7125		Continental Airtran spotter
469.8500		Active unknown user simplex
471.0375	(127.3)	CTA El train line operations
471.9625	(114.8)	Continental Airtran busses
472.2875	(162.2)	Air-Sped messenger service
475.0875		Differential GPS data
851.1625	(136.5)	O'Hare -Midway Limo service
853.4625	(173.8)	O'Hare -Midway Limo service
853.5875	(156.7)	West Suburban Limo service
854.8875	(162.2)	Air cargo shippers
855.0125	(173.8)	O'Hare -Midway Limo service
895.6055	-TO-	895.8055 Airphone bases (digital)
850.6055	-TO-	850.8055 Airphone mobiles (digital)
Hudson Fuels trunked system: (Motorola type 2)		
937.6875	937.7000	937.7250
Talk groups: 16, 48, 80		
Fedex trunked system: (Motorola type 2)		
939.2000	939.2125	939.2250 939.2375 939.2500
Talk groups: 208, 240, 400		
American Airlines has a new license:		
451.2375	451.4625	451.7125 451.8625
452.0375	452.1875	452.3375 452.4875
452.6375	452.8625	

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Happy Scanning!

