

# Charlotte - Douglas International

## Standard Operating Procedures

CLT TRACON 7110.65D

Effective: May 1, 2011.

## CHAPTER 1. Departure/Satellite Radar

### SECTION 1. EQUIPMENT

1-1-1. Callsign Usage and Frequency Delegation: The following callsigns and frequencies shall be used when working positions at CLT TRACON.

Callsign	Frequency	VOX Channel
<b>Departure</b>	<b>120.500</b>	<b>CLT-W</b>
Satellite	134.750	CLT-N

NOTE: Bold letters indicates the base position.

### SECTION 2. POSITION DUTIES AND RESPONSIBILITIES

#### 1-2-1. DEPARTURE RADAR EAST/WEST RESPONSIBILITIES

a. Provide standard separation and radar service to all aircraft within Departure Radar's delegated airspace.

#### 1-2-2. SATELLITE RADAR RESPONSIBILITIES

a. Provide standard separation and radar service to all aircraft within Satellite Radar's delegated airspace.

b. When simultaneous approaches are in use, vector IFR satellite arrivals landing at Charlotte at 5000' from the west and from the east.

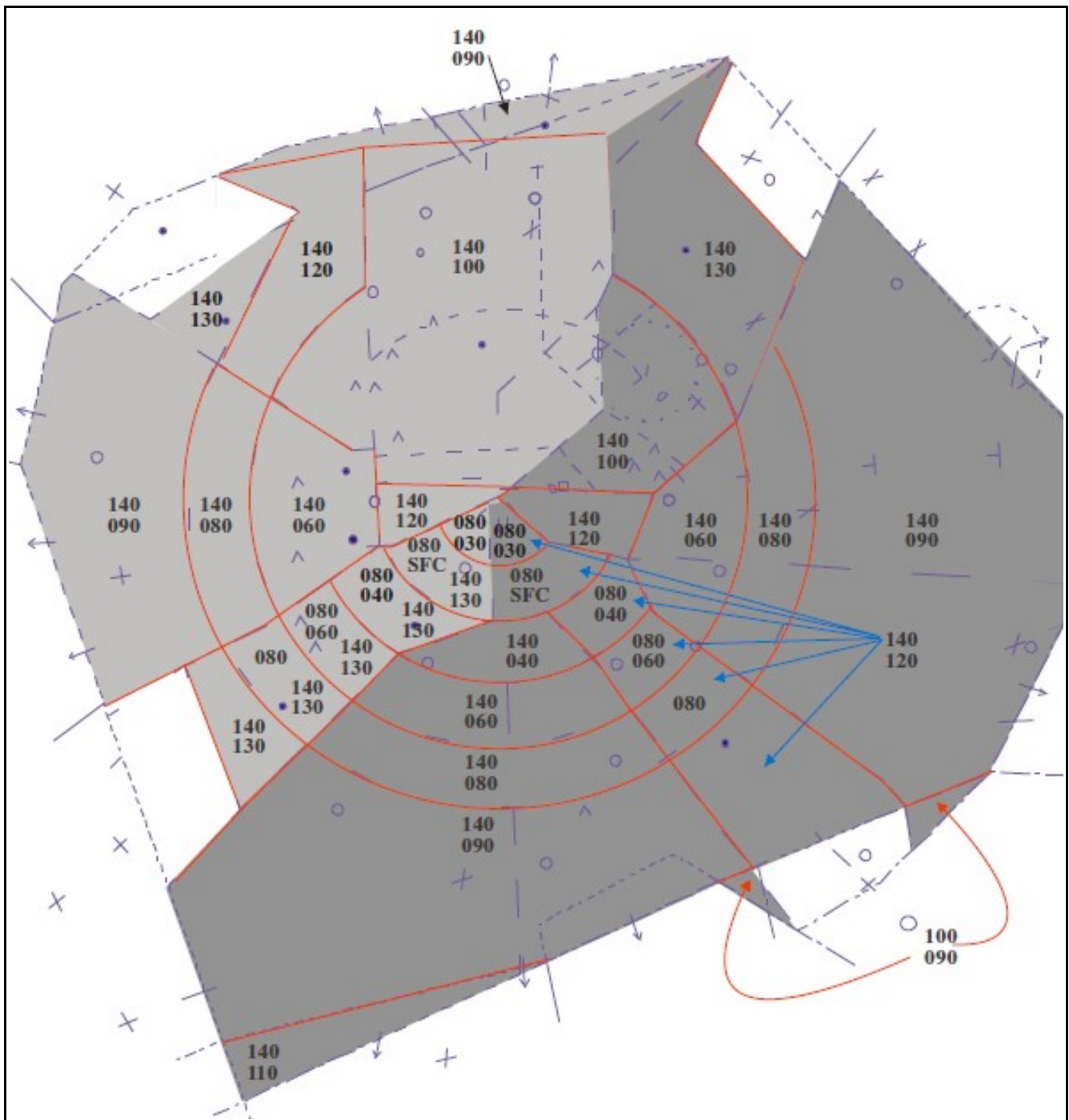
c. Vector VFR satellite arrivals landing Charlotte at an appropriate VFR altitude.

d. Satellite Radar shall assign VFR aircraft over-flying Charlotte airspace via the satellite airspace corridor east to west at 4,500, unless otherwise coordinated.

e. Satellite Radar shall assign aircraft over-flying Charlotte airspace via the satellite corridor west to east at 5,000, unless otherwise coordinated.

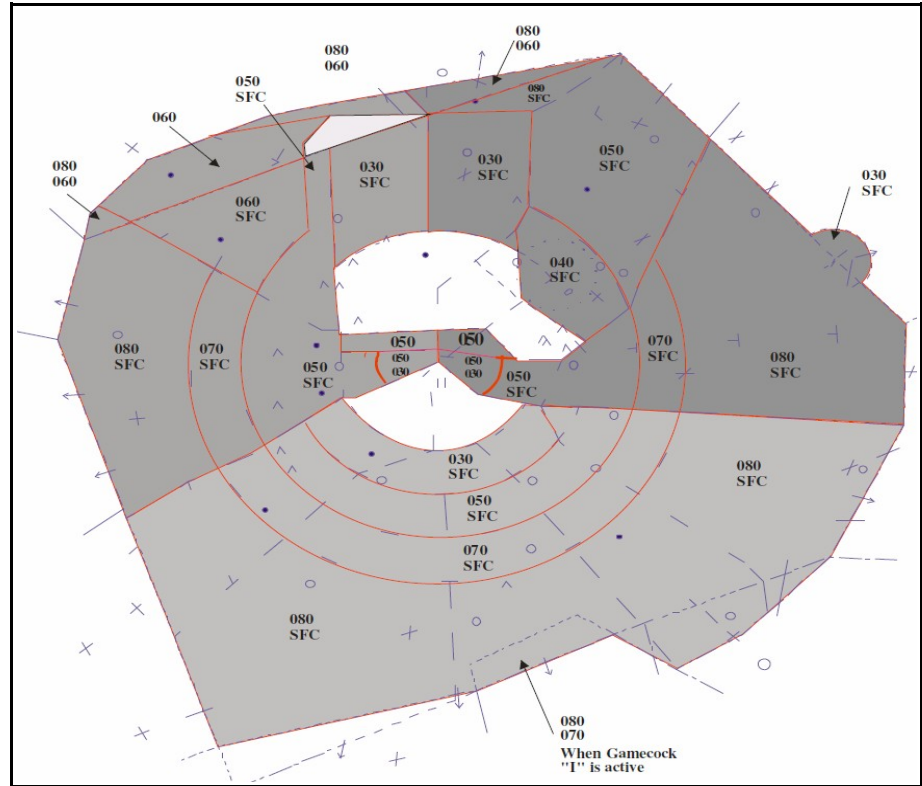
### SECTION 3. AREA OF JURISDICTION

#### DEPARTURE AIRSPACE (SOUTH)

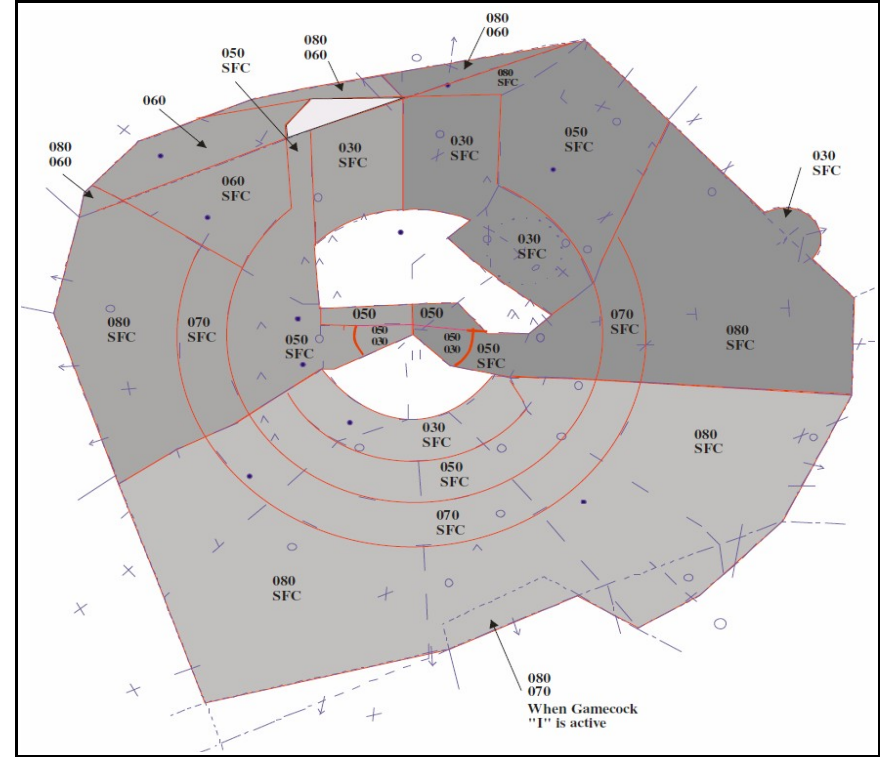


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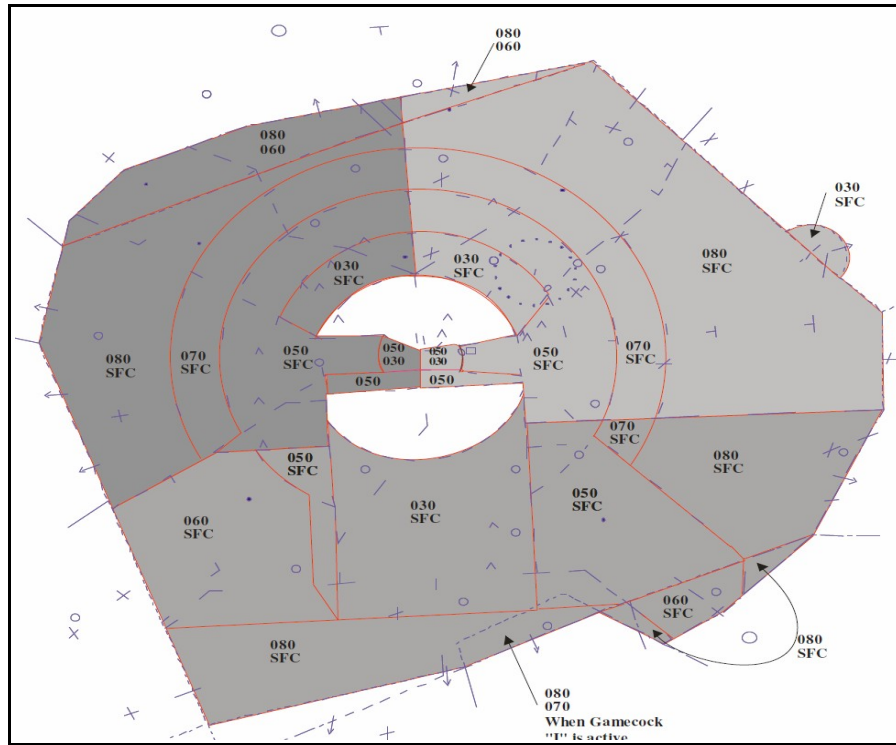
SATELLITE RADAR AIRSPACE (SOUTH) RUNWAY 23 INACTIVE



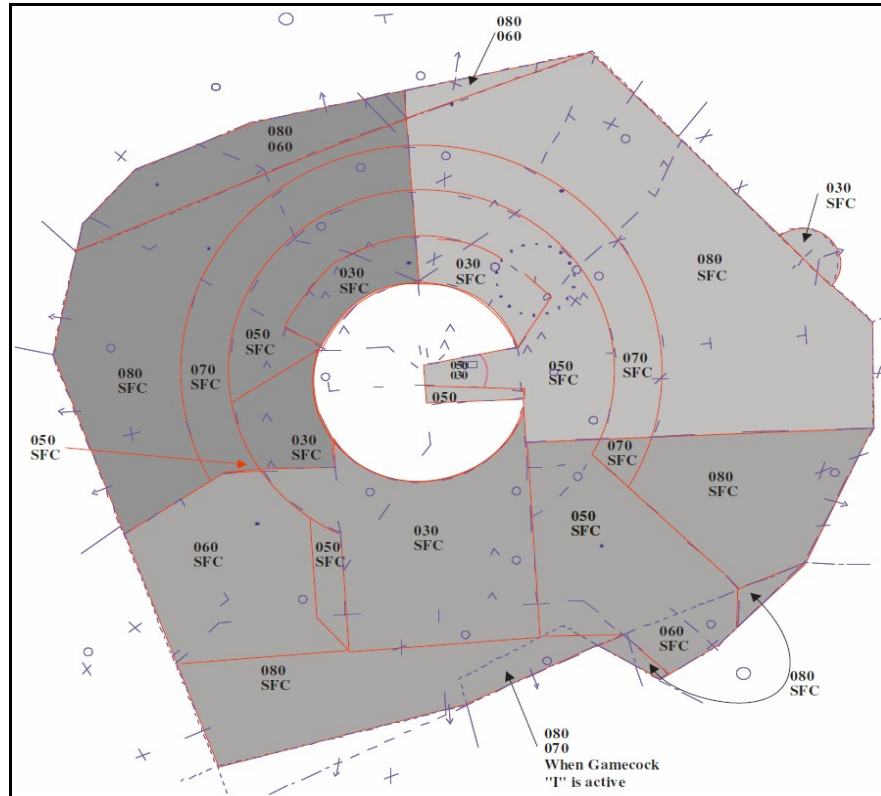
SATELLITE RADAR AIRSPACE (SOUTH) RUNWAY 23 ACTIVE



## SATELLITE RADAR AIRSPACE (NORTH) RUNWAY 5 INACTIVE



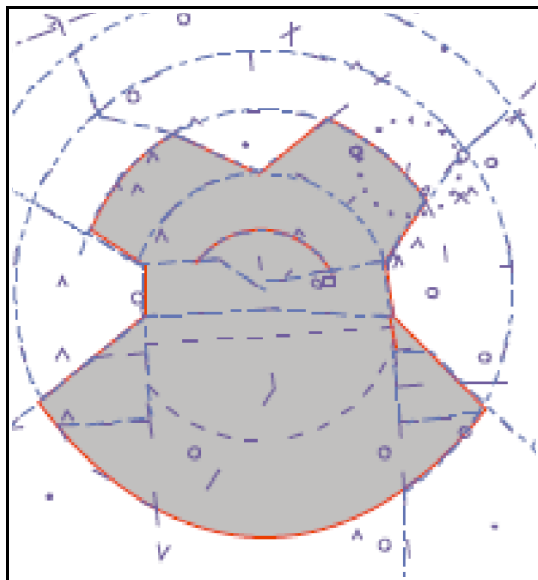
## SATELLITE RADAR AIRSPACE (NORTH) RUNWAY 5 ACTIVE



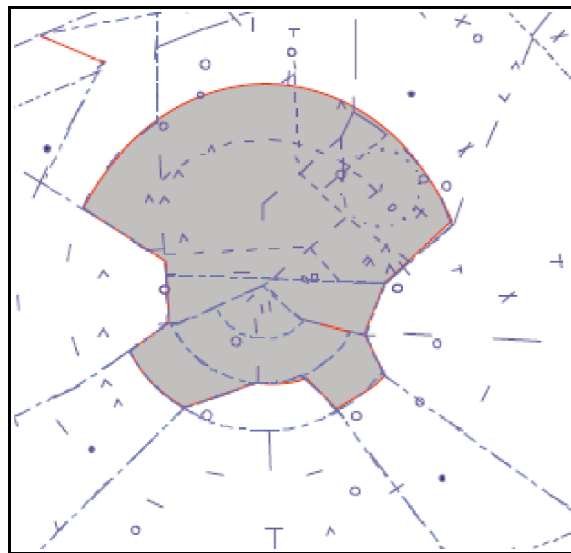


## DEPARTURE /ARRIVAL PREARRANGED COORDINATION AREA AIRSPACE

(SOUTH)



(NORTH)



### SECTION 4. PRE-ARRANGED COORDINATION, TRANSFER AREAS, AND POTENTIAL PROBLEM AREAS

1-4-1. DEPARTURE RADAR/ARRIVAL RADAR STARS PRE-ARRANGED COORDINATION AREA. A pre-arranged coordination area is established for traffic departing airports from within the Charlotte terminal area. The following procedures apply:

- a. Departure Radar may penetrate Arrival Radar East / West airspace without individual coordination utilizing the pre-arranged coordination area.
- b. Departure radar shall provide radar separation, including appropriate wake turbulence separation, from all arrival radar traffic when utilizing this prearranged coordination area.
- c. Arrival radar shall:
  - 1) Point out all untagged/untracked targets, point-outs, and IFR pick-ups to the appropriate departure radar position.
  - 2) Have the option to suspend this pre-arranged coordination procedure when operational conditions dictate.
- d. Automatic altitude readout of an aircraft under another controller's jurisdiction may be used for separation purposes when the aircraft are within pre-arranged coordination airspace.

## CHAPTER 2. Arrival Radar

### SECTION 1. EQUIPMENT

2-1-1. Callsign Usage and Frequency Delegation: The following callsigns and frequencies shall be used when working positions at CLT TRACON.

Callsign	Frequency	VOX Channel
<b>Arrival East</b>	<b>126.150</b>	<b>CLT-H</b>
Arrival West	125.350	CLT-U

NOTE: **Bold letters indicates the base position.**

### SECTION 2. POSITION DUTIES AND RESPONSIBILITIES

#### 2-2-1. ARRIVAL RADAR EAST/WEST RESPONSIBILITIES

- a. Provide service within Arrival Radar's delegated airspace.
- b. When the Runway 5 Final operation is in use, SHINE/JOHNS arrivals should be vectored for a left downwind entry, UNARM/ADENA arrivals should be vectored for a straight-in entry, MAJIC/SUDSY arrivals should be vectored for a right downwind entry, and CHESTERFIELD/HUSTN arrivals should be vectored for a right downwind or a right base entry.
- c. As soon as practical place an R, L, C, or X in the scratch-pad to reflect the assigned runway.

#### 2-2-2. APPROACH INFORMATION

It shall be the responsibility of the first radar controller to establish communication with a satellite airport IFR arrival to advise that arrival of the approach information (ATIS code, weather information, type of approach to expect, etc) referenced in FAAO 7110.65 paragraph 4-7-10 (Approach Information).

#### 2-2-3. PRE-ARRANGED COORDINATION AREAS

There are several Pre-Arranged Coordination Areas in use in the Charlotte Airspace. These areas and associated procedures are described in detail in the appropriate position chapters.



### SECTION 3. ARRIVAL RADAR FLOWS

a. Manage arrival routes, speeds, and altitudes so that traffic enters the final controller's airspace at the appropriate point and speed to establish an orderly and efficient traffic flow. Unless otherwise coordinated, assign altitudes as follows:

#### 1. North Operation

- a) Duals - Runways 36C/36R
  - Base leg from west – 7,000 feet
  - Base leg from east – 6,000 feet
  - Downwinds – 6,000 feet
  
- b) Duals - Runways 36L/36R
  - Base leg from west – 7,000 feet
  - Base leg from east – 6,000 feet
  - Downwinds – 6,000 feet
  
- c) Duals - Runways 36L/36C
  - Base leg from west – 7,000 feet
  - Base leg from east – 6,000 feet
  - Downwinds – 6,000 feet
  
- d) Trips – Runways 36L/36C/36R
  - Base leg from east (36R) – 6,000 feet
  - Base leg from east (36C) – 8,000 feet into "M" final box
  - Base leg from west (36L) – 7,000 feet
  - Base leg from west (36C) – 9,000 feet into "M" final box
  - Downwinds (36L/36R) – 6,000 feet
  - Right downwind (36C) – 8,000 feet
  - Left downwind (36C) – 9,000 feet

#### 2. South Operation

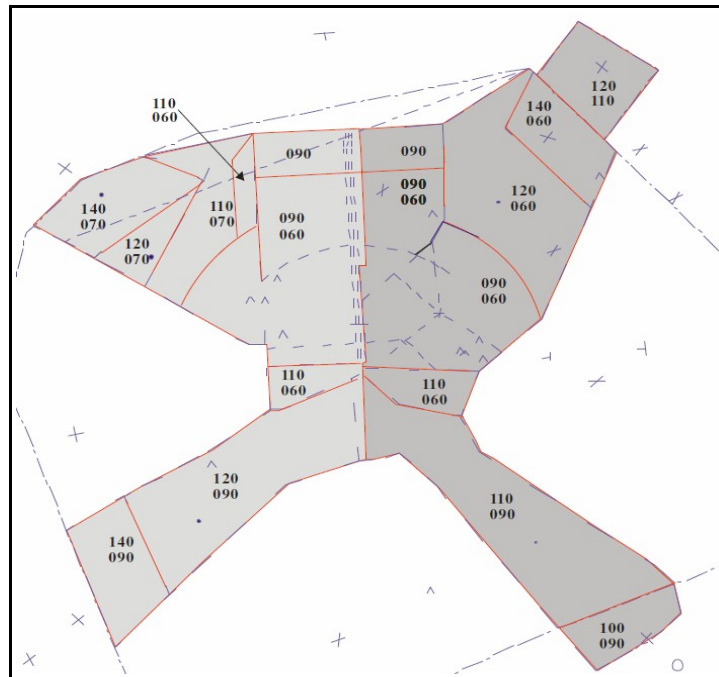
- a) 23 - (18C/23 or 18R/23)
  - Straight-in (23) – 6,000 feet
  - Left downwind (23) – 6,000 feet
  - Right downwind (23) – 7,000 feet
  - Right downwind (18R/18C) – 6,000 feet
  - Base leg from west (18R/18C) – 7,000 feet
  - Base leg from east (18C) – 6,000 feet
  - Left downwind (18C) – 8,000 feet

- b) Duals 23 - (18R/18C/23)
  - Feed to runway 23 – same as above (23)
  - Base leg from west (18R) – 7,000 feet
  - Base leg from east (18C) – 6,000 feet
  - Base leg from west (18C) – 9,000 feet into “M” final box
  - Right downwind (18R) – 6,000 feet
  - Right downwind (18C) – 9,000 feet
  - Left downwind (18C) – 8,000 feet
  
- c) Duals - Runways 18C/18R
  - Base leg from west – 7,000 feet
  - Base leg from east – 6,000 feet
  - Downwinds – 6,000 feet
  
- d) Duals - Runways 18L/18R
  - Base leg from west – 7,000 feet
  - Base leg from east – 6,000 feet
  - Downwinds – 6,000 feet
  
- e) Duals - Runways 18L/18C
  - Base leg from west – 7,000 feet
  - Base leg from east – 6,000 feet
  - Downwinds – 6,000 feet
  
- f) Trips (18R/18C/18L)
  - Base leg from east (18L) – 6,000 feet
  - Base leg from east (18C) – 8,000 feet into “M” final box
  - Base leg from west (18R) – 7,000 feet
  - Base leg from west (18C) – 9,000 feet into “M” final box
  - Left downwind (18L) – 6,000 feet
  - Left downwind (18C) – 8,000 feet
  - Right downwind (18R) – 6,000 feet
  - Right downwind (18C) – 9,000 feet

**SECTION 4. DEPARTURE RADAR/ARRIVAL RADAR STARS PRE-ARRANGED COORDINATION  
AREA ----SEE DEPARTURE RADAR ---**

## SECTION 5. AREA OF JURISDICTION

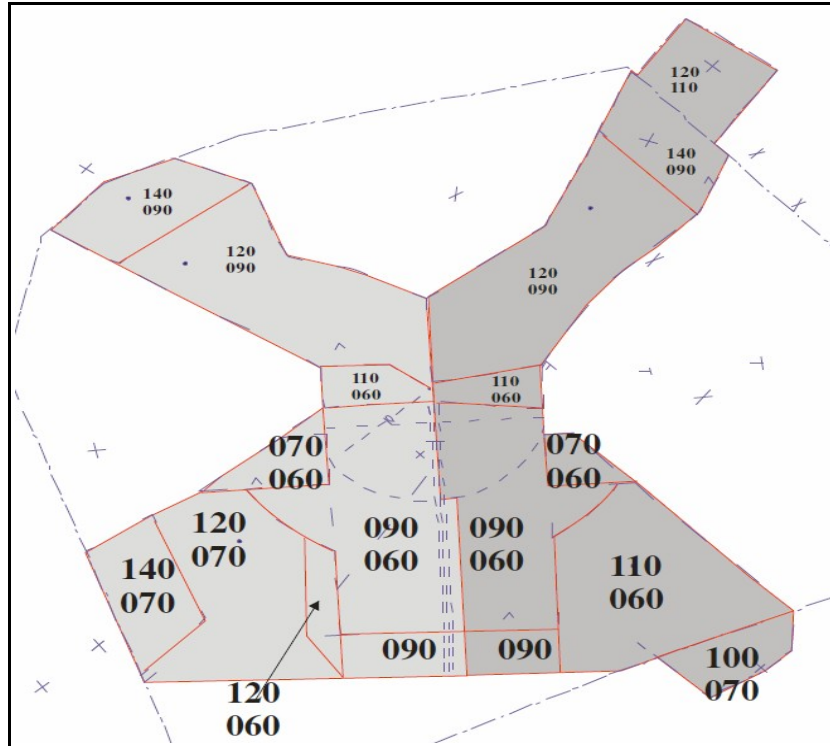
ARRIVAL RADAR EAST/WEST AIRSPACE (SOUTH OPERATION ) RUNWAY 23 INACTIVE



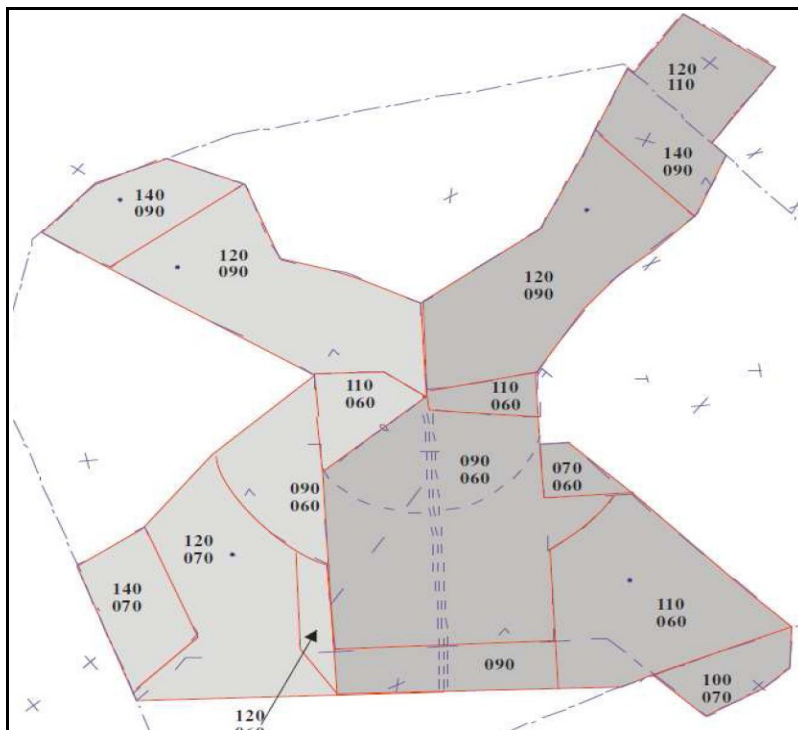
ARRIVAL RADAR EAST/WEST AIRSPACE (SOUTH OPERATION ) RUNWAY 23 ACTIVE



# ARRIVAL RADAR EAST/WEST AIRSPACE (NORTH OPERATION) RUNWAY 5 INACTIVE



# ARRIVAL RADAR EAST/WEST AIRSPACE (NORTH OPERATION) RUNWAY 5 ACTIVE



## SECTION 6. ARRIVAL RADAR/FINAL RADAR STARS PRE-ARRANGED COORDINATION AREA

### 2-6-1 ARRIVAL RADAR/FINAL RADAR STARS PRE-ARRANGED COORDINATION AREA

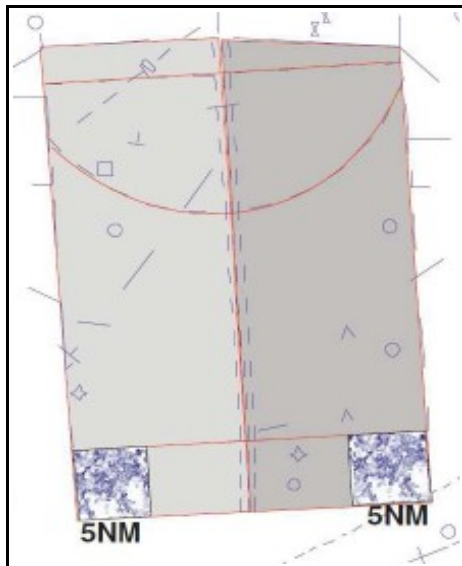
In addition to the procedures described in CLT ATCT 7110.65 , the following procedures apply:

A pre-arranged coordination area is established for traffic landing at Charlotte Airport. The following procedures apply:

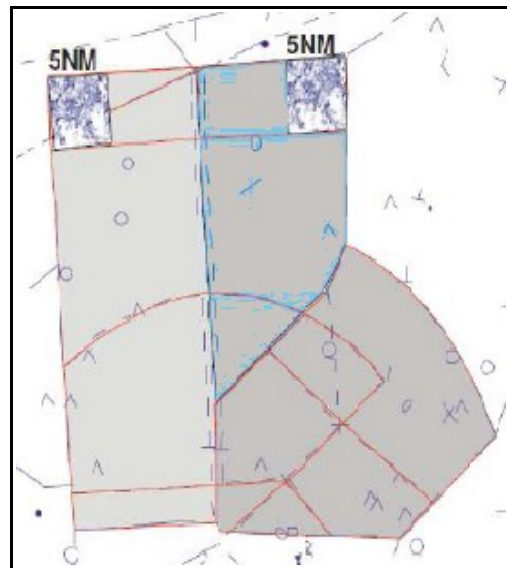
- a. Arrival Radar East/West only may penetrate Final Radar West airspace without individual coordination utilizing the east final pre-arranged coordination area.
- b. Arrival Radar shall provide radar separation, including appropriate wake turbulence separation, from all final radar west traffic when utilizing this prearranged coordination area.
- e. Automatic altitude readout of an aircraft under another controller's jurisdiction may be used for separation purposes while aircraft are within pre-arranged coordination airspace.

### ARRIVAL RADAR/FINAL RADAR PRE-ARRANGED COORDINATION AREA AIRSPACE

NORTH OPERATION



SOUTH OPERATION



## SECTION 7. POTENTIAL PROBLEM AREAS

- a. When a south runway 23 operation is in use, aircraft flowed via a left downwind to runway 18L/18C/18R requires that a point-out be accomplished with the arrival radar west position.

## CHAPTER 3. Final Radar

### SECTION 1. EQUIPMENT

**3-1-1. Callsign Usage and Frequency Delegation:** The following callsigns and frequencies shall be used when working positions at CLT TRACON.

Callsign	Frequency	VOX Channel
Final West	119.000	CLT-M
<b>Final East</b>	<b>127.700</b>	<b>CLT-A</b>

NOTE: Bold letters indicates the base position.

### SECTION 2. POSITION DUTIES AND RESPONSIBILITIES

#### 3-2-1. FINAL RADAR EAST/WEST RESPONSIBILITIES

- a. Provide standard separation and radar services to all aircraft within Final Radar's delegated airspace.
- b. Ensure that all arrivals have the assigned runway displayed in the scratch pad in accordance with the ATCT SOP.
- c. Final Radar West will determine the approach sequence when both Final Radar positions are vectoring for instrument approaches, other than simultaneous ILS approaches.
- d. Final radar controllers shall ensure that traffic on opposing base legs to the same, or parallel runways are vertically separated until such time as the required lateral/longitudinal separation clearly exists.

NOTE - The intent of this requirement is to eliminate the practice whereby a final controller will attempt to turn in front of, behind, or between two arrivals without having vertical separation. Once required spacing is established then the use of vertical separation may be discontinued.

- e. All traffic shall be vectored so as to intercept the final approach course of the runway at an angle of 30 degrees or less unless triple ILS approaches are in use. During triple ILS approaches, traffic shall be vectored so as to intercept the final approach course of the runway at an angle of 20 degrees or less.
- f. Aircraft assigned runway 18C/36C shall exit the "M" box established on the localizer at or above 8,000 feet when conducting triple operations (or when conducting a Dual23 operation with aircraft being fed on a right base leg).
- i. Final radar positions are authorized to utilize the automatic altitude readout (Mode C) of traffic being worked by the adjacent final radar position for vertical separation purposes when conducting

Parallel/ Simultaneous/Visual Approaches. Any erroneous altitude report received by any final radar position shall immediately be coordinated with the adjacent final position and vertical separation shall not be applied.

j. All final radar positions shall quicklook all final radar positions.

### **3-2-2. FINAL RADAR ALTITUDE ASSIGNMENTS**

Altitude assignments by final radar shall normally be:

#### **a. North Operation**

1. Duals - (36L/36R, 36L/36C, or 36C/36R)
  - A – at or below 4,000 feet
  - M – 5,000 feet or above
  - 36L/36C operation – 36C – At or below 4,000 feet or above, 36L – at or above 5,000 feet
2. Trips - (36L/36C/36R) (Visual approaches or ILS approaches).
  - A – 4,000 feet
  - M – 8,000 feet
  - M (36L)– 5,000 or 6,000 feet.

#### **b. South Operation**

1. Duals - (18L/18R, 18L/18C, or 18C/18R)
  - A – at or below 4,000 feet
  - M – 5,000 feet or above
  - 18R/18C operation – 18C at or below 4,000, 18R – at or above 5,000 feet
2. Duals 23 - (18R/18C/23)
  - A – At controller's discretion.
  - M – traffic from east: 6,000 feet or above. Traffic from west: 8,000 feet into "M" final box.
  - M (R23) – 5,000 feet or below
4. Trips - 18R/18C/18L.
  - A – 4,000 feet
  - M – 8,000 feet
  - M (18R) – 5,000 or 6,000 feet.



### SECTION 3. POSITION PROCEDURES

#### a. Breakout procedures:

- 1) Runway 36R: Out side FAF Issue a turn 30° right of the final approach course heading; FAF to one mile from the end of the runway issue a right turn heading 090°. Assign an altitude of 4000.
- 2) Runway 36C: track localizer and climb to appropriate altitude. If necessary, coordinate with Local Control for heading assignment. If able, coordinate with appropriate final radar controller and assign a heading of 270° or 090° and climb to 4000.
- 3) Runway 36L: Outside FAF issue a turn 30° left of the final approach course heading; from FAF and one mile from the end of the runway issue a left turn heading 270°. Assign an altitude of 4000.
- 4) Runway 18L: Outside FAF issue a turn 30° left of the final approach course heading; from FAF and one mile from the end issue turn left heading 090°. Assign an altitude of 4000.
- 5) Runway 18C: track localizer and climb to appropriate altitude. If necessary, coordinate with Local Control for heading assignment. If able, coordinate with adjacent final radar controller and assign a heading of 270° or 090° and climb to 4000.
- 6) Runway 18R: Outside FAF issue a turn 30° right of the final approach course heading; from FAF to and one mile from the end of the runway issue a right turn heading 270°. Assign an altitude of 4000.

#### b. When running simultaneous ILS approaches, FR shall ensure aircraft are turned onto the Localizer prior to the loss of the required separation prior to crossing:

##### Duals:

##### North Operation:

- 36L and 36R – LONIA @ 5,000, HEKAM @ 4,000
- 36C and 36R – FORET @ 5,000, HEKAM @ 4,000
- 36L and 36C – LONIA @ 5,000, HUNEX @ 4,000

##### South Operation:

- 18L and 18R – CAVVI @ 4,000, WOVEN @ 5,000
- 18L and 18C – CAVVI @ 4,000, TOMME @ 5,000
- 18C and 18R – FERSA @ 4,000, WOVEN @ 5,000

Trips:

North Operation:

36R – HEKAM @ 4,000

36C – SOLMN @ 8,000

36L – WELET @ 5,000 (or > at 6,000)

South Operation:

18L – CAVVI @ 4,000

18C – JEDKO @ 8,000

18R – RUDKY @ 5,000 (or > at 6,000)

**3-3-3. REDUCED LONGITUDINAL SEPARATION** - Reduced longitudinal separation (2.5 miles inside of a 10-mile final) is authorized between aircraft established on the final approach course in accordance with FAA Order 7110.65 for runways 18C/36C, 18L/36R, 18R/36L and runways 5/23.

**3-3-4. ARRIVAL RADAR/FINAL RADAR PRE-ARRANGED COORDINATION AREA**

(SEE AR FOR DETAILS)

**3-3-5. ALTITUDE ASSIGNMENTS DURING SIMULTANEOUS APPROACHES**

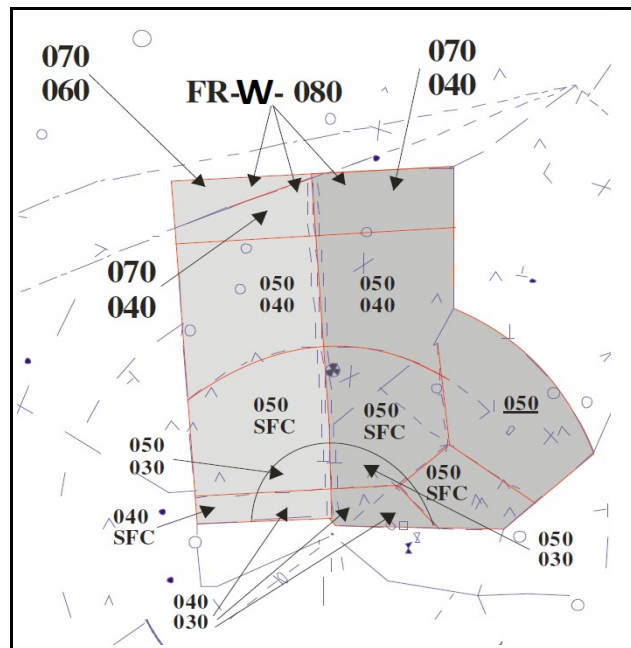
It is recommended that the final radar west controller keep runway 36C/18C traffic at an altitude higher than the adjacent outboard final radar controllers. The purpose of this is to assist the outboard final radar controllers in obtaining visual approach clearances.

**3-3-6. AIRCRAFT JURISDICTION** Final controllers should work the aircraft that have been assigned landing runways that are within their area of jurisdiction.

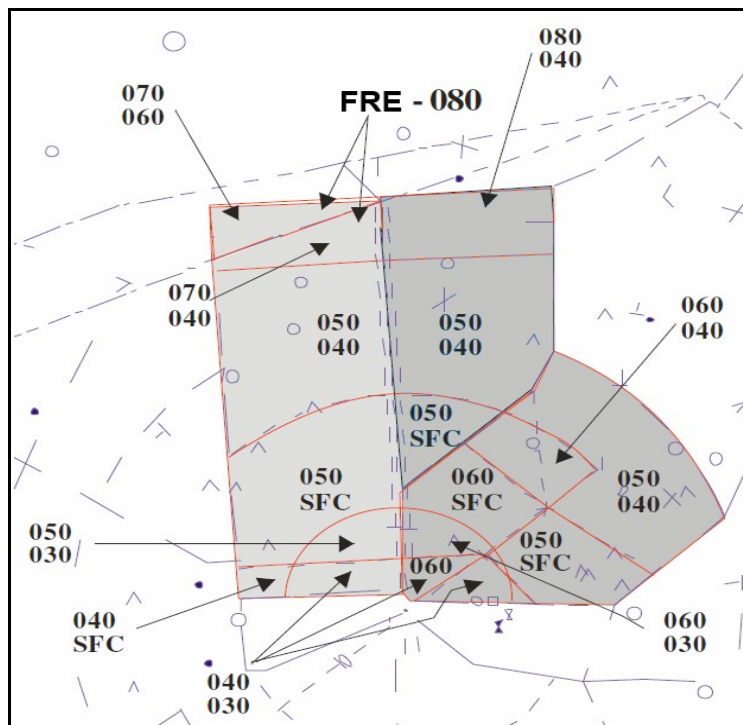
**3-3-7. POTENTIAL PROBLEM AREAS** Controllers must be aware of potential conflicts whenever non-standard altitude assignments are employed. In all cases where non-standard altitudes are used, coordination must be complete and timely.

## SECTION 4. AREAS OF JURISDICTION

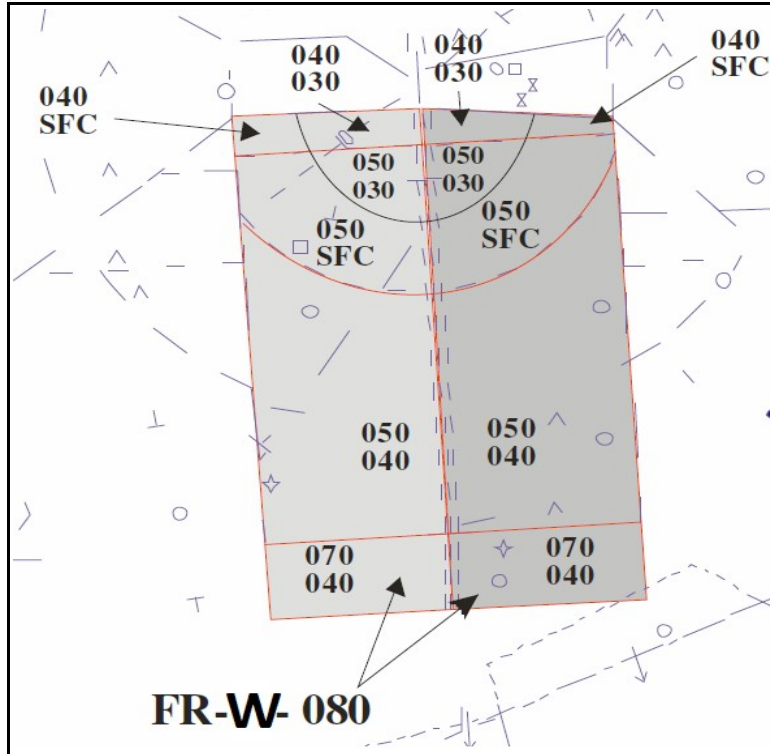
FR WEST/ FR EAST AIRSPACE - SOUTH OPERATION RUNWAY 23 INACTIVE



FR WEST/ FR EAST AIRSPACE - SOUTH OPERATION RUNWAY 23 ACTIVE



FR WEST / FR EAST AIRSPACE - NORTH OPERATION RUNWAY 5 INACTIVE



FR WEST / FR EAST AIRSPACE - NORTH OPERATION RUNWAY 5 ACTIVE

