

August 7, 1996

To Whom it May Concern:

Enclosed in this PDF document (T\_APPCH1.PDF) are the following pages:

1. Cover Letter (this page)
2. Monett (M58) GPS-36C VFR Test Approach
3. Monett (M58) GPS-18C VFR Test Approach
4. Monett (M58) Airport and Area Reference Waypoints
5. SIDs & STARs Using 20 Procedural Leg Types (courtesy Universal Avionics)
6. Monett (M58) Northeast and Southeast VFR Test Approach Transitions
7. Monett (M58) Northwest and Southwest VFR Test Approach Transitions
8. PDF document (T\_APPCH1.PDF) NOTES Summary Page 1
9. PDF document (T\_APPCH1.PDF) NOTES Summary Page 2

For the best understanding of these concepts, it is suggested that the reader print all nine pages of this document. Please see the Acrobat Notes associated with each document—by double-clicking the small Notes icons—for further discussion. (If a Note window is already open, and it is obscuring part of the page, it can be closed by clicking on the Close box at the upper left corner of the Note window.)

Very truly yours,

*Mark E. Ingram*

MARK I PRODUCTIONS  
Mark E. Ingram  
President

Enclosures



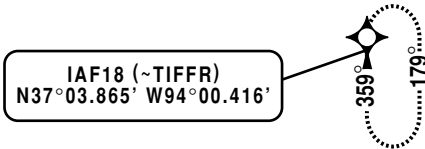
# VFR/GPS RWY 36C

EFCO *Beechjet*

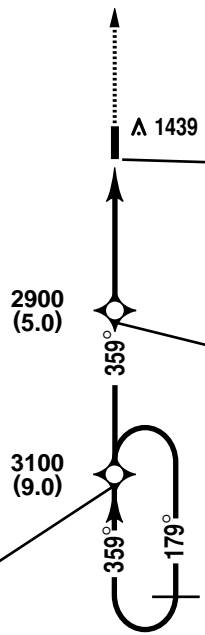
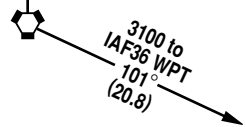
MONETT MUNI (M58)

MONETT, MISSOURI

SPRINGFIELD APP CON  
 124.95 234.2 RTR 121.9  
 UNICOM 122.8 (CTAF) **0**  
 AWOS-3 118.275  
 EFCO 122.875  
 JHA 123.075



NEOSHO  
 117.3 EOS  
 Chan 120

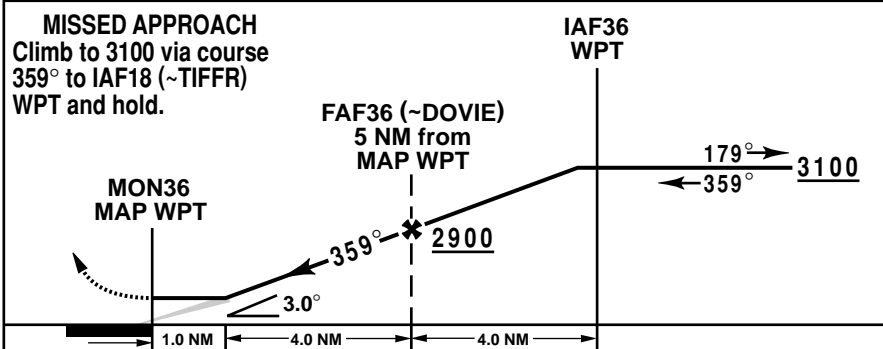
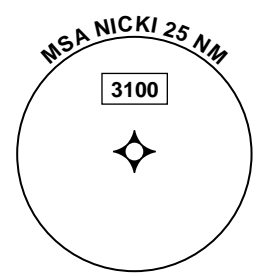


MAP  
 MON36  
 N36°54.201' W94°00.770'

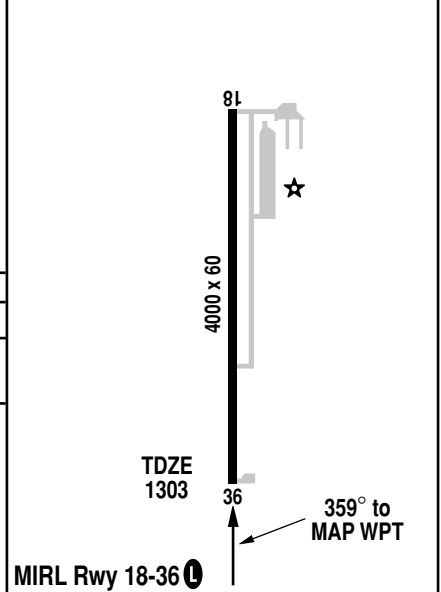
FAF  
 FAF36 (~DOVIE)  
 N36°49.211' W94°00.962'

IAF  
 IAF36  
 N36°45.207' W94°01.111'

A 1898



ELEV 1315



CATEGORY	A	B	C	D
S-36	1700-1 397 (400-1)			

Use Joplin, MO altimeter setting.

**Δ** NA



Internal use only.

Knots	60	90	120	150	180
Min:Sec					

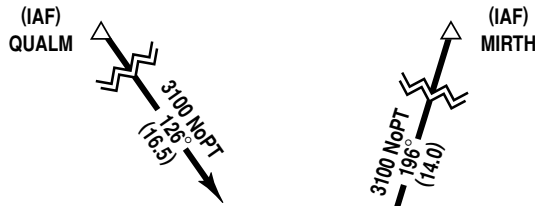
N36°54.53' W94°00.76'

# VFR/GPS RWY 18C

EFCO *Beechjet*

**MONETT MUNI (M58)**  
MONETT, MISSOURI

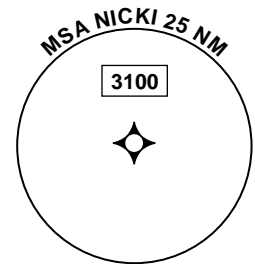
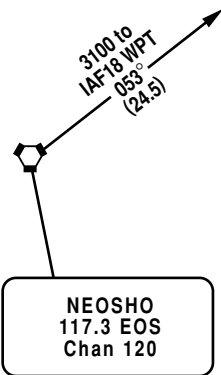
SPRINGFIELD APP CON  
124.95 234.2 RTR 121.9  
UNICOM 122.8 (CTAF) **Q**  
AWOS-3 118.275  
EFCO 122.875



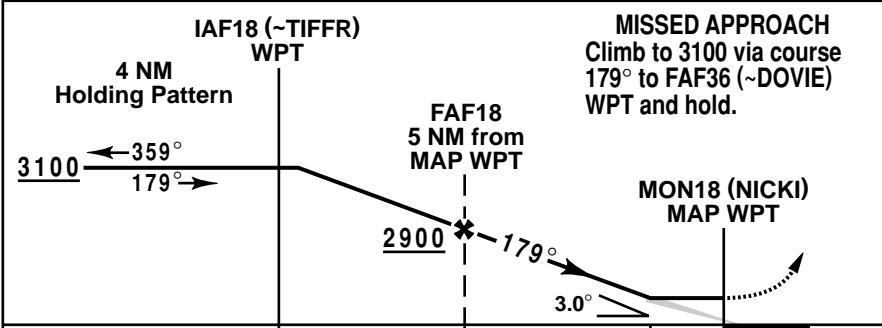
**FAF**  
FAF18  
N36°59.861' W94°00.566'

**MAP**  
MON18 (NICKI)  
N36°54.860' W94°00.745'

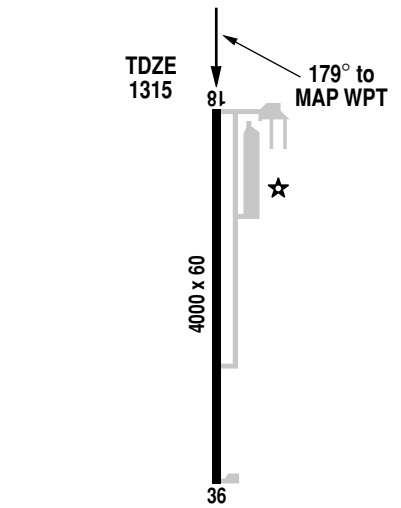
**FAF36 (~DOVIE)**  
N36°49.211' W94°00.962'



▲ 1898



**ELEV 1315**



CATEGORY	A	B	C	D
S-18	1700-1	385 (400-1)		NA

Use Joplin, MO altimeter setting.

▲ NA

**EFCO** Internal use only.

**MIRL Rwy 18-36**

Knots	60	90	120	150	180
Min:Sec					

N36°54.53' W94°00.76'

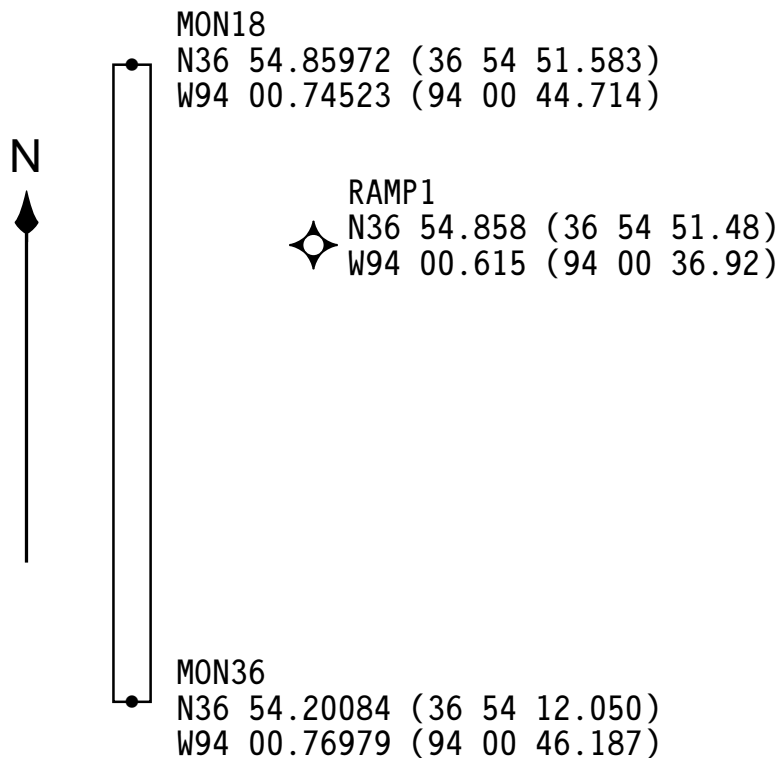
Revised: 6-8-95

			ALN18 ◆ N37 04.868 W94 00.371		
			1		
MONNW ◆ N37 04.011 W94 06.661	REFNW ◆ N37 03.939 W94 03.539	IAF18 ◆ N37 03.865 W94 00.416	NM	REFNE ◆ N37 03.789 W93 57.294	MONNE ◆ N37 03.713 W93 54.172

FAF18  
◆ N36 59.861  
W94 00.566

181.7150° True

☰ All points based on fixed-position, ground survey of four main benchmarks, made using Trimble hand-held GPS receiver with external antenna: Three 99-position averages at each station; eight satellites visible; 3-D GPS.



001.7150° True

FAF36  
◆ N36 49.211  
W94 00.962

MONSW ◆ N36 45.354 W94 07.330	REFSW ◆ N36 45.282 W94 04.221	IAF36 ◆ N36 45.207 W94 01.111	REFSE ◆ N36 45.132 W93 58.001	MONSE ◆ N36 45.055 W93 54.892
		1		
		NM		
		ALN36 ◆ N36 44.192 W94 01.142		



# Courtesy Universal Avionics Used with permission

## SIDS & STARS USING 20 PROCEDURAL LEG TYPES

### UNSAFE SYSTEM HIGHLIGHTS


Revised: 6-8-95

001.7° True

MONE5  
N37 06.129  
W93 58.403

MONE4  
N37 06.291  
W93 57.201

MONE3  
N37 06.072  
W93 56.013

339.2°

024.2°

316.7° True

MONE6  
N37 05.611  
W93 59.437

MONE2  
N37 05.505  
W93 55.020

046.7° True

294.2°

MONE7  
N37 04.815  
W94 00.144

All Bearings are TRUE, from REFNE  
2.5 NM (4630 M) Radius

MONE1  
N37 04.677  
W93 54.374

069.2°

IAF18  
N37 03.865  
W94 00.416

271.7° True

REFNE  
N37 03.789  
W93 57.294

091.7° True

MONNE  
N37 03.713  
W93 54.172

IAF36  
N36 45.207  
W94 01.111

271.7° True

REFSE  
N36 45.132  
W93 58.001

091.7° True

MONSE  
N36 45.055  
W93 54.892

249.2°

MOSE7  
N36 44.243  
W94 00.909

All Bearings are TRUE, from REFSE  
2.5 NM (4630 M) Radius

MOSE1  
N36 44.104  
W93 55.165

114.2°

226.7° True

MOSE6  
N36 43.415  
W94 00.265

MOSE2  
N36 43.309  
W93 55.869

136.7° True

MOSE5  
N36 42.849  
W93 59.277

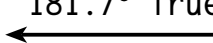
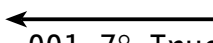
204.2°

MOSE4  
N36 42.630  
W93 58.095

159.2°

MOSE3  
N36 42.791  
W93 56.898

181.7° True



Revised: 6-8-95

001.7° True

MONW3  
N37 06.279  
W94 04.648

MONW4  
N37 06.441  
W94 03.445

MONW5  
N37 06.221  
W94 02.257

339.2°

024.2°

316.7° True

MONW2  
N37 05.760  
W94 05.681

MONW6  
N37 05.654  
W94 01.264

046.7° True

294.2°

MONW1  
N37 04.965  
W94 06.388

All Bearings are TRUE, from REFNW  
2.5 NM (4630 M) Radius

MONW7  
N37 04.826  
W94 00.618

069.2°

MONNW  
N37 04.011  
W94 06.661

271.7° True

REFNW  
N37 03.939  
W94 03.539

091.7° True

IAF18  
N37 03.865  
W94 00.416

REFSW  
N36 45.282  
W94 04.221

091.7° True

IAF36  
N36 45.207  
W94 01.111

MONSW  
N36 45.354  
W94 07.330

271.7° True

All Bearings are TRUE, from REFSW  
2.5 NM (4630 M) Radius

MOSW7  
N36 44.254  
W94 01.384

114.2°

MOSW1  
N36 44.393  
W94 07.129

249.2°

MOSW2  
N36 43.565  
W94 06.484

MOSW6  
N36 43.459  
W94 02.088

136.7° True

226.7° True

MOSW3  
N36 42.998  
W94 05.496

204.2°

MOSW4  
N36 42.779  
W94 04.314

159.2°

MOSW5  
N36 42.941  
W94 03.117

181.7° True



## Notes from T\_Appch1.pdf

### Page 2

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*Note 1; Label: Mark Ingram; Date: 8/7/96 8:45:30 AM*  
Monett (M58) GPS-36C VFR Test Approach

Like the corresponding Monett (M58) GPS-18C procedure, this VFR test approach approximates the "ideal" for GPS, in that the FAF is located five NM from the MAP, and by crossing it at 2900' (MSL), there results a 3-degree constant-angle descent to a Threshold Crossing Height (TCH) of 50' at the MAP.

One difference from the FAA-proposed concept is that the IAF and MAP are 4.0 NM apart, rather than the "standard" 5.0 NM.

However, when this test approach is flown in conjunction with either of the Southeast or Southwest "arc" transitions (see pages 6 and 7, respectively), the shorter Initial segment has so far been more than adequate for normal jet approach speeds.

### Page 3

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*Note 1; Label: Mark Ingram; Date: 8/7/96 8:46:01 AM*  
Monett (M58) GPS-18C VFR Test Approach

Like the corresponding Monett (M58) GPS-36C procedure, this VFR test approach approximates the "ideal" for GPS, in that the FAF is located five NM from the MAP, and by crossing it at 2900' (MSL), there results a 3-degree constant-angle descent to a Threshold Crossing Height (TCH) of 50' at the MAP.

One difference from the FAA-proposed concept is that the IAF and MAP are 4.0 NM apart, rather than the "standard" 5.0 NM.

However, when this test approach is flown in conjunction with either of the Southeast or Southwest "arc" transitions (see pages 6 and 7, respectively), the shorter Initial segment has so far been more than adequate for normal jet approach speeds.

### Page 4

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*Note 1; Label: Mark Ingram; Date: 8/7/96 9:00:21 AM*  
Monett (M58) Airport and Area ReferenceWaypoints

These are the GPS-surveyed points used in establishing the VFR GPS test approaches. According to the "T" concept, the following four waypoints would be No-Procedure Turn IAF's, and make up the outermost ends of the top of each "T," for each corresponding approach:

Monett (M58) GPS-36C VFR Test Approach:

MONSE  
MONSW

Monett (M58) GPS-18C VFR Test Approach:

MONNE  
MONNW

Note that when a known 50,000:1 benchmark was surveyed using this methodology, the resultant

calculated position was accurate to within less than three meters (GPS Selective Availability was undoubtedly OFF at the time of this survey).

### **Page 5**

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*Note 1; Label: Mark Ingram; Date: 8/5/96 5:26:45 PM*

SIDs & STARs Using 20 Procedural Leg Types (courtesy Universal Avionics—used with permission)

For purposes of this discussion, note particularly the Radius to Fix (RF) leg type.

### **Page 6**

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*Note 1; Label: Mark Ingram; Date: 8/7/96 8:51:21 AM*

Monett (M58) Northeast and Southeast VFR Test Approach Transitions

The top half of this page represents a no-procedure turn “pseudo-arc” transition, simulating a left-turning RF (Radius to Fix) leg between MONNE and IAF18 (with REFNE as the imaginary pivot point).

The bottom half of the page represents a corresponding NO-PT pseudo-arc, simulating a right-turning RF leg between MONSE and IAF36 (with REFSE as the imaginary pivot point).

### **Page 7**

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*Note 1; Label: Mark Ingram; Date: 8/7/96 8:51:38 AM*

Monett (M58) Northwest and Southwest VFR Test Approach Transitions

The top half of this page represents a no-procedure turn “pseudo-arc” transition, simulating a right-turning RF (Radius to Fix) leg between MONNW and IAF18 (with REFNW as the imaginary pivot point).

The bottom half of the page represents a corresponding NO-PT pseudo-arc, simulating a left-turning RF leg between MONSW and IAF36 (with REFSW as the imaginary pivot point).