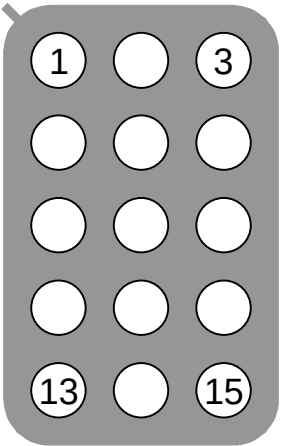


Circuit Breaker Panel

Yellow

1	EFIS 1	Red	18
2	EFIS 2	Red	18
3	EFIS 3	Red	18
4	EFIS 4	Red	18
5	Audio FL Rec	Yellow	18
6	Autopilot	Green	18
7	Comm 1	Yellow/Red	18
8	Comm 2	Yellow/Blue	18
9	Transponder	White/Yellow	18
10	EbNet	Purple	18
11	AHRS 1	Blue	20
12	Backup Battery	Blue	18
13	Backup AD & AI	Black	20
14	ADS-B	White/Black	20
15	AHRS 2	Blue	20

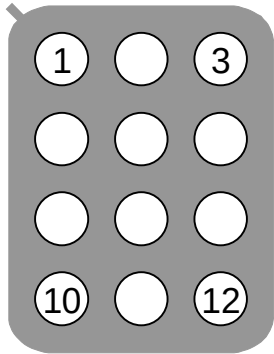


Green

connects with Switch Panel

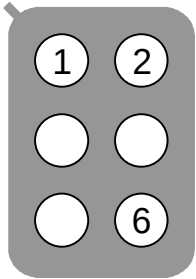
1	A/P Servos	Red	16
2	Boost Pump	Yellow/Blue	18
3	Pitot Heat	Red	16
4	Ldg Light	Red	16
5	Taxi Light	Red	16
6	Nav Light	Red	16
7	Strobe Light	Red	16
8	Honeywell B/L+	White/Blue	22
9	Honeywell B/L-	White/Green	22
10	N.C.		
11	N.C.		
12	N.C.		

OLD



Blue

1	EngMon	Purple	18
2	Flaps	Red	16
3	Elev. Trim	Yellow/Red	18
4	Hobbs O/P Switch	White/Black	22
5	Ground	Green	20
6	N.C.		



Switch Panel (1)

Green

connects with Circuit Breaker Panel

OLD

1	A/P Servos	Red	18
2	Boost Pump	Yellow	18
3	Pitot Heat	White	16
4	Ldg Light	Blue	18
5	Taxi Light	Red	18
6	Nav Light	Blue	18
7	Strobe Light	Yellow	18
8	Honeywell B/L+	White	20
9	Honeywell B/L-	Black	20
10	N.C.		
11	N.C.		
12	N.C.		

Red

1	V+	Red	18
2	Ground	Black	20
3	Right Mag Ind.	White/Green	22
4	Left Mag Ind.	White/Black	22
5	N.C.		
6	To Starter Relay	Blue	18

Blue

1	Av. Master Relay	Black	20
2	Ground	Black	20
3	Master Relay	White	18
4	Ground	White	18
5	V+	Yellow/Red	18
6	Alt. Field	Yellow/Blue	18

Yellow

1	+12V Sensing Source	White/Green	20
2	Boost Pump	Yellow	18
3	A/P Sensing	Yellow/Blue	18
4	Boost Pump Sensing	Yellow	18
5	Ldg Light Sensing	Yellow/Red	18
6	Nav Light Sensing	White/Yellow	18

Switch Panel (2)

Green

1	A/P Servos	Red	18
2	Pitot Heat	White	18
3	Ldg Light	Blue	18
4	Taxi Light	Red	18
5	Strobe Light	Yellow	18
6	Nav Light	Blue	18

Red/Blue

1	Ground	White	22
2	N.C.		
3	Flaps Down	White	22
4	Flaps Up	White	22
5	Trim Down	White	22
6	Trim Up	White	22

EFIS

DB25	
1	CAN H
2	CAN L
3	CAN H connected to pin 1
4	CAN L connected to pin 2
5	AHRS 422- RX (secondary)
6	AHRS 422+ RX (secondary)
7	Debug 232 TX
8	N.C.
9	AHRS 422- RX (primary)
10	AHRS 422+ RX (primary)
11	N.C.
12	N.C.
13	Gnd
14	UAT 422- RX
15	UAT 422+ RX
16	Gnd
17	
18	
19	
20	
21	
22	
23	
24	+14V
25	

Eng Mon

DB-9

1. +12V
2. +12V
3. GND
4. CAN L
5. CAN H
6. GND
7. GND
8. CAN L
9. CAN H

DB-25

1. EngMon RS422 Rx A
2. EngMon RS422 Rx B
3. EngMon RS422 Tx Y
4. EngMon RS422 Tx Z
5. EngMon RS422 GND
6. Comm 1 RS422 Rx A
7. Comm 1 RS422 Rx B
8. Comm 1 RS422 Tx Y
9. Comm 1 RS422 Tx Z
10. Comm 1 RS422 GND
11. Gnd
12. Ext. Battery +
13. N.C.
14. Comm 2 RS422 Rx A
15. Comm 2 RS422 Rx B
16. Comm 2 RS422 Tx Y
17. Comm 2 RS422 Tx Z
18. Comm 2 RS422 GND
19. Transponder RS422 Rx A
20. Transponder RS422 Rx B
21. Transponder RS422 Tx Y
22. Transponder RS422 Tx Z
23. Transponder RS422 GND
24. EngMon Power out, +12V
25. EngMon Power out, +12V

1. CHT 1 -		1. +12V regulated, from display unit	
2. CHT 1 +	HCNR201	2. GND	
3. EGT 1 -	HCNR201	3. Tank Sel +LED	
4. EGT 1 +		4. Tank Sel GND	
5.		5. Tank Sel Signal L	B TLP2361
6.		6. Tank Sel Signal R	B TLP2361
7.		7. Main Bus voltage	
8.		8.	
9. AP switch	A TLP2361	9. RPM +12V	
10. Landing Light switch	A TLP2361	10. RPM Signal	C TLP2361
11. Boost Pump switch	A TLP2361	11. RPM GND	
12. Nav Light switch	A TLP2361	12. Manif Pres +12V	
13.		13. Manif Pres GND	
14.		14. Manif Pres Signal	TLP2361
15.		15.	

- A** 3.3k to internal +12V, ground to activate
B to LED- LED+ to internal 12V via 3.3k
C 1k in series, 6V zener to ground

1.		1. Mag Sw L	E TLP2361
2.		2. Mag Sw R	F TLP2361
3.		3.	
4.		4.	
5.		5.	
6.		6.	
7. Hall sensor +8V		7. Hood Signal	F TLP2361
8. Hall sensor GND		8. Hood GND	
9. Hall sensor Signal	HCNR201	9. RS422 Rx A	TLP2361
10. Fuel Pres	HCNR201	10. RS422 Rx B	
11. Oil Temp	HCNR201	11. RS422 Tx Y (1)	TLP2361
12. Oil Pres	HCNR201	12. RS422 Tx Z (1)	
13. Fuel Flow +12V		13. RS422 GND	
14. Fuel Flow Signal	D TLP2361	14. RS422 Tx Y (2)	
15. Fuel Flow GND		15. RS422 Tx Z (2)	

- D** 10k pull-up to +12V
E via 3.3k to LED+ LED- grounded Voltage in => Mag L OFF
F to LED- LED+ to internal 12V via 3.3k
Mag R: Input grounded => Mag R ON

Autopilot

DB-15

1. +14V
2. Gnd
3. AHRS RS-422+
4. AHRS RS-422-
5. AHRS RS-422+
6. AHRS RS-422-
7. Gnd
8. Gnd
9. Servos CAN H
10. Servos CAN L
11. Servos CAN H
12. Servos CAN L
13. Trim Up Active Low
14. Trim Dn Active Low
15. A/P Diseng. Ground to activate

DB-25

1. EbNet CAN L
2. EbNet CAN H
3. EbNet CAN L
4. EbNet CAN H
- 5.
6. Debug RX RS-232
7. Debug TX RS-232
8. Gnd
- 9, 10, 11, 12, 13 N.C.
14. EbNet CAN L
15. EbNet CAN H
16. Gnd
17. EbNet CAN L
18. EbNet CAN H
19. Gnd
20. EbNet CAN L
21. EbNet CAN H
22. Gnd
23. EbNet CAN L
24. EbNet CAN H
25. Gnd

Audio Panel

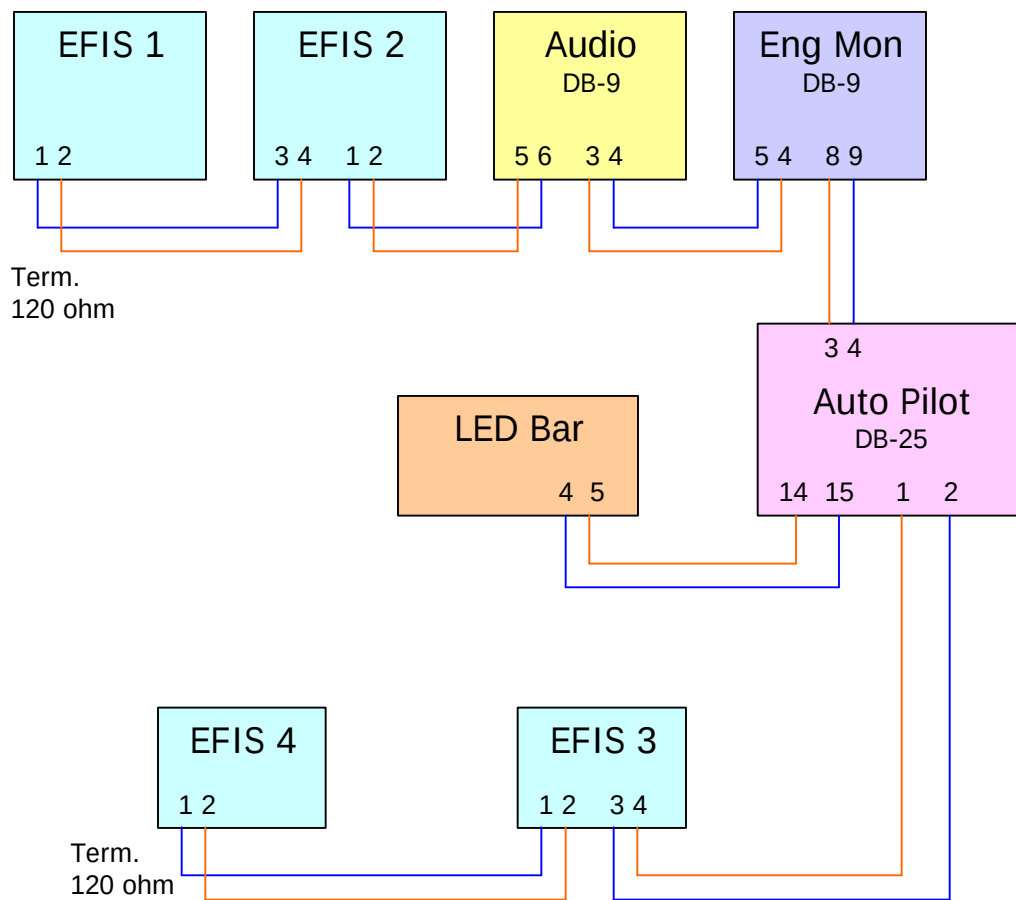
DB25

1. Mic 1 in
2. Mic 1 GND
3. Mic 2 in
4. Mic 2 GND
5. Ent 1 L in
6. Ent 1 R in
7. Ent 1 GND
8. Ent 2 L in
9. Ent 2 R in
10. Ent 2 GND
11. Headphone 1 L out
12. Headphone 1 R out
13. Headphone 1 GND
14. Headphone 2 L out
15. Headphone 2 R out
16. Headphone 2 GND
17. Com 1 Rx+
18. Com 1 Rx-
19. Com 1 Tx+
20. Com 1 Tx-
21. Com 2 Rx+
22. Com 2 Rx-
23. Com 2 Tx+
24. Com 2 Tx-
25. Com 2 PTT out

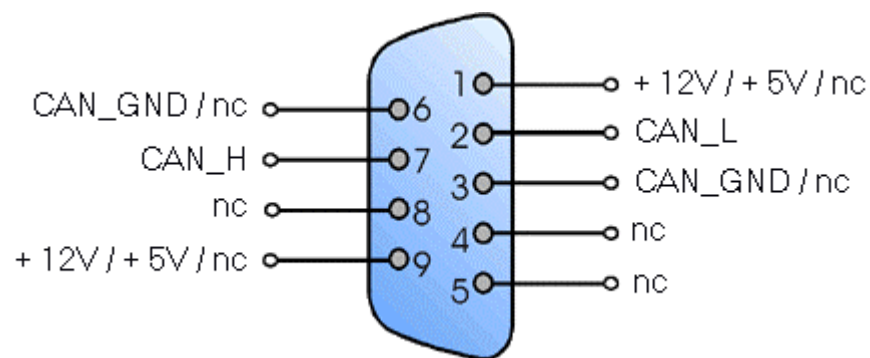
DB15

1. +14V
2. GND
3. CAN L
4. CAN H
5. CAN L
6. CAN H
7. AHRS Rx+
8. AHRS Rx-
9. EngMon Rx-
10. EngMon Rx+
11. GoPro audio COM1
12. GoPro audio Pilot + CoPilot
13. Com 1 PTT out
14. PTT Pilot in
15. PTT Co-Pilot in

Avionics Bay						Re-purposing for Remote Audio Hub
AWG-20	1.	+14V	Blue		Becker CM4201	
	2.		Green		Trig TT22	
	3.		Red		AHRS 1	
	4.		Yellow		Val 2KR	
	5.		Purple		<i>Future AHRS 2</i>	
	6.		White		<i>(not used)</i>	Audio Hub power
4w with shield	7.	RS-422	TX+ TX- RX+ RX-	Blue White Orange Green	Becker CM4201	
	8.	RS-422	TX+ TX- RX+ RX-	Blue White Orange Green	Trig TT22	
	9.	RS-422	TX+ TX- RX+ RX-	Blue White Orange Green	Val 2KR	
3w with shield	10.	Audio	Mic H Mic L PTT	Blue White Orange	Audio panel -> Becker CM4201	Pilot HP, Left Pilot HP, Right Pilot Mic
	11.	Audio	Mic H Mic L PTT	Blue White Orange	Audio panel -> Val 2KR	Copilot HP, Left Copilot HP, Right Copilot Mic
	12.	RS-422	TX+ TX- N.C.	Blue White Orange	AHRS 1	
2w with shield	13.	Audio	HP H HP L	Blue White	Becker CM4201 -> Audio panel	Pilot PTT Copilot PTT
	14.	Audio	HP H HP L	Blue White	Val 2KR -> Audio Panel	GoPro Audio, Left GoPro Audio, Right
	15.	RS-422	TX+ TX-	Blue White	<i>Future AHRS-2</i>	
	16.	RS-422	TX+ TX-	Blue White	<i>(not used)</i>	CAN H CAN L



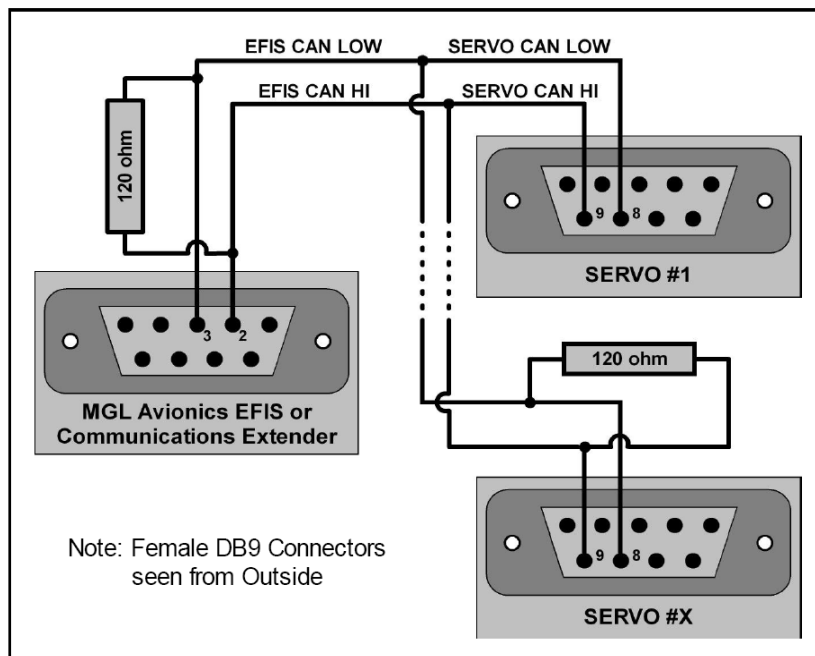
CAN-USB

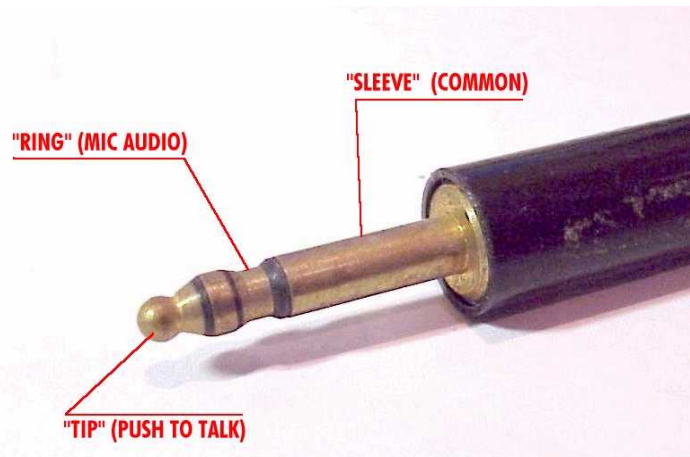
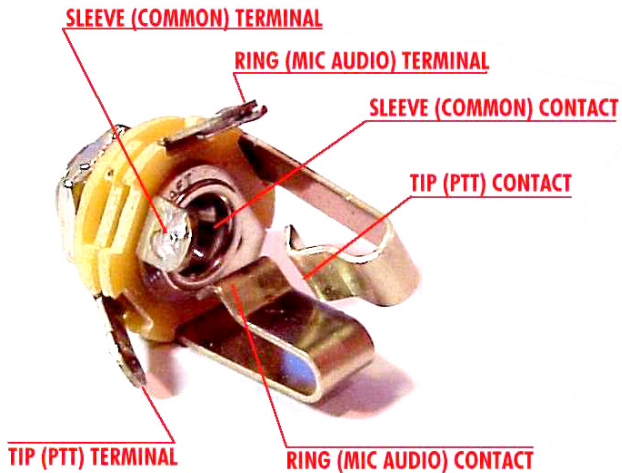


MGL Servo

Female DB-9

1. GND
2. NC
3. RX RS-232
4. TX RS-232
5. NC
6. +12 to +28V
7. +12 to +28V
8. CAN Low
9. CAN High





Pilot Side

Mic 1-cond. Shield: "Low"
Center: "High"

Phone 4-cond. Shield: Grounded at audio panel only
Green: Common
White: Common
Blue: Left
Orange: Right

Passenger Side

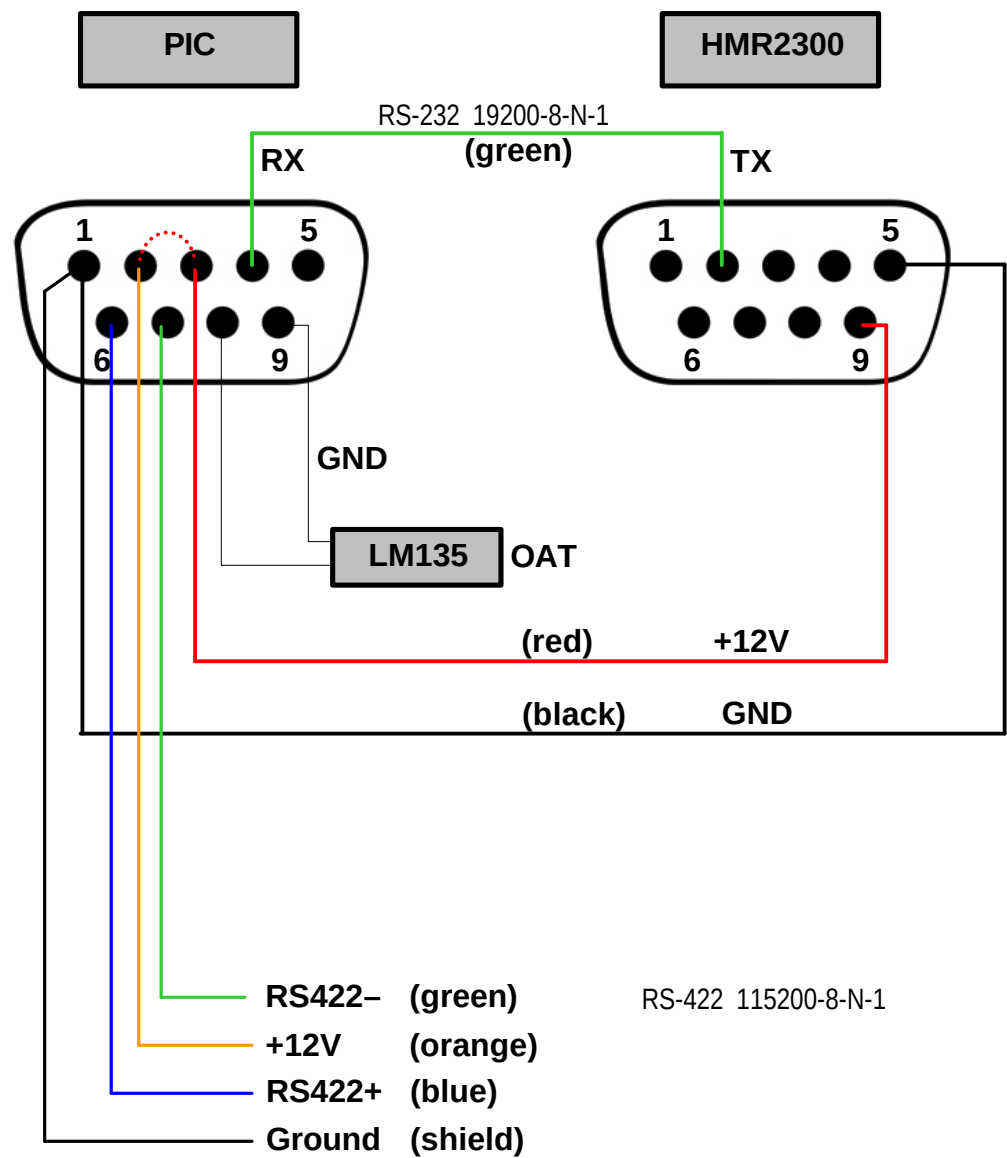
Mic 2-cond. Shield: Grounded at audio panel only
Green: "Low"
Blue: "High"

Phone 3-cond. Shield: Grounded at audio panel only
White: Common
Blue: Left
Orange: Right

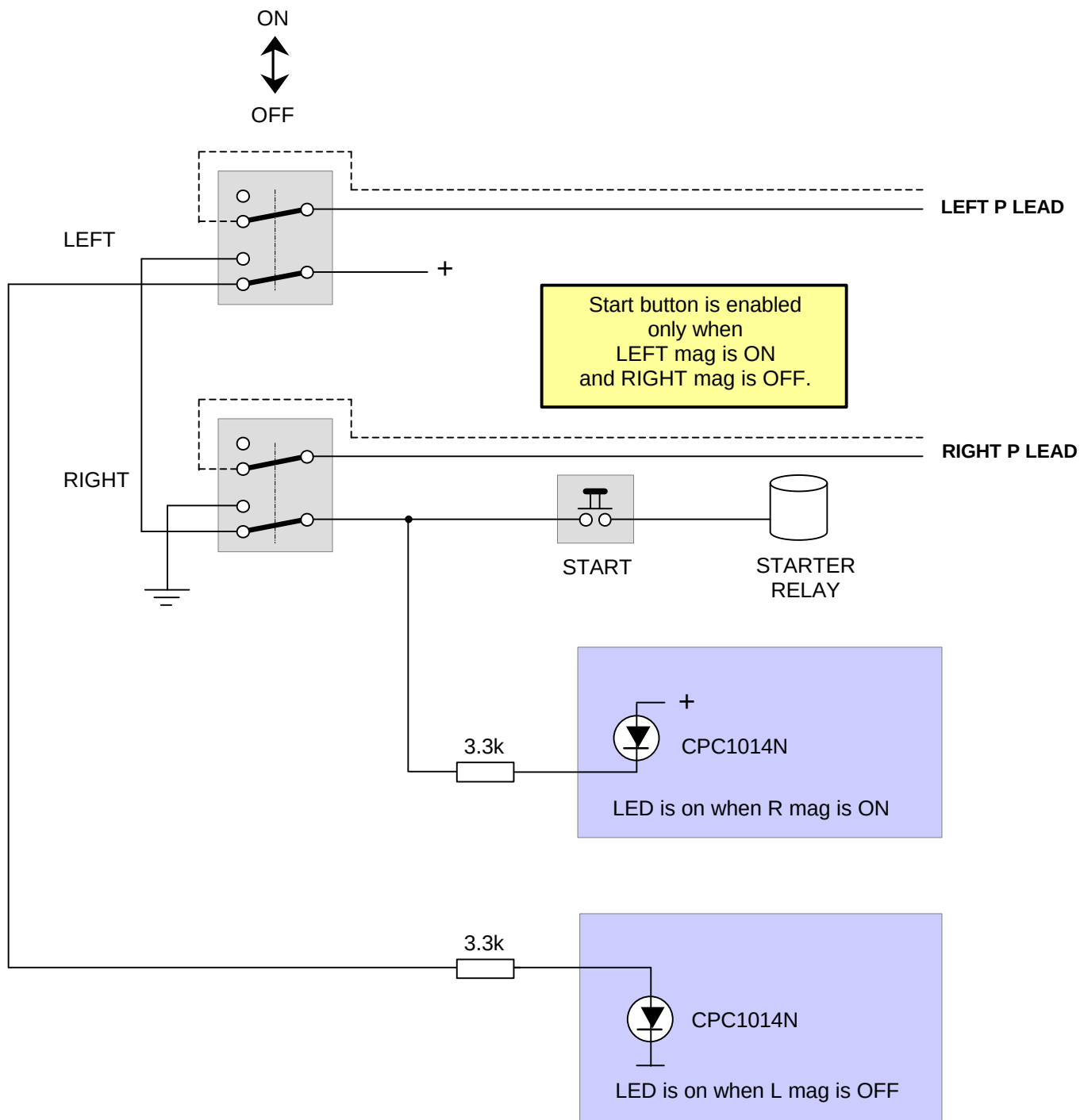
LED Bar 2.0

1.	+14V in	from "Misc" CB
2.	Gnd	
3.	+5V out for Flaps	Shielded 2-wire (blue)
4.	CAN H	Shielded 4-wire (green)
5.	CAN L	Shielded 4-wire (orange)
6.	+14V Honeywell LEDs	Black
7.	Gnd	
8.	Gnd	
9.	Trim Analog in	Green AWG 20
10.	Trim Motor in	Orange AWG 22 -> pin 8 on Trim box
11.	+5V out for Trim	Yellow AWG 20
12.	Flap Analog in	Shielded 2-wire (white)
13.	NC	
14.	Flap Motor in	Yellow AWG 22
15.	- Honeywell LEDs	Black

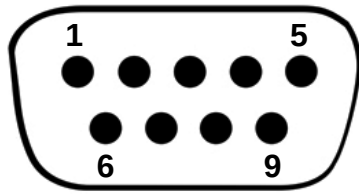
Magnetometer and OAT Sensor



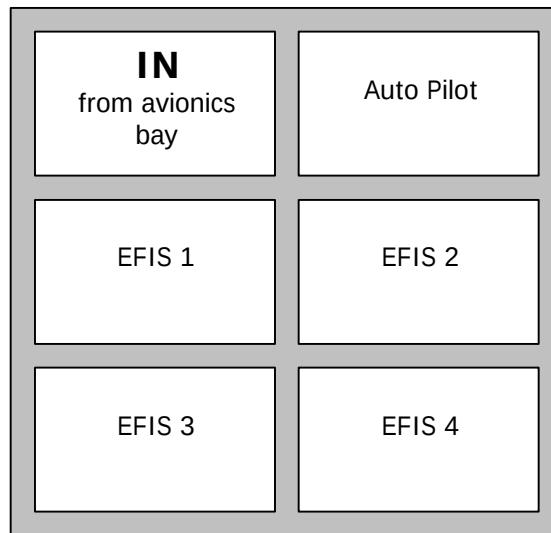
Byte		
1	Mag X MSB	mG × 15
2	Mag X LSB	
3	Mag Y MSB	
4	Mag Y LSB	
5	Mag Z MSB	
6	Mag Z LSB	
7	OAT MSB	K × 10
8	OAT LSB	
9	<CR>	



AHRS & UAT DSUB-9 Parallel board



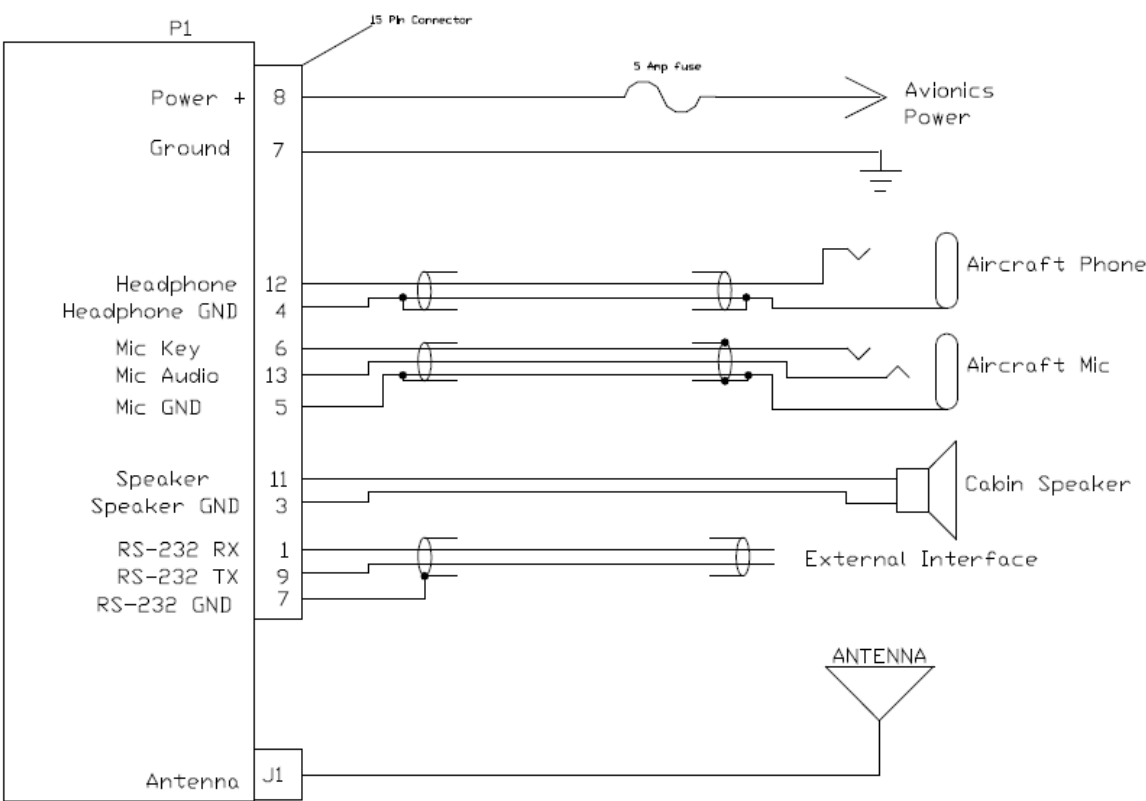
- | | | |
|----|--------|-----------|
| 1. | AHRS-1 | Debug TTL |
| 2. | AHRS-1 | RS422+ |
| 3. | AHRS-1 | RS422- |
| | | |
| 6. | AHRS-2 | GND |
| 7. | AHRS-2 | RS422+ |
| 8. | AHRS-2 | RS422- |
| | | |
| 4. | UAT | GND |
| 5. | UAT | RS422+ |
| 9. | UAT | RS422- |



Becker DB-25

Pin	Description	Connection
1	AF-ASYM.	AF-Output asymmetricaly
2	AFHI	AF-Output Symmetricaly HI
3	AFLO	AF-Output Symmetricaly HI
4	AFAUX	AF-Output Auxiliary
5	MIKE DYN. HI	Dynamic Mike connection HI
6	MIKE DYN. LO	Dynamic Mike connection LO
7	IC	Connection IC-Key
8	TEMS 1	Temperatursensor
9	RXD	RS 232 Data-Interface
10	N.C.	Not connected
11	+ VS	Plus power supply voltage
12	+ VS	Plus power supply voltage
13	GND	Minus power supply voltage
14	AFGND/ MIC.STD.GND	Standard Mike connection GND or AF-Output asy.
15	AFCU	AF-Output remote control unit
16	VAGC/AFWB	Output AGC-Voltage or AF-wide-band Output
17	PTT	Connection PTT-Key
18	MIKE STD	Standard Mike connection HI
19	CPIN	Code pin
20	TEMS2 (SQI)	Temperatursensor
21	GND DATA	Ground RS 232 Data-Interface
22	TXD	RS 232 Data-Interface
23	POWER CONTR. LINE	Control line to switch ON/OFF the equipment
24	+ VS switched	Power supply voltage switched
25	GND	Minus Power supply voltage

Val Avionics 2KR DB-15



Trig TT22 TMAP Interface

DB-15

1.	+14V in
2.	+14V in
3.	AHRS RS-422 RX+
4.	AHRS RS-422 RX-
5.	Control RS-422 RX+
6.	Control RS-422 RX-
7.	Control RS-422 TX+
8.	Control RS-422 TX-
9.	Ground
10.	Ground
11.	Ground
12.	+14V --> TT22
13.	Ground --> TT22
14.	TMAP-A --> TT22
15.	TMAP-B --> TT22