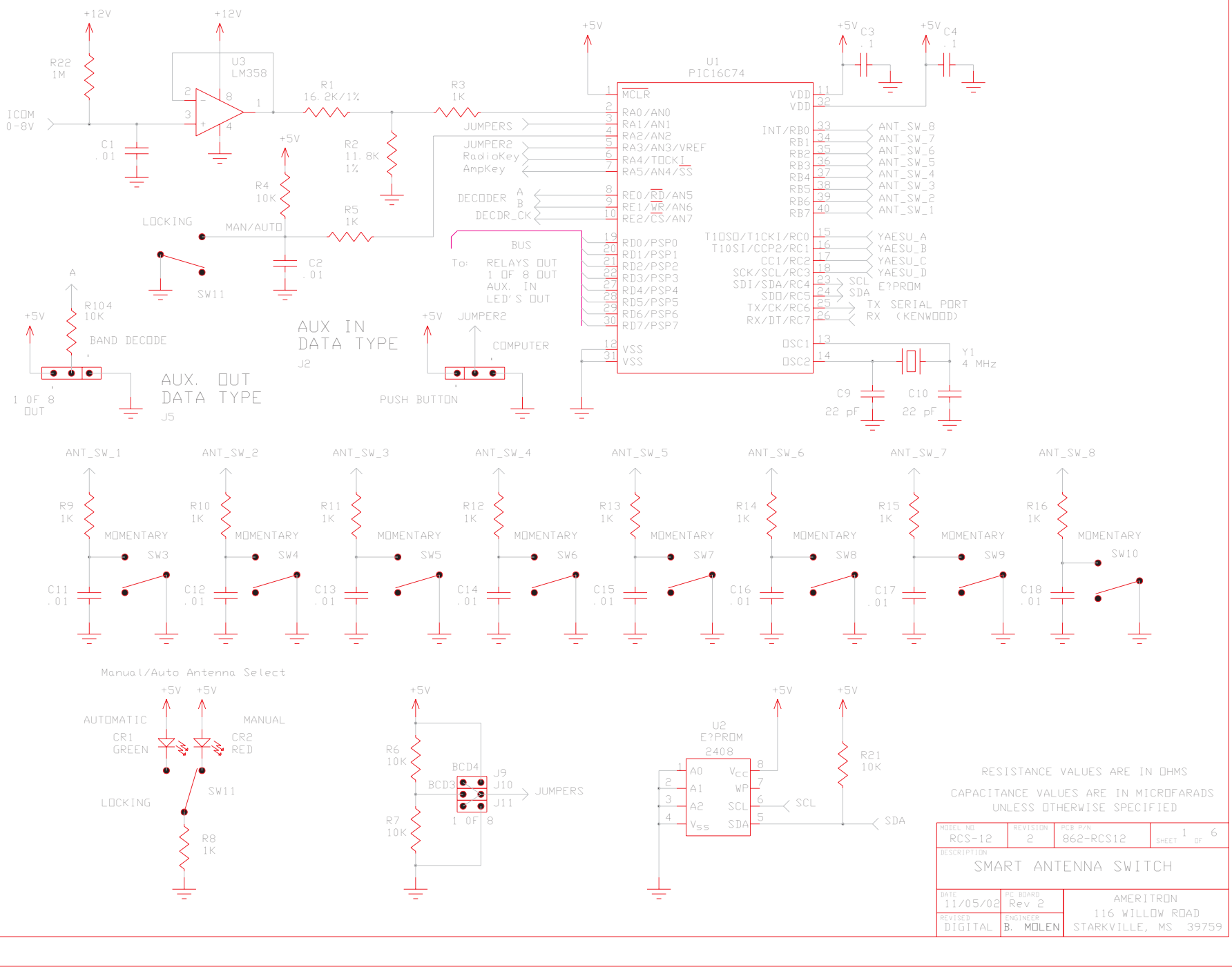


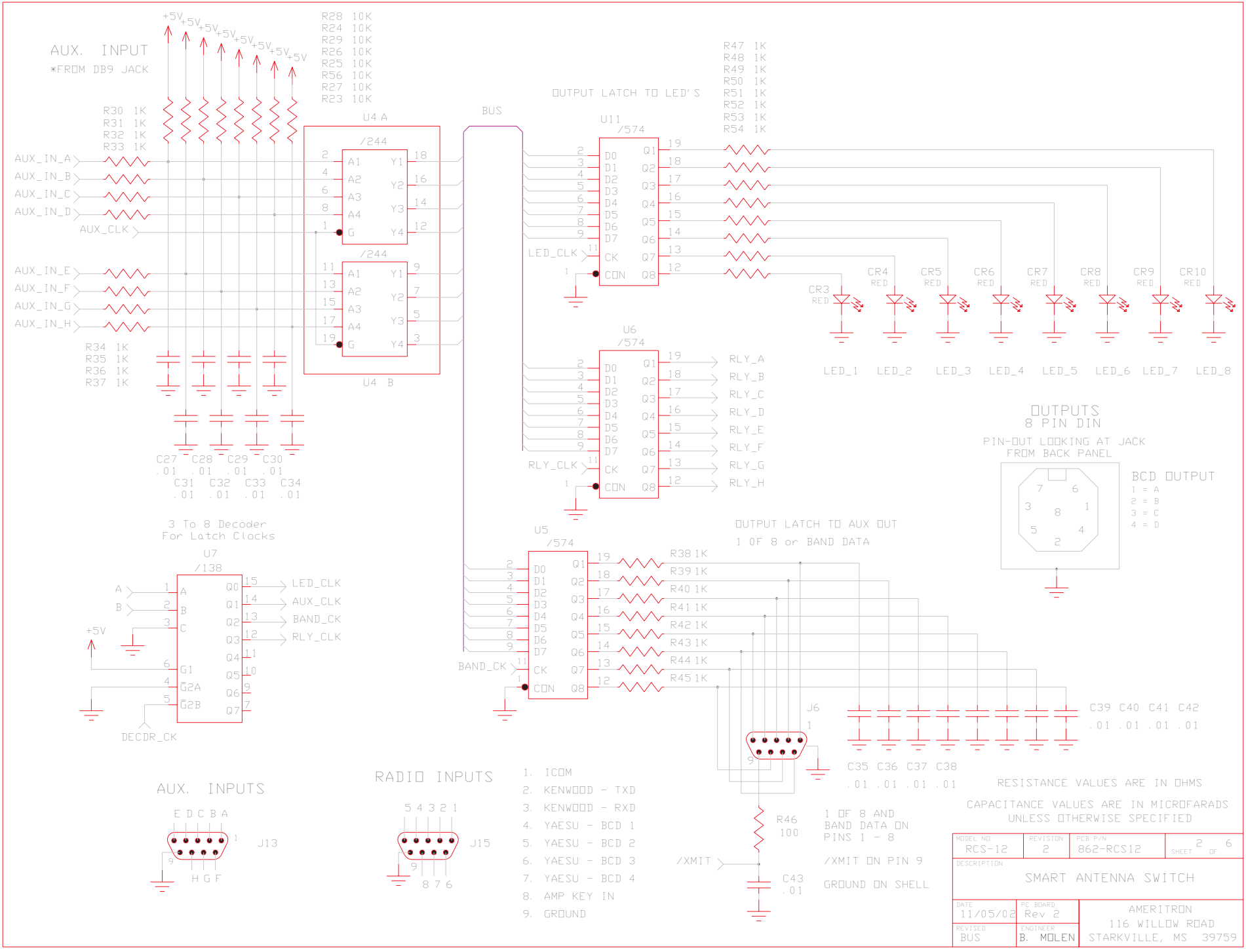
RESISTANCE VALUES ARE IN OHMS

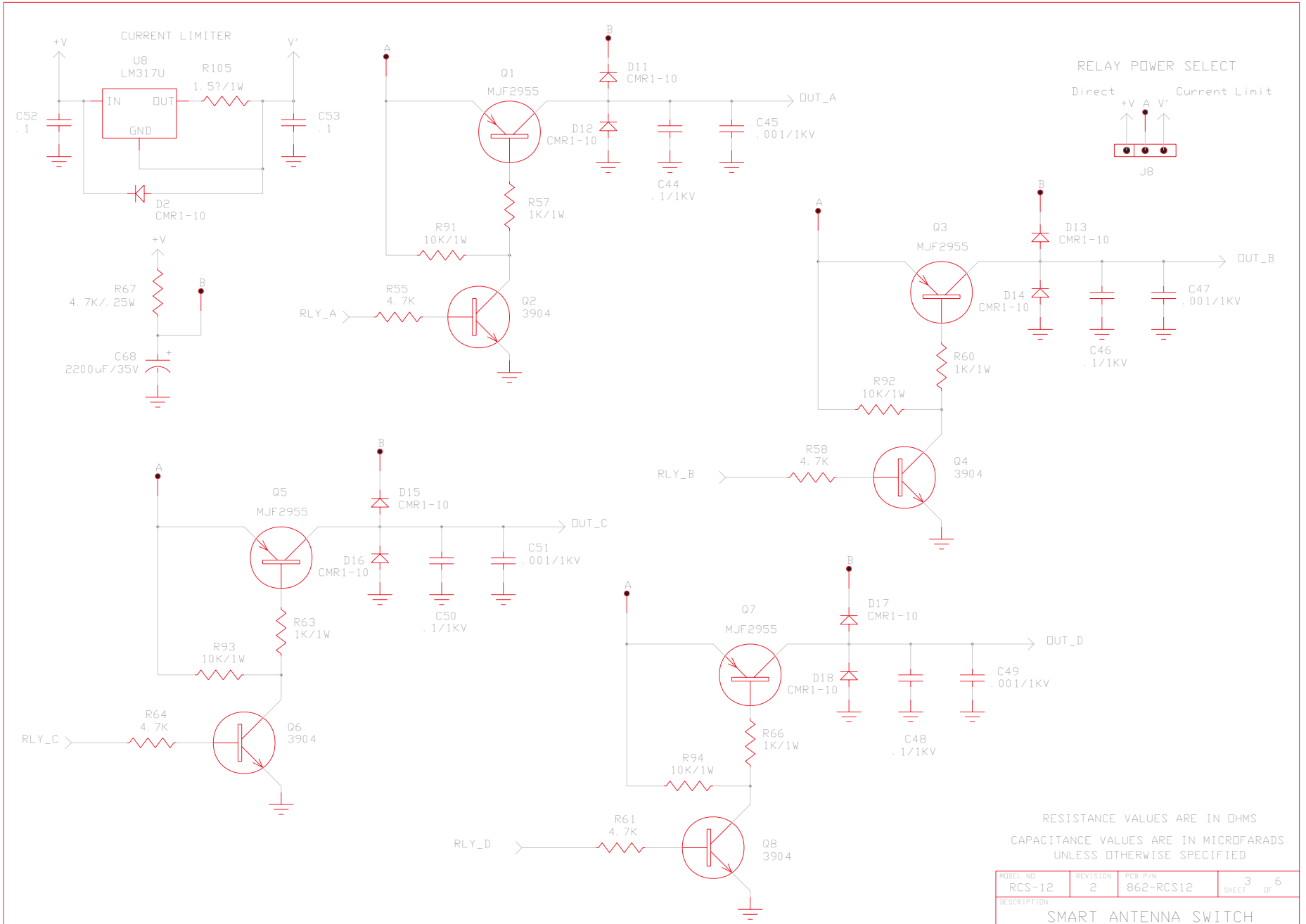
CAPACITANCE VALUES ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED

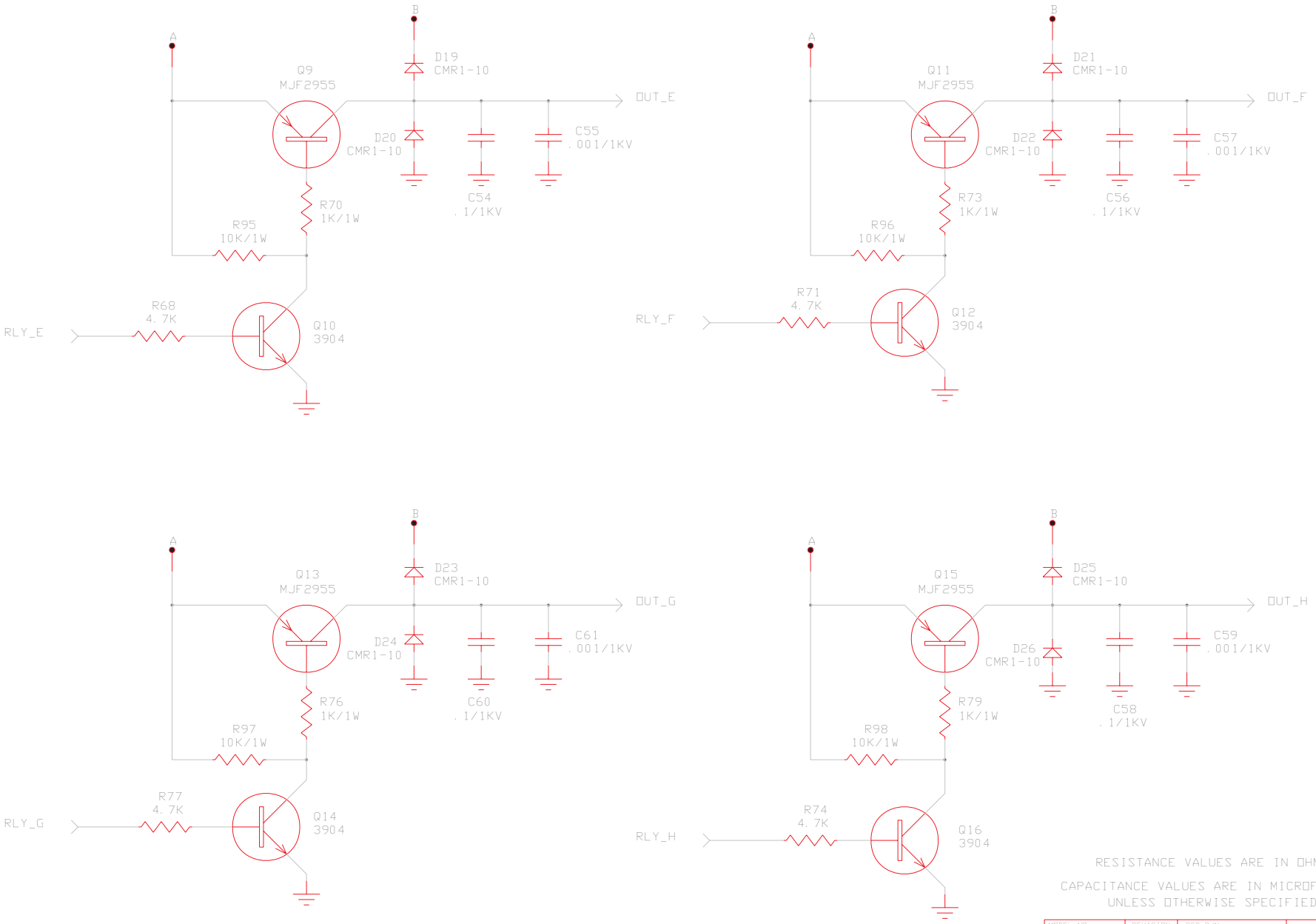
MODEL NO.	REVISION	PCB P/N	SHEET
RCS-12	2	862-RCS12	1 OF 6

DESCRIPTION: SMART ANTENNA SWITCH

DATE	PC BOARD	
11/05/02	Rev 2	AMERITRON
REVISED	ENGINEER	116 WILLOW ROAD
DIGITAL	B. MOLEN	STARKVILLE, MS 39759


AUX. INPUT
*FROM DB9 JACK
+5V
R28 10K
R24 10K
R29 10K
R26 10K
R25 10K
R56 10K
R27 10K
R23 10K
R30 1K
R31 1K
R32 1K
R33 1K
AUX_IN_A
AUX_IN_B
AUX_IN_C
AUX_IN_D
AUX_CLK
AUX_IN_E
AUX_IN_F
AUX_IN_G
AUX_IN_H
R34 1K
R35 1K
R36 1K
R37 1K
C27 .01
C28 .01
C29 .01
C30 .01
C31 .01
C32 .01
C33 .01
C34 .01
U4 A
/244
U4 B
BUS
OUTPUT LATCH TO LED'S
U11
/574
LED_CLK
R47 1K
R48 1K
R49 1K
R50 1K
R51 1K
R52 1K
R53 1K
R54 1K
CR3 RED
CR4 RED
CR5 RED
CR6 RED
CR7 RED
CR8 RED
CR9 RED
CR10 RED
LED_1
LED_2
LED_3
LED_4
LED_5
LED_6
LED_7
LED_8
U6
/574
RLY_CLK
RLY_A
RLY_B
RLY_C
RLY_D
RLY_E
RLY_F
RLY_G
RLY_H
OUTPUTS
8 PIN DIN
PIN-OUT LOOKING AT JACK
FROM BACK PANEL
BCD OUTPUT
1 = A
2 = B
3 = C
4 = D
3 To 8 Decoder
For Latch Clocks
U7
/138
LED_CLK
AUX_CLK
BAND_CK
RLY_CLK
DECDR_CK
U5
/574
BAND_CK
OUTPUT LATCH TO AUX OUT
1 OF 8 or BAND DATA
R38 1K
R39 1K
R40 1K
R41 1K
R42 1K
R43 1K
R44 1K
R45 1K
J6
C39 .01
C40 .01
C41 .01
C42 .01
C35 .01
C36 .01
C37 .01
C38 .01
R46 100
/XMIT
C43 .01
1 OF 8 AND
BAND DATA ON
PINS 1 - 8
/XMIT ON PIN 9
GROUND ON SHELL
AUX. INPUTS
E D C B A
H G F
J13
RADIO INPUTS
5 4 3 2 1
8 7 6
J15
1. ICOM
2. KENWOOD - TXD
3. KENWOOD - RXD
4. YAESU - BCD 1
5. YAESU - BCD 2
6. YAESU - BCD 3
7. YAESU - BCD 4
8. AMP KEY IN
9. GROUND
RESISTANCE VALUES ARE IN OHMS
CAPACITANCE VALUES ARE IN MICROFARADS
UNLESS OTHERWISE SPECIFIED
MODEL NO. RCS-12
REVISION 2
PCB P/N 862-RCS12
SHEET 2 OF 6
DESCRIPTION
SMART ANTENNA SWITCH
DATE 11/05/02
PC BOARD Rev 2
REVISED BUS
ENGINEER B. MOLEN
AMERITRON
116 WILLOW ROAD
STARKVILLE, MS 39759

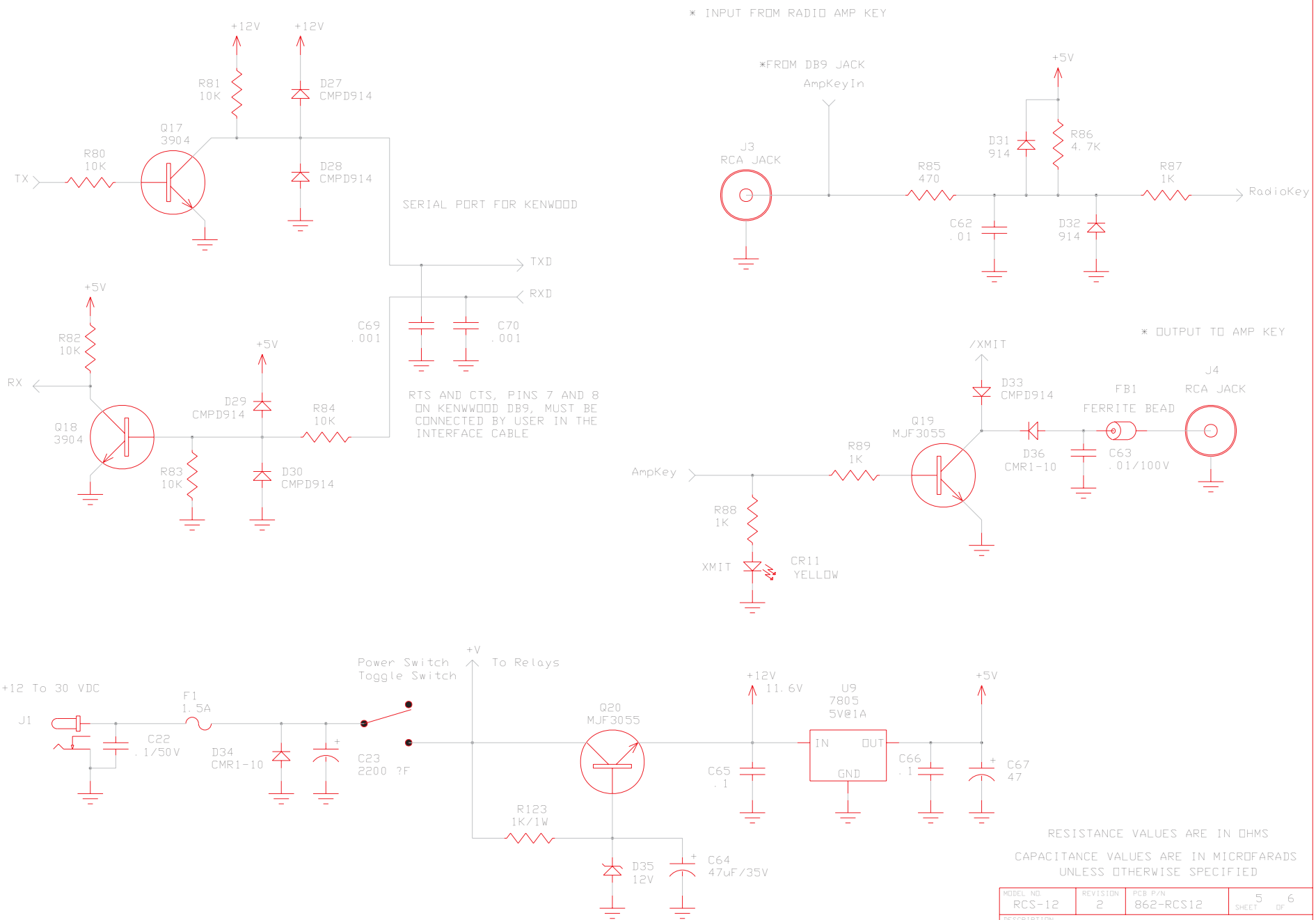

CURRENT LIMITER
+V
V'
U8
LM317U
R105
1.5?/1W
IN
OUT
GND
C52
.1
C53
.1
D2
CMR1-10
A
B
Q1
MJF2955
D11
CMR1-10
D12
CMR1-10
C44
.1/1KV
C45
.001/1KV
OUT_A
R57
1K/1W
R91
10K/1W
R55
4.7K
RLY_A
Q2
3904
R67
4.7K/.25W
C68
2200uF/35V
RELAY POWER SELECT
Direct
Current Limit
J8
Q3
MJF2955
D13
CMR1-10
D14
CMR1-10
C46
.1/1KV
C47
.001/1KV
OUT_B
R60
1K/1W
R92
10K/1W
R58
4.7K
RLY_B
Q4
3904
Q5
MJF2955
D15
CMR1-10
D16
CMR1-10
C50
.1/1KV
C51
.001/1KV
OUT_C
R63
1K/1W
R93
10K/1W
R64
4.7K
RLY_C
Q6
3904
Q7
MJF2955
D17
CMR1-10
D18
CMR1-10
C48
.1/1KV
C49
.001/1KV
OUT_D
R66
1K/1W
R94
10K/1W
R61
4.7K
RLY_D
Q8
3904
RESISTANCE VALUES ARE IN OHMS
CAPACITANCE VALUES ARE IN MICROFARADS
UNLESS OTHERWISE SPECIFIED
MODEL NO: RCS-12
REVISION: 2
PCB P/N: 862-RCS12
SHEET 3 OF 6
DESCRIPTION: SMART ANTENNA SWITCH
DATE: 10/09/02
PC BOARD: Rev 2
REVISED: ANT_OUT1
ENGINEER: B. MOLEN
AMERITRON
116 WILLOW ROAD
STARKVILLE, MS 39759

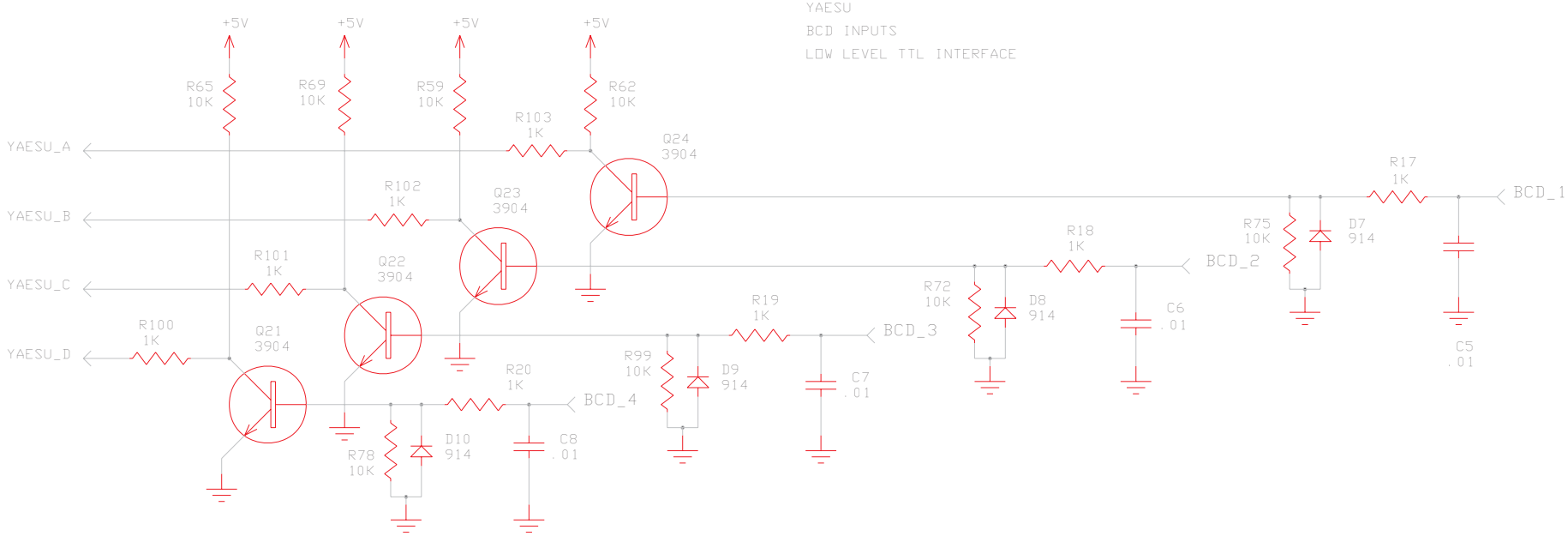


RESISTANCE VALUES ARE IN OHMS

CAPACITANCE VALUES ARE IN MICROFARADS
UNLESS OTHERWISE SPECIFIED

MODEL NO. RCS-12	REVISION 2	PCB P/N	SHEET 4 OF 6
DESCRIPTION: SMART ANTENNA SWITCH			
DATE 10/09/02	PC BOARD Rev 2	AMERITRON 116 WILLOW ROAD STARKVILLE, MS 39759	
REVISED ANT_OUT2	ENGINEER B. MOLEN		


* INPUT FROM RADIO AMP KEY
+12V
+12V
R81
10K
D27
CMPD914
Q17
3904
R80
10K
TX
D28
CMPD914
SERIAL PORT FOR KENWOOD
TXD
RXD
+5V
R82
10K
RX
Q18
3904
+5V
D29
CMPD914
R84
10K
R83
10K
D30
CMPD914
C69
.001
C70
.001
RTS AND CTS, PINS 7 AND 8
ON KENWWOOD DB9, MUST BE
CONNECTED BY USER IN THE
INTERFACE CABLE
*FROM DB9 JACK
AmpKeyIn
J3
RCA JACK
R85
470
+5V
D31
914
R86
4.7K
R87
1K
RadioKey
C62
.01
D32
914
* OUTPUT TO AMP KEY
/XMIT
D33
CMPD914
J4
FB1
FERRITE BEAD
RCA JACK
Q19
MJF3055
D36
CMR1-10
C63
.01/100V
AmpKey
R89
1K
R88
1K
XMIT
CR11
YELLOW
+12 To 30 VDC
J1
F1
1.5A
C22
.1/50V
D34
CMR1-10
C23
2200 ?F
Power Switch
Toggle Switch
+V
To Relays
Q20
MJF3055
R123
1K/1W
D35
12V
C64
47uF/35V
+12V
11.6V
C65
.1
U9
7805
5V@1A
IN
OUT
GND
C66
.1
+5V
C67
47
RESISTANCE VALUES ARE IN OHMS
CAPACITANCE VALUES ARE IN MICROFARADS
UNLESS OTHERWISE SPECIFIED
MODEL NO.
RCS-12
REVISION
2
PCB P/N
862-RCS12
SHEET
5
OF
6
DESCRIPTION
SMART ANTENNA SWITCH
DATE
11/05/02
PC BOARD
Rev 2
REVISED
SERIAL
ENGINEER
B. MOLEN
AMERITRON
116 WILLOW ROAD
STARKVILLE, MS 39759



RESISTANCE VALUES ARE IN OHMS

CAPACITANCE VALUES ARE IN MICROFARADS
UNLESS OTHERWISE SPECIFIED

MODEL NO.	REVISION	PCB P/N	SHEET OF
RCS-12	2	862-RCS12	6 6

DESCRIPTION

SMART ANTENNA SWITCH

DATE	PC BOARD	AMERITRON
10/09/02	Rev 2	116 WILLOW ROAD
REVISED	ENGINEER	STARKVILLE, MS 39759
BCD	B. MOLEN	