SPKR

DIAL

CNTL UNIT F3172101A

DS4001
FTD-8E51
LCD

Q4017
HD61602RH
LCD DRIVER

KEY SW

Q4016
HD64330BF
CPU

VOL

SQL

BAL

MIC

Q4005. 11. 14
NJM2904M1/2
2SB1182FS
FMW1
DIMMER CNTL

Q4005 1/2
NJM2904M
MIC AMP

Q5009. 10. 19. 20. 23
2SA1213Y
DTA114EK
BN1A4M
POWER SW

Q5007
μPD4052BG
SW

Q5002
M51523AL
VOL CNTL

Q5015 1/2
NJM2902M
AF AMP

Q5016 1/2
NJM2902M
AF AMP

Q5005
M37450M2
CPU

INTERFACE UNIT
F3171100A

MOD

MAIN AF

SUB AF

MAIN AF

SUB AF

VOICE MEMORY UNIT
DVS-3
(OPTION)

PAGER UNIT
FRC-4
(OPTION)

TONE SQ UNIT
FTS-22
(OPTION)

IF UNIT
F3168103

X1002 22.045MHz

X1001 17.245MHZ

Q404
MC3372M
OSC MIX DET

Q403
MC3372M
OSC MIX DET

Q402
M5223FP
CNTR STOP

Q401
M5223FP
CNTR STOP

Q1023
2SC1623L6
BUFF

Q1025
TDA2003V
AF PA

Q1020
μPD4066BG
SW

Q1008
DTC124EK
MOD SW

UR8V

MOD

VIF

UIF

VT8V

/R 8V

9101

Q801
4226R22
VCO

Q803
C144EU
SW

Q804
4226R22
VCO

Q805
C144EU
SW

Q505
2SC1623L6
HPF

Q504
2SC1623L6
HPF

Q506
μPD4066BG
SW

Q501
2SC1623L6
HPF

Q507. 8. 9
DTC124EKx3
SW

Q502. 3
DTC124EKx2
SW

AF UNIT F3168101

70101

Q601
K1577
VCO

Q603
4116GR
FIL

MOD

8V

LL UNIT
69102

Q703
A1586Y
UL

UUL

X V 8V

10V

Q1014
2SC2873Y
REG

Q209
B624
SW

Q213
N1A4M
SW

VRX

5V

Q1024
μPC7805H
REG

8V

Q1016
μPC7808H
REG

RX

TX

COMMON

Ремонт электроники
http://www.raid.ru/customers/dmitryr

144 PA UNIT F3167101

Ремонт электроники
http://www.raid.ru/customers/dmitryr

※	10W	50W	25W
Q101	M57715	S-AV24	M57737
D101	M1407	UM9415	—
C122	3P	8P	—
C121	1P	5P	—

SUB SP
J101 P1090667
EXT SP
J102 P1090668
SP
J103 P0090647
※ Q101 M57715
※ D101 M1407
Q102 TDA7233D
ANT
UHF ANT
+B

NOTE:

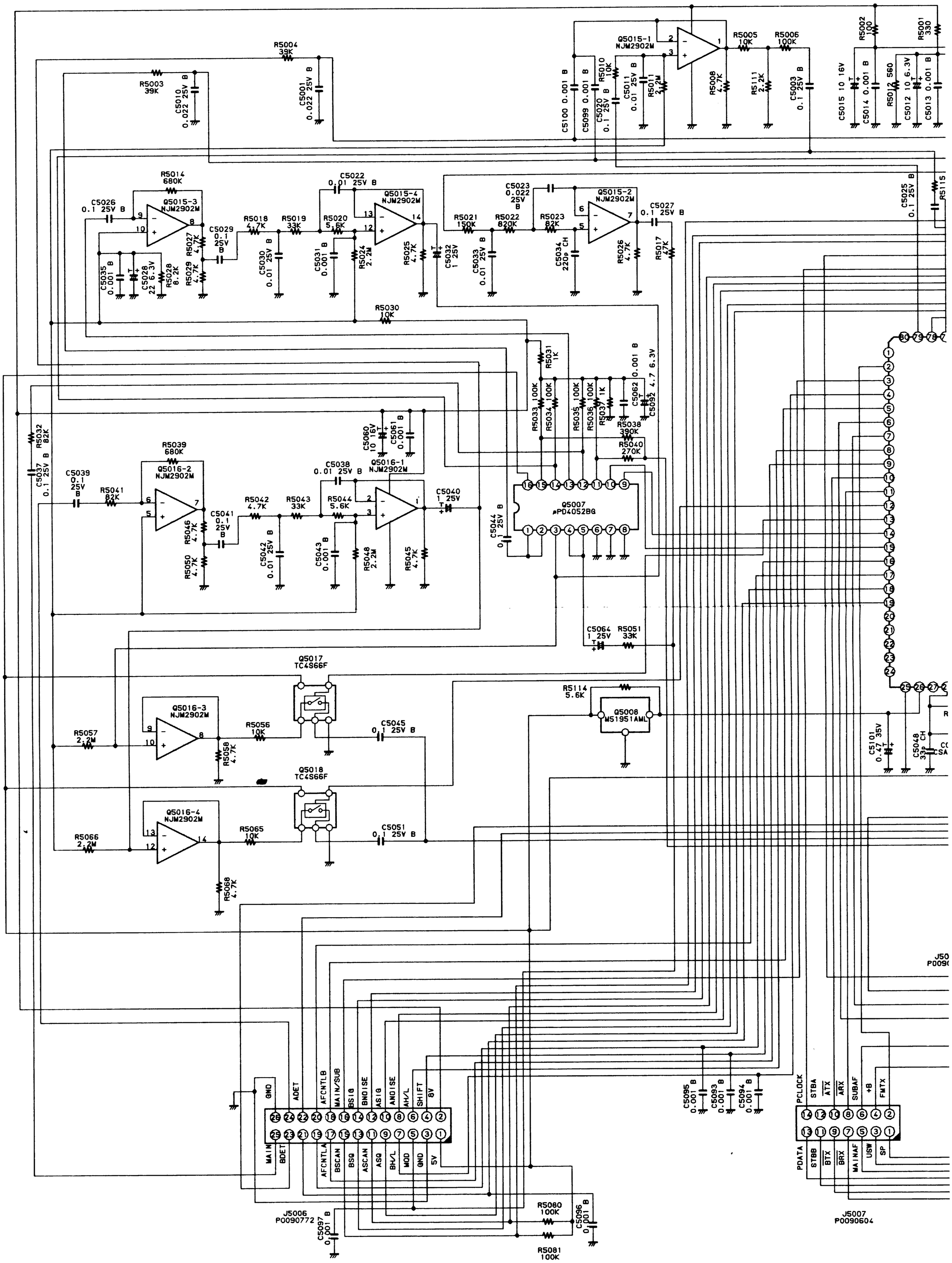
RESISTER VALUES ARE IN Ω.1/10W :
CAPACITOR VALUES ARE IN μF. 50V :
INDUCTOR VALUES ARE IN H
UNLESS OTHERWISE NOTED.

J105 P0090789 — SUBIN, AF+B, SUBCNT, SP, GND, TXIN

J106 P0090789 — D+B, TXB, GND, RX, GND, APC

Ремонт электроники
http://www.raid.ru/customers/dmitryr

INTERFACE UNIT



Ремонт электроники
http://www.raid.ru/customers/dmitryr

Q5002
M51523AL

Q5005
M37450M2-***FP

Q5006
μPD4028BG

Q5009
2SA1213Y

Q5019
2SA1213Y

Q5023
BN144M

J5003
P0090649
DVS OR PAG

J5004
P0090648

J5005
P0090782
TSQ

NOTE:

RESISTER VALUES ARE IN Ω.1/16W ;
CAPACITOR VALUES ARE IN μF. 50V ;
(T) CAPACITOR VALUES ARE TANTALUM ;
UNLESS OTHERWISE NOTED.

MAIN-UNIT F3166000

TP1003 TP-R
ANT
C1120 ***
L1001 L0021817
L1002 L0021359
L1003 L0021359
C1003 2p CK
C1004 2p CK
C1005 22p CH
C1006 2p CK
C1142 1p CK
C1143 2p CK
L1004 L0021359
L1005 L0021359
C1007 7p CH
C1009 1p CK
C1013 1p CK
C1010 6p CH
C1011 1p CK
C1012 5p CH
J1002 P1090672
APC
GND
VANT
GND
VT8
VDB
C1037 470p CH
R1004 10K
D1004 1SS97
C1031 8p CH
C1022 5p CH
R1005 10K
D1005 1SS97
C1154 0.001 B
C1105 0.001 B
R1090 1.2K
R1091 5.6 1/4W
R1092 1.2K
C1107 0.1 25V B
L1024 L0020340
R1088 15 1/4W
C1135 0.01 B
Q1026 2SC2538
C1108 0.001 B
D1022 1SS55
R1071 2.2K
R1070 68
C1104 12p CH
L1023 0.1µ
C1109 0.001 B
R1072 22
Q1027 2SC3357
C1106 0.001 B
R1073 15
R1075 4.7K
R1074 1K
C1163 10p CH
C1151 0.1 25V B
C1103 8p CH
FB1001
FB1002
FB1003
FB1004
D1021 1SS110
D1002 1SS184
L1009 0.22µ
L1010 0.22µ
R1010 220
C1038 0.001 B
C1033 0.001 B
R1011 220
Q1003 2SC2714Y
R1001 68K
C1015 10p CH
C1024 4p CH
■1004 MS7788MR
D1003 UM9415
L1008 L0020724
R1012 150 1/2W
C1130 0.001 B
L1007 L0021817
D1007 MI308
C1034 470p CH
C1129 3p CJ
C1023 3p CJ
C1025 470p CH
C1016 10 16V
C1026 470p CH
C1017 10 16V
C1030 470p CH
C1021 10 16V
R1076 220K
R1078 180K
TP1004 TP-R
U SW
13.8V
GND
R1101 0
D1001 P6KE18
C1001 470 16V
C1002 0.001 B
C1114 100 16V
C1115 470 16V
C1116 470 16V
Q1028-2 M5223FP
R1080 2.2K
R1081 220K
R1082 1K
Q1028-1 M5223FP
R1083 220K
R1084 22K
R1087 1.5K
R1086 8.2K
C1144 100 10V
C1184 0.001 B
R1104 4.7K
R1105 4.7K
SHIFT
GND
CLK
DATA
STBU
8V
5V
430 PLL
C1185 0.001 B
C1186 0.001 B
C1152 0.01 B
D1009 HSM2693
L1015 0.018µ
R1106 4.7K
R1107 4.7K
VT8
VR8
CLK
DATA
STBV
8V
5V
144 PLL
C1183 0.001 B
C1137 0.5p CK
R1096 100
R1097 68
R1098 100
J1007 P1090210
Q1009 SGM2006M
C1044 0.001 B
C1048 4p CH
C1049 2p CK
D1027 MI308
L1017 0.022µ
TP1005 TP-E
L1021 L0020900
TC1001 4p
R1021 100K
R1022 22K
R1023 6.8K
C1051 0.001 B
R1024 68
C1055 0.001 B
R1019 1K
C1045 2p CK
L1016 0.018µ
R1025 10
C1056 0.001 B
C1057 0.001 B
C1122 0.01 B
C1046 2p CK
Q1010 2SK1577
R1020 47
C1047 0.001 B
C1121 ***
CV1001 L4020082
R1089 ***
L1022 0.018µ
C1117 2p CK
C1136 0.001 B
CV1002 L4020081
C1052 0.001 B
R1026 10
R1027 470
MIXER UNIT
U1008 ***
VLOCAL
GND
VCV
GND
VRF
GND
VR8
UR8
ULOCAL
GND
URF
GND
C1112 0.001 B
R1028 10K
R1029 10K
Q1011 1MZ1
R1030 10K
C1061 0.001 B
Q1014 2SC2873-Y
R1031 220
C1059 0.001 B
C1060 10 16V
D1010 HZM11B
R1112 8.2K
C1073 0.001 B
Q1021 3SK131-V11
C1074 0.001 B
T1002 L0022067
C1160 0.1 25V B
D1011 HSU277
C1076 0.001 B
T1003 L0022067
C1082 10p CH
T1004 L0022067
D1012 HSU277
C1077 0.001 B
T1005 L0022067
T1006 L0022067
C1081 0.001 B
C1159 10p CH
R1051 100K
C1090 0.001 B
C1091 0.001 B
R1054 12
L1020 2.2µ
C1093 0.001 B
R1064 10
C1086 0.5p CK
D1013 1T362
C1096 0.001 B
R1058 10K
R1052 10K
D1016 1T362
C1083 1p CK
C1087 2p CK
D1014 1T362
C1097 0.001 B
R1059 10K
R1060 10K
D1017 1T362
C1089 0.001 B
J1005 P1090672
TXIN
GND
MSP
SCNT
10V
SUB IN
R1035 100
C1065 0.01 B
R1037 330
C1071 47p CH
L1018 0.68µ
R1039 120K
R1045 1K
R1053 22K
Q1018 2SC2620QB

■	10
C1022	3
C1029	3
C1031	5
C1103	6
C1104	8
C1129	3
D1003	M14
Q1004	M57
Q1027	2SC2

Ремонт электроники
http://www.raid.ru/customers/dmitryr

Ремонт электроники
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CNTL UNIT F3172101A

D1 D2 SP USW MIC GND

C4040 100p CH C4039 100p CH

LOW BAND REW TONE SUB RPT VOICE F/W WHZ CALL D/MR

S4001 N5090027 S4002 N5090027 S4003 N5090027 S4004 N5090027 S4005 N5090027 S4006 N5090027 S4007 N5090027 S4008 N5090027 S4010 N5090027 S4011 N5090027 S4012 N5090027

R4013 100K R4060 100K CO4001 CSA9.83MT C4017 33p CH C4016 33p CH R4031 1M

D4005 1SS270 C4010 1 16V R4014 100K R4018 100K Q4010 1MZ1 R4055 100K

Q4013 MS1953AFP C4015 0.1 35V R4026 220K C4047 0.1 25V B

Q4002 RH5VA45AA R4002 18K C4028 0.22 35V R4003 10K R4012 4.7K

Q4008 1MD2 D4001 1SS184 Q4016 DTC124EK

R4069 100 Q4003 NJU7201U50 Q4012 2SA1162GR R4023 100K R4025 4.7K R4021 47K

C4004 10 16V C4006 0.001 B C4009 10 6.3V D4002 1SS319 BT4001 CR2016-TS1 JP4006 * S4013 N5090027 POWER

D4006 HZ15-2 C4001 0.001 B C4018 0.001 B C4019 1 16V S4014 N5090051

Q4006 2SB624-BV4 R4006 3.3K 1/10W R4011 3.3K 1/10W Q4004 FMG4

R4061 47 0.1W Q4009 NJM78L05UA IN OUT GND C4008 10 16V C4011 0.001 B C4013 0.001 B C4014 10 6.3V

R4001 10K C4003 0.1 25V B R4008 0 Q4011 2SB1182F5-Q

R4004 1.2K R4010 470K C4038 100p CH Q4005-2 NJM2904M R4017 0

C4002 0.01 25V B R4005 10K R4009 8.2K C4005 0.001 B C4007 10 6.3V R4016 4.7K

Q4014 FMW1 R4028 1K R4029 22 1/10W R4030 22 1/10W R4032 22 1/10W

PL4001 9V PL4002 9V PL4003 9V R4022 1K R4027 470

C4037 0.001 B Q4005-1 NJM2904M 8 R4033 10K C4023 10 6.3V R4035 18K

R4039 10K R4038 10K A B COM S4006 Q9000395

C4020 0.01 25V B C4021 0.01 25V B R4040 100K R4041 100K

D4003 1SS184 C4036 0.001 B R4042 22K R4044 22K R4043 220K

Q4016 HD643308F-10

D0 D1 D2 D3 D4 D5 D6 D7 RE WE READY

R4062 0 R4063 0 R4064 0 R4065 0 R4066 0

R4058 2.2K R4059 1K R4056 8.2K R4057 3.9K

Q4017 HD61602RH

READY R4054 330K C4022 2.2 16V C4027 0.001 B C4025 NO.1 25V B C4024 NO.1 25V B R4053 10K R4052 10K R4051 2.2K

COM2 COM1 COM0

LCD DS4001 FTD-10223AA

CS4001 P2137-01 R4045 2.2M C4041 0.001 B

R4037 82K R4036 39K R4034 22K C4030 0.001 B C4031 0.001 B C4032 0.001 B

VR4001 20KB VR4002 20KB VR4003 20KB

Q4018 TC4S66F

J4001 P0090742

C4034 0.001 B C4045 1K C4035 0.001 B C4047 1K R4048 1K R4049 1K C4033 0.001 B R4057 100K R4068 1K R4050 1M

NOTE:
RESISTER VALUES ARE IN Ω,1/16W ;
CAPACITOR VALUES ARE IN μF, 50V ;
(T) CAPACITOR VALUES ARE TANTALUM ;
ELECTORLYTIC CAPACITOR ARE IN μF,16V ;
UNLESS OTHERWISE NOTED.

OUT IN REF VCV MOD UL R702 15

430-VCO-UNIT F3170101

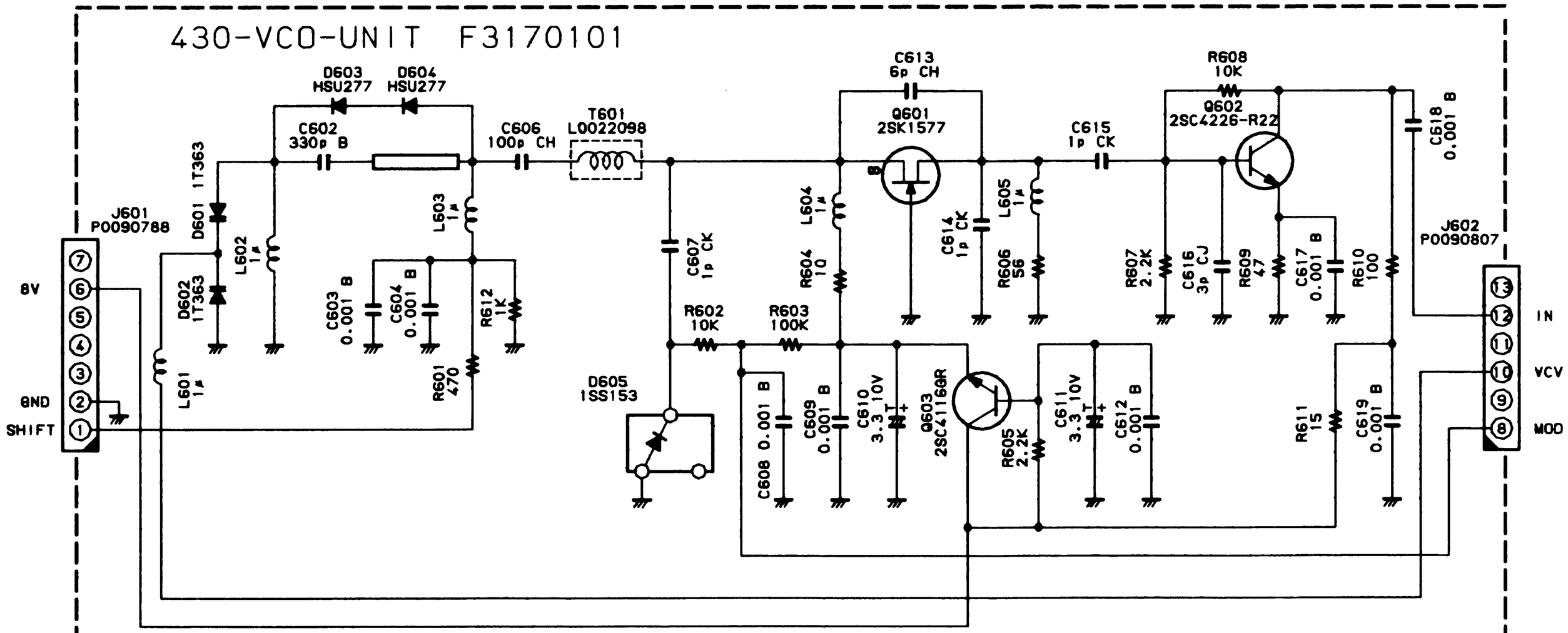
D603 HSU277 D604 HSU277 C613 6p CH R608 10K

MIXER-UNIT F3168104

T301 L0021913 C301 0.001 B Q301 3SK136-1V XF301 17T15BU

C302 22p CH D301 1T363 R303 100K R301 4.7K R304 180 C306 25V B R302 22K C303 5p CH L301 2.2μ R305 100 C307 25V B C304 7p CH

430-VCO-UNIT F3170101

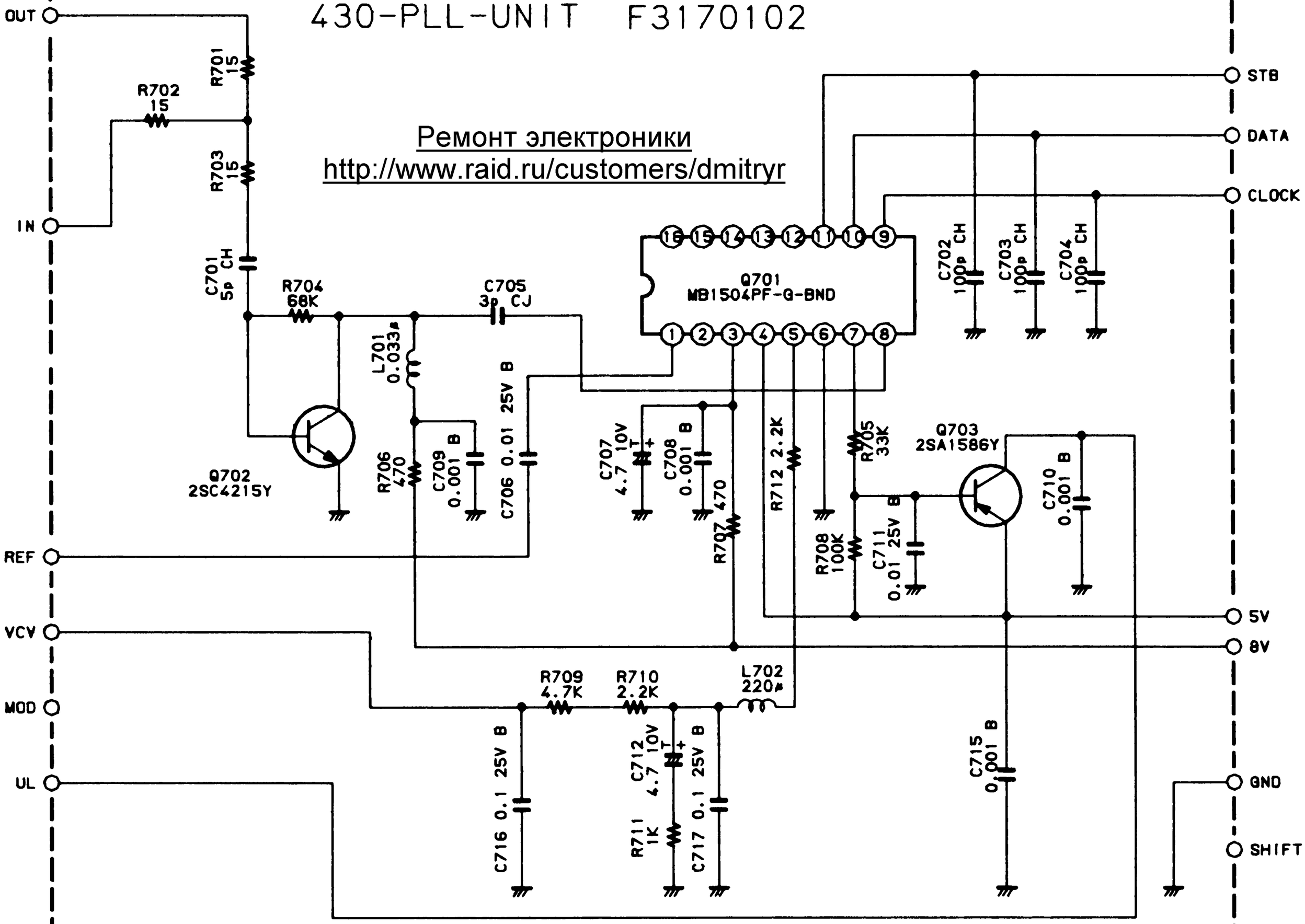


NOTE:
RESISTER VALUES ARE IN Ω.1/16W :
CAPACITOR VALUES ARE IN μF. 50V :
(T) CAPACITOR VALUES ARE TANTALUM :
INDUCTOR VALUES ARE IN H
UNLESS OTHERWISE NOTED.

Ремонт электроники
http://www.raid.ru/customers/dmitryr

430-PLL-UNIT F3170102

Ремонт электроники
http://www.raid.ru/customers/dmitryr



NOTE:
RESISTER VALUES ARE IN Ω. 1/16W ;
CAPACITOR VALUES ARE IN µF. 50V ;
(T) CAPACITOR VALUES ARE TANTALUM ;
INDUCTOR VALUES ARE IN H
UNLESS OTHERWISE NOTED.

MIXER-UNIT F3168104

Ремонт электроники
http://www.raid.ru/customers/dmitryr

T301 L0021913
C301 0.001 B
Q301 3SK136-IV
XF301 17T15BU
XF302 17T15BU
C302 22p CH
R301 4.7K
R302 22K
C303 33p CH
L301 2.2μ
C304 7p CH
C305 0.001 B
D301 1T363
R303 100K
C306 0.01 25V B
R304 180
R305 100
C307 0.01 25V B
D302 1SS301
XF303 22T15BU
XF304 22T15BU
Q303 SGM2006M
R307 2.2K
C308 56p CH
L302 0.82μ
C309 150p CH
R306 1M
Q302 2SC1623-L6
X301 12.800MHZ
C316 0.01 25V B
C311 4p CH
L303 0.033μ
C318 3p CJ
L304 0.033μ
C319 ***
C320 0.01 25V B
R311 330
R312 100
C321 0.01 25V B
R309 10K
C312 6p CH
C310 0.01 25V B
C325 0.001 B
C324 4.7 6.3V
R308 100
C313 0.01 25V B
R310 4.7K
C314 150p CH
TC301 20p
C315 27p CH
C322 0.01 25V B
C323 0.01 25V B

NOTE:
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UNLESS OTHERWISE NOTED.

J301 P0090709

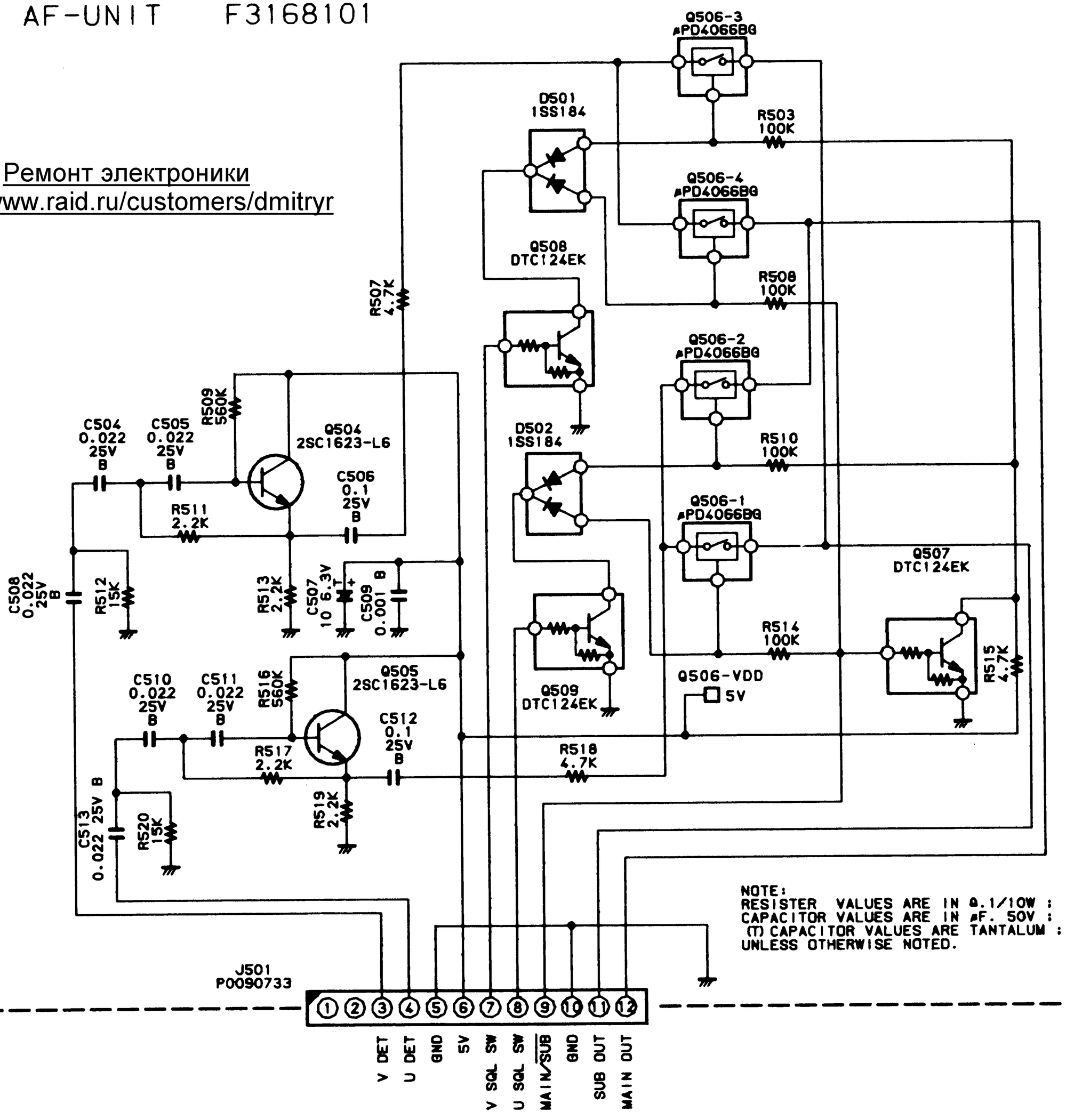
1	2	3	4	5	6	7	8	9	10	11	12	13
V LOCAL	GND	VCV	GND	V RF	GND	V R8	U R8	U LOCAL	GND	U RF	GND	

J302 P0090740

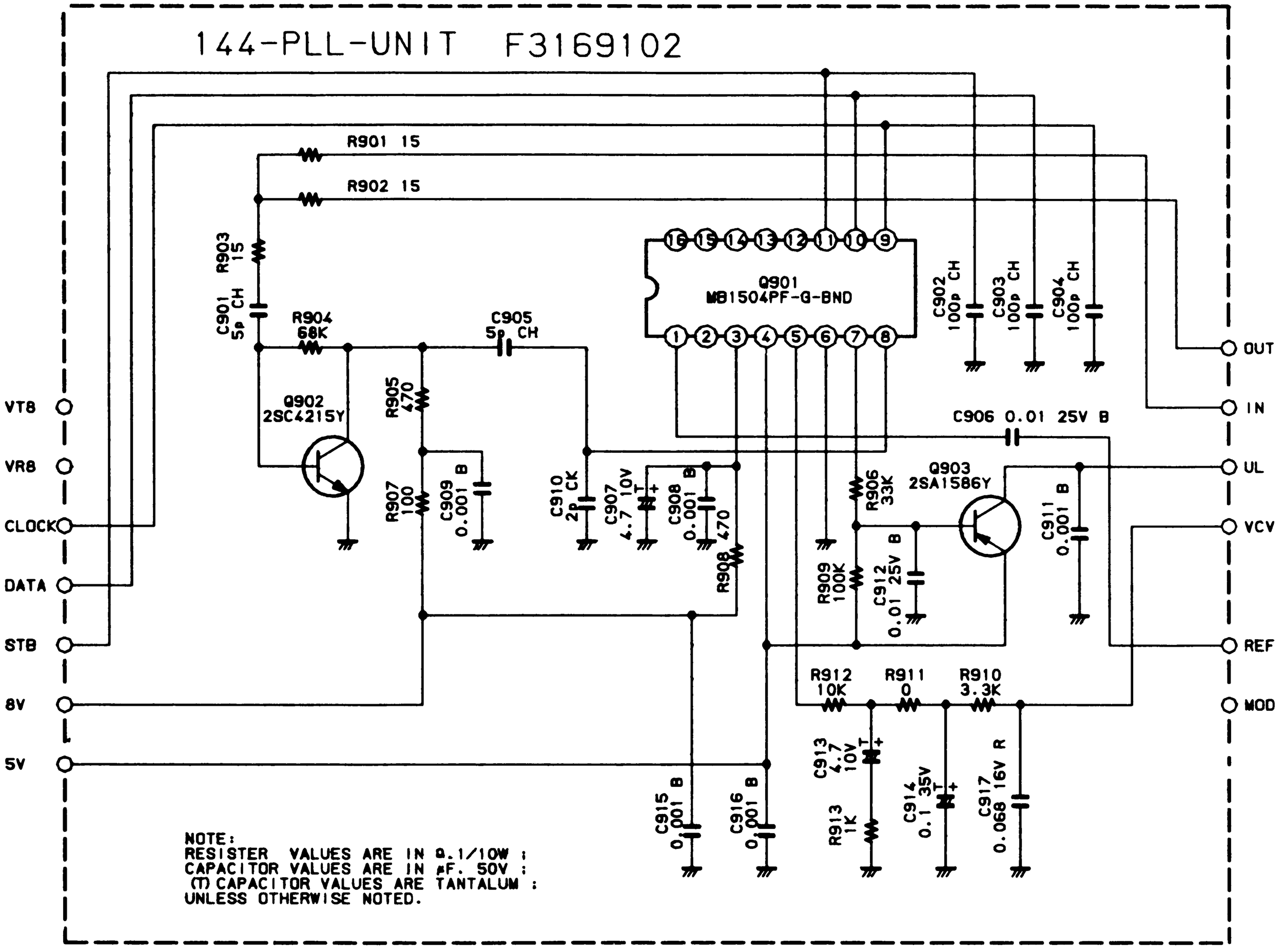
14	15	16	17	18	19	20
V IF	GND	GND	U IV	5V	GND	REF

AF-UNIT F3168101

Ремонт электроники
http://www.raid.ru/customers/dmitryr



144-PLL-UNIT F3169102



Ремонт электроники
http://www.raid.ru/customers/dmitryr