SAT-A55P RM-Y802
SAT-B55P RM-Y139
SAN-18D3

SERVICE MANUAL

RM-Y802

SAN-18D3

SAT-A55P

DIGITAL SATELLITE RECEIVER/SATELLITE ANTENNA

DIRECTV®

SONY®

9-965-914-01

TABLE OF CONTENTS

SECTION TITLE **PAGE**

SPECIFICATIONS

FOR DIGITAL SATELLITE RECEIVER:

Input Jacks

UHF/VHF 75 ohm F-type
Satellite Antenna 75 ohm F-type
RF Remote Antenna (SAT-A55P Only)
AC Power (120V, 60Hz)

Output Jacks

S-VIDEO OUT, 4-pin mini DIN
VIDEO (RCA Jacks) (2)
AUDIO R/L (RCA Jacks) (2)
VHF (SAT)/UHF 75 ohms F-type
Low Speed Data, 9-pin D-sub Female
Telephone Line (RJ11)
VCR Control (1) VCR Controller
   (or monoaural cable for Sony SmartFile VCRs)

Input Frequency

950 - 1450 Mhz / 950 - 2150 Mhz

Power Consumption

20 W maximum

Dimensions (w/h/d)

11 x 2⁵⁄₈ x 9 inches (280 x 66.5 x 228.5 mm)

Weight

SAT-A55P	SAT-B55P
Set: 6.0 lbs. (2.7 kg)	Set: 5.4 lbs (2.5 kg)
Unit: 3.6 lbs. (1.6 kg)	Unit: 3.4 lbs. (1.5 kg)

Supplied Accessories

Remote Commander RM-Y802 (SAT-A55P Only)
Remote Commander RM-Y139 (SAT-B55P Only)
Size AA Batteries (2)
Access Card (1)
Audio/Video Cable (1)
S-VIDEO Cable (1) (SAT-A55P Only)
Coaxial RF Cable (1)
RF Remote Antenna (1) (SAT-A55P Only)
VCR Controller (1)
Telephone Cable (1)
AC Power Cord (1)

FOR SATELLITE ANTENNAS:

Input Frequency

12.2 - 12.7 GHz

Output Frequency

950 - 1450 MHz

Output Connector

F-Type Female

Power Consumption

3.0 W maximum

Supply Voltage

DC + 10.5 - 14.0 V for RHCP • DC + 15.5 - 21.0 V for LHCP

Dimensions (w/h/d)

18⁵⁄₈ x 31 x 18⁵⁄₁₆ inches (473 x 787 x 643 mm)

Weight

8 lbs., 6 oz. (3.8 kg)

Supplied Accessories

Weatherboot (2 pcs.)
Signal Seeker (1 pc.)
Snap-in Clip (dual type) (1 pc.)
Bolt for Ground Terminal (1 pc.)
Bolt for LNB Support Arm (2 pcs.)

Optional Accessories

Installation Kit ANJ-DS2
Amplifier EAC-DA1
Diplexer EAC-DD1
Voltage Switch ECA-DV2
Multi-Room A/V
Distribution System MDR-D1
Coaxial Cable 25 ft. SAK-C25
Coaxial Cable 75 ft. SAK-C75
Flat Cable DAK-F1

Optional Sony-brand DSS Accessories

Local TV Antenna ANJ-AA1
Installation Kit ANJ-DS2
Amplifier EAC-DA1
Diplexer EAC-DD1
Voltage Switch ECA-DV2
RF Universal Remote Commander
      Remote Control RM-Y802

Design and specifications are subject to change without notice.

WARNINGS AND CAUTIONS

⚠ SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and ⚠ mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with sony parts whose part numbers appear as shown in this manual or in supplements published by sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

⚠ ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifies par une trame et par une marque ⚠ sur les schemas de principe, les vues explosees et les listes de pieces sont d'une importance critique pour la securite du fonctionnement. Ne les remplacer que par des composants sony dont le numero de piece est indique dans le present manuel ou dans des supplements publies par sony. Les reglages de circuit dont l'importance est critique pour la securite du fonctionnement sont identifies dans le present manuel. Suivre ces procedures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or touching high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.
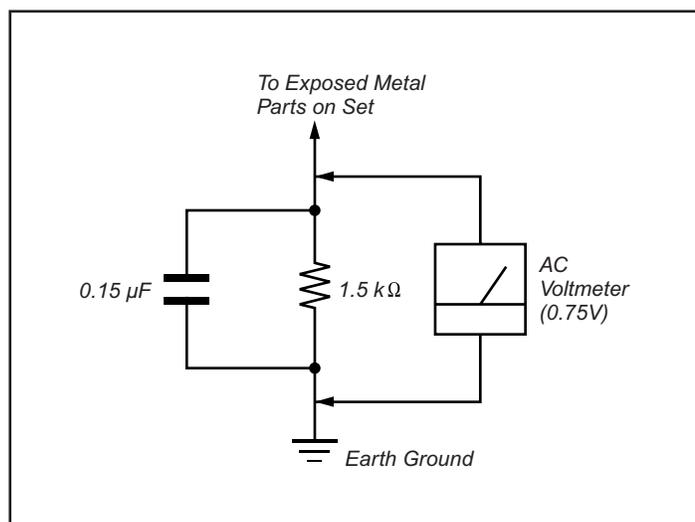
Leakage Test
The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground
A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).
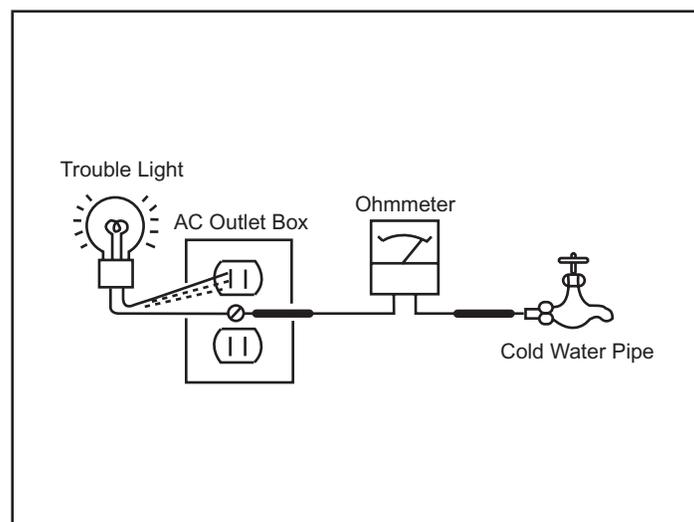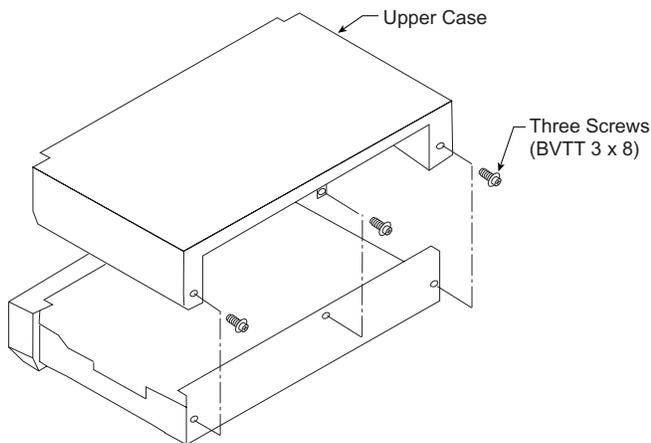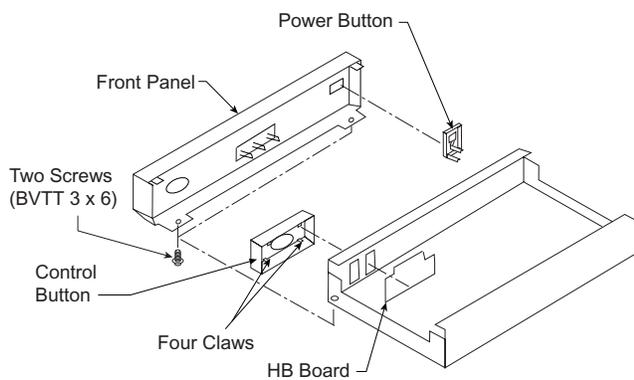

Figure A. Using an AC voltmeter to check AC leakage.

Figure B. Checking for earth ground.

SECTION 1: DISASSEMBLY

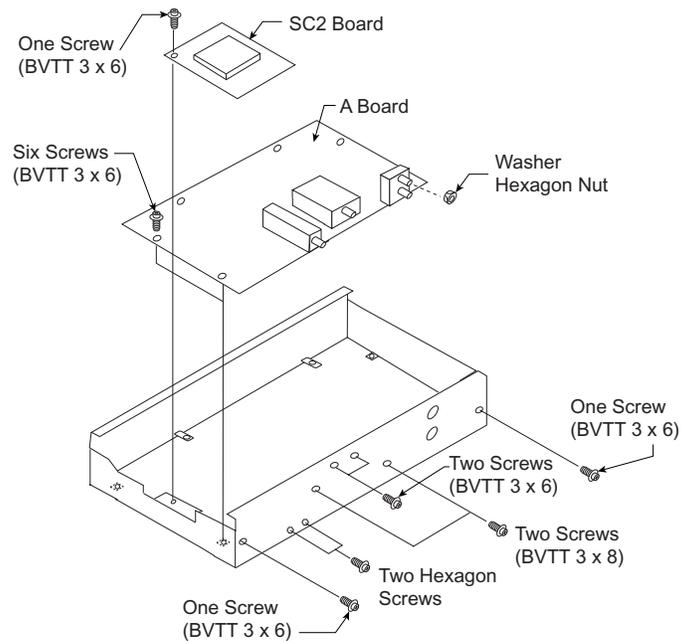## 1-1. UPPER CASE REMOVAL

Upper Case

Three Screws
(BVTT 3 x 8)

1-3. A AND SC2 BOARD REMOVAL

One Screw
(BVTT 3 x 6)

SC2 Board

A Board

Six Screws
(BVTT 3 x 6)

Washer
Hexagon Nut

One Screw
(BVTT 3 x 6)

Two Screws
(BVTT 3 x 6)

Two Screws
(BVTT 3 x 8)

Two Hexagon
Screws

One Screw
(BVTT 3 x 6)

1-2. HB BOARD REMOVAL

Power Button

Front Panel

Two Screws
(BVTT 3 x 6)

Control
Button

Four Claws

HB Board

SECTION 2: SERVICE TEST

Use the following procedure to run the service test:

1. Turn the power ON.
2. Enter the Service Test Screen by simultaneously pressing the MENU button and the DOWN ARROW button on the front panel of the unit.
3. Select the TEST button on the Service Test Screen. The test will diagnose and identify the following:
    - IRD
    - DEMOD TYPE
    - demod signal
    - AV7100
    - RAM TEST
    - ROM
    - TELCO
    - VERIFIER, CAM
    - ACCESS CARD
    - CHECKSUM
    - EEPROM
4. To reset the unit, simultaneously press the GUIDE button and the DOWN ARROW button on the fron panel of the unit.

SECTION 3: DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

A Board

SC2 Board

HB Board
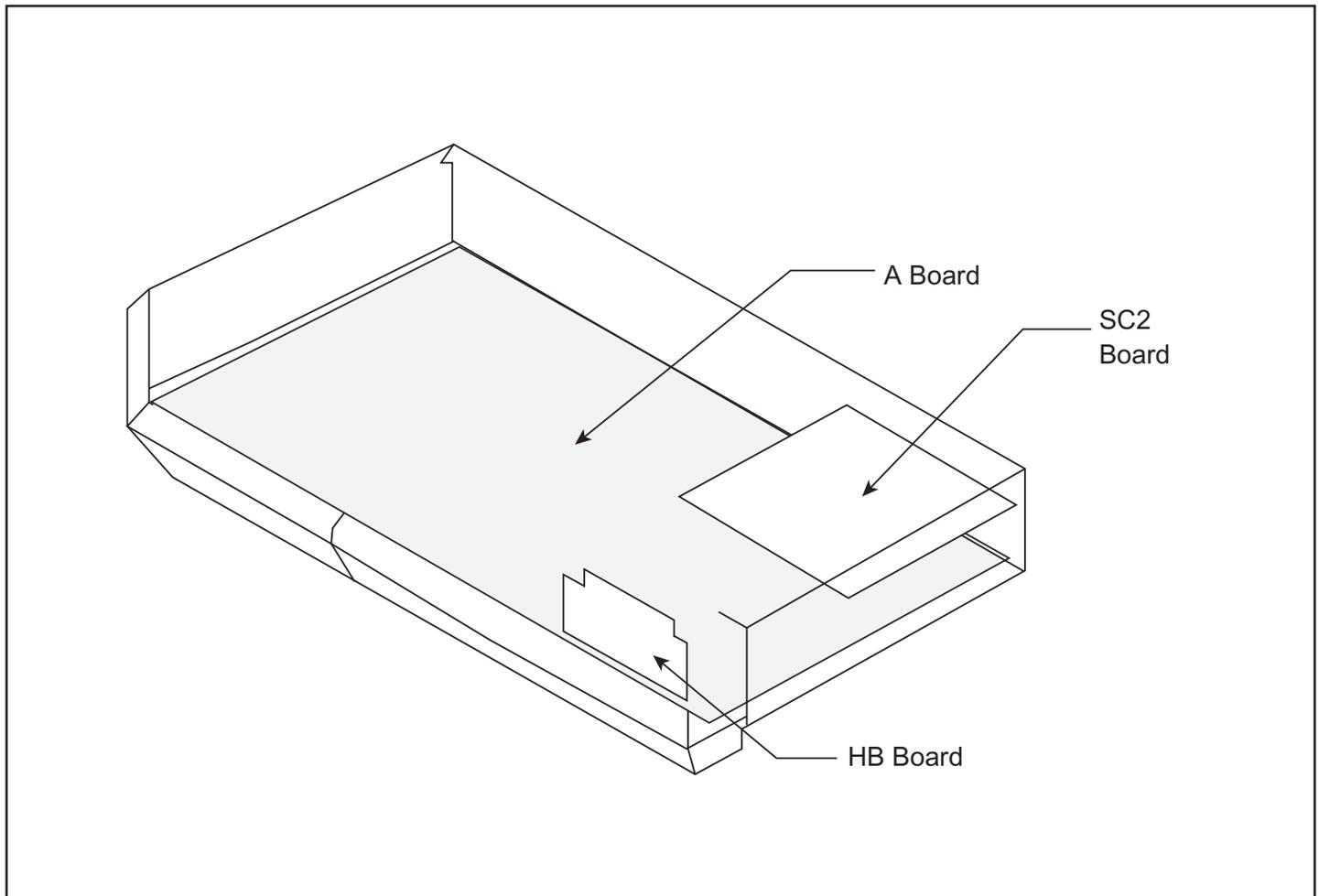
3-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

- All capacitors are in µF unless otherwise noted.
  pF: mmF 50 WV or less are not indicated except for electrolytic and tantalums.
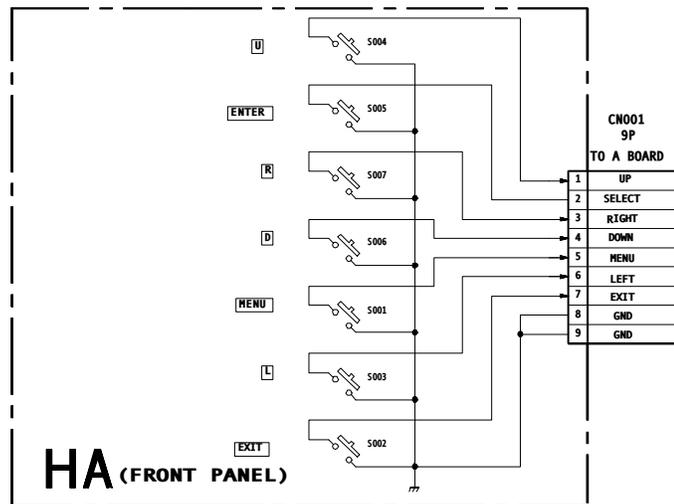
- All electrolytics are 50V unless otherwise specified.

- Indication of resistance, which does not have one for rating electrical power, is as follows:
  Pitch: 5mm
  Rating electrical power 1/4W (CHIP: 1/10W)

- All resistors are in ohms.
  KW = 1000W • MW = 1000KW

- ⊣⊞⊢ : nonflammable resistor

- ⊣⊞⊢ : fusible resistor

- △ : internal component

- ▭ : panel designation and adjustment for repair

- ⊥ : earth-ground

- ⊓ : earth-chassis

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

- All voltages are in Volts

- Readings are taken with a 10M ohm digital multimeter.

- Readings are taken with a color-bar signal input.

- Voltage variations may be noted due to normal production tolerance.

- * : cannot be measured

- ▬▬ : B + Line

- ▬▬▬ : B - Line

- ⇒ : Signal path

— 7 —

BLOCK DIAGRAM (1 OF 2)

CN120
RF_REMOTE
SAT-A55P ONLY

CN200
9P
TO SMART CARD

CN201
9P
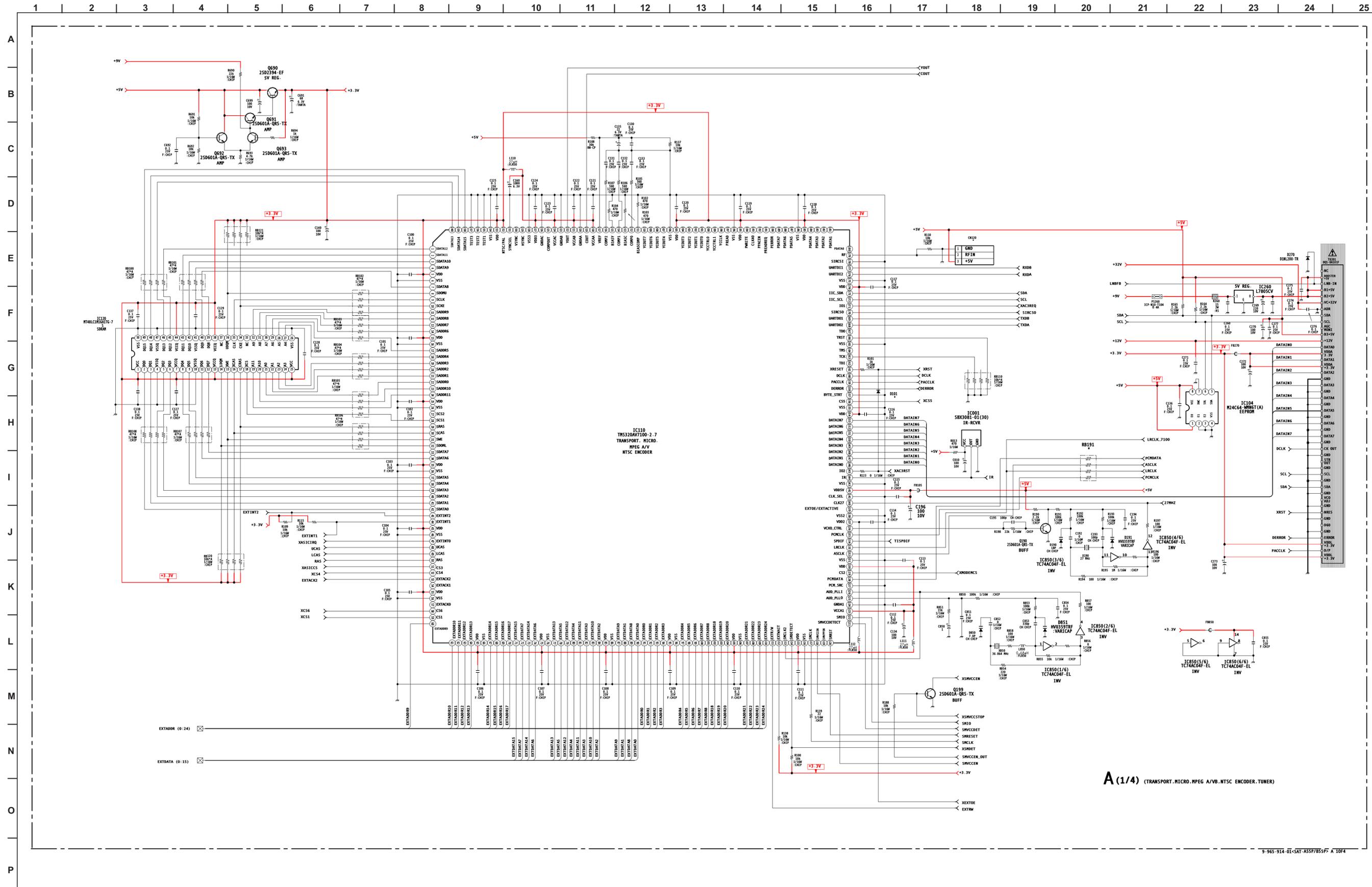TO FRONT PANEL

S600
POWER SW

(POWER) (TIMER) (MESSAGE)

J151
1P
MINI JACK

SAT IN

TU201 DSS TUNER

LNB-IN   LNBFB

TI_SCL
TI_SDA
DATA 0-7
PACCLK
DERROR
DCLK

+3.3V
+32V
+12V

B1+5V
BOOSTER
B2+5V

+5V

IC260   +9V

EEPROM
IC103
TI_SCL   TI_SDA

TRANSPORT MICRO

IC110

SDRAM
IC120
SDATA
0-15
SADDR
0-11

SDATA
0-15
SADDR
0-11

TI_SCL
TI_SDA
DATA 0-7
PACCLK
DERROR
DCLK

SCIO
SCCLK

TO IC206

XRST
EXTDATA
0-15
EXTADDR
0-24

UARTDO2
UARTDI2

UARTDI1
UARTDO1

YOUT
COUT

LRCLK
ASCLK
PCMCLK
PCMDATA
SMVCCDET

SCIO
SCCLK

IC 171
RESET IC
XRST

SML
SCKST

UP_SW
SELECT_SW
RIGHT_SW
MENU_SW
LEFT_SW
DOWN_SW
EXIT_SW

EXTDATA
0-15
EXTADDR
0-24

EXTDATA
0-15
EXTADDR
0-24

MEMORY BLOCK

DRAM IC101
FLASH ROM A
IC106
FLASH ROM B
IC100

XRESET

ASIC
IC150

VCR_CLK/VFD_CLK
VCR_DATA/VFD_SERIAL_OUT
XVCR_IRQ/VFD_LATCH

5VDATA8-15
XWR/XRD

LNBFB
LNBPOL
LNBVAL
LNBPWR
XTVDSS
RESET

POWER_SW

TV0SS_LED
THR_LED
POWER_LED

RST   Q522
SW

XRST
Q101
SW

IC 520
IR BLASTER

XRST
RCLK
RDATA
RINT

REM

5VDATA8-15
XWR/XRD
RESET

MODEM IC
IC500

TXA1
TXA2
RXA

TXDA
RXDA
XHO

T510
MIDCOM

IC1350
OPTOMOS
RELAY

J500

CN550
D-SUB

Q520
SW
Q521
INV

LOGIC IC
IC160

EXTDATA
0
EXTADDR
0,1,21..24

XMUTE

AC3ADDR
0-1

Q160
BUFF

AUDIO PROCESSOR
IC910
SAT-A55P ONLY

EXTDATA
0-15

AC3ADDR
0-1

LRCLK
ASCLK
PCMCLK
PCMDATA

Q801
MUTE

Q802
MUTE

IC300
AMP

IC301
AMP

Q800
BUFF

Q550
SW
Q551
INV

RXTI
TXTI

CN300
4P
S-VIDEO

YOUT
COUT

V1
V2

J800
VIDEO OUT

SAT-A55P ONLY

CN920

DIGITAL OUT
OPTICAL

VIN

Q301,Q302,Q303,Q304
BUFFERS

VID IN
CONTROL   RF300
AUD IN

AUDIO DAC
IC800

PCMDATA
PCMCLK
ASCLK
LRCLK

XMT958

AOUTL

AOUTR

IC801(1/2)
AMP

IC802(1/2)
AMP

IC801(2/2)
AMP

IC802(2/2)
AMP

L1
L2

R1
R2

J800
AUDIO OUT

CN601
AC IN
T601

AC-RECT
D601

SW REG.
TRANSFORM
T620

+32V REG
Q630

+9V REG
IC640

-5V REG
IC622

SOURCE
SW REGULATOR
CONTROL   DRAIN
IC700

FEED BACK
IC623

SHUNT REG.
IC624

+32V

+24V

+9V

-5V

+5V

Q290
SW

SM_E

LNBPWR
LNBPOL
LNBLED
LNBVAL

SW
Q203
SW
Q202

IPK
IC290
DC-DC CONV.
XCOMP

SW
Q291

AMP
IC240

AMP
Q240,241

Q204
OCP

LNBFB
TO
TU 201

SMVCCDET

COMPARATOR
IC206

OCP
Q650

SCPW REG.
Q653

INV
Q654

INV
Q655

AMP
Q651,652

SCPW
TO CN200

A

PWR SUPPLY. TUNER. TPT/MODEM

MICRO CONTROLLER/ASIC

MPEG A/V. NTSC. AC3 AUDIO

9-965-914-01<SAT-A55P/B55P> BD 1OF2

BLOCK DIAGRAM (2 OF 2)

9-965-914-01<SAT-A55P/B55P> BD 2OF2

A (1/4) (TRANSPORT.MICRO.MPEG A/VB.NTSC ENCODER.TUNER)

IC110
TMS320AV7100-2.7
TRANSPORT. MICRO.
MPEG A/V
NTSC ENCODER

IC001
SBX3081-01(30)
IR-RCVR

IC104
M24C64 WMN6T(A)
EEPROM

(*) A BOARD VARIANT
MODEL LIST (1 OF 4)

	SAT-A55P	SAT-B55P
CN120	3P	#
D101	RB751V-40TE-17	#
RB191	#	47

#: Not Mounted

9-965-914-01<SAT-A55P/B55P> A 10F4

— 10 —

A(2/4) (POWER SUPPLY, AUDIO DAC)

(*) A BOARD VARIANT
MODEL LIST (2 OF 4)

	SAT-A55P	SAT-B55P
Q801	2SD601A-Q	#
Q802	2SD601A-Q	#
R800	10K	#
R801	1K	#
R802	1K	#

#: Not Mounted

A(3/4) (LOGIC. ASIC)

(*) A BOARD VARIANT MODEL LIST (3 OF 4)

	SAT-A55P	SAT-B55P
Q160	DTA114EKA-T146	#

#: Not Mounted

9-965-914-01<SAT-A55P/B55P> A 30F4

A BOARD SCHEMATIC DIAGRAM (4 OF 4)
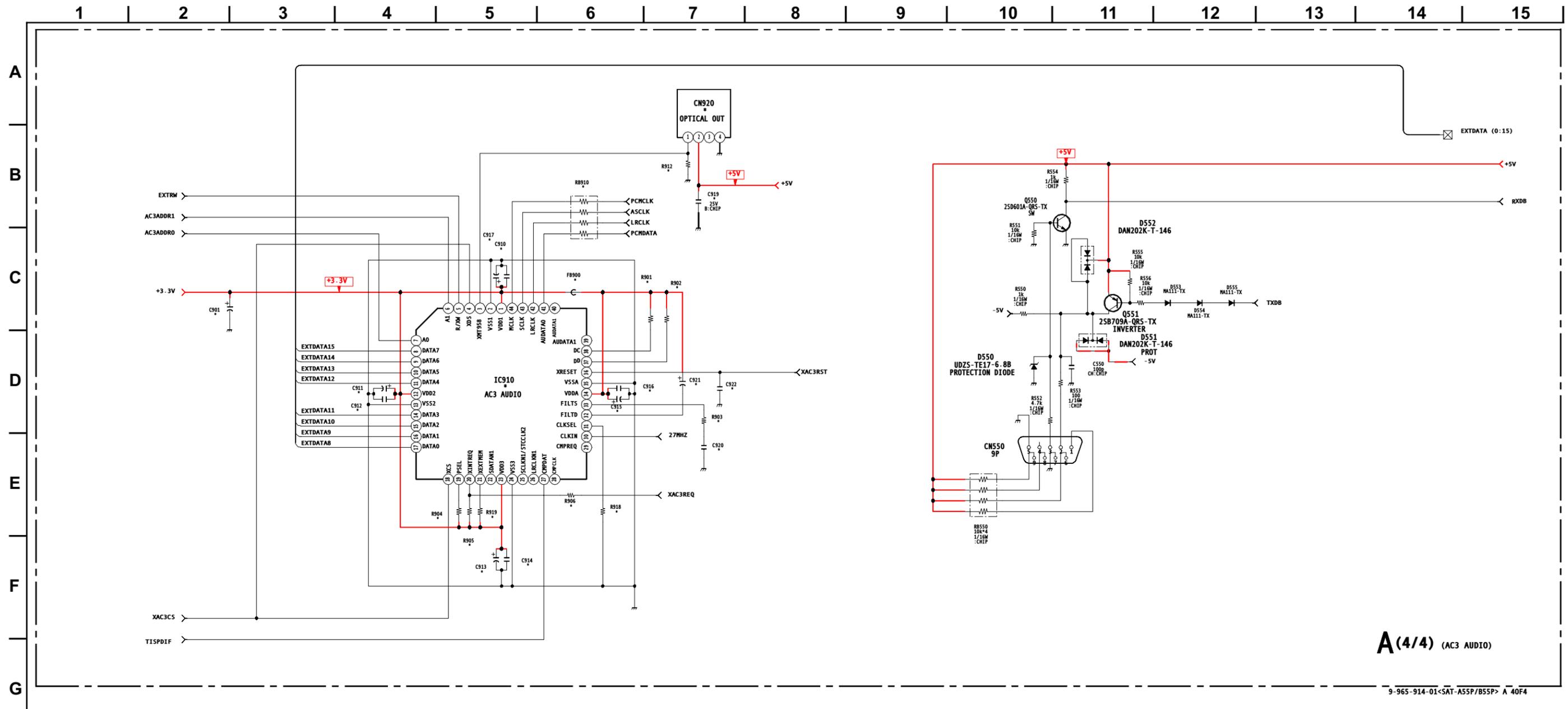
A (4/4) (AC3 AUDIO)

9-965-914-01<SAT-A55P/B55P> A 40F4

(*) A BOARD VARIANT MODEL LIST (4 OF 4)

	SAT-A55	SAT-B55		SAT-A55	SAT-B55		SAT-A55	SAT-B55
C901	100µF	#	C919	0.1µF	#	R903	0	#
C910	0.1µF	#	C920	0.22µF	#	R904	10K	#
C911	1µF	#	C921	2.2µF	#	R905	4.7K	#
C912	0.1µF	#	C922	0.01µF	#	R906	0	#
C913	1µF	#	CN920	IC GP1F32T	#	R912	10K	#
C914	0.1µF	#	FB900	0 µH	#	R918	10K	#
C915	47µF	#	IC910	IC CS492CL	#	R919	4.7K	#
C916	0.1µF	#	R901	10K	#	RB910	47	#
C917	1µF	#	R902	10K	#			

#: Not Mounted

— 13 —

A

[TRANSPORT, MICRO, MPEG A/VB, NTSC ENCODER, TUNER, POWER SUPPLY, AUDIO DAC, LOGIC, ASIC, AC3 AUDIO]

COMPONENT SIDE
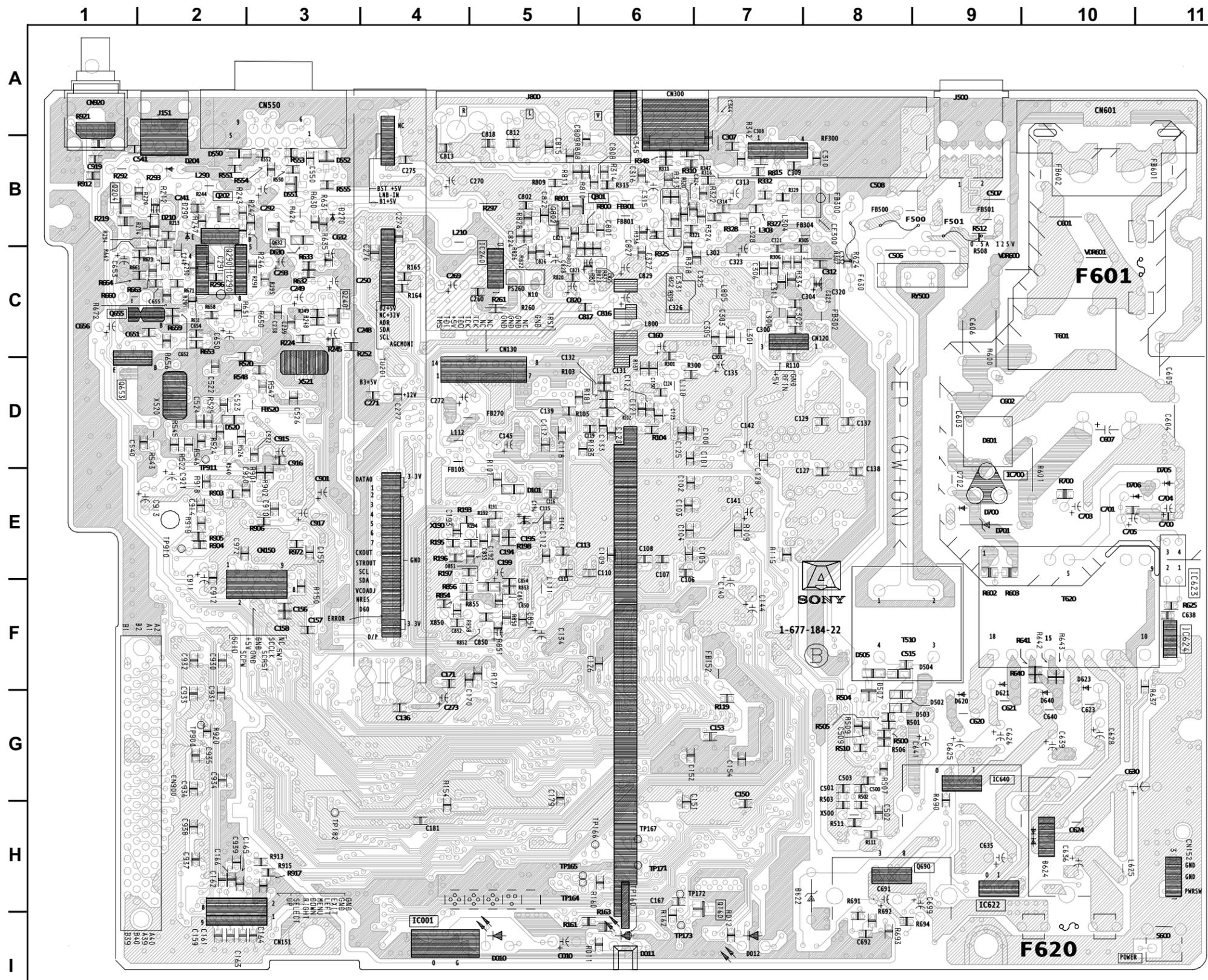
A BOARD LOCATOR LIST (COMPONENT SIDE)

DIODE		D552	B-3
D010	I-5	D630	C-3
D011	I-6	D640	G-10
D012	I-7	D700	E-9
D101	E-5	D701	E-9
D109	E-6	D705	E-11
D210	B-2	D706	E-10
D501	G-9	D851	E-4
D502	G-9	TRANSISTOR	
D503	G-9	Q160	I-7
D504	F-8	Q202	B-2
D505	F-8	Q204	B-1
D507	G-8	Q240	C-3
D520	D-2	Q632	C-3
D550	C-2	Q801	B-6
D551	B-3	Q802	B-6

A

[TRANSPORT, MICRO, MPEG A/VB, NTSC ENCODER, TUNER, POWER SUPPLY, AUDIO DAC, LOGIC, ASIC, AC3 AUDIO]

CONDUCTOR SIDE

A BOARD LOCATOR LIST (CONDUCTOR SIDE)

DIODE		IC501	C-4
D152	F-6	IC520	C-10
D190	E-7	IC622	H-3
D191	E-7	IC623	F-1
D204	B-10	IC624	F-1
D240	C-9	IC640	G-3
D241	C-9	IC700	E-3
D270	B-8	IC800	C-6
D290	B-10	IC801	C-6
D307	B-6	IC802	B-7
D308	B-6	IC850	E-7
D330	B-6	IC910	E-9
D331	B-5	TRANSISTOR	
D500	C-3	Q101	H-4
D506	B-3	Q190	E-7
D531	D-10	Q199	F-7
D532	C-9	Q201	C-10
D553	B-9	Q203	C-9
D554	B-9	Q241	D-8
D555	B-9	Q290	B-9
D601	D-3	Q301	C-5
D620	G-3	Q302	B-5
D621	F-2	Q303	B-5
D623	F-2	Q304	B-5
D624	H-2	Q520	D-10
D800	B-7	Q521	D-10
D801	B-7	Q522	C-10
D802	B-7	Q550	B-9
D803	B-7	Q551	B-8
D850	F-7	Q630	B-9
IC		Q631	B-9
IC001	I-8	Q650	C-9
IC100	H-9	Q651	C-10
IC101	F-6	Q652	C-10
IC104	G-8	Q653	C-10
IC110	E-5	Q654	C-10
IC120	D-5	Q655	C-11
IC150	G-5	Q690	H-4
IC160	H-6	Q691	H-3
IC170	G-7	Q692	I-4
IC206	C-10	Q693	I-3
IC240	C-9	Q800	B-6
IC260	C-7	CRYSTAL	
IC290	C-10	X190	E-7
IC300	C-4	X500	G-4
IC301	B-5	X520	D-10
IC500	G-4	X850	F-7

HB BOARD SCHEMATIC DIAGRAM

9-965-914-01<SAT-A55P/B55P> HB

HB [FRONT PANEL]

SC2 BOARD SCHEMATIC DIAGRAM

IC950
TDA8004T
CARD READER

CN950
SC CONN

SC2 (SMART CARD)

9-965-914-01<SAT-A55P/B55P>SC2

TO A BOARD
CN951

CN951
9P
WHT
:FFC

SC2 [SMART CARD]

1-679-916-11

SONY

1-719-234-11
>EP-(GW+GN)<
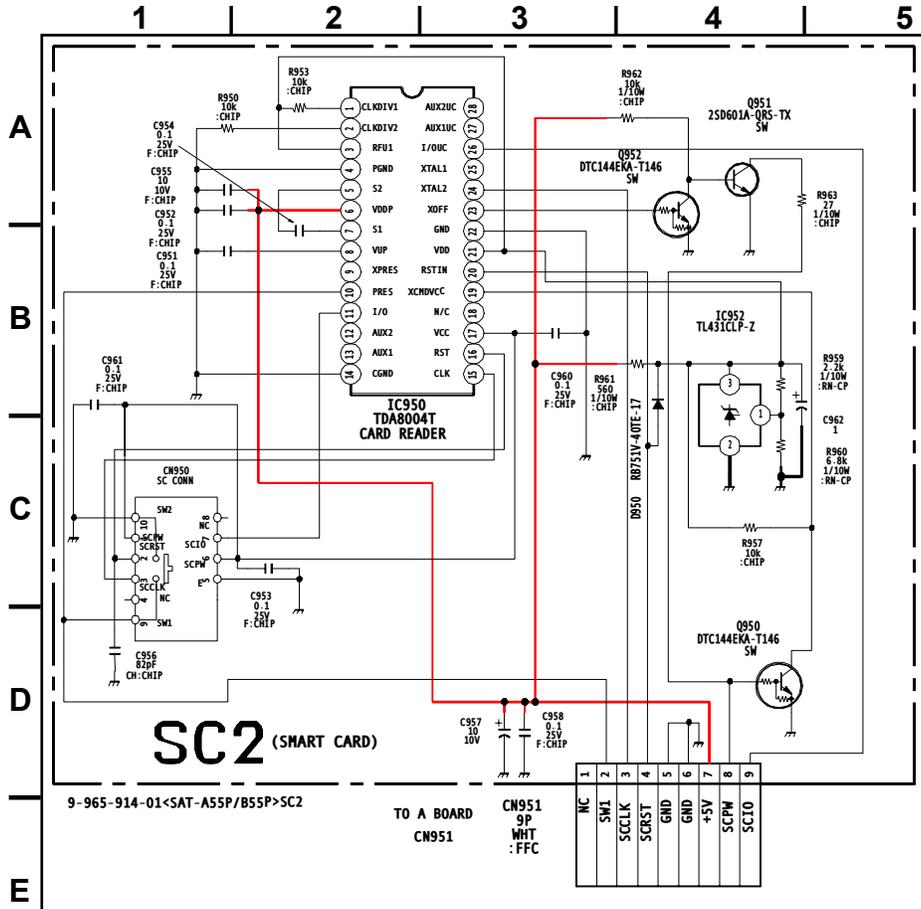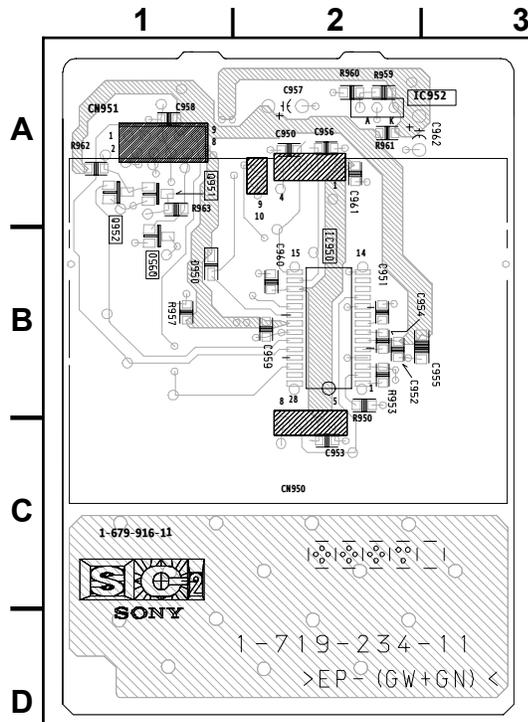
3-4. SEMICONDUCTORS

MN4SV17165BT-12

50　　26

1　　25

(TOP VIEW)

MC34063ABN

8 7

1 2 3 4　　6 5

DAN202K

3

2

1

2SD774-34

E C B
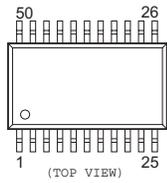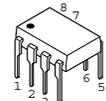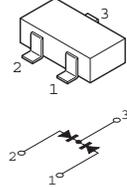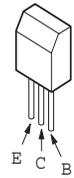
SLR-325MCT31
SLR-325DCA47
SLR-325VRT31

ANODE　CATHODE

TA7805S

1 3 2

PIN 1.IN
3.GND
2.OUT
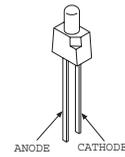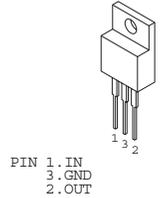
2SA1162-G0
2SD601A-Q
DTC144EK-T164

C

B

E

S2LA20F

CATHODE

ANODE

MN150414SA1

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(TOP VIEW)

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NJM78M05FA

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PIN 1.OUT
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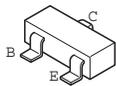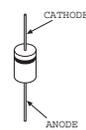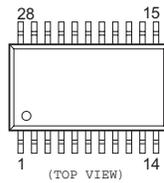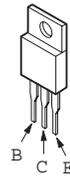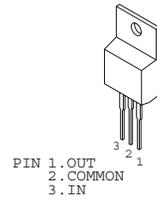
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MC14577CF

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(TOP VIEW)

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(TOP VIEW)

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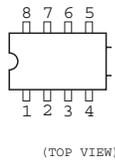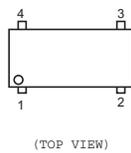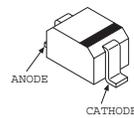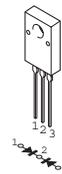
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3.OUT
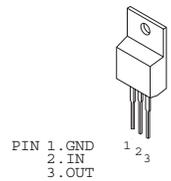
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(TOP VIEW)
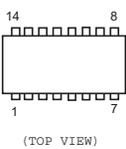
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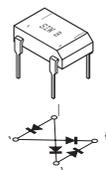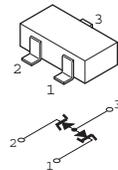
SECTION 4: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

4-1. CHASSIS

●	7-685-871-01	SCREW +BVTT 3X6
▲	7-685-646-79	SCREW +BV 3X8
■	7-682-547-09	SCREW +BTT 3X6
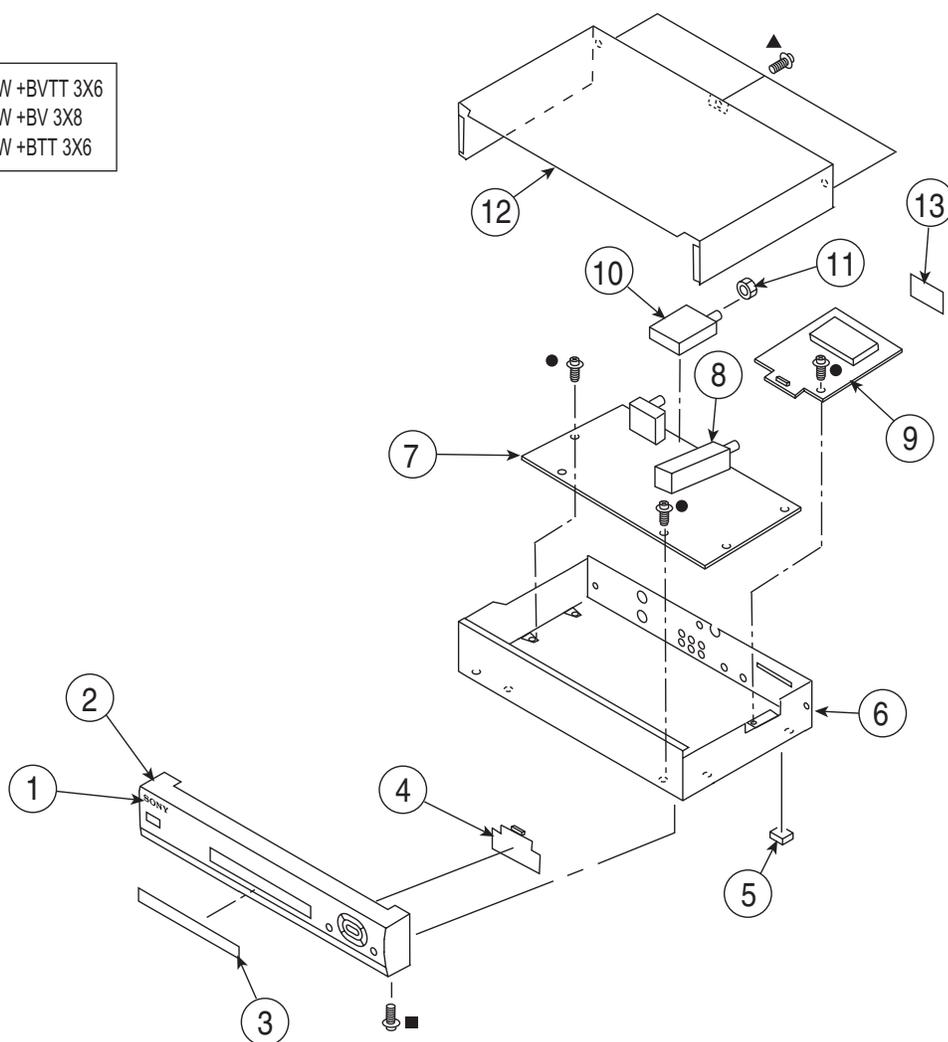
	REF.NO.	PART NO.	DESCRIPTION
	1	4-062-173-01	EMBLEM, SONY (4-A)
	2	X-4036-848-4	PANEL ASSY, FRONT (SAT-A55P ONLY)
	2	X-4036-848-3	PANEL ASSY, FRONT (SAT-B55P ONLY)
	3	4-071-127-11	PANEL, INDICATOR
*	4	A-1372-878-A	HB MOUNTED PC BOARD
	5	4-048-281-01	FOOT
*	6	4-060-761-06	CASE, LOWER
*	7	A-1299-328-A	A COMPLETE PC BOARD (SAT-A55P ONLY)
*	7	A-1299-327-A	A COMPLETE PC BOARD (SAT-B55P ONLY)

	REF.NO.	PART NO.	DESCRIPTION
⚠	8	8-598-524-00	MODULE, INTERFACE DQS-DA101F
*	9	A-1391-061-A	SC2 MOUNTED PC BOARD
	10	8-598-363-00	RF REMOCON RECEIVER RFR-RA101 (SAT-A55P ONLY)
	11	3-682-691-00	NUT, WASHER HEXAGON
	12	4-080-221-01	CASE, UPPER
*	13	4-071-128-32	LABEL, DIRECTV (SAT-A55P ONLY)
*	13	4-071-128-22	LABEL, DIRECTV (SAT-B55P ONLY)

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

4-2. SAN-18D3

● 7-685-871-01   BOLT, 1/4-20 UNC X 1/2 FORMING
■ 4-061-591-01   BOLT, 1/4-20 UNC X 1/2
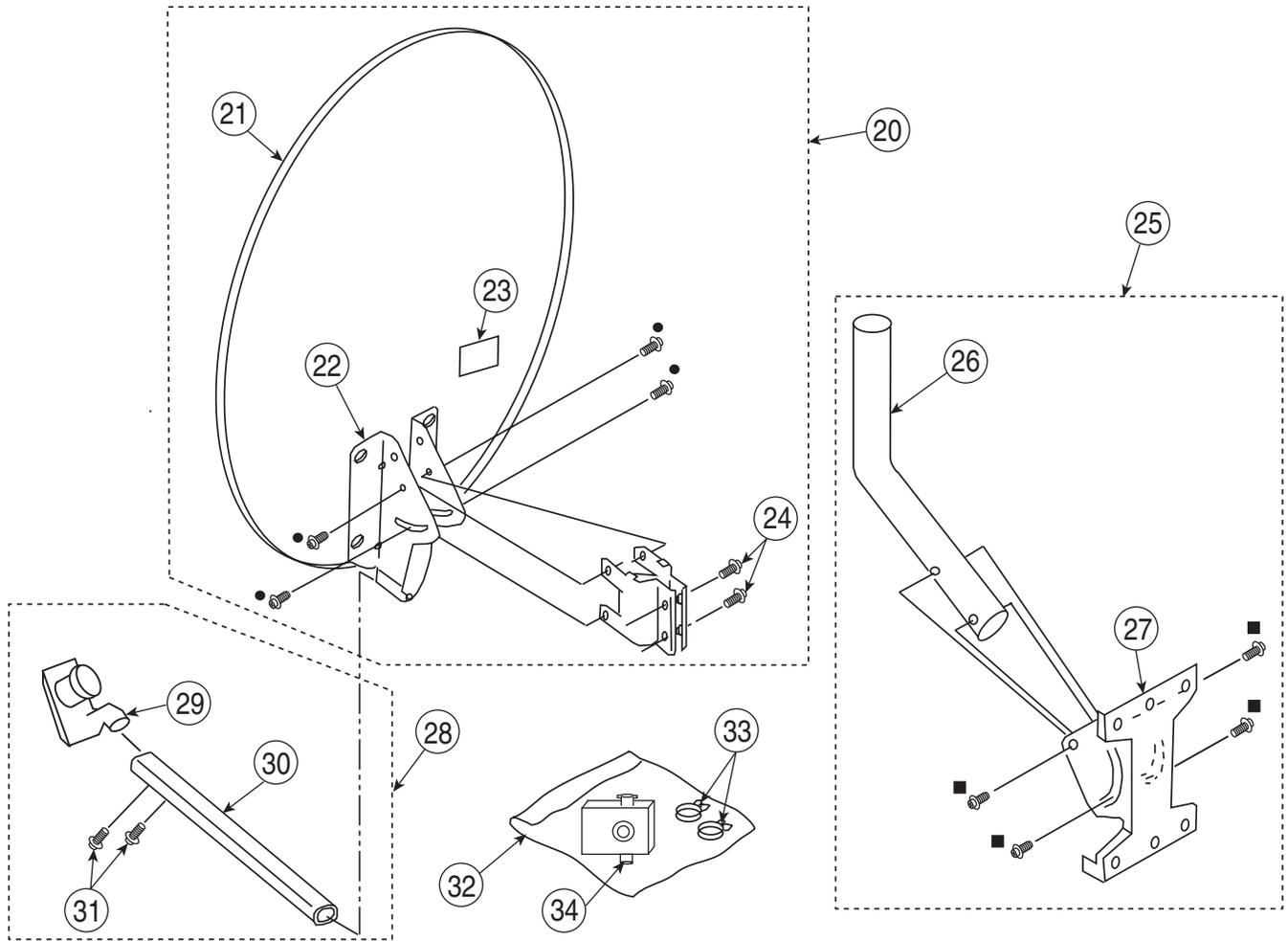
	REF.NO.	PART NO.	DESCRIPTION	[Assembly Includes]		REF.NO.	PART NO.	DESCRIPTION	([Assembly Includes]
	20	X-4035-039-2	MOUNT ASSY, REFLECTOR	21-24	*	28	X-4035-040-1	ARM ASSY, LNB	29-31
	21	4-061-583-01	REFLECTOR			29	8-598-326-02	CONVERTER, BS SAC-DA201	
	22	4-061-584-01	REFLECTOR, MOUNTING BASE			30	4-061-590-01	ARM, LNB SUPPORT	
*	23	4-061-576-11	LABEL, MODEL NUMBER			31	4-061-592-01	SCREW, ROUND SEMS (2)	
	24	4-061-587-01	BOLT, 1/4-20 UNC X 7/8			32	4-049-203-01	COVER, WATERPROOF	
	25	X-4035-030-1	MOUNT ASSY, UNIVERSAL	26-27		33	4-049-478-01	CLIP (L)	
*	26	4-061-588-01	MAST, UNIVERSAL MOUNT			34	1-251-841-11	SIGNAL SEEKER	
*	27	4-061-589-01	FOOT, UNIVERSAL MOUNT						

SECTION 5: ELECTRICAL PARTS LIST

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components in this manual identified by the following symbol: ✉ indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.

* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

RESISTORS
• All resistors are in ohms
• F : nonflammable
• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

A

When ordering parts by reference number, please include the board name.

REF.NO.	PART NO.	DESCRIPTION	VALUES		
A					
*	A-1299-328-A	A BOARD, COMPLETE (SAT-A55P ONLY)			
*	A-1299-327-A	A BOARD, COMPLETE (SAT-B55P ONLY)			
	1-533-223-11	HOLDER, FUSE			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	4-382-854-41	SCREW (M3X8), P, SW (+)			
		CAPACITOR			
C010	1-104-665-11	ELECT	100µF	20%	10V
C100	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C101	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C102	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C103	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C104	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C105	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C106	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C107	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C108	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C109	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C110	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C111	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C112	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C113	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C114	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C115	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C116	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C117	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C118	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C119	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C120	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C121	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C122	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C123	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C124	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C125	1-164-156-11	CERAMIC CHIP	0.1µF		25V

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C126	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C127	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C128	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C129	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C130	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C131	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C132	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C133	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C134	1-104-665-11	ELECT	100µF	20%	10V
C135	1-131-379-00	TANTALUM	22µF	10%	6.3V
C136	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C137	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C138	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C140	1-104-665-11	ELECT	100µF	20%	10V
C150	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C151	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C152	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C153	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C154	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C156	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C157	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C158	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C159	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C160	1-126-916-11	ELECT	1000µF	20%	6.3V
C161	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C162	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C163	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C164	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C165	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C166	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C167	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C171	1-113-619-11	CERAMIC CHIP	0.47µF	10V	
C181	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C192	1-216-864-11	SHORT			
C193	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C194	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C195	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C196	1-104-665-11	ELECT	100µF	20%	10V

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

A

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C238	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C239	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C240	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C241	1-126-960-11	ELECT	1µF	20%	50V
C242	1-165-112-11	CERAMIC CHIP	0.33µF		16V
C245	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C248	1-126-964-11	ELECT	10µF	20%	50V
C249	1-126-964-11	ELECT	10µF	20%	50V
C250	1-126-959-11	ELECT	0.47µF	20%	50V
C260	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C269	1-126-934-11	ELECT	220µF	20%	10V
C270	1-104-665-11	ELECT	100µF	20%	10V
C271	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C272	1-104-665-11	ELECT	100µF	20%	10V
C273	1-104-665-11	ELECT	100µF	20%	10V
C274	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C275	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C276	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C277	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C290	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C291	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C292	1-135-909-71	ELECT	220µF	20%	50V
C293	1-126-971-11	ELECT	470µF	20%	50V
C300	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C301	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C302	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C303	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C304	1-162-928-11	CERAMIC CHIP	120pF	5%	50V
C305	1-162-928-11	CERAMIC CHIP	120pF	5%	50V
C306	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C307	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C308	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C309	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C310	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C311	1-162-920-11	CERAMIC CHIP	27pF	5%	50V
C312	1-162-916-11	CERAMIC CHIP	12pF	5%	50V
C313	1-104-665-11	ELECT	100µF	20%	10V
C314	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C315	1-104-665-11	ELECT	100µF	20%	10V
C316	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C317	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C320	1-104-665-11	ELECT	100µF	20%	10V
C321	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C322	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C323	1-104-665-11	ELECT	100µF	20%	10V
C325	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C326	1-162-926-11	CERAMIC CHIP	82pF	5%	50V

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C327	1-104-665-11	ELECT	100µF	20%	25V
C328	1-162-928-11	CERAMIC CHIP	120pF	5%	50V
C331	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C332	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V
C344	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C345	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C500	1-162-922-11	CERAMIC CHIP	39pF	5%	50V
C501	1-162-922-11	CERAMIC CHIP	39pF	5%	50V
C502	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C503	1-164-156-11	CERAMIC CHIP	0.1µF		25V
⚠ C506	1-162-114-00	CERAMIC	.0047µF		2KV
⚠ C507	1-162-134-11	CERAMIC	470pF	10%	2KV
⚠ C508	1-162-134-11	CERAMIC	470pF	10%	2KV
C509	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C515	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V
C522	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C523	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C524	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C540	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
C541	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C550	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
⚠ C601	1-136-345-21	MYLAR	0.1µF	20%	125V
⚠ C602	1-136-345-21	MYLAR	0.1µF	20%	125V
C603	1-102-050-00	CERAMIC	0.01µF	20%	500V
C604	1-102-050-00	CERAMIC	0.01µF	20%	500V
⚠ C605	1-113-903-11	CERAMIC	0.001µF	20%	250V
⚠ C606	1-113-903-11	CERAMIC	0.001µF	20%	250V
C607	1-113-610-11	ELECT(BLOCK)	220µF	20%	250V
C620	1-102-244-00	CERAMIC	220pF	10%	500V
C621	1-102-244-00	CERAMIC	220pF	10%	500V
C623	1-102-244-00	CERAMIC	220pF	10%	500V
C624	1-102-244-00	CERAMIC	220pF	10%	500V
C625	1-128-582-11	ELECT	10µF	20%	63V
C626	1-126-971-11	ELECT	470µF	20%	50V
C628	1-104-666-11	ELECT	220µF	20%	25V
C630	1-126-944-11	ELECT	3300µF	20%	25V
C632	1-126-964-11	ELECT	10µF	20%	50V
C635	1-104-665-11	ELECT	100µF	20%	10V
C636	1-104-665-11	ELECT	100µF	20%	10V
C638	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C639	1-126-951-11	ELECT	470µF	20%	35V
C640	1-102-244-00	CERAMIC	220pF	10%	500V
C641	1-104-665-11	ELECT	100µF	20%	25V
C650	1-126-960-11	ELECT	1µF	20%	50V
C651	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C652	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C653	1-126-961-11	ELECT	2.2µF	20%	50V

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C654	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C655	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C656	1-104-665-11	ELECT	100µF	20%	10V
C691	1-131-388-00	TANTALUM	68µF	10%	6.3V
C692	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C699	1-104-665-11	ELECT	100µF	20%	10V
C702	1-107-601-11	CERAMIC	33pF	5%	500V
C703	1-126-951-11	ELECT	470µF	20%	35V
C704	1-126-964-11	ELECT	10µF	20%	50V
C705	1-126-964-11	ELECT	10µF	20%	50V
C801	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C802	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C808	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C809	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C812	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C813	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C814	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C815	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C816	1-126-964-11	ELECT	10µF	20%	50V
C817	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C818	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C820	1-126-964-11	ELECT	10µF	20%	50V
C821	1-126-964-11	ELECT	10µF	20%	50V
C822	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C823	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C824	1-162-922-11	CERAMIC CHIP	39pF	5%	50V
C825	1-162-922-11	CERAMIC CHIP	39pF	5%	50V
C826	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C827	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C828	1-104-665-11	ELECT	100µF	20%	10V
C829	1-104-665-11	ELECT	100µF	20%	10V
C850	1-126-960-11	ELECT	1µF	20%	50V
C851	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C852	1-216-864-11	SHORT			
C853	1-162-959-11	CERAMIC CHIP	330pF	5%	50V
C854	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C855	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C901	1-104-665-11	ELECT (SAT-A55P ONLY)	100µF	20%	10V
C910	1-164-156-11	CERAMIC CHIP (SAT-A55P ONLY)	0.1µF		25V
C911	1-126-960-11	ELECT (SAT-A55P ONLY)	1µF	20%	50V
C912	1-164-156-11	CERAMIC CHIP (SAT-A55P ONLY)	0.1µF		25V
C913	1-126-960-11	ELECT (SAT-A55P ONLY)	1µF	20%	50V
C914	1-164-156-11	CERAMIC CHIP (SAT-A55P ONLY)	0.1µF		25V

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C915	1-126-967-11	ELECT (SAT-A55P ONLY)	47µF	20%	50V
C916	1-164-156-11	CERAMIC CHIP (SAT-A55P ONLY)	0.1µF		25V
C917	1-126-960-11	ELECT (SAT-A55P ONLY)	1µF	20%	50V
C919	1-164-156-11	CERAMIC CHIP (SAT-A55P ONLY)	0.1µF		25V
C920	1-115-467-11	CERAMIC CHIP (SAT-A55P ONLY)	0.22µF	10%	10V
C921	1-126-961-11	ELECT (SAT-A55P ONLY)	2.2µF	20%	50V
C922	1-162-974-11	CERAMIC CHIP (SAT-A55P ONLY)	0.01µF		50V
C971	1-162-917-11	CERAMIC CHIP	15pF	5%	50V

FILTER

CF300	1-527-943-00	CERAMIC TRAP			

CONNECTOR

	REF.NO.	PART NO.	DESCRIPTION			
	CN120	1-564-506-11	PLUG,CONNECTOR 3P (SAT-A55P ONLY)			
*	CN150	1-568-828-11	PIN,CONNECTOR (PC BOARD) 9P			
*	CN151	1-568-828-11	PIN,CONNECTOR (PC BOARD) 9P			
	CN300	1-694-135-11	TERMINAL, S			
	CN550	1-774-279-11	CONNECTOR, D-SUB (FEMALE)			
⚠	CN601	1-251-135-11	INLET, AC.			
	CN920	8-749-921-12	IC GP1F32T (SAT-A55P ONLY)			

DIODE

REF.NO.	PART NO.	DESCRIPTION	VALUES		
D010	8-719-050-05	DIODE SLR-325VRT31			
D011	8-719-048-77	DIODE SLR-325DCA47			
D012	8-719-060-27	DIODE SLR-325MCT31			
D101	8-719-060-48	DIODE RB751V-40TE-17 (SAT-A55P ONLY)			
D109	8-719-045-67	DIODE RB731U-T108			
D152	8-719-045-67	DIODE RB731U-T108			
D190	1-163-233-91	CERAMIC CHIP	18pF	5%	50V
D191	8-719-031-68	DIODE HVU359TRF			
D204	8-719-063-73	DIODE D1NL20U-TR			
D210	8-719-404-50	DIODE MA111-TX			
D240	8-719-404-50	DIODE MA111-TX			
D241	8-719-404-50	DIODE MA111-TX			
D270	8-719-063-73	DIODE D1NL20U-TR			
D290	8-719-063-73	DIODE D1NL20U-TR			
D307	8-719-067-40	DIODE STZ6.8N-T146			
D308	8-719-067-40	DIODE STZ6.8N-T146			
D330	8-719-067-40	DIODE STZ6.8N-T146			

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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REF.NO.	PART NO.	DESCRIPTION	VALUES
D331	8-719-067-40	DIODE STZ6.8N-T146	
D502	8-719-404-50	DIODE MA111-TX	
D503	8-719-404-50	DIODE MA111-TX	
D504	8-719-404-50	DIODE MA111-TX	
D505	8-719-404-50	DIODE MA111-TX	
⚠ D506	8-719-064-74	DIODE P3100SB	
D507	8-719-067-40	DIODE STZ6.8N-T146	
D520	8-719-404-50	DIODE MA111-TX	
D531	8-719-067-40	DIODE STZ6.8N-T146	
D532	8-719-045-67	DIODE RB731U-T108	
D550	8-719-978-33	DIODE UDZSTE-176.8B	
D551	8-719-914-43	DIODE DAN202K-T-146	
D552	8-719-914-43	DIODE DAN202K-T-146	
D553	8-719-404-50	DIODE MA111-TX	
D554	8-719-404-50	DIODE MA111-TX	
D555	8-719-404-50	DIODE MA111-TX	
D601	8-719-510-43	DIODE S1WB60B	
D620	8-719-063-73	DIODE D1NL20U-TR	
D621	8-719-063-73	DIODE D1NL20U-TR	
D623	8-719-063-73	DIODE D1NL20U-TR	
D624	8-719-031-79	DIODE D5SC4M	
D630	8-719-404-50	DIODE MA111-TX	
D640	8-719-063-73	DIODE D1NL20U-TR	
D700	8-719-063-73	DIODE D1NL20U-TR	
D701	8-719-059-24	DIODE P6KE200A	
D705	8-719-063-73	DIODE D1NL20U-TR	
D706	8-719-063-73	DIODE D1NL20U-TR	
D800	8-719-067-40	DIODE STZ6.8N-T146	
D801	8-719-067-40	DIODE STZ6.8N-T146	
D802	8-719-067-40	DIODE STZ6.8N-T146	
D803	8-719-067-40	DIODE STZ6.8N-T146	
D850	1-163-224-11	CERAMIC CHIP	7pF 0.25pF 50V
D851	8-719-031-68	DIODE HVU359TRF	

FUSE

REF.NO.	PART NO.	DESCRIPTION	VALUES
⚠ F500	1-576-393-11	FUSE	
⚠ F501	1-576-393-11	FUSE	
⚠ F601	1-532-745-11	FUSE, GLASS TUBE 3.15A/125V	
⚠ F620	1-532-745-11	FUSE, GLASS TUBE 3.15A/125V	

FERRITE BEAD

REF.NO.	PART NO.	DESCRIPTION	VALUES
FB105	1-412-911-11	FERRITE	0μH
FB152	1-412-911-11	FERRITE	0μH
FB270	1-412-911-11	FERRITE	0μH
FB300	1-412-911-11	FERRITE	0μH
FB301	1-412-911-11	FERRITE	0μH
FB302	1-412-911-11	FERRITE	0μH
FB304	1-412-911-11	FERRITE	0μH

REF.NO.	PART NO.	DESCRIPTION	VALUES
⚠ FB500	1-412-911-11	FERRITE	0μH
⚠ FB501	1-412-911-11	FERRITE	0μH
FB520	1-412-911-11	FERRITE	0μH
FB601	1-412-911-11	FERRITE	0μH
FB602	1-412-911-11	FERRITE	0μH
FB801	1-412-911-11	FERRITE	0μH
FB850	1-414-231-22	FERRITE	0μH
FB900	1-414-231-22	FERRITE (SAT-A55P ONLY)	0μH
FB970	1-414-231-22	FERRITE	0μH

IC

REF.NO.	PART NO.	DESCRIPTION	VALUES
IC001	8-742-205-30	HYB IC SBX3081-01(30)	
IC100	8-759-693-15	IC TC58FVB160FT-85-SV10701	
IC101	8-759-687-40	IC IS41LV16256-35T	
IC104	8-759-684-72	IC M24C64-WMN6T(A)	
IC110	8-759-663-50	IC TMS320AV7100-2.7	
IC120	8-759-573-19	IC MT48LC1M16A1TG-7S	
IC150	8-759-471-57	IC AT82002159-0T1T	
IC160	8-759-675-91	IC ISPLSI2032VE-135LJ44B6	
IC171	8-759-663-27	IC LP3470M5X-4.38	
IC206	8-759-700-07	IC NJM2903M-TE2	
IC240	8-759-100-96	IC NJM4558M-TE2	
IC260	8-759-231-53	IC L7805CV	
⚠ IC290	8-759-641-88	IC MC34063ABN	
IC300	8-759-640-14	IC TK15420MTL	
IC301	8-759-640-14	IC TK15420MTL	
IC500	8-759-469-41	IC 73K222BL-IH	
⚠ IC501	8-749-017-37	IC CPC1035NTR	
IC520	8-759-553-77	IC MN150414SA1	
IC622	8-759-663-02	IC L7905CV	
⚠ IC623	8-719-936-96	PHOTO COUPLER PC817-B	
IC624	8-759-198-31	IC TL431CLP-Z	
IC640	8-759-231-58	IC L7812CV	
⚠ IC700	8-759-490-02	IC TOP224Y-BB	
IC800	8-759-594-77	IC CS4338KS	
IC801	8-759-636-55	IC M5218AFP-T1	
IC802	8-759-636-55	IC M5218AFP-T1	
IC850	8-759-073-52	IC TC74AC04F-EL	
IC910	8-759-594-68	IC CS4924CL (SAT-A55P ONLY)	

JACK

REF.NO.	PART NO.	DESCRIPTION	VALUES
J151	1-568-267-21	JACK	
⚠ J500	1-770-671-11	JACK, MODULAR	
J800	1-770-546-21	JACK, PIN 6P	

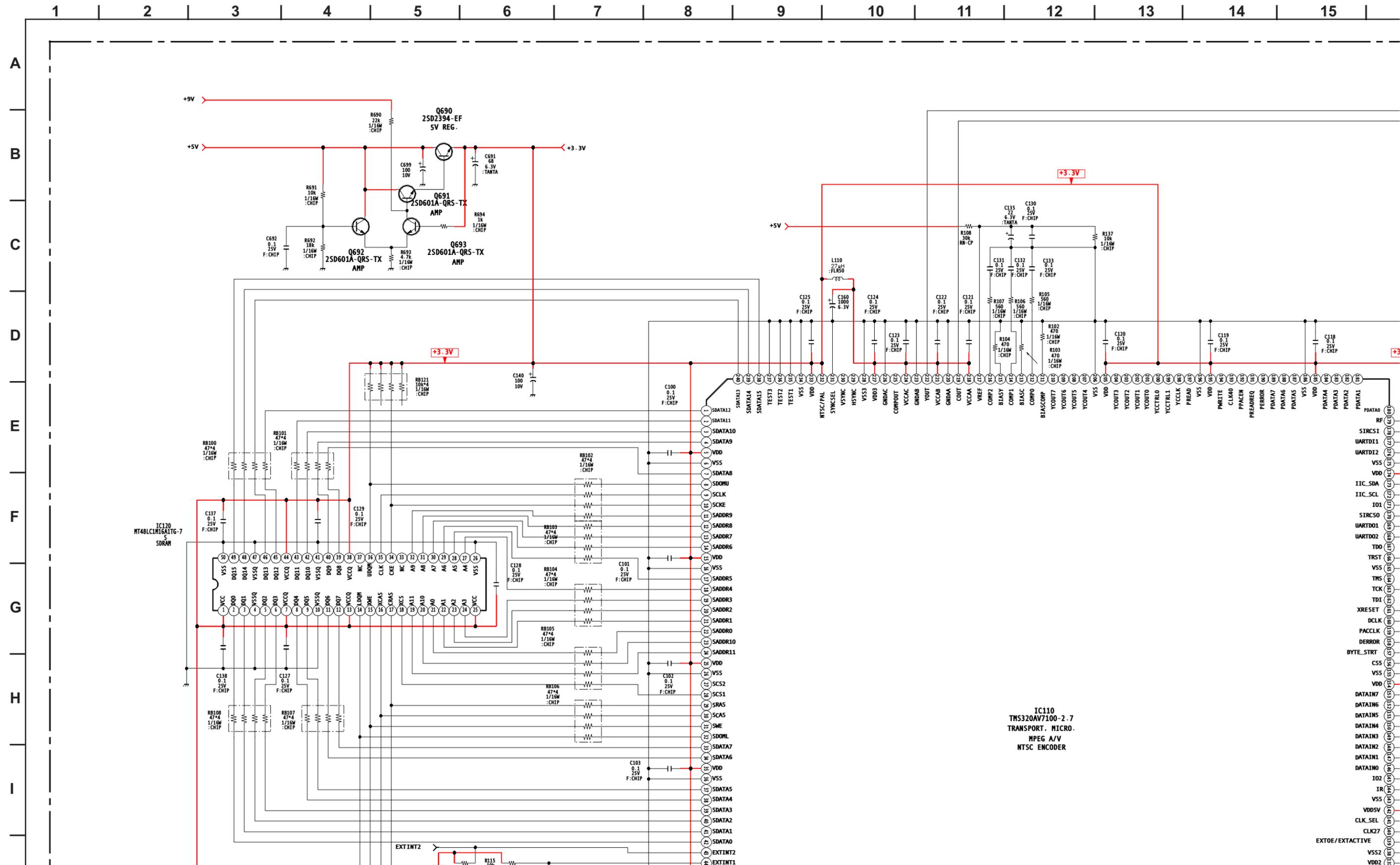| REF.NO.	PART NO.	DESCRIPTION	VALUES		
COIL					
L110	1-408-608-31	INDUCTOR	27μH		
L111	1-408-608-31	INDUCTOR	27μH		
L112	1-408-608-31	INDUCTOR	27μH		
L210	1-406-669-11	INDUCTOR	470μH		
L290	1-406-669-11	INDUCTOR	470μH		
L300	1-408-605-31	INDUCTOR	15μH		
L301	1-408-605-31	INDUCTOR	15μH		
L302	1-408-613-31	INDUCTOR	68μH		
L303	1-408-608-31	INDUCTOR	27μH		
L304	1-410-471-11	INDUCTOR	12μH		
L625	1-406-659-11	INDUCTOR	10μH		
L800	1-408-608-31	INDUCTOR	27μH		
L805	1-408-608-31	INDUCTOR	27μH		
L850	1-414-108-11	INDUCTOR	0.68μH		
IC LINK					
PS260	1-532-605-00	LINK, IC 0.4A/150V			
TRANSISTOR					
Q101	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q160	8-729-027-23	TRANSISTOR DTA114EKA-T146 (SAT-A55P ONLY)			
Q190	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q199	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q201	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q202	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q203	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q204	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q240	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q241	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q290	8-729-019-01	TRANSISTOR 2SD2394-EF			
Q301	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q302	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q303	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q304	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q520	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q521	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q522	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q550	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q551	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q630	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q631	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q632	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q650	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q651	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q652	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q653	8-729-019-01	TRANSISTOR 2SD2394-EF			
Q654	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q655	8-729-140-96	TRANSISTOR 2SD774-T-4			
Q690	8-729-019-01	TRANSISTOR 2SD2394-EF			
Q691	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q692	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q693	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q800	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q801	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX (SAT-A55P ONLY)			
Q802	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX (SAT-A55P ONLY)			
RESISTOR					
R010	1-216-813-11	RES-CHIP	220	5%	1/16W
R011	1-216-813-11	RES-CHIP	220	5%	1/16W
R012	1-216-813-11	RES-CHIP	220	5%	1/16W
R013	1-216-817-11	RES-CHIP	470	5%	1/16W
R100	1-216-833-11	RES-CHIP	10K	5%	1/16W
R101	1-216-821-11	RES-CHIP	1K	5%	1/16W
R102	1-216-817-11	RES-CHIP	470	5%	1/16W
R103	1-216-817-11	RES-CHIP	470	5%	1/16W
R104	1-216-817-11	RES-CHIP	470	5%	1/16W
R105	1-216-818-11	RES-CHIP	560	5%	1/16W
R106	1-216-818-11	RES-CHIP	560	5%	1/16W
R107	1-216-818-11	RES-CHIP	560	5%	1/16W
R108	1-208-817-11	METAL CHIP	30K	0.50%	1/10W
R109	1-216-833-11	RES-CHIP	10K	5%	1/16W
R110	1-216-833-11	RES-CHIP	10K	5%	1/16W
R111	1-216-833-11	RES-CHIP	10K	5%	1/16W
R112	1-216-833-11	RES-CHIP	10K	5%	1/16W
R115	1-216-833-11	RES-CHIP	10K	5%	1/16W
R119	1-216-864-11	SHORT			
R123	1-216-864-11	SHORT			
R137	1-216-833-11	RES-CHIP	10K	5%	1/16W
R138	1-216-833-11	RES-CHIP	10K	5%	1/16W
R139	1-216-801-11	RES-CHIP	22	5%	1/16W
R150	1-216-833-11	RES-CHIP	10K	5%	1/16W
R152	1-216-833-11	RES-CHIP	10K	5%	1/16W
R154	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R160	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R161	1-216-864-11	SHORT			
R162	1-216-864-11	SHORT			
R164	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R165	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R170	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R172	1-216-833-11	RES-CHIP	10K	5%	1/16W
R188	1-216-833-11	RES-CHIP	10K	5%	1/16W
R190	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R191	1-216-845-11	RES-CHIP	100K	5%	1/16W

A

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.
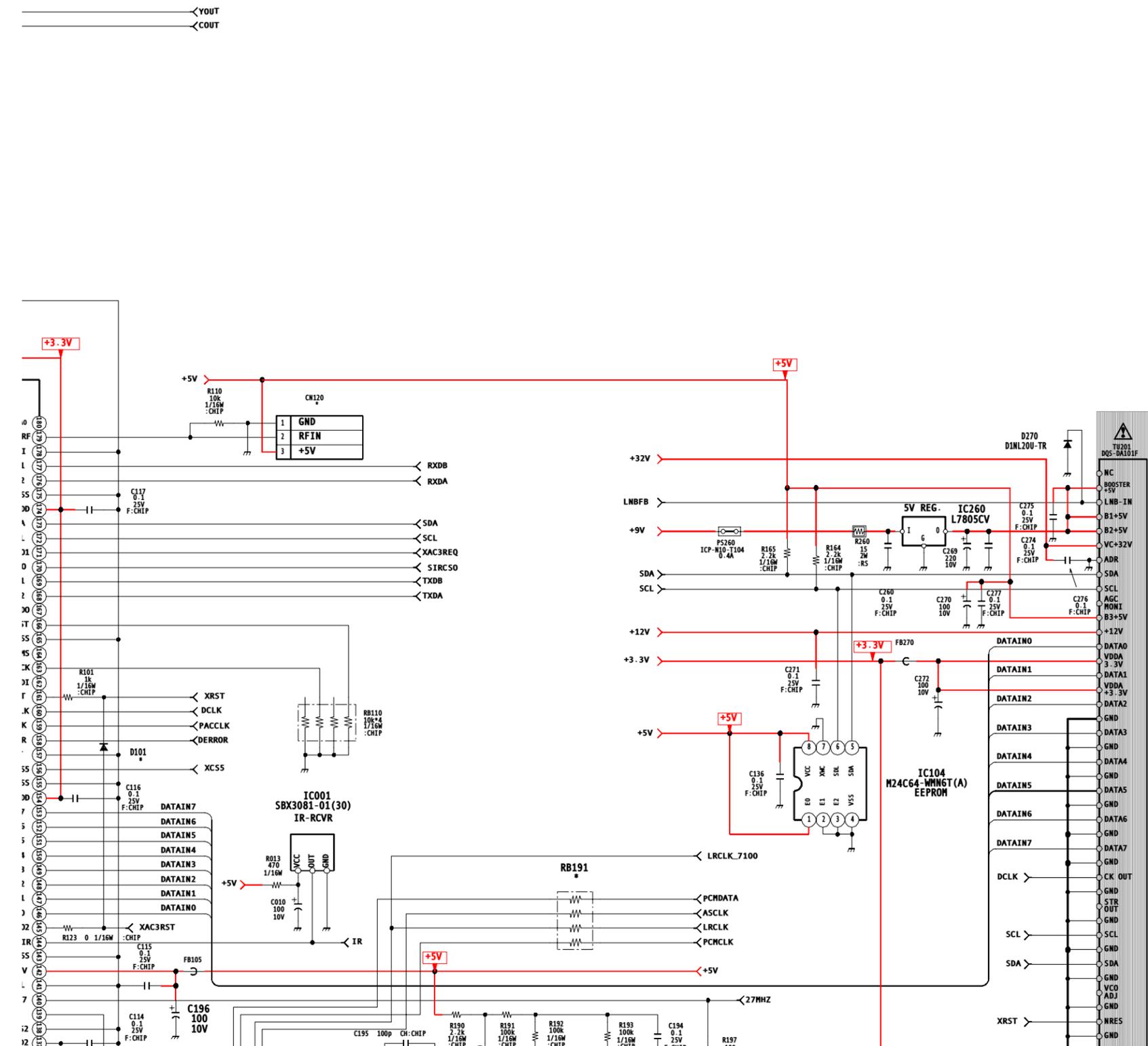
NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	VALUES			REF.NO.	PART NO.	DESCRIPTION	VALUES		
R192	1-216-845-11	RES-CHIP	100K	5%	1/16W	R319	1-216-822-11	RES-CHIP	1.2K	5%	1/16W
R193	1-216-845-11	RES-CHIP	100K	5%	1/16W	R320	1-216-818-11	RES-CHIP	560	5%	1/16W
R194	1-216-809-11	RES-CHIP	100	5%	1/16W	R321	1-216-809-11	RES-CHIP	100	5%	1/16W
R195	1-216-857-11	RES-CHIP	1M	5%	1/16W	R322	1-216-864-11	SHORT			
R196	1-216-809-11	RES-CHIP	100	5%	1/16W	R323	1-216-818-11	RES-CHIP	560	5%	1/16W
R197	1-216-809-11	RES-CHIP	100	5%	1/16W	R324	1-216-817-11	RES-CHIP	470	5%	1/16W
R198	1-216-837-11	RES-CHIP	22K	5%	1/16W	R325	1-216-831-11	RES-CHIP	6.8K	5%	1/16W
R212	1-216-833-11	RES-CHIP	10K	5%	1/16W	R326	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R213	1-216-837-11	RES-CHIP	22K	5%	1/16W	R327	1-216-809-11	RES-CHIP	100	5%	1/16W
R214	1-216-835-11	RES-CHIP	15K	5%	1/16W	R328	1-216-821-11	RES-CHIP	1K	5%	1/16W
R218	1-216-827-11	RES-CHIP	3.3K	5%	1/16W	R330	1-216-815-11	RES-CHIP	330	5%	1/16W
R219	1-216-049-11	RES-CHIP	1K	5%	1/10W	R331	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R220	1-216-827-11	RES-CHIP	3.3K	5%	1/16W	R332	1-216-809-11	RES-CHIP	100	5%	1/16W
R224	1-216-833-11	RES-CHIP	10K	5%	1/16W	R333	1-216-833-11	RES-CHIP	10K	5%	1/16W
R241	1-216-817-11	RES-CHIP	470	5%	1/16W	R335	1-216-833-11	RES-CHIP	10K	5%	1/16W
R242	1-218-726-11	METAL CHIP	27K	0.50%	1/16W	R342	1-216-805-11	RES-CHIP	47	5%	1/16W
R243	1-218-698-11	METAL CHIP	1.8K	0.50%	1/16W	R347	1-218-285-11	RES-CHIP	75	5%	1/16W
R244	1-218-692-11	METAL CHIP	1K	0.50%	1/16W	R348	1-218-285-11	RES-CHIP	75	5%	1/16W
R245	1-216-833-11	RES-CHIP	10K	5%	1/16W	R500	1-216-814-11	RES-CHIP	270	5%	1/16W
R246	1-216-864-11	SHORT				R501	1-216-815-11	RES-CHIP	330	5%	1/16W
R247	1-218-716-11	METAL CHIP	10K	0.50%	1/16W	R502	1-219-570-11	RES-CHIP	10M	5%	1/16W
R248	1-216-833-11	RES-CHIP	10K	5%	1/16W	R504	1-215-388-00	METAL	43	1%	1/4W
R249	1-216-833-11	RES-CHIP	10K	5%	1/16W	R505	1-216-797-11	RES-CHIP	10	5%	1/16W
R252	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R506	1-216-857-11	RES-CHIP	1M	5%	1/16W
R260	1-215-881-11	METAL OXIDE	15	5%	2W	R507	1-216-857-11	RES-CHIP	1M	5%	1/16W
R290	1-216-821-11	RES-CHIP	1K	5%	1/16W	⚠ R508	1-249-414-11	CARBON	560	5%	1/4W
R291	1-249-401-11	CARBON	47	5%	1/4W	R509	1-216-864-11	SHORT			
⚠ R292	1-260-292-11	CARBON	1	5%	1/2W	R513	1-216-033-00	RES-CHIP	220	5%	1/10W
R294	1-216-821-11	RES-CHIP	1K	5%	1/16W	R520	1-216-833-11	RES-CHIP	10K	5%	1/16W
R295	1-216-837-11	RES-CHIP	22K	5%	1/16W	R521	1-216-833-11	RES-CHIP	10K	5%	1/16W
R300	1-218-285-11	RES-CHIP	75	5%	1/16W	R522	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R301	1-218-285-11	RES-CHIP	75	5%	1/16W	R525	1-216-837-11	RES-CHIP	22K	5%	1/16W
R302	1-216-814-11	RES-CHIP	270	5%	1/16W	R526	1-216-833-11	RES-CHIP	10K	5%	1/16W
R303	1-216-814-11	RES-CHIP	270	5%	1/16W	R540	1-216-833-11	RES-CHIP	10K	5%	1/16W
R304	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	R543	1-249-398-11	CARBON	27	5%	1/4W
R305	1-216-823-11	RES-CHIP	1.5K	5%	1/16W	R545	1-216-821-11	RES-CHIP	1K	5%	1/16W
R306	1-216-821-11	RES-CHIP	1K	5%	1/16W	R546	1-216-821-11	RES-CHIP	1K	5%	1/16W
R307	1-216-819-11	RES-CHIP	680	5%	1/16W	R547	1-216-821-11	RES-CHIP	1K	5%	1/16W
R308	1-216-831-11	RES-CHIP	6.8K	5%	1/16W	R548	1-216-821-11	RES-CHIP	1K	5%	1/16W
R309	1-216-830-11	RES-CHIP	5.6K	5%	1/16W	R550	1-216-821-11	RES-CHIP	1K	5%	1/16W
R310	1-216-817-11	RES-CHIP	470	5%	1/16W	R551	1-216-833-11	RES-CHIP	10K	5%	1/16W
R311	1-216-817-11	RES-CHIP	470	5%	1/16W	R552	1-216-829-11	RES-CHIP	4.7K	5%	1/16W
R312	1-216-818-11	RES-CHIP	560	5%	1/16W	R553	1-216-809-11	RES-CHIP	100	5%	1/16W
R313	1-216-817-11	RES-CHIP	470	5%	1/16W	R554	1-216-821-11	RES-CHIP	1K	5%	1/16W
R314	1-218-285-11	RES-CHIP	75	5%	1/16W	R555	1-216-833-11	RES-CHIP	10K	5%	1/16W
R315	1-218-285-11	RES-CHIP	75	5%	1/16W	R556	1-216-833-11	RES-CHIP	10K	5%	1/16W
R317	1-216-809-11	RES-CHIP	100	5%	1/16W	⚠ R600	1-202-723-00	SOLID	2.2M	20%	1/2W
R318	1-216-818-11	RES-CHIP	560	5%	1/16W	R601	1-217-253-11	WIREWOUND	2.2	10%	3W

— 26 —

REF.NO.	PART NO.	DESCRIPTION	VALUES			REF.NO.	PART NO.	DESCRIPTION	VALUES		
R602	1-216-113-00	RES-CHIP	470K	5%	1/10W	R810	1-216-833-11	RES-CHIP	10K	5%	1/16W
R603	1-216-113-00	RES-CHIP	470K	5%	1/10W	R811	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R624	1-216-864-11	SHORT				R815	1-216-813-11	RES-CHIP	220	5%	1/16W
R625	1-216-821-11	RES-CHIP	1K	5%	1/16W	R820	1-216-842-11	RES-CHIP	56K	5%	1/16W
R626	1-260-332-51	CARBON	2.2K	5%	1/2W	R821	1-216-842-11	RES-CHIP	56K	5%	1/16W
R627	1-218-675-11	RES-CHIP	200	5%	1/16W	R822	1-216-826-11	RES-CHIP	2.7K	5%	1/16W
R628	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W	R823	1-216-826-11	RES-CHIP	2.7K	5%	1/16W
R629	1-216-839-11	RES-CHIP	33K	5%	1/16W	R826	1-216-835-11	RES-CHIP	15K	5%	1/16W
R630	1-216-821-11	RES-CHIP	1K	5%	1/16W	R827	1-216-835-11	RES-CHIP	15K	5%	1/16W
R631	1-216-833-11	RES-CHIP	10K	5%	1/16W	R828	1-218-725-11	RES-CHIP	24K	5%	1/16W
R632	1-216-834-11	RES-CHIP	12K	5%	1/16W	R829	1-218-725-11	RES-CHIP	24K	5%	1/16W
R633	1-216-833-11	RES-CHIP	10K	5%	1/16W	R850	1-216-845-11	RES-CHIP	100K	5%	1/16W
R635	1-216-833-11	RES-CHIP	10K	5%	1/16W	R851	1-216-835-11	RES-CHIP	15K	5%	1/16W
R636	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W	R853	1-216-845-11	RES-CHIP	100K	5%	1/16W
R637	1-216-809-11	RES-CHIP	100	5%	1/16W	R854	1-216-813-11	RES-CHIP	220	5%	1/16W
R640	1-216-864-11	SHORT				R855	1-216-833-11	RES-CHIP	10K	5%	1/16W
R641	1-216-864-11	SHORT				R856	1-216-864-11	SHORT			
R650	1-249-389-11	CARBON	4.7	5%	1/4W	R857	1-216-809-11	RES-CHIP	100	5%	1/16W
R651	1-216-821-11	RES-CHIP	1K	5%	1/16W	R858	1-216-809-11	RES-CHIP	100	5%	1/16W
R652	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R901	1-216-833-11	RES-CHIP (SAT-A55P ONLY)	10K	5%	1/16W
R653	1-216-821-11	RES-CHIP	1K	5%	1/16W						
R655	1-216-821-11	RES-CHIP	1K	5%	1/16W	R902	1-216-833-11	RES-CHIP (SAT-A55P ONLY)	10K	5%	1/16W
R656	1-216-821-11	RES-CHIP	1K	5%	1/16W						
R657	1-216-821-11	RES-CHIP	1K	5%	1/16W	R903	1-216-864-11	SHORT (SAT-A55P ONLY)			
R658	1-216-827-11	RES-CHIP	3.3K	5%	1/16W						
						R904	1-216-833-11	RES-CHIP (SAT-A55P ONLY)	10K	5%	1/16W
R659	1-216-821-11	RES-CHIP	1K	5%	1/16W						
R660	1-249-389-11	CARBON	4.7	5%	1/4W	R905	1-216-829-11	RES-CHIP (SAT-A55P ONLY)	4.7K	5%	1/16W
R661	1-216-825-11	RES-CHIP	2.2K	5%	1/16W						
R662	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R906	1-216-864-11	SHORT (SAT-A55P ONLY)			
R663	1-216-833-11	RES-CHIP	10K	5%	1/16W						
R664	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R912	1-216-833-11	RES-CHIP (SAT-A55P ONLY)	10K	5%	1/16W
R670	1-216-833-11	RES-CHIP	10K	5%	1/16W						
R671	1-216-833-11	RES-CHIP	10K	5%	1/16W	R918	1-216-833-11	RES-CHIP (SAT-A55P ONLY)	10K	5%	1/16W
R672	1-216-837-11	RES-CHIP	22K	5%	1/16W						
R673	1-216-833-11	RES-CHIP	10K	5%	1/16W	R919	1-216-829-11	RES-CHIP (SAT-A55P ONLY)	4.7K	5%	1/16W
R690	1-216-837-11	RES-CHIP	22K	5%	1/16W						
R691	1-216-833-11	RES-CHIP	10K	5%	1/16W			**RESISTOR BRIDGE**			
R692	1-216-836-11	RES-CHIP	18K	5%	1/16W						
R693	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	RB100	1-239-409-11	RES, CHIP NETWORK	47		-3216
R694	1-216-821-11	RES-CHIP	1K	5%	1/16W	RB101	1-239-409-11	RES, CHIP NETWORK	47		-3216
						RB102	1-239-409-11	RES, CHIP NETWORK	47		-3216
R700	1-216-313-00	RES-CHIP	8.2	5%	1/10W	RB103	1-239-409-11	RES, CHIP NETWORK	47		-3216
R800	1-216-833-11	RES-CHIP (SAT-A55P ONLY)	10K	5%	1/16W	RB104	1-239-409-11	RES, CHIP NETWORK	47		-3216
R801	1-216-821-11	RES-CHIP (SAT-A55P ONLY)	1K	5%	1/16W	RB105	1-239-409-11	RES, CHIP NETWORK	47		-3216
						RB106	1-239-409-11	RES, CHIP NETWORK	47		-3216
R802	1-216-821-11	RES-CHIP (SAT-A55P ONLY)	1K	5%	1/16W	RB107	1-239-409-11	RES, CHIP NETWORK	47		-3216
						RB108	1-239-409-11	RES, CHIP NETWORK	47		-3216
R808	1-216-837-11	RES-CHIP	22K	5%	1/16W	RB110	1-236-908-11	RES, CHIP NETWORK	10K		-3216
R809	1-216-833-11	RES-CHIP	10K	5%	1/16W	RB120	1-236-908-11	RES, CHIP NETWORK	10K		-3216

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

| A | HB | SC2 |

REF.NO.	PART NO.	DESCRIPTION	VALUES	
RB121	1-236-908-11	RES, CHIP NETWORK	10K	-3216
RB151	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB152	1-239-409-11	RES, CHIP NETWORK	47	-3216
RB190	1-236-908-11	RES, CHIP NETWORK	10K	-3216
RB191	1-239-409-11	RES, CHIP NETWORK	47	-3216
		(SAT-B55P ONLY)		
RB550	1-236-908-11	RES, CHIP NETWORK	10K	-3216
RB800	1-233-411-21	RES, CHIP NETWORK	220	-3216
RB910	1-239-409-11	RES, CHIP NETWORK	47	-3216
		(SAT-A55P ONLY)		

MODULATOR

| RF300 | 1-473-156-11 | MODULATOR, RF | | |

SWITCH

| S600 | 1-692-431-21 | SWITCH TACTILE | | |

TRANSFORMER

⚠ T510	1-427-947-11	TRANSFORMER, MODEM		
⚠ T601	1-411-672-11	FILTER, LINE		
⚠ T620	1-431-646-21	TRANSFORMER, CONVERTER (SRT)		

TUNER

| ⚠ TU201 | 8-598-524-00 | MODULE, INTERFACE | DQS-DA101F | |

VARISTOR

| ⚠ VDR601 | 1-801-074-41 | VARISTOR | ERZV10D271 | |

CRYSTAL

X190	1-760-626-11	VIBRATOR, CRYSTAL		
X500	1-760-624-11	VIBRATOR, CRYSTAL		
X520	1-577-082-11	VIBRATOR, CERAMIC		
X850	1-767-911-21	CRYSTAL VIBRATOR		

| HB |

| * A-1372-878-A | HB BOARD, MOUNTED | | |

CONNECTOR

| CN001 | 1-568-852-11 | PIN,CONNECTOR (PC BOARD) 9P | | |

SWITCH

S001	1-572-198-11	SWITCH KEYBOARD		
S002	1-572-198-11	SWITCH KEYBOARD		
S003	1-572-198-11	SWITCH KEYBOARD		
S004	1-572-198-11	SWITCH KEYBOARD		
S005	1-572-198-11	SWITCH KEYBOARD		

REF.NO.	PART NO.	DESCRIPTION	VALUES		
S006	1-572-198-11	SWITCH, KEYBOARD			
S007	1-572-198-11	SWITCH, KEYBOARD			

| SC2 |

| * A-1391-061-A | SC2 BOARD, MOUNTED | | | |

CAPACITOR

C951	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C952	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C953	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C954	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C955	1-117-370-11	CERAMIC CHIP	10µF	10V	
C956	1-163-249-11	CERAMIC CHIP	82pF	5%	50V
C957	1-124-261-00	ELECT	10µF	20%	10V
C958	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C960	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C961	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C962	1-126-160-11	ELECT	1µF	20%	50V

CONNECTOR

| CN950 | 1-785-558-11 | CONNECTOR, SMART CARD | | | |
| CN951 | 1-568-852-11 | PIN,CONNECTOR (PC BOARD) 9P | | | |

DIODE

| D950 | 8-719-060-48 | DIODE RB751V-40TE-17 | | | |

IC

| IC950 | 8-759-533-74 | IC TDA8004T | | | |
| IC952 | 8-759-198-31 | IC TL431CLP-Z | | | |

TRANSISTOR

Q950	1-801-806-11	TRANSISTOR DTC144EKA-T146			
Q951	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
Q952	1-801-806-11	TRANSISTOR DTC144EKA-T146			

RESISTOR

R950	1-216-073-91	RES-CHIP	10K	5%	1/10W
R953	1-216-073-91	RES-CHIP	10K	5%	1/10W
R957	1-216-073-91	RES-CHIP	10K	5%	1/10W
R959	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W
R960	1-208-802-11	METAL CHIP	6.8K	0.50%	1/10W
R961	1-216-043-91	RES-CHIP	560	5%	1/10W
R962	1-216-073-91	RES-CHIP	10K	5%	1/10W
R963	1-216-011-00	RES-CHIP	27	5%	1/10W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

	REF.NO.	PART NO.	DESCRIPTION	VALUES
		ACCESSORIES AND PACKAGING		
		1-754-022-11	ANTENNA, RF REMOTE (SAT-A55P ONLY)	
		1-769-758-11	CABLE, MODULAR (WITH PLUG)	
*		4-075-056-01	CARTON, INDIVIDUAL	
*		4-071-131-51	LABEL, INDIVIDUAL CARTON (SAT-A55P ONLY)	
⚠		1-790-131-11	CORD SET, POWER SUPPLY	
		1-751-271-12	CORD, CONNECTION (AV)	
		1-696-592-11	CORD, CONNECTION (COAXIAL)	
		1-751-498-21	CORD, CONNECTION (SAT-A55P ONLY)	
		1-575-335-91	CORD, CONNECTION (SAT-A55P ONLY)	
		1-782-576-11	CORD, CONNECTION (S-VIDEO) (SAT-A55P ONLY)	
*		4-077-832-01	CUSHION, UNIVERSAL	
		1-782-913-11	IR BLASTER (SAT-A55P ONLY)	
		1-790-953-11	IR BLASTER (SAT-B55P ONLY)	
		4-075-080-22	MANUAL, INSTRUCTION (ENGLISH)	
		4-075-080-31	MANUAL, INSTRUCTION (FRENCH)	
		REMOTE COMMANDER		
		1-475-342-11	REMOTE COMMANDER (RM-Y139) (SAT-B55P ONLY)	
		9-973-375-01	BATTERY COVER FOR RM-Y139 (SAT-B55P ONLY)	
		1-418-609-11	REMOTE COMMANDER (RM-Y802) (SAT-A55P ONLY)	
		4-978-977-01	BATTERY COVER FOR RM-Y802 (SAT-A55P ONLY)	

IC110
TMS320AV7100-2.7
TRANSPORT. MICRO.
MPEG A/V
NTSC ENCODER

IC120
MT48LC1M16A1TG-7
S
SDRAM

Q690
2SD2394-EF
5V REG.

Q691
2SD601A-QRS-TX
AMP

Q692
2SD601A-QRS-TX
AMP

Q693
2SD601A-QRS-TX
AMP

16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25

YOUT
COUT

+3.3V

+5V

R110
10k
1/16W
:CHIP

CN120
1 GND
2 RFIN
3 +5V

RXDB
RXDA

C17
0.1
25V
F:CHIP

SDA
SCL
XAC3REQ
SIRCSO
TXDB
TXDA

R101
1k
1/16W
:CHIP

XRST
DCLK
PACCLK
DERROR

RB110
10k*4
1/16W
:CHIP

D101

XCS5

C116
0.1
25V
F:CHIP

DATAIN7
DATAIN6
DATAIN5
DATAIN4
DATAIN3
DATAIN2
DATAIN1
DATAIN0

IC001
SBX3081-01(30)
IR-RCVR

R013
470
1/16W

VCC
OUT
GND

+5V

C010
100
10V

XAC3RST

R123 0 1/16W :CHIP

IR

C115
0.1
25V
F:CHIP

FB105

V

C114
0.1
25V
F:CHIP

C196
100
10V

+32V

LNBFB

+9V

SDA

SCL

+12V

+3.3V

+5V

PS260
ICP-N10-T104
0.4A

R165
2.2k
1/16W
:CHIP

R164
2.2k
1/16W
:CHIP

R260
15
2W
:RS

5V REG. IC260
L7805CV
I   O
G

C269
220
10V

+5V

D270
D1NL20U-TR

C275
0.1
25V
F:CHIP

C274
0.1
25V
F:CHIP

C260
0.1
25V
F:CHIP

C270
100
10V

C277
0.1
25V
F:CHIP

C276
0.1
F:CHIP

+3.3V FB270

C271
0.1
25V
F:CHIP

C272
100
10V

C

DATAIN0
DATAIN1
DATAIN2
DATAIN3
DATAIN4
DATAIN5
DATAIN6
DATAIN7

DCLK

SCL

SDA

XRST

+5V

C136
0.1
25V
F:CHIP

VCC XMC SDL SDA

E0 E1 E2 VSS

IC104
M24C64-WMN6T(A)
EEPROM

LRCLK_7100

RB191

PCMDATA
ASCLK
LRCLK
PCMCLK

+5V

27MHZ

C195 100p CH:CHIP

R190
2.2k
1/16W
:CHIP

R191
100k
1/16W
:CHIP

R192
100k
1/16W
:CHIP

R193
100k
1/16W
:CHIP

C194
0.1
25V
F:CHIP

R197

TU201
DQS-DA101F

NC
BOOSTER
+5V
LNB-IN
B1+5V
B2+5V
VC+32V
ADR
SDA
SCL
AGC
MONI
B3+5V
DATA0
VDDA
3.3V
DATA1
VDDA
+3.3V
DATA2
GND
DATA3
GND
DATA4
GND
DATA5
GND
DATA6
GND
DATA7
GND
CK OUT
GND
STR
OUT
GND
SCL
GND
SDA
GND
VCO
ADJ
GND
GND
NRES
GND

A (1/4) (TRANSPORT.MICRO.MPEG A/VB.NTSC ENCODER.TUNER)

9-965-914-01<SAT-A55P/B55P> A 10F4

15 16 17 18 19 20 21 22 23

XTVDSS

+9V

+9V

R342
47
1/16W
:CHIP

RF300

VIDEO IN
AUDIO IN
HD.+B
CONTROL

R310
470
1/16W
:CHIP

IC301(1/2)
TK15420MTL
AMP

R322
0
1/16W
:CHIP

C307
47p
CH:CHIP

C309
0.1
25V
F:CHIP

C308
47p
CH:CHIP

R325
6.8k
1/16W
:CHIP

C325
0.1
25V
F:CHIP

R318
560
1/16W
:CHIP

L302
4.6µH
FLK50

C326
82p
CH:CHIP

R321
100
1/16W
:CHIP

L303
27µH
FLK50

C328
120p
CH:CHIP

R323
560
1/16W
:CHIP

C327
100
25V

R326
4.7k
1/16W
:CHIP

R317
100
1/16W
:CHIP

R320
560
1/16W
:CHIP

Q301
2SD601A-QRS-TX
BUFF

R319
1.2k
1/16W
:CHIP

R324
470
1/16W
:CHIP

R328
1k
1/16W
:CHIP

Q302
2SD601A-QRS-TX
BUFF

IC301(2/2)
TK15420MTL
AMP

+5V

R315 75 1/16W :CHIP

C310
0.1
25V
F:CHIP

C314
0.1
25V
:CHIP

R311
470
1/16W
:CHIP

R312
560
1/16W
:CHIP

R309
5.6k
1/16W
:CHIP

R314
75
1/16W
:CHIP

R331
2.2k
1/16W
:CHIP

R330
330
1/16W
:CHIP

L304
1.2µH
FLK50

R332
100
1/16W
:CHIP

R308
6.8k
1/16W
:CHIP

R313
470
1/16W
:CHIP

C331
10p
CH:CHIP

R347
75
1/16W
:CHIP

C344
47p
CH:CHIP

R327
100
1/16W
:CHIP

CF300
4.5MHz

R335
10k
1/16W
:CHIP

Q303
2SB709A-QRS-TX
BUFF

Q304
2SD601A-QRS-TX
BUFF

R348
75
1/16W
:CHIP

C345
47p
CH:CHIP

CN300
4P
S-VIDEO

C315
100
10V

C316
0.1
25V
F:CHIP

D330
STZ6.8N-T146
PROT

D331
STZ6.8N-T146
PROT

+5V

IC801(2/2)
M5218AFP-T1
AMP

C808
0.1
25V
F:CHIP

IC801(1/2)
M5218AFP-T1
AMP

D307
STZ6.8N-T146
PROT

D308
STZ6.8N-T146
PROT

R827
15k
/16W
CHIP

C801
0.1
25V
F:CHIP

R810
10k
1/16W
:CHIP

Q800
2SD601A-QRS-TX
BUFF

V1
V2

VIDEO OUT

R808
22k
1/16W
:CHIP

R809
10k
1/16W
:CHIP

R815
220
1/16W
:CHIP

C809
47p
CH:CHIP

C814
47p
CH:CHIP

L1
L2

AUDIO OUT-L

R811
2.2k
1/16W
:CHIP

C815
47p
CH:CHIP

IC802(2/2)
M5218AFP-T1
AMP

R826
15k
/16W
CHIP

C812
47p
CH:CHIP

R1
R2

AUDIO OUT-R

R8800
220/4
1/16W
:CHIP

C813
47p
CH:CHIP

C818
47p
CH:CHIP

J800
6P
AUDIO/VIDEO OUT

-5V

IC802(1/2)
M5218AFP-T1
AMP

D800
STZ6.8N-T146
PROT

D801
STZ6.8N-T146
PROT

D802
STZ6.8N-T146
PROT

D803
STZ6.8N-T146
PROT

C802
0.1
25V
F:CHIP

IC240(2/2)
NJM4558M-TE2
AMP

C802
0.1
25V
F:CHIP

Q240
2SD601A-QRS-TX
AMP

+5V

LNBFB

C249
10

C238
0.1
25V
F:CHIP

D240
MA111-TX

R224
10k 1/16W :CHIP

LNBLED

R248
10k
1/16W
:CHIP

C248
10

R245
10k
1/16W
:CHIP

LNBFSSCLK

C250
0.47

D241
MA111-TX

R249
10k
1/16W
:CHIP

C239
0.1
25V
F:CHIP

R252
2.2k
1/16W
:CHIP

Q241
2SB709A-QRS-TX
AMP

-5V

-5V

C240
0.1
25V
F:CHIP

IC240(1/2)
NJM4558M-TE2
AMP

+5V

K

R213
22k
1/16W
:CHIP

R294
1k
1/16W
:CHIP

C245
0.001
B:CHIP

LNBVAL

R214
15k
1/16W
:CHIP

R220
3.3k
1/16W
:CHIP

IC206(2/2)
NJM2903M-TE2
COMPARATOR

R218
3.3k
/16W
:CHIP

R219
1k
1/10W
:CHIP

C242
0.33
16V
F:CHIP

R673
10k
1/16W
:CHIP

SMVCCDET

/2)
-TE2
TOR

R671
10k
1/16W
:CHIP

R672
22k
1/16W
:CHIP

A(2/4) (POWER SUPPLY. AUDIO DAC)

**(*) A BOARD VARIANT
MODEL LIST (2 OF 4)**

	SAT-A55P	SAT-B55P
Q801	2SD601A-Q	#
Q802	2SD601A-Q	#
R800	10K	#
R801	1K	#
R802	1K	#

#: Not Mounted

Grid columns: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Grid rows: A B C D E F G H I

TO HB BOARD
CN001

CN151
9P
WHT
:FFC

1	2	3	4	5	6	7	8	9
GND	GND	EXIT	LEFT	MENU	DOWN	RIGHT	SELECT	UP

S600
POWER SW

+5V SMCLK

C165 100p CH:CHIP
C166 100p CH:CHIP
C162 100p CH:CHIP

C164 100p CH:CHIP
C163 100p CH:CHIP
C161 100p CH:CHIP
C159 100p CH:CHIP

RB152 47*4 1/16W :CHIP

RB151 47*4 1/16W :CHIP

+5V

R150 10k 1/16W :CHIP

TO SC BOARD
CN951

CN150
9P
WHT
:FFC

C971 15p CH:CHIP

NC	9
SW1	8
SCCLK	7
SCRST	6
GND	5
GND	4
+5V	3
SCPW	2
SCIO	1

C156 100p CH:CHIP

FB970 +5V

SCPW
SMIO

C157 100p CH:CHIP
C158 100p CH:CHIP

LNBPWR
LNBPOL
LNBLED
LNBVAL
FSSENAB

C151 0.1 25V F:CHIP

5VDATA8
5VDATA9
5VDATA10
5VDATA11

+5V

C150 0.1 25V F:CHIP

EXTADDR0
EXTADDR21
EXTADDR24

R161 0 1/16W :CHIP

EXTADDR1

SMRESET_OUT

XCS4
LNBFSSCLK
XCS5

Q160
BUFFER

SMRESET
XMODEMCS

AMUTE

EXTDATA0

IC160
ISPLSI2032VE-135
LJ44
LOGIC

Pin labels (IC160)
XAUX_CS / XCS1
XCS1
A0
XASICCS
LRCLK
VCC
XISPEN
TDI/IN
XVFDCS
FSSENAB
XCS6

XAUX_CS
XCS1
XASICCS
LRCLK_7100
+3.3V
XVFDCS
FSSENAB
XCS6

I/O
A1
XAC3CS
TMS
XRST/Y1
VCC
CLK40
ASICOE
XROMCS_B
SMVO
SVEN

R162 0.1 1/16W :CHIP

C167 0.1 25V F:CHIP

+3.3V +3.3V

XAC3CS

CLK40

SMVCCEN_OUT
SMVCCEN

D152
RB731U-T108

D109
RB731U-T108

XRST
R172 10k 1/16W :CHIP

XFLASHRST
XSMVCCSTOP

+3.3V

XAUX_CS
27MHZ

IC150
AT82002159-0T1T
ASIC
ATMEL

VSS
SC_IO
SC_CLK
SW1
NC
NC
XRESET
XAUX_CS
CLK_27M
VFD_BLANK
SM_IO
VCR_CLK/VFD_CLK
VCR_DATA/VFD_SERIAL_OUT
XVCR_IRQ/VFD_LATCH
MODEM_CS
SM_RESET
SM_CLK
XSM_DETECT
ASICOE
EXTR/W
EXTADDR7
EXTADDR6
EXTADDR5
EXTADDR4
VSS

XMODEMCS
SMRESET_OUT

XSMDET

EXTRW +5V

EXTDATA7
EXTDATA6
EXTDATA5
EXTDATA4

5VDATA12
5VDATA13
5VDATA14
5VDATA15

5VDATA12
5VDATA13
5VDATA6
5VDATA7
5VDATA15

TVDSSLED
TMR_LED
PWR_LED
XTV_DSS
RESET
ALE
XWR
XRD
VSS
XASIC_IRQ
XASIC_CS
EXTDATA15
EXTDATA14
EXTDATA6
VSS

EXTDATA15
EXTDATA7
EXTDATA14
EXTDATA6

B_RW
AC3ADDR1
AC3ADDR0
VFDALE
EXTRW
EXTWR

R160 4.7k 1/16W :CHIP +3.3V

XROMKILL

XROMCS_A

R540 10k 1/16W :CHIP
R170 4.7k 1/16W :CHIP +5V

R546 1k 1/16W :CHIP
R547 1k 1/16W :CHIP
R548 1k 1/16W :CHIP

D532
RB731U-T108

+3.3V

IC171
LP3470M5X-4.38
RESET IC

XRST VCC

+3.3V +3.3V +5V

| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |

MODEM   PRIMARY

C515
0.022
25V
B:CHIP

TS10

F500
0.5A
125V
473.500

FB500

J500
TEL LINE

1
2

C506
0.0047
2KV
E

D506
P3100SB

R508
560
1/4W
FPRD

FB501

F501
0.5A
125V
473.500

C507
470p
2KV
B

C508
470p
2KV
B

TXDA
RXDA
XOH

+5V

XOH

+5V

+5V

D502
MA111-TX

D504
MA111-TX

IC501
CPC1035NTR
OPTOMOS RELAY

4 3

1 2

+5V

R513
220
1/10W
:CHIP

R506
1M
1/16W
:CHIP

R507
1M
1/16W
:CHIP

D503
MA111-TX

D505
MA111-TX

R501
330
1/16W
:CHIP

R505
10
1/16W
:CHIP

R500
270
1/16W
:CHIP

D507
STZ6.8N-T146
PROT

+5V

R111
10k
1/16W
:CHIP

Q101
2SD601A-QRS-TX
SW

XRST

R112
10k
1/16W
:CHIP

C503
0.1
25V
F:CHIP

29 28 27 26 25 24 23 22 21

NC
ISET
XOH
RXCLK
RXD
TXD
XCS
EXCLK
TXCLK

30 RESET
31 VREF
32 RXA
1 GND
2 CLK
3 XTAL1
4 XTAL2

IC500
73K222BL-IH
MODEM IC

XINT 20
NC 19
TXA1 18
TXA2 17
VDD 16
XRD 15
XWR 14

EXTINT1

+5V

RST

C502
0.1
25V
F:CHIP

R509
0
1/16W
:CHIP

R504
43
1/4W
RN

C509
0.1
25V
F:CHIP

+5V

RS502
10M
1/16W
:CHIP

X500
11.0592MHz

C500
39p
CH:CHIP

C501
39p
CH:CHIP

AD0 AD1 AD2 AD3 AD4 AD5 AD6 AD7 ALE
5   6   7   8   9 10 11 12 13

SVDATA8
SVDATA9
SVDATA10
SVDATA11
SVDATA12
SVDATA13
SVDATA14
SVDATA15

XTVDSS

D012
SLR-325MTC31

[POWER]

D010
SLR-325VRT31

[MESSAGE]

+5V

R012
220
1/16W

R011
220
1/16W

R010
220
1/16W

A15
TA7
A14
A6

XASICIRQ

XASICCS

D011
SLR-325DCA47

[TIMER]

LP3470M5X-4.38
RESET IC

SRT XR V
GND VCC1

C171
0.47
10V
F:CHIP

+3.3V

+3.3V

+5V

FB152

R119
0
1/16W
:CHIP

C152
0.1
25V
F:CHIP

C153
0.1
25V
F:CHIP

C154
0.1
25V
F:CHIP

EXTADDR3
EXTADDR2
EXTADDR1
EXTADDR0
EXTDATA8
EXTDATA9
EXTDATA1
EXTDATA2
EXTDATA10
EXTDATA3
EXTDATA11
EXTDATA4
EXTDATA12
EXTDATA5
EXTDATA13

+3.3VFILT

+5V

FB520

+3.3V

Q520
2SB709A-QRS-TX
SW

R522
2.2k
1/16W
:CHIP

D520
MA111-TX

IC520
MN150414SA1
IR BLASTER

R526
10k
1/16W
:CHIP

SIRCSO

XEXTOE
UCAS
LCAS

R545
1k
1/16W
:CHIP

Q521
2SD601A-QRS-TX
INV

C524
1000
CH:CHIP

+3.3V

RB190
100*4
1/16W
:CHIP

EXTDATA15
EXTDATA14
EXTDATA13
EXTDATA12
EXTDATA11
EXTDATA10
EXTDATA9
EXTDATA8

EXTADDR4
EXTADDR5
EXTADDR6
EXTADDR7
EXTADDR8

J151
1P
MINIJACK

R543
27
1/4W
:FPRD

D531
STZ6.8N-T146
PROT

R525
22k
1/16W
:CHIP

C523
0.1
25V
F:CHIP

RINT

REM

VDD
XOUT
XIN
GND
XRST
XWDOUT

RDATA
RCLK

+3.3V

C541
1000p
B:CHIP

C540
100p
CH:CHIP

C522
0.1
25V
F:CHIP

X520
4 MHz

R520
10k
1/16W
:CHIP

Q522
2SD601A-QRS-TX
SW

IC101
IS41LV16256-35T
DRAM

C126
0.1
25V
F:CHIP

R521
10k
1/16W
:CHIP

RST

44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23

VSS DQ16 DQ15 DQ14 DQ13 VSS DQ12 DQ11 DQ10 DQ9 NC NC NC XLCAS UCAS XOE A8 A7 A6 A5 A4 VSS

VCC DQ1 DQ2 DQ3 DQ4 VCC DQ5 DQ6 DQ7 DQ8 NC NC NC XWE RAS A0 A1 A2 A3 VCC VSS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

EXTDATA7
EXTDATA6
EXTDATA5
EXTDATA4
EXTDATA3
EXTDATA2
EXTDATA1
EXTDATA0

EXTADDR0
EXTADDR1
EXTADDR2
EXTADDR3

EXTRW

RAS

EXTDATA (0:15)

EXTADDR (0:24)

IC100 IS FOR TOSHIBA FLASH

IC100 NEEDS R152 AND C181

IC100
TC58FVB160FT-85
FLASH ROM A

EXTWR
+3.3V
XROMCS_A

+3.3V

R152
10K
1/16W
:CHIP

C181
0.1
25V
F:CHIP

R154
4.7K
1/16W

XFLASHRST

A(3/4) (LOGIC, ASIC)

9-965-914-01<SAT-A55P/B55P> A 30F4

SONY ®

DIRECTV PLUS™ Digital Satellite Receiver

Operating Instructions

Before you begin using your Digital Satellite Receiver for the first time, follow the instructions in "Connecting Your DIRECTV PLUS™ Digital Satellite Receiver" on pages 6-13 and "Setting Up Your Digital Satellite Receiver (SYSTEM)" on pages 22-34.

Also, make sure your Satellite Dish Antenna has been properly installed and call your service provider to begin service:

DIRECTV: 1-800-DIRECTV (347-3288)

SAT-A55 MODEL ONLY

RF ANTENNA: This Digital Satellite Receiver is shipped with IR reception enabled and RF reception disabled. To use the RF feature (and the RF Antenna) you must change the factory setting (IR only) to the RF setting (RF only) using the on-screen displays, as described in these Operating Instructions.

DIRECTV
—*Plus*—

□□ DOLBY
D I G I T A L

SAT-A55
SAT-B55

WARNING

To reduce the risk of fire or shock hazard, do not expose the unit to rain or moisture.

```
        ⚡                CAUTION                 ⚠
                    RISK OF ELECTRIC SHOCK
                        DO NOT OPEN


        CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,

              DO NOT REMOVE COVER (OR BACK).

            NO USER-SERVICEABLE PARTS INSIDE.

        REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
```
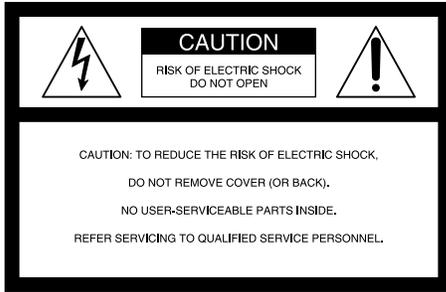
This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of significant magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Note to the CATV Installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Note to the Satellite Dish Antenna Installer

This reminder is provided to call the Satellite Dish Antenna installer's attention to Article 810 and in particular Article 810-15 of the NEC, which covers proper installation and grounding of television receiving equipment, as well as to Article 820-40 of the NEC, which specifies that the Satellite Dish Antenna cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Attention

Telephone Line Interruption

Periodically, information on your DIRECT TICKET® and Pay Per View selections is sent, free of charge, via your telephone line to an 800 number. If you use your telephone during the time the information is being forwarded, you will hear static noise for approximately 30 seconds. If you would like to use your telephone while the information is being sent, you can interrupt the sending of this information at any time by temporarily unplugging the phone line to the receiver.

Local Programming

With this Digital Satellite Receiver and the proper satellite dish antenna, you may be able to receive local channels from DIRECTV in certain areas. Additional equipment may be required in some areas. Check with your retailer or visit *www.directv.com* for information on availability of local channels from DIRECTV in your area.

> You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

The Digital Satellite Receiver is intended for use only within the United States.

Owner's Record

The model and serial numbers are located on the bottom of the Digital Satellite Receiver. The number for the Access Card is on the back of the card and on the carton label. Record these numbers in the space provided below. Refer to these numbers whenever you need to call your sales or service representative regarding this product.

Model Number: _____

Serial Number: _____

Access Card Number: _____

Customer Support

For Programming

For subscription information, or to resolve problems related to programming, call:
DIRECTV at 1-800-DIRECTV (347-3288)

For Hardware and Installation

To arrange for the installation of your Digital Satellite Receiver, call the dealer from whom you purchased your system.
For general information, or to resolve problems related to the operation of your Digital Satellite Receiver or Satellite Dish Antenna, please contact your Sony dealer. If your dealer or installer is unable to answer your questions, call the Sony Satellite System Information Center at 1-800-838-7669.

Trademark and Copyrights

Sony, Media Window, SmartFile, SignalSeeker, and Remote Commander are trademarks and the Sony Partnership and Express Support are service marks of Sony.
DIRECTV and DIRECTV PLUS are trademarks of DIRECTV Inc., a unit of Hughes Electronics, and are used with permission. Manufactured under license from Dolby Laboratories. "Dolby", the double-D symbol and Pro Logic are trademarks of Dolby Laboratories. Confidential Unpublished Works. © 1992–1997 Dolby Laboratories Inc. All rights reserved.
Macrovision is a trademark of Macrovision Corporation.

Macrovision Information

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology is granted by Macrovision for home and other limited pay per view uses only. Reverse engineering or disassembly is prohibited.

Note on Recording Programming

Programming may be taped for home viewing only. All other taping is expressly prohibited. Some programming may not be taped. An additional taping fee may be applied. Call your program providers for details.

StarSight Licensed

The manufacture and sale of the television schedule feature of this product was licensed under one or more of the following patents of StarSight Telecast, Inc.: U.S. Patent Nos. 4,706,121; 4,977,455; 5,151,789; and 5,353,121; with use rights reserved.

About These Operating Instructions

These Operating Instructions describe how to use the SAT-A55 and its remote control. Any differences in operation for the SAT-B55 are noted in the text.
The ☼ icon indicates hints and tips for making the task easier.
A **Note** provides information that may be necessary to complete the task.

Getting to Know Your DIRECTV PLUS™ Digital Satellite Receiver

Connecting Your Digital Satellite Receiver (Page 6)
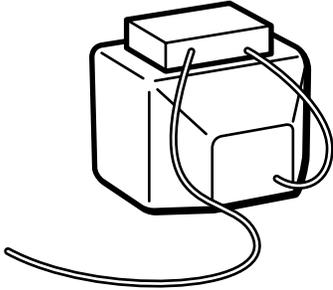
Using Your Remote Control (Page 14)

Setting Up Your Digital Satellite Receiver (Page 22)
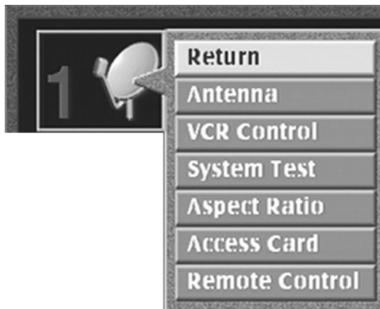
Using the Program Guide (Page 37)
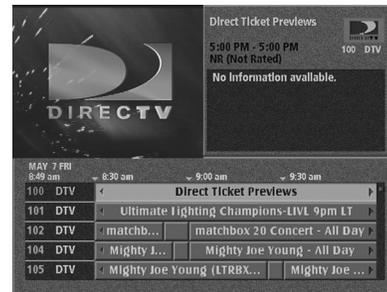
Using the Favorite Stations Guide (Page 40)

Setting Locks & Limits (Page 53)
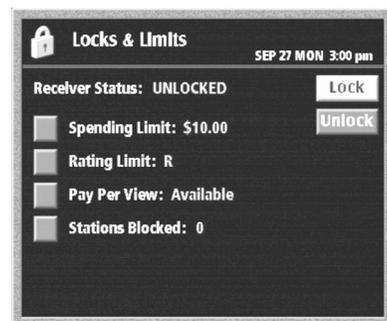
Features

Congratulations on your purchase of the Sony Digital Satellite Receiver. This manual can help you to become familiar with the many great features of the Digital Satellite Receiver. Check below to find out about some of the most exciting features.

Convenience and Ease-of-Use

• The Program Guide shows the picture and sound in the Media Window™ Display while you check station and program information. See page 37.

• The One Button Record and VCR Control features allow you to easily record your favorite programming on your VCR. See pages 26–28 and page 60.

• SAT-A55 model: Operate your Digital Satellite Receiver from another room or from outside a cabinet by setting up the RF feature on your remote control. See pages 32–34.

Excellent Performance

• The Auto Title Insert feature for VCR recording can display program information at the beginning of any Timer & Rec event. You'll have a convenient "title" recorded at the beginning of your tapes. See page 26.

• Choose to listen to different audio tracks available with many programs. See page 64.

• SAT-A55 model: Select Dolby Digital™ audio to truly make your home theater come alive. See page 64.

Easy to Customize

• Organize the channels your family watches most often by setting up the Favorite Stations guide. See pages 40–42.

• Control access to programming with the Locks & Limits feature. See pages 53–58.

• Set up the Custom Stations feature to exclude stations that you don't want to see from the Program Guide, Category Guide and Station Index. See pages 50–51.

• Choose your favorite color palette for the on-screen displays. See pages 47–48.

Table of Contents

Carton Contents

Check to make sure the following items are in the Digital Satellite Receiver's carton.
If you are missing any items, contact your Sony dealer.
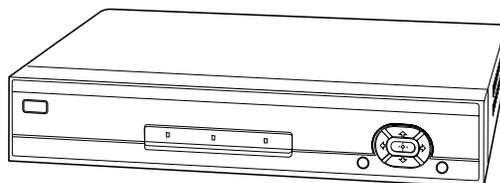
Digital Satellite Receiver

RF Antenna**
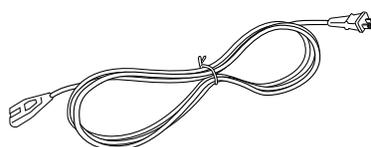
AC Power Cord
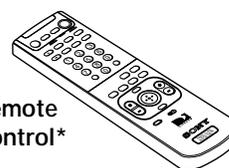
Remote Control*

Access Card

Size AA Batteries

VCR Controller
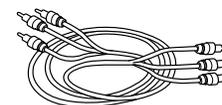
Audio/Video Cable

RF Coaxial Cable

Telephone Cord
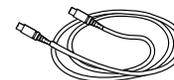
S-Video Cable**

*   The RM-Y802 Remote Control shown.
** The RF Antenna and S-Video cable are not included with the SAT-B55 model.

Note
Keep the original carton and packing materials to safely transport the Digital Satellite Receiver in the future.

Connection Overview

Follow the procedures or make the connections in each of the steps to connect your Digital Satellite Receiver.

Step 1:	Inserting the Batteries
	Page 7

↓

Step 2:	Connecting the Satellite Dish Antenna and Telephone Line
	Page 8

↓

Step 3:	Connecting Your TV
	Page 9

↓

Step 4:	Adding a VCR and Audio System
(advanced connection)	Page 10

↓

Step 5:	Connecting the VCR Controller
(advanced connection)	Page 11

↓

Step 6:	Connecting the RF Antenna (SAT-A55 only)
(advanced connection)	Page 12

↓

Step 7:	Connecting the AC Power Cord
	Page 13

↓

Step 8:	Inserting the Access Card
	Page 13

Step 1: Inserting the Batteries

Before you can use the remote control, you must insert the supplied batteries. If you want to use this remote control to operate other audio/video equipment, such as a TV or VCR, you must set up the remote control (see page 65).

1 Push and slide open the battery compartment.
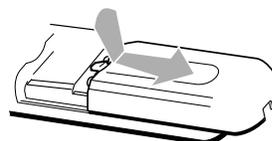
2 Insert two size AA batteries (supplied).
Be sure to match the + and – marks on the batteries with the + and – marks inside the battery compartment.
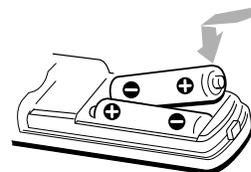
Notes
- When the batteries become weak, the Function button indicators flash. If the remote control does not work properly, the batteries may be weak.
- When replacing batteries, replace both batteries with new ones. Do not mix different types of batteries together.
- When you remove the batteries, any manufacturer codes you've set up may be erased. To set up the remote control again, see "Setting Up the Remote Control" on page 65.

7

Step 2: Connecting the Satellite Dish Antenna and Telephone Line

The SATELLITE IN jack sends power to, and receives satellite signals from, the Satellite Dish Antenna. The telephone line connection periodically sends information about your receiver and Access Card to your service provider.

Connections are shown using the SAT-A55 model. Any differences in connecting the SAT-B55 model are noted in the text.

Digital Satellite Receiver

ACCESS CARD

RF REMOTE

CH3
CH4

SATELLITE IN   AUDIO   VIDEO

VHF/UHF IN

DIGITAL
OUT
(OPTICAL)   LOW SPEED DATA

S VIDEO

1

2

VCR CONTROL

R   L(MONO)

VHF(SAT)/UHF
OUT   TEL LINE

AC IN~

VIDEO OUT
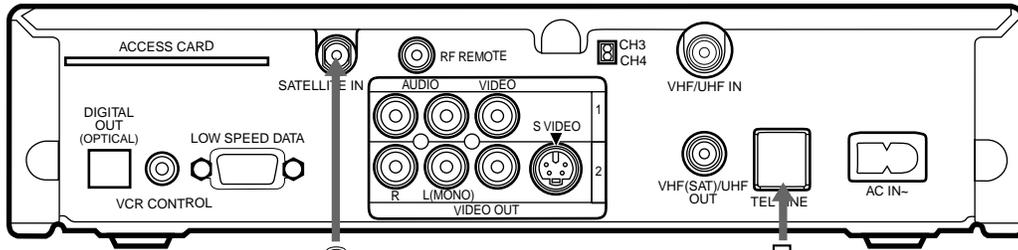
1 Connect the SATELLITE IN jack to your Satellite Dish Antenna using RG-6 coaxial cable.

1

2

2 Connect the TEL LINE jack to a telephone line wall jack using the supplied telephone cord.

RG-6 Coaxial Cable from Satellite Dish Antenna

Telephone Cord

Note
• Your Satellite Dish Antenna Installation Instructions provides detailed instructions on how to install RG-6 coaxial cable from your Satellite Dish Antenna.

⚠ **CAUTION**
Only connect your authorized Satellite Dish Antenna to the SATELLITE IN jack as described in the Installation Instructions. Connecting any other equipment to this jack could result in damage to the equipment and/or receiver.

8

Step 3: Connecting Your TV

Connect your TV to the Digital Satellite Receiver as shown below. Refer to your TV's instruction manual for more information.

1 If you have a local TV antenna or cable company service
Connect it to the VHF/UHF IN jack on your Digital Satellite Receiver using a coaxial cable or RF adapter (not supplied).
You can view local stations using your TV controls.

Note
You must use the VHF(SAT)/UHF OUT jack to connect to your TV or VCR when a local TV antenna or cable company service is connected to the VHF/UHF IN jack (see "2c" below and on page 10).

Coaxial Cable

1

Digital Satellite Receiver

ACCESS CARD   RF REMOTE   CH3 CH4

SATELLITE IN   AUDIO   VIDEO   VHF/UHF IN

DIGITAL OUT (OPTICAL)   LOW SPEED DATA   S VIDEO   1

VCR CONTROL   L(MONO)   2
VIDEO OUT   VHF(SAT)/UHF OUT   TEL LINE   AC IN~

2a   **2b**   **2c**
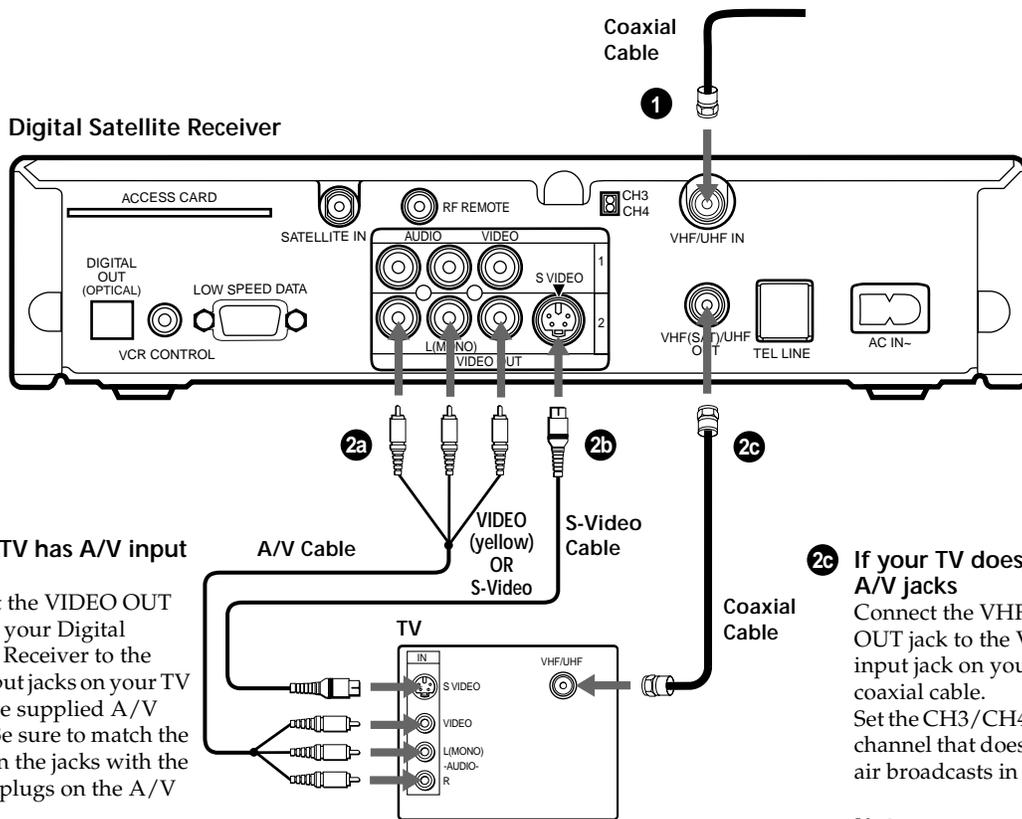
2a If your TV has A/V input jacks
Connect the VIDEO OUT jacks on your Digital Satellite Receiver to the A/V input jacks on your TV using the supplied A/V cable. (Be sure to match the colors on the jacks with the colored plugs on the A/V cable.)

2b If your TV has an S-Video input
Use an S-Video cable instead of the yellow video connection. S-Video cable is supplied with the SAT-A55 model and is an optional accessory with the SAT-B55 model.
If your TV has only one audio input, connect it to the L(MONO) jack on the receiver.

VIDEO (yellow) OR S-Video

A/V Cable   **S-Video Cable**

TV

IN   VHF/UHF
S VIDEO
VIDEO
L(MONO) -AUDIO- R

Coaxial Cable

2c If your TV does not have A/V jacks
Connect the VHF(SAT)/UHF OUT jack to the VHF/UHF input jack on your TV using coaxial cable.
Set the CH3/CH4 switch to the channel that does not carry off-air broadcasts in your area.

Note
With this connection, your input source is channel 3 or channel 4 depending on how you set the CH3/CH4 switch on the receiver.

9

Step 4: Adding a VCR and Audio System

You can record programs by adding a VCR. You can also connect your Digital Satellite Receiver to an audio system for enhanced sound enjoyment.

Audio Receiver

1a If you have a digital or Dolby Digital audio system (SAT-A55 only)
Connect the DIGITAL OUT (OPTICAL) of the Digital Satellite Receiver to the optical digital input of your audio system.

💡 **Tip**
If you connect your Digital Satellite Receiver to a Dolby Digital receiver, set the Dolby Digital option of the Audio display to Auto Select. See "Setting Audio Options (AUDIO)" on page 64 for more information.

Optical Cable
(SAT-A55 only)
(optional Sony accessory POC-15A)

1b If you have a stereo or Dolby® Pro Logic® audio system
Connect the upper AUDIO R and L(MONO) jacks on the Digital Satellite Receiver to the audio inputs of your stereo amplifier.

Stereo Cable

Digital Satellite Receiver
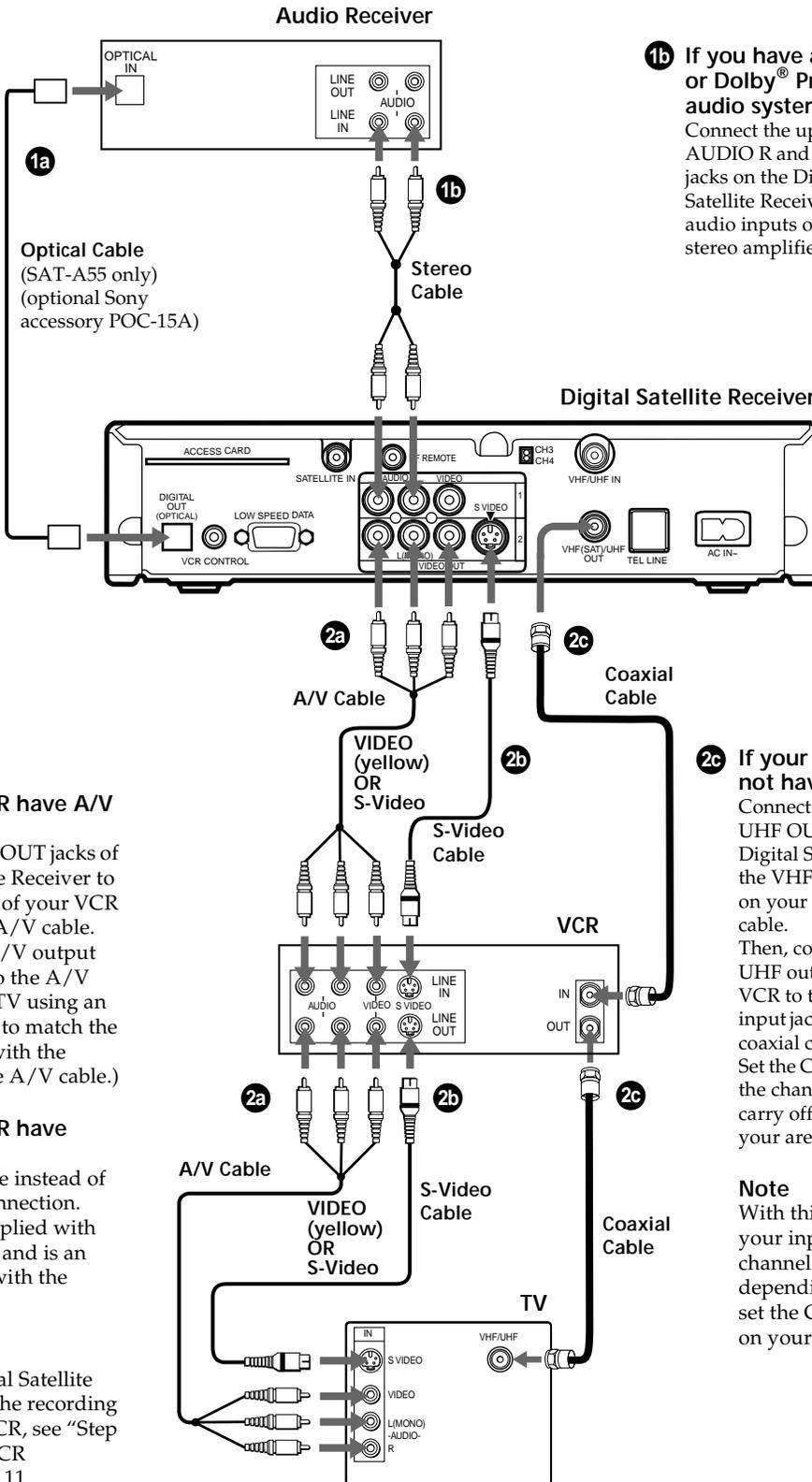
2a If your TV and VCR have A/V jacks
Connect the VIDEO OUT jacks of your Digital Satellite Receiver to the A/V input jacks of your VCR using the supplied A/V cable. Then, connect the A/V output jacks of your VCR to the A/V input jacks of your TV using an A/V cable. (Be sure to match the colors on the jacks with the colored plugs on the A/V cable.)

2b If your TV and VCR have S-Video jacks
Use an S-Video cable instead of the yellow video connection. S-Video cable is supplied with the SAT-A55 model and is an optional accessory with the SAT-B55 model.

💡 **Tip**
To allow your Digital Satellite Receiver to control the recording functions of your VCR, see "Step 5: Connecting the VCR Controller" on page 11.

A/V Cable

VIDEO (yellow) OR S-Video

S-Video Cable

VCR

2c If your TV and VCR do not have A/V jacks
Connect the VHF(SAT)/ UHF OUT jack on the Digital Satellite Receiver to the VHF/UHF input jack on your VCR using coaxial cable. Then, connect the VHF/ UHF output jack on your VCR to the VHF/UHF input jack on your TV using coaxial cable. Set the CH3/CH4 switch to the channel that does not carry off-air broadcasts in your area.

Note
With this connection, your input source is channel 3 or channel 4 depending on how you set the CH3/CH4 switch on your VCR.

Coaxial Cable

A/V Cable

VIDEO (yellow) OR S-Video

S-Video Cable

Coaxial Cable

TV

10

Step 5: Connecting the VCR Controller

Connect the VCR Controller to allow the Timer & Rec feature to automatically operate your VCR.
See "Setting Up the VCR Control Feature" on page 26 for information about setting up the Digital Satellite Receiver to work with your VCR.

Digital Satellite Receiver

1a To allow the Digital Satellite Receiver to control your VCR
Connect the VCR Controller to the VCR CONTROL jack on the receiver.

VCR Controller
Cable   VCR Controller

IR Sensor   **VCR (front view)**
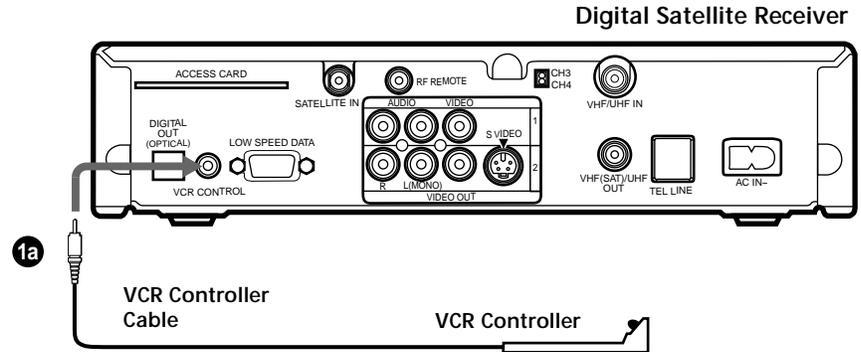
In front of the VCR
Place the VCR Controller under and in front of the VCR.
The VCR Controller must extend just in front of the infrared sensor of the VCR.

🔆 Tip
If the infrared sensor is not marked on your VCR, shine a flashlight into the front panel of the VCR to locate the sensor.

VCR (side view)

¹/₂" to 1"
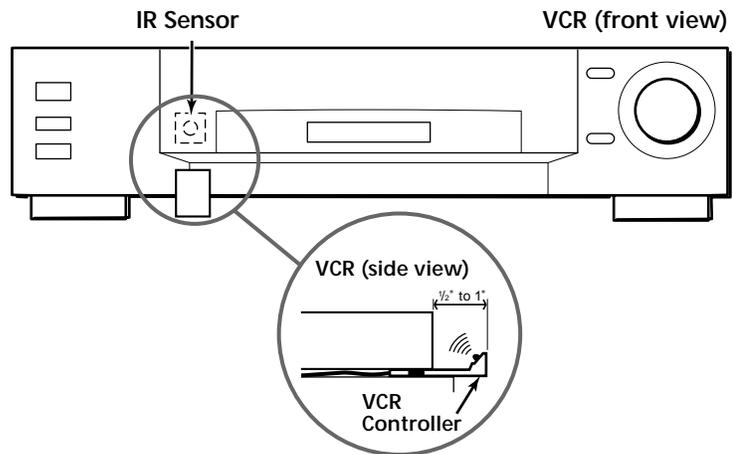
VCR Controller

Connecting a Sony SmartFile™ VCR

Digital Satellite Receiver

1b If you are using a Sony SmartFile VCR to take advantage of the Program Data Download feature
Use this connection instead of the VCR Controller connection. For information about setting up the VCR Control feature, see page 26. For details about the Program Data Download feature, refer to your SmartFile VCR Operating Instructions.

Monaural Cable (supplied with SmartFile VCR)

Sony SmartFile VCR

11
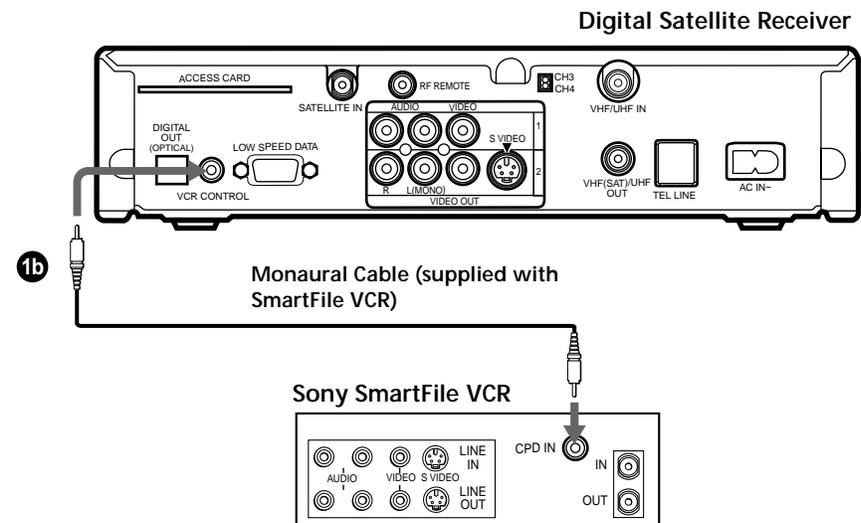
Step 6: Connecting the RF Antenna (SAT-A55 only)

With the SAT-A55 model you can connect the RF Antenna and operate the Digital Satellite Receiver when installed in a cabinet or from another room in your house using the remote control. See page 32 for information about how to set up the Digital Satellite Receiver to use the RF feature.

1 **If you want to use the RF feature**
Connect the RF Antenna to the RF REMOTE jack of the Digital Satellite Receiver. Then, place the RF Antenna in a convenient location.

RF Antenna

1

Digital Satellite Receiver

ACCESS CARD

RF REMOTE

CH3
CH4

SATELLITE IN   AUDIO   VIDEO   VHF/UHF IN

DIGITAL
OUT
(OPTICAL)   LOW SPEED DATA

S VIDEO

1

2

VCR CONTROL   R   L(MONO)

VHF(SAT)/UHF
OUT   TEL LINE   AC IN~

VIDEO OUT
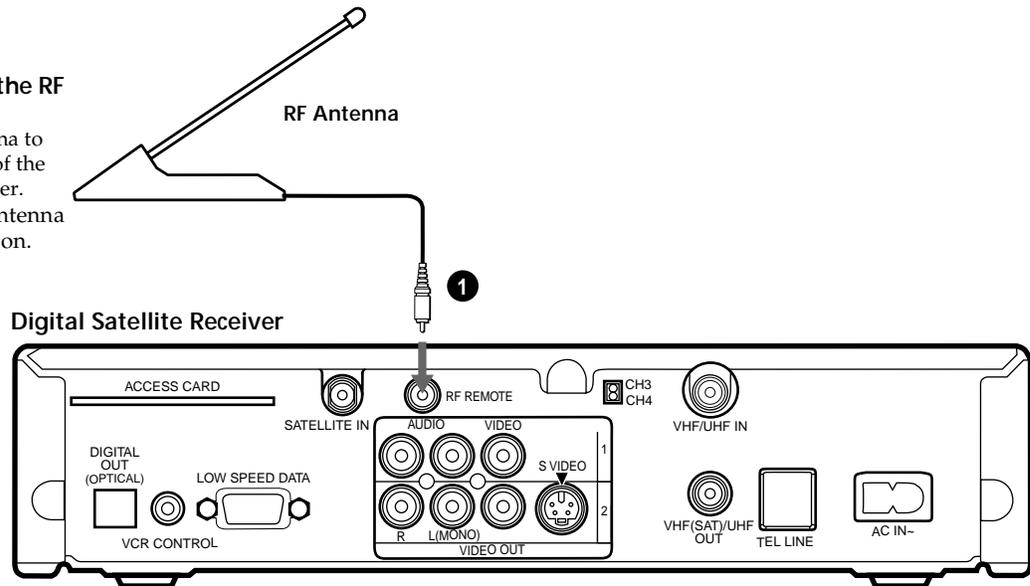
Notes
- Do not place the RF Antenna directly on top of the Digital Satellite Receiver or any other metal object. For best results, place the RF Antenna in a visible location.
- The operating range of the remote control is about 100 feet when using the RF feature. This may decrease due to ambient reception conditions, weak batteries, etc.

12

Step 7: Connecting the AC Power Cord

After all other connections are complete, connect the AC Power Cord to the Digital Satellite Receiver. Then connect the AC Power Cord to a power outlet.

Digital Satellite Receiver

AC Power Cord

to power outlet
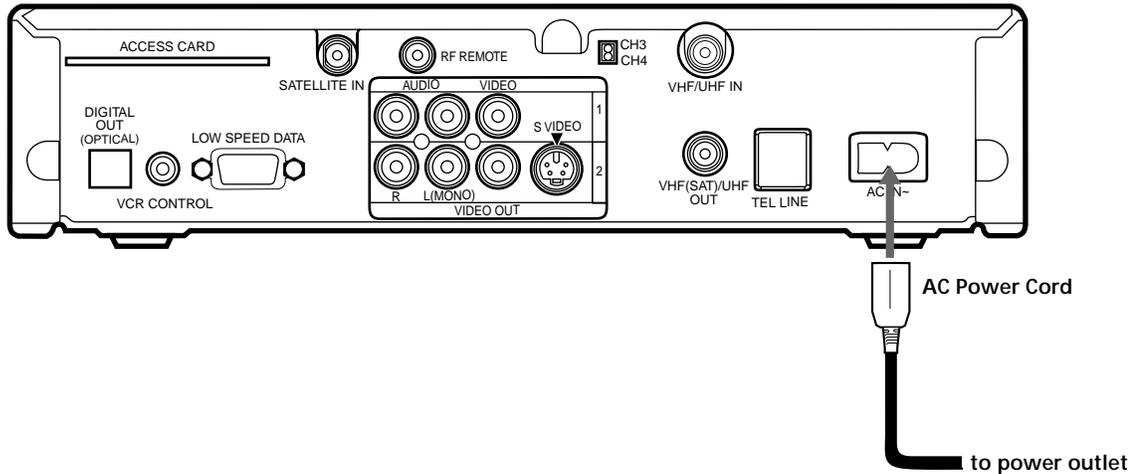
Step 8: Inserting the Access Card

After you insert the Access Card and your Satellite Dish Antenna is installed, you are ready to begin enjoying digital satellite programming. Call DIRECTV at 1-800-DIRECTV (347-3288) to begin service.

Digital Satellite Receiver
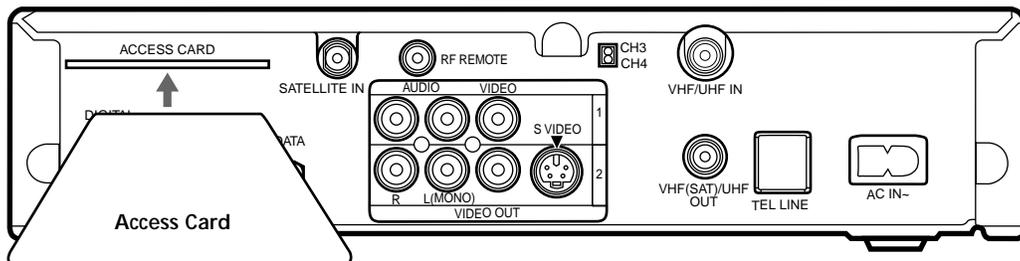
Access Card

13

Using Your Remote Control

RM-Y802 Remote Control (SAT-A55 model)
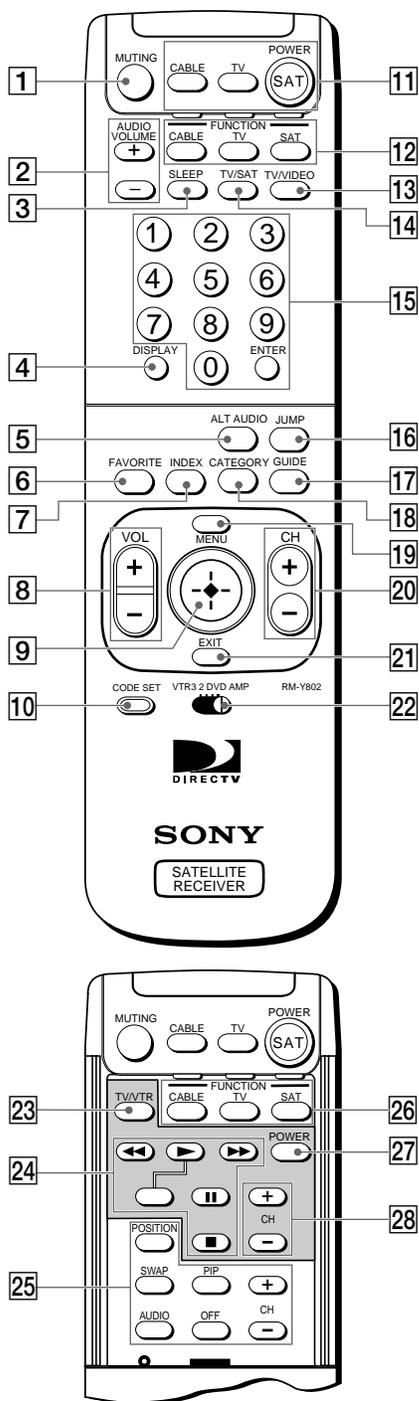
1 **MUTING button**
Mutes the volume. Press again to restore the volume. To operate your TV, you must first set up the remote control (see page 65).

2 **AUDIO VOLUME buttons**
Adjust the volume of your audio receiver. To operate your audio receiver, you must first set up the remote control (see page 65).

3 **SLEEP button**
Sets the TV to turn off automatically after a certain amount of time (if your TV has the Sleep feature). To operate your TV, you must first set up the remote control (see page 65).

4 **DISPLAY button**
Opens the program information display for the current program.

5 **ALT AUDIO button**
Switches among the available audio broadcasts.

6 **FAVORITE button**
Opens the Favorite Stations guide.

7 **INDEX button**
Opens the Station Index.

8 **VOL buttons**
Adjust the volume. To operate your TV, you must first set up the remote control (see page 65).

9 **Joystick**
Moving the joystick up, down, left, and right moves the highlight in on-screen displays. Press the joystick to select the highlighted item.

10 **CODE SET button**
Lets you program the remote control to operate your TV and other audio/video equipment (see page 65).

Note
You may need to set up the remote control to operate your other audio/video equipment. See "Setting Up the Remote Control" on page 65 for details.

14

⑪ **POWER buttons**
Turn on and off the Digital Satellite Receiver and other audio/video equipment. To operate your TV and other audio/video equipment, you must first set up the remote control (see page 65).

⑫ **FUNCTION buttons**
Select the equipment (CABLE, TV or SAT) that you want to operate. The indicators light up to show which device the remote control is operating. To operate your TV or cable box, you must first set up the remote control (see page 65).

⑬ **TV/VIDEO button**
Switches between the various inputs of your TV. To operate your TV, you must first set up the remote control (see page 65).

⑭ **TV/SAT button**
Switches the output of your Digital Satellite Receiver between regular TV and satellite broadcasts. To receive regular TV broadcasts, you must have a local TV antenna or cable company connection (see page 9).

⑮ **0–9 and ENTER buttons**
Change channels directly, and enter numerical values in on-screen displays.

⑯ **JUMP button**
Changes channels to the previously tuned channel.

⑰ **GUIDE button**
Opens the Program Guide.

⑱ **CATEGORY button**
Opens the Category Guide.

⑲ **MENU button**
Opens the Main Menu.

⑳ **CH buttons**
Change channels. When a program guide is open, pressing the CH buttons pages through the guide.

㉑ **EXIT button**
Closes all on-screen displays including program guides and menus.

㉒ **VTR3/2/DVD/AMP switch**
Sets the remote to operate other devices in your A/V system. To operate these other devices, you must first set up the remote control (see page 65).

㉓ **TV/VTR button**
Switches between the TV and VTR (VCR) inputs of your TV. To operate your TV, you must first set up the remote control (see page 65).

㉔ **VCR Control buttons**
Operate VCR features such as play, record, pause, stop, and fast wind. To operate your VCR, you must first set up the remote control (see page 65).

㉕ **PIP control buttons**
Operate the Picture-in-picture features of your TV (if your TV has PIP). To operate your TV, you must first set up the remote control (see page 65).

㉖ **FUNCTION buttons**
Select the equipment (CABLE, TV or SAT) that you want to operate. The indicators light up to show which device the remote control is operating. To operate your TV or cable box, you must first set up the remote control (see page 65).

㉗ **POWER button**
Turns on or off the equipment selected with the VTR3/2/DVD/AMP switch.

㉘ **CH +/– buttons**
Change channels in numerical order on the equipment selected with the VTR3/2/DVD/AMP switch.

RM-Y139 Remote Control (SAT-B55 model)
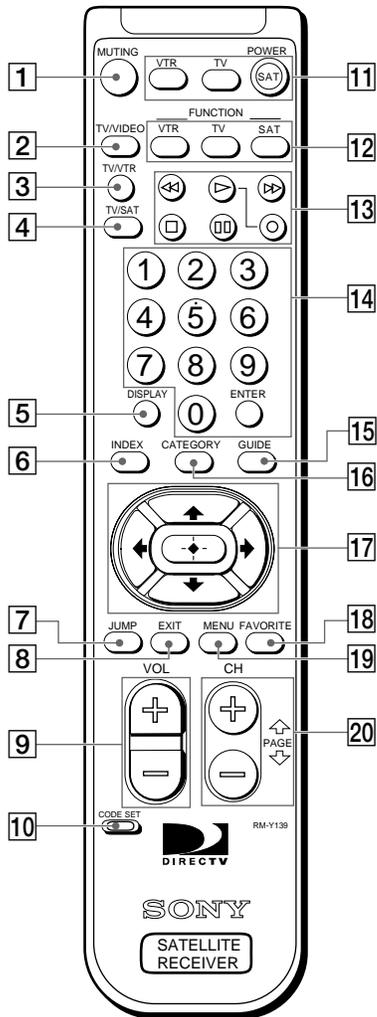
1 **MUTING button**
Mutes the volume. Press again to restore the volume. To operate your TV, you must first set up the remote control (see page 65).

2 **TV/VIDEO button**
Switches between the inputs of your TV. To operate your TV, you must first set up the remote control (see page 65).

3 **TV/VTR button**
Switches between the inputs of your VCR. To operate your VCR, you must first set up the remote control (see page 65).

4 **TV/SAT button**
Switches the output of your Digital Satellite Receiver between regular TV and satellite broadcasts. To receive regular TV broadcasts, you must have a local TV antenna or cable company connection (see page 9).

5 **DISPLAY button**
Opens the program information display for the current program.

6 **INDEX button**
Opens the Station Index.

7 **JUMP button**
Changes channels to the previously tuned channel.

8 **EXIT button**
Closes all on-screen displays including program guides and menus.

Note
You may need to set up the remote control to operate your other audio/video equipment. See "Setting Up the Remote Control" on page 65 for details.

16

9 **VOL buttons**
Adjust the volume. To operate your TV, you must first set up the remote control (see page 65).

10 **CODE SET button**
Lets you program the remote control to operate your TV and other audio/video equipment (see page 65).

11 **POWER buttons**
Turn on and off the Digital Satellite Receiver, TV and VTR (VCR). To operate your TV or VTR (VCR), you must first set up the remote control (see page 65).

12 **FUNCTION buttons**
Select the equipment (SAT, TV, VTR) that you want to operate. The indicators light up to show which device the remote control is operating. To operate your TV or VTR (VCR), you must first set up the remote control (see page 65).

13 **VCR Control buttons**
Operate VCR features such as play, record, pause, stop, and fast wind. To operate your VTR (VCR), you must first set up the remote control (see page 65).

14 **0–9 and ENTER buttons**
Change channels directly and enter numerical values in on-screen displays.

15 **GUIDE button**
Opens the Program Guide.

16 **CATEGORY button**
Opens the Category Guide.

17 **Arrow and ⊹ buttons**
The arrow buttons move the highlight in on-screen displays. The ⊹ button selects the highlighted item.

18 **FAVORITE button**
Opens the Favorite Stations guide.

19 **MENU button**
Opens the Main Menu.

20 **CH/PAGE buttons**
Change channels. When a program guide is open, these buttons page through the guide.

Selecting Items

In on-screen displays such as the Main Menu and program guides, you must first move the highlight to the item you want, then select the item.

RM-Y802 Remote Control (SAT-A55 model)

1 Move the joystick in any direction to move the highlight to the item you want.
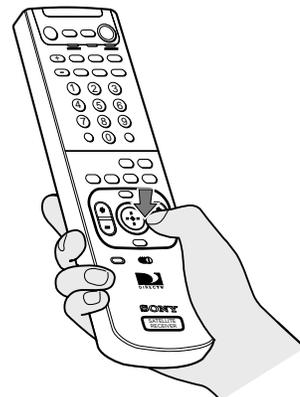
2 Press down on the joystick to select the item.

RM-Y139 Remote Control (SAT-B55 model)

Note (SAT-B55 model)
Whenever these Operating Instructions refer to using the joystick, use the arrow ▲/▼/◄/► buttons surrounding the ⊹ button.
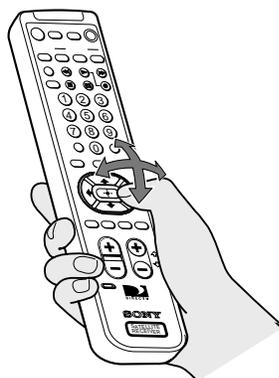
1 Press the ▲/▼/◄/► buttons to move the highlight to the item you want.
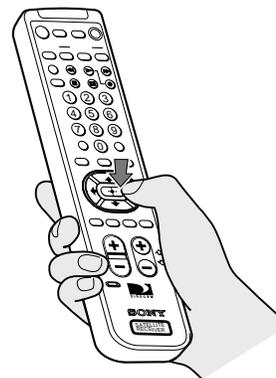
2 Press the ⊹ button to select the item.

❝ Tip
Be sure to press the SAT FUNCTION button before operating the Digital Satellite Receiver with the remote control.

Turning On the Power
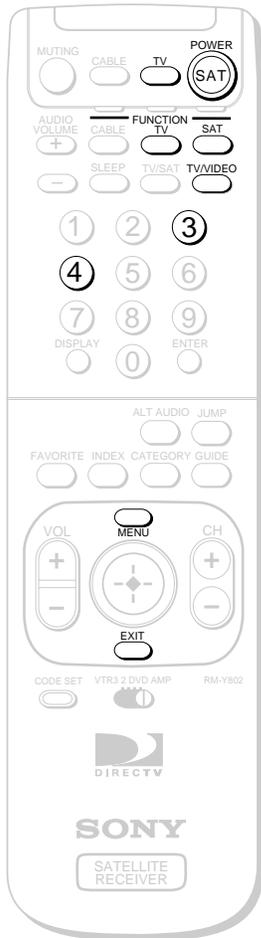
RM-Y802
Remote Control

1 **Press the POWER SAT button to turn on the Digital Satellite Receiver.**
The POWER indicator lights up.

POWER

SAT ➜
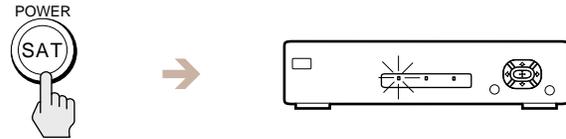
2 **Press the TV button to turn on the TV.**

TV ➜

3 **Press the TV FUNCTION button, then select the TV's input source to which you connected the Digital Satellite Receiver.**
Depending on how you connected your Digital Satellite Receiver to your TV, the input source could be channel 3 or channel 4, or you may need to use the TV/VIDEO button to select one of the A/V input sources.

FUNCTION
TV ➜ 3 / 4 / TV/VIDEO ➜ DIRECTV

To make sure you are viewing satellite pictures

Press the SAT FUNCTION button, then press the MENU button to open the Main Menu.

FUNCTION
SAT ➜ MENU ➜

1 SYSTEM 2 GUIDES 3 PREFERENCES
4 MESSAGES 5 EXIT 6 LOCKS&LIMITS
7 PURCHASES 8 TIMER&REC 9 AUDIO
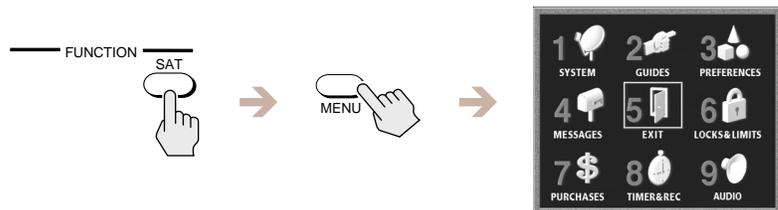
If the Main Menu does not appear, turn off your equipment, check your connections and repeat from step 1.
Press the EXIT button to close the Main Menu.

💡 *Tip*
The FUNCTION button indicators light up to show you which equipment the remote control is operating.

Note
You may need to set up the remote control to operate your other audio/video equipment. See "Setting Up the Remote Control" on page 65 for details.

19

Changing Channels
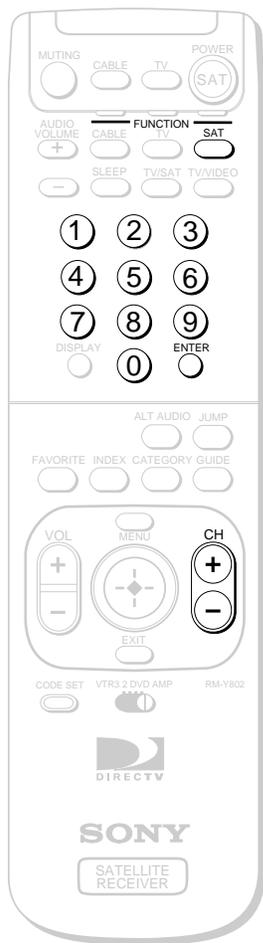
**RM-Y802
Remote Control**

1 | **Press the SAT FUNCTION button.**

FUNCTION

SAT
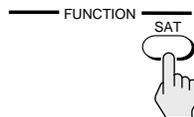
2 | **Press the CH +/– buttons.**

The Digital Satellite Receiver tunes to the next channel, and the Station ID and channel number appear in the upper right corner of your TV screen.

CH

You can also change channels by entering the channel number using the 0–9 buttons, and either pressing the ENTER button or waiting several seconds.

ENTER
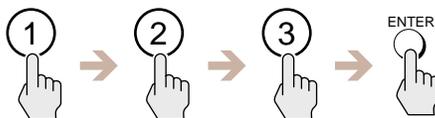
The Digital Satellite Receiver tunes to that channel, and the Station ID and channel number appear in the upper right corner of your TV screen.

⎯ゞ⎯ Tip
You can see information about a program you are watching by pressing the DISPLAY button.

Using the Main Menu

The Main Menu acts as a gateway to all of the features your Digital Satellite Receiver has to offer.

**RM-Y802
Remote Control**

1 **Press the MENU button.**
The Main Menu appears.

2 **Highlight and select the feature you want to access.**

GUIDES (Page 35)
Access the many guides that help you find the program you want.
 • Alpha List
 • Program Guide
 • Category Guide
 • Station Index
 • Favorite Stations
 • Other Guides

PREFERENCES (Page 46)
Adjust the way menus and information appear.
 • Display Options
 • Custom Stations
 • Data Services
  (future application)

SYSTEM (Page 22)
Adjust and test your Digital Satellite Receiver's settings.
 • Antenna
 • VCR Control
 • System Test
 • Aspect Ratio
 • Access Card
 • Remote Control
  (SAT-A55 only)

MESSAGES (Page 52)
Read messages from your service provider.

LOCKS & LIMITS (Page 53)
Set limits on spending and ratings. Block stations and pay per view programs.

PURCHASES (Page 59)
Review the pay per view program purchases and cancellations you have made.

TIMER & REC (Page 60)
Schedule program tuning and recording.

AUDIO (Page 64)
Choose a preferred language for the default audio and current audio for multiple language programs.
You can also select the Dolby Digital settings (SAT-A55 only).

Closing the Main Menu
• Highlight and select EXIT to close the Main Menu (the current program appears on your screen). You can also press the EXIT button on your remote control.
• The on-screen displays close automatically after several minutes.

Using the On-Screen Displays

RM-Y802
Remote Control

Using the System Menu

The System Menu provides many ways to adjust your Digital Satellite Receiver so it matches your preferences and optimizes the conditions of your home entertainment system.

1 **Press the MENU button, then highlight and select SYSTEM.**
The SYSTEM pop-up appears.
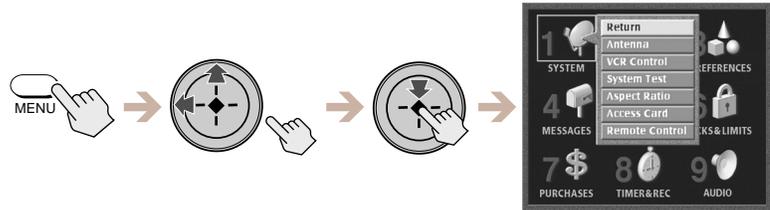
2 **Highlight and select the item you want to set up.**

Return
Closes the SYSTEM pop-up to show the Main Menu.

Antenna
Lets you find the position of the satellite and helps you get the strongest signal from your Satellite Dish Antenna (see page 23).

VCR Control
Lets you set up and test your VCR using the VCR Controller (see page 26).

System Test
Lets you test the connections to your Satellite Dish Antenna, and telephone line (see page 29).

Aspect Ratio
Lets you set the receiver's output to match the aspect ratio of your TV (see page 30).

Access Card
Lets you initialize a replacement card (see page 31).

Remote Control (SAT-A55 only)
Lets you set up the receiver so the remote control can operate the receiver from behind a cabinet or from another room (see page 32).

22

RM-Y802
Remote Control

Setting Up the Satellite Dish Antenna

This display helps you aim your Satellite Dish Antenna to get the strongest signal.

For complete information on installation of your Satellite Dish Antenna, refer to the Satellite Dish Antenna Installation Instructions.

1 **Press the MENU button, then highlight and select SYSTEM.**

The SYSTEM pop-up appears.
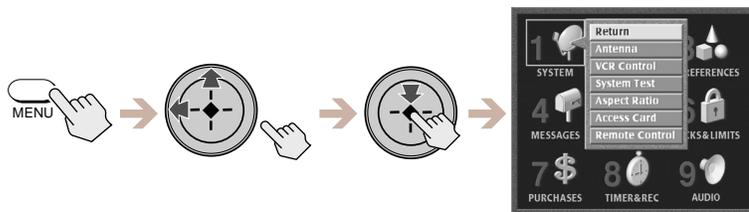
2 **Highlight and select "Antenna".**

The Antenna display appears.

Antenna Type
Select Round, Oval 2-Sat or Oval 3-Sat depending on your Satellite Dish Antenna type.

Transponder
Lets you select the transponder from which the Satellite Dish Antenna receives its signal.
You do not need to change this setting unless instructed by your service provider.

Antenna Location
Lets you find out the direction of the satellite from your location.

Azimuth, Elevation and Tilt
Shows how to aim your Satellite Dish Antenna depending on your antenna type and location.

Status
"Locked" shows that your Satellite Dish Antenna is receiving a signal.
"Unlocked" shows that a signal is not being received.

Note
Most areas of the United States will not receive a peak signal strength of 100. Although there is no picture quality difference between a signal strength of 60 and 100, a higher signal strength will limit any negative effects in degraded conditions such as rain or snow.
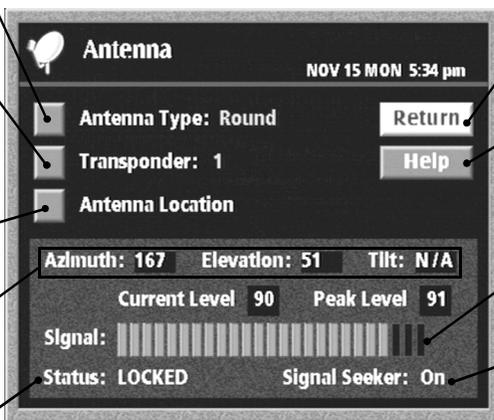
Return
Closes the Antenna display to show the Main Menu.

Help
Opens information about the Antenna display.

Signal Strength Meter
Shows the current and peak levels of the signal strength.

SignalSeeker® Indicator
When using a Round antenna, shows that your Satellite Dish Antenna's SignalSeeker indicator can be used.

Using the On-Screen Displays

Selecting an Antenna Type

The Antenna Type display lets you or your professional installer enter which type of Satellite Dish Antenna you use. After you have entered your antenna type, you can use the Antenna Location pop-up to help aim your antenna.

1 **Highlight and select "Antenna Type" from the Antenna Display.**

The Antenna Type display appears.
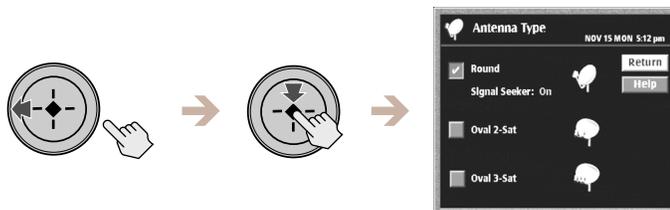
2 **Highlight and select the Satellite Dish Antenna type that you have installed.**

The SignalSeeker pop-up appears if you have selected "Round". Skip to step 4 if you selected "Oval 2-Sat" or "Oval 3-Sat".
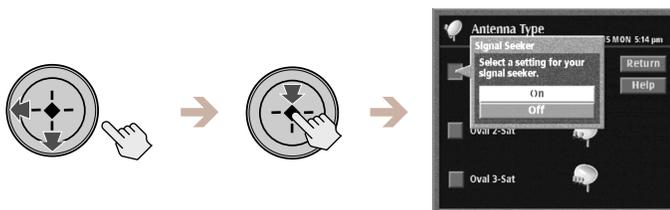
3 **Highlight and select "On" if you selected "Round".**

The SignalSeeker pop-up closes to show the Antenna Type display.
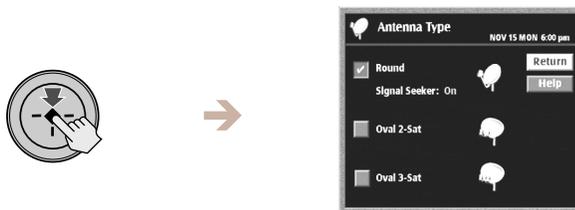
☼ Tip
Selecting "off" in the SignalSeeker pop-up may allow you to see the Signal Strength Meter if you use a diplexer or certain other accessories with your Satellite Dish Antenna.

Note
The SignalSeeker feature is available only with the Round Antenna. Refer to your Satellite Dish Antenna Installation Instructions for more information about this feature.

4 **Select "Return".**

The Antenna Type display closes to show the Antenna display.

24

Entering Your Antenna Location

The Antena Location pop-up helps you or your professional installer aim your Satellite Dish Antenna based on your zip code or your latitude and longitude location.

1 Highlight and select "Antenna Location" from the Antenna display.

The Antenna Location pop-up appears.
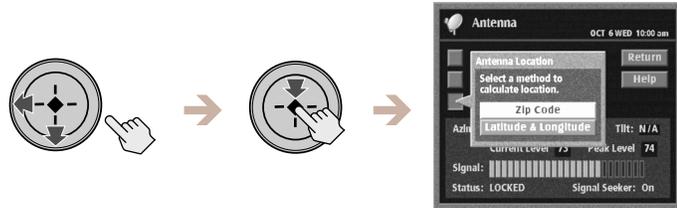
2 Select "Zip Code".

The Zip Code pop-up appears.
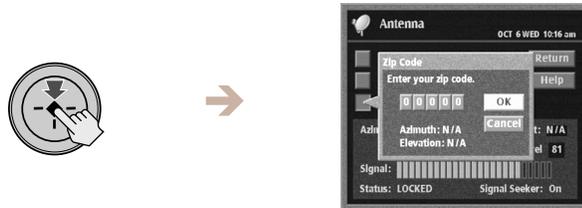
ϙ̈ *Tip*
If it is more convenient for you to enter latitude and longitude, select "Latitude & Longitude" instead of "Zip Code".

3 Enter your Zip Code, then select "OK".

If you have a Round Satellite Dish Antenna, you or your professional installer can use the azimuth and elevation readings to aim the antenna. If you have an Oval 2-Sat or Oval 3-Sat Satellite Dish Antenna, you or your professional installer can use the azimuth, elevation and tilt readings to aim the antenna.

Note
Round Satellite Dish Antennas do not have a Tilt setting.
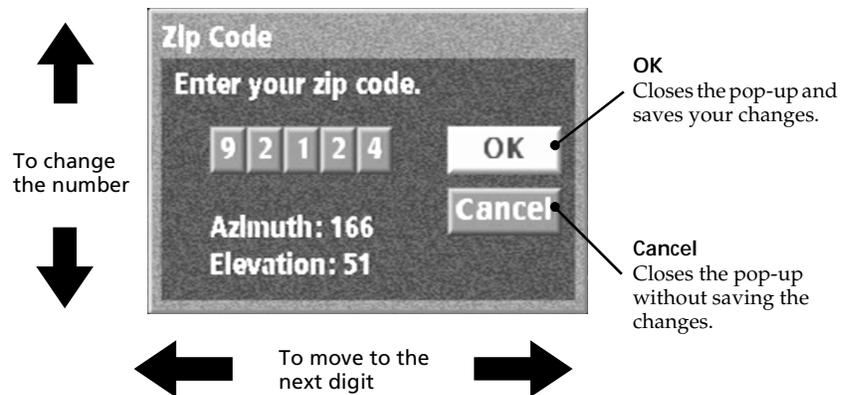
To change the number

Zip Code
Enter your zip code.

9 2 1 2 4

OK

Azimuth: 166
Elevation: 51

Cancel

OK
Closes the pop-up and saves your changes.

Cancel
Closes the pop-up without saving the changes.

To move to the next digit

Using the On-Screen Displays

25

**RM-Y802
Remote Control**

Setting Up the VCR Control Feature

The VCR Control feature lets the Digital Satellite Receiver control your VCR using the Timer & Rec feature (see page 60). To use the VCR Control feature you must connect the VCR Controller or a Sony SmartFile VCR (see page 11).

1 Press the MENU button, then highlight and select SYSTEM.

The SYSTEM pop-up appears.
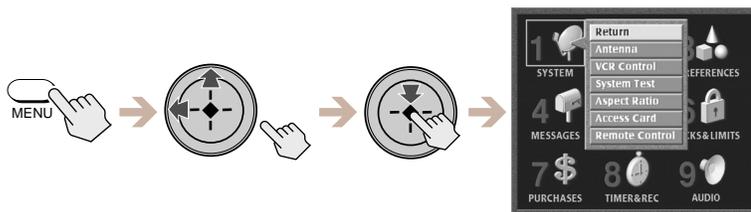
2 Highlight and select "VCR Control".

The VCR Control display appears.

Manufacturer
Lets you select the manufacturer code for your VCR (see page 27).

Auto Title Insert
Lets you turn on the Auto Title Insert feature (see page 28).
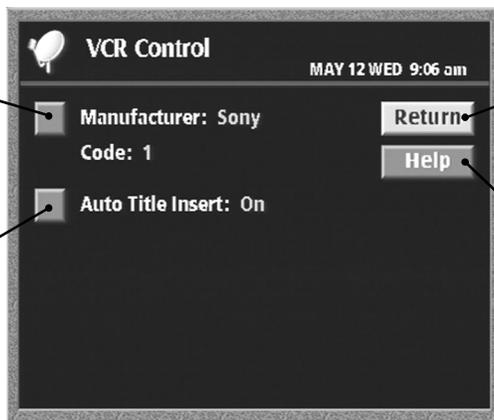
Return
Closes the VCR Control display to show the Main Menu.

Help
Opens information about the VCR Control display.

Setting the VCR Manufacturer Code

The VCR Manufacturer Code allows the Digital Satellite Receiver to control your VCR using the VCR Controller or a Sony SmartFile VCR.
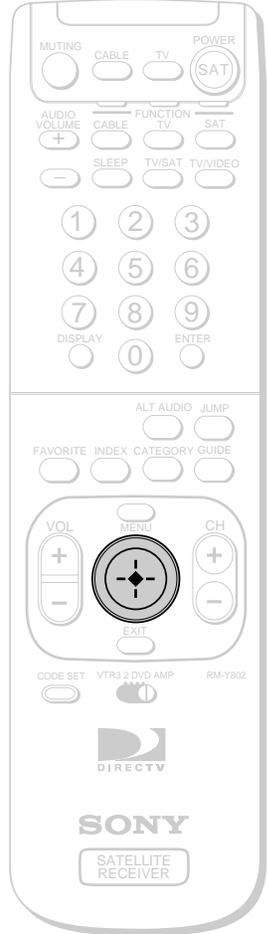
1 **Highlight and select "Manufacturer" from the VCR Control display (see page 26).**
The Manufacturer pop-up appears.
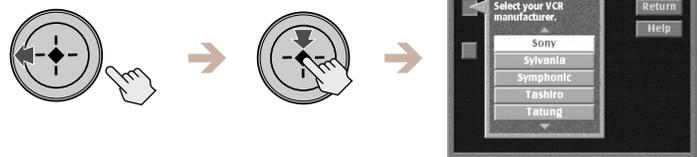
2 **Highlight and select the manufacturer of your VCR.**
The manufacturer's pop-up appears.
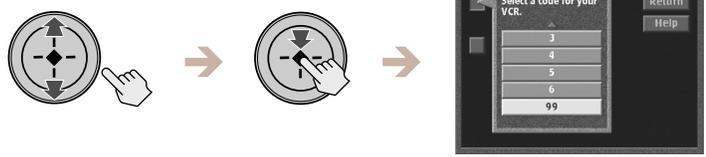
3 **Select a VCR manufacturer code from the list.**
The Test pop-up appears.
Some manufacturers have more than one code to choose from.
If the VCR manufacturer code you select does not work in step 4 below you can select another code for that manufacturer.
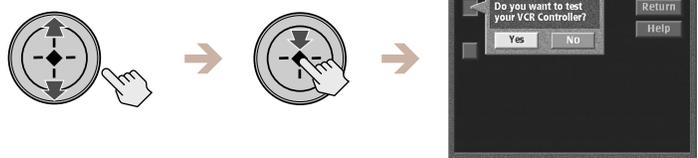
4 **Select "Yes" to perform a VCR test.**
If you select "Yes", a pop-up appears giving you instructions on how to perform a VCR test.
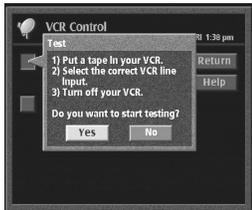
If the test is unsuccessful, check your connections and the VCR Controller placement, then repeat this procedure selecting a different VCR manufacturer code in step 3 (if your VCR manufacturer has more than one code).

RM-Y802
Remote Control

ᵕ̈ *Tip*
If you connected a Sony SmartFile VCR, use the manufacturer code of 99.

Note
Do not stop or interrupt the VCR test by pressing any buttons until after the VCR test is complete.
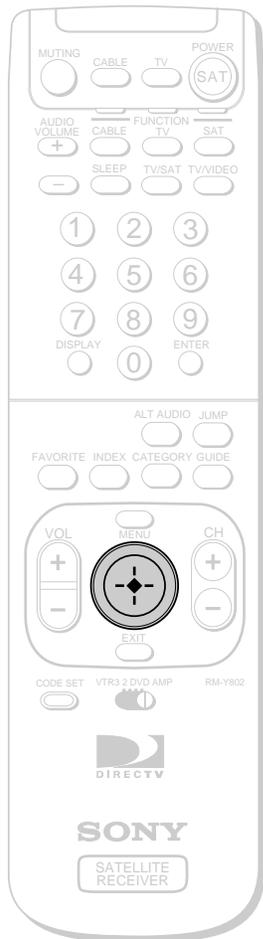
**RM-Y802
Remote Control**

Setting Up Auto Title Insert

The Auto Title Insert feature lets you display information about the program at the beginning of a Timer & Rec event. This is convenient if you want a "title" to appear at the beginning of programs you schedule or record.

1 Highlight and select "Auto Title Insert" from the VCR Control display (see page 26).

The Auto Title Insert pop-up appears.
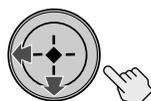
2 Select "On" or "Off".

The Auto Title Insert pop-up closes to show the VCR Control display.
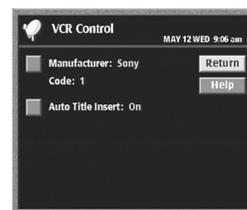
When the scheduled event begins

A title appears at the beginning of any Timer & Rec event.

Program name — Theodore Tugboat — Channel 384 PBS — Network

Program length — 0h30m

Date — OCT 8,1999 — NR (Not Rated) — Rating

"True Blue Friends; Foduck Stays Home" George avoids an annual event; Foduck understands his role. (CC) (Stereo) — Program description
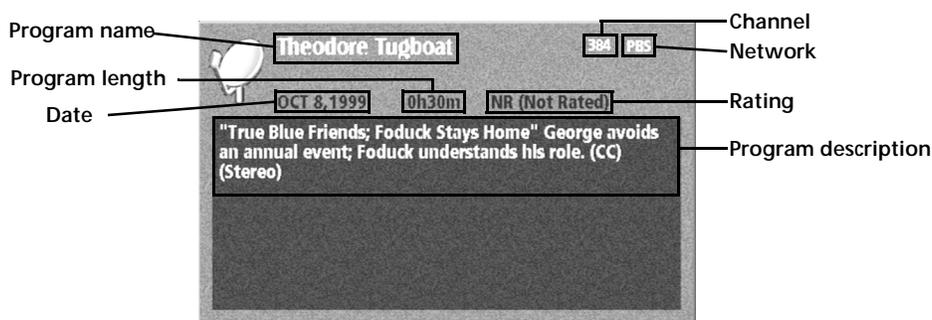
Note

When you schedule two or more consecutive programs, the Auto Title Insert feature will only appear before the first program.
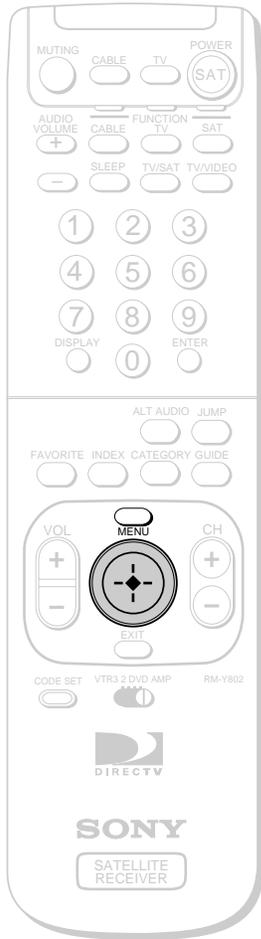
RM-Y802
Remote Control

Performing a System Test

The system test checks your Access Card, telephone line, and Satellite Dish Antenna connections for proper operation.

1 Press the MENU button, then highlight and select SYSTEM.

The SYSTEM pop-up appears.
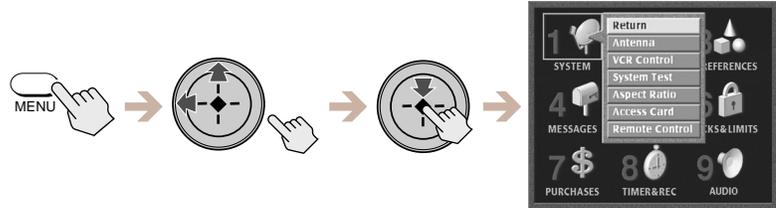
2 Highlight and select "System Test".

The System Test display appears.

Return
Closes the System Test display to show the Main Menu.

Test
Starts the system test.

Help
Opens information about the System Test display.
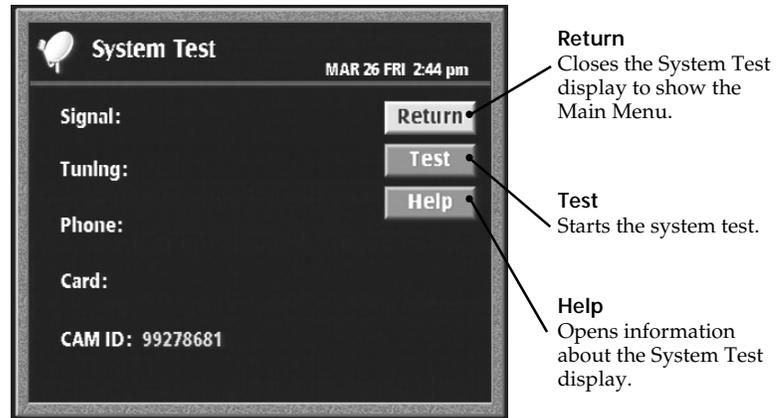
3 Highlight and select "Test".

The system test begins.
If the system test fails, check your connections before calling your service provider or Sony.
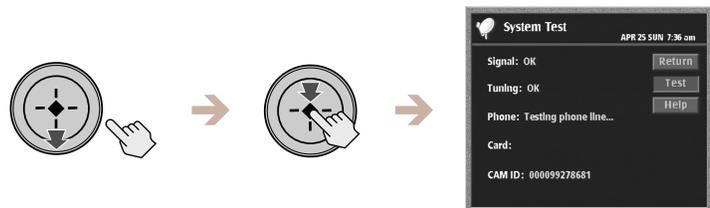
4 Select "Return".

The System Test display closes to show the Main Menu.
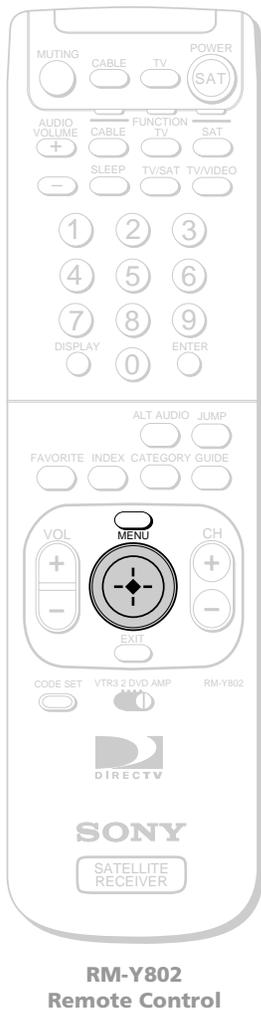
RM-Y802
Remote Control

Setting the Aspect Ratio

The aspect ratio refers to the proportion of your TV screen. Some newer TVs may offer the 16:9 ratio which is similar to the proportions of a movie screen. Most TVs use the standard 4:3 ratio.

1 **Press the MENU button, then highlight and select SYSTEM.**
The SYSTEM pop-up appears.
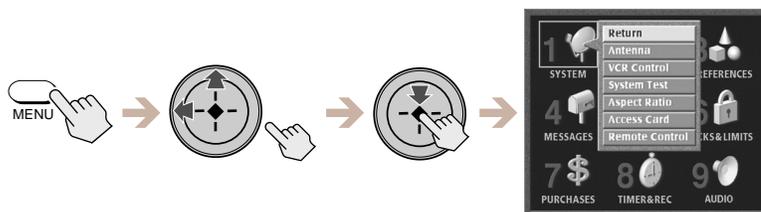
2 **Highlight and select "Aspect Ratio".**
The Aspect Ratio display appears.

Return
Closes the Aspect Ratio display to show the Main Menu.

Help
Opens information about the Aspect Ratio display.
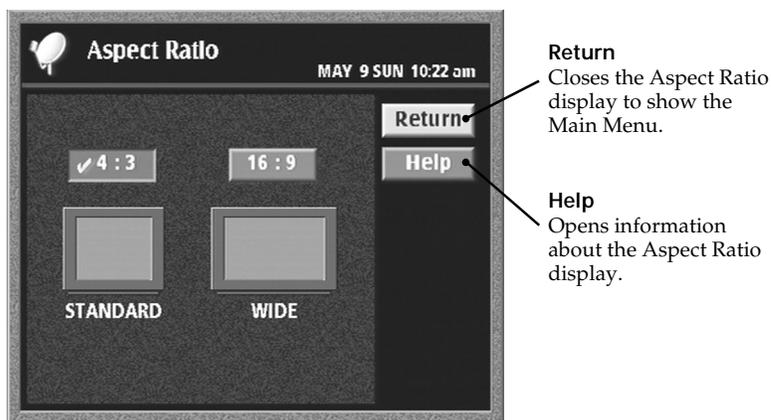
3 **Highlight and select the aspect ratio of your TV.**
The highlight moves to "Return".

Note
To use the Wide aspect ratio feature, you must receive a 16:9 aspect ratio signal. Check with your service provider to see if 16:9 programming is available.
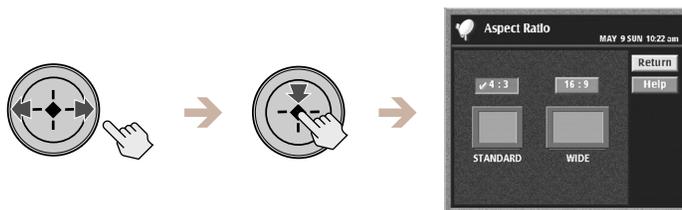
4 **Select "Return".**
The Aspect Ratio display closes to show the Main Menu.
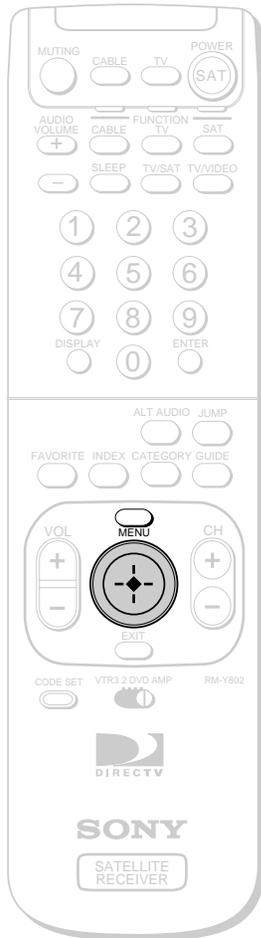
Replacing Your Access Card

Occasionally your service provider may send you a new Access Card. Use this display to set up your new card. See "Inserting the Access Card" on page 13 for information about inserting the Access Card into the Digital Satellite Receiver.

RM-Y802
Remote Control

1 **Press the MENU button, then highlight and select SYSTEM.**

The SYSTEM pop-up appears.
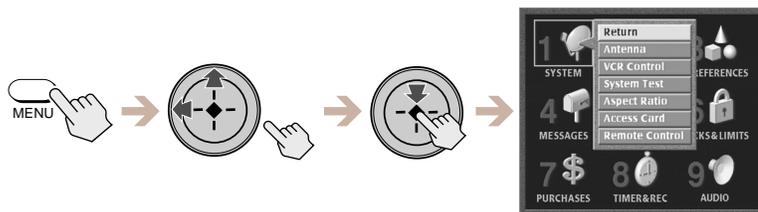
2 **Highlight and select "Access Card" from the System pop-up.**

The Access Card display appears.
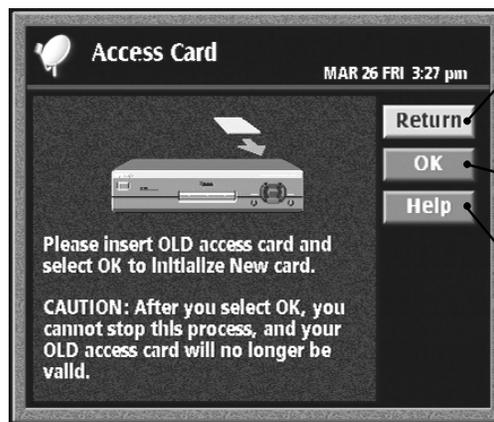
Return
Closes the Access Card display to show the Main Menu.

OK
Starts the Access Card replacement process.

Help
Opens information about the Access Card display.

3 **Highlight and select "OK".**

The display shows instructions on how to proceed.

4 **Follow the instructions in each display to complete the replacement process.**

Using the On-Screen Displays

**RM-Y802
Remote Control**

Selecting RF or IR Remote Control Reception (SAT-A55 only)

The RF feature allows you to operate the Digital Satellite Receiver from outside a cabinet or from another room within your home. The RF Antenna must be connected to use the RF feature (see page 12).

1 **Press the MENU button, then highlight and select SYSTEM.**
The SYSTEM pop-up appears.
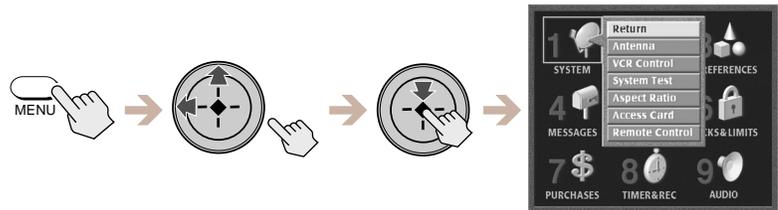
2 **Highlight and select "Remote Control".**
The Remote Control display appears.

Remote Signal
Lets you select IR or RF as the type of signal the receiver accepts.

RF Security Control
Lets you change the security code. RF signals are used to control many devices. You may need to change the security code so that this remote control operates the Digital Satellite Receiver only.

Return
Closes the Remote Control display to show the Main Menu.

Help
Opens information about the Remote Control display.

3 **Highlight and select "Remote Signal".**
The Remote Signal pop-up appears.
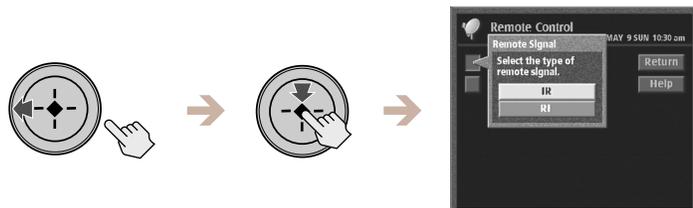
4 **Highlight and select "RF".**

The Remote Signal pop-up closes to show the Remote Control display.
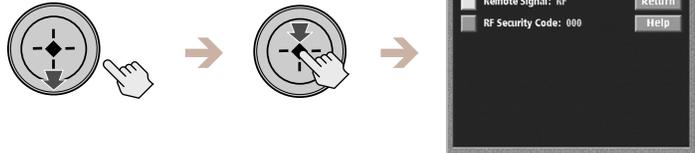
5 **Highlight and select "Return".**

The display closes to show the Main Menu, and the Digital Satellite Receiver is set to receive RF signals from the remote control.

Setting the Security Code

If the Digital Satellite Receiver is receiving signals from another RF remote control in your home (or from your neighbor's home), you can eliminate this problem by changing the security codes for the Digital Satellite Receiver and remote control, or by selecting IR control.
Both the Digital Satellite Receiver and the remote control must use the same three digit security code.
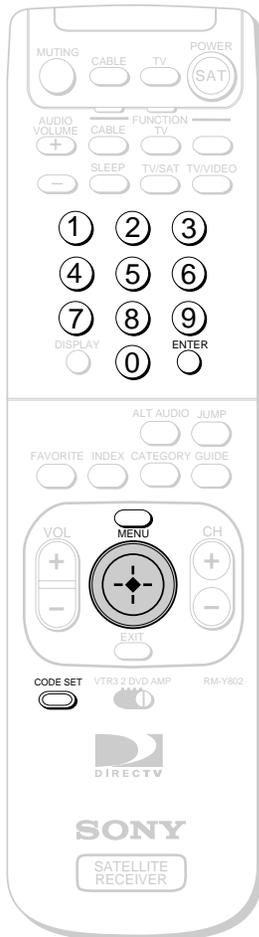
1 **Select "Remote Control" from the SYSTEM pop-up (see page 32).**

The Remote Control display appears.
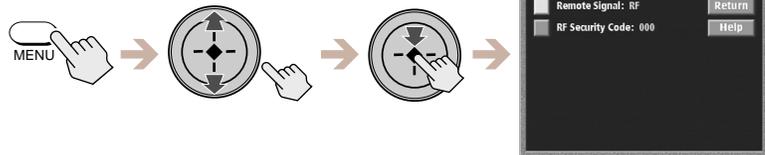
2 **Highlight and select "RF Security Code".**

The confirmation pop-up appears.
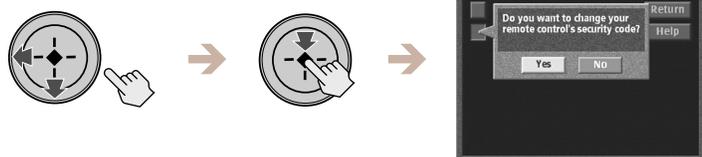
RM-Y802
Remote Control

Using the On-Screen Displays

33

3 Select "Yes".

The RF Security Code pop-up appears.
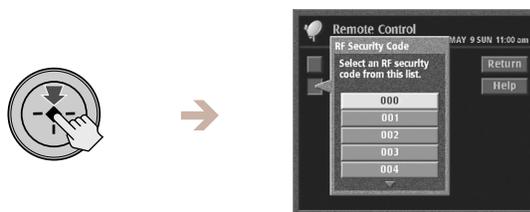
4 Select a different security code.

The conformation pop-up appears.
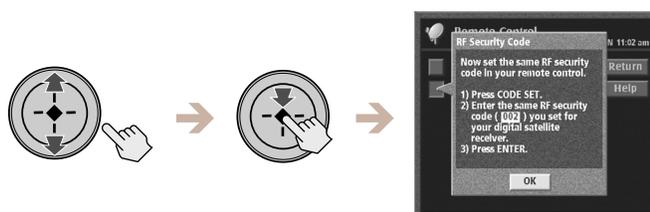
5 Press the CODE SET button on the remote control.

The CABLE and TV FUNCTION indicators flash.

6 Enter the three digit security code you selected for the receiver in step 4 above.

7 Press the enter button.

The remote control and Digital Satellite Receiver are now set to a new security code.

8 Select "OK" to save your changes.

The Remote Control display appears.
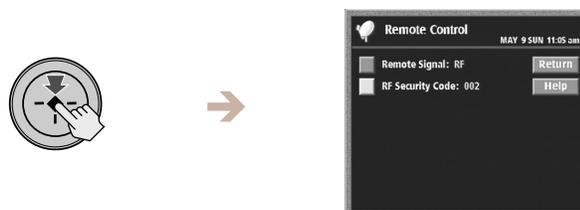
Note
If the remote control no longer operates your Digital Satellite Receiver after completing this procedure, use the controls on the front panel to open the Remote Control display (see page 32). Then repeat the steps in "Setting the Security Code" to try again.

34

Viewing Station and Program Information (GUIDES)

**RM-Y802
Remote Control**

Using the Guides Menu

The Guides Menu helps you find the program you want to watch. You can choose to see all stations or just a few. You can also create your own favorite station guides for fast access to your favorite stations.

1 Press the MENU button, then highlight and select GUIDES.

The GUIDES Menu appears.

2 Highlight and select the guide you want to use.

Return
Closes the GUIDES Menu to show the Main Menu.

Alpha List
Shows a list of categories (movies, sports, etc.) and only the programs that match the category you select in alphabetical order (see page 36).

Program Guide
Opens your custom list of stations and shows program information for up to three days in advance (see page 37).

Category Guide
Shows a list of categories (movies, sports, etc.) and only those stations broadcasting programs that match the category you select (see page 38).

Station Index
Opens your custom list of stations as a grid of station logos (see page 39).

Favorite Stations
Opens the Favorite Stations guide which allows you to create and access up to four different sets of stations you enjoy watching most (see page 40).

Other Guides
Opens the Other Guides display which shows a variety of special categories provided by DIRECTV. Each category is divided into subcategories so you can find exactly the kind of program you want (see page 43).

✦ Tips
- Be sure to press the SAT FUNCTION button before operating the Digital Satellite Receiver with the remote control.
- You can see information about a program you are watching by pressing the DISPLAY button.

Using the On-Screen Displays

35
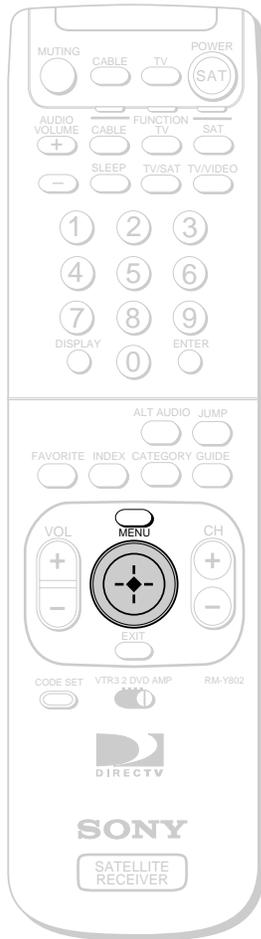
RM-Y802
Remote Control

Using the Alpha List

The Alpha List shows program information in the category you select (such as movies, sports, etc.) in alphabetical order. Program information is available for up to four hours in advance.

1 **Press the MENU button, then highlight and select GUIDES.**

The GUIDES Menu appears.

2 **Highlight and select "Alpha List".**

The Alpha List guide appears.

3 **Highlight and select a category.**

Programs appear in alphabetical order.
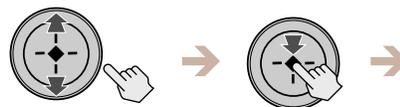
4 **Highlight and select a program.**

If you select a current program, the Alpha List guide closes. For information about selecting a future program see "Using One Button Timer & Rec" on page 60.

**RM-Y802
Remote Control**

Using the Program Guide

The Program Guide shows program information for up to three days in advance. You can open the Program Guide using the Main Menu or by pressing the GUIDE button.

1 Press the GUIDE button.

The Program Guide opens and the current program appears in the Media Window display.

GUIDE ➜
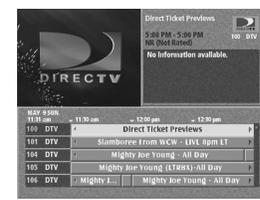
2 Highlight the program you want.

The sound and the picture in the Media Window display change as you highlight current programs.
Skipped stations do not appear (see page 50).

Media Window Display

Information Area

Move the joystick up and down to highlight different stations.

Press the CH ⬆/⬇ buttons to move the highlight to the next page of stations.
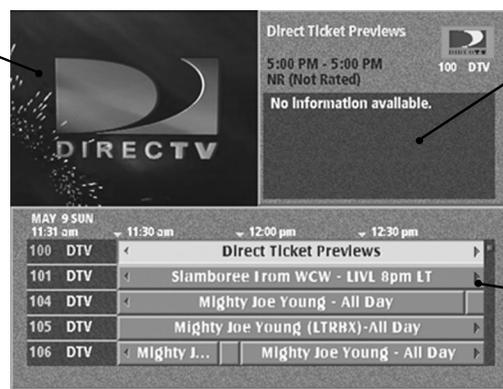
List Area

Move the joystick right to highlight future programs.

☼ *Tip*
Press the EXIT button to close the Program Guide and return to the previous station.

Note
If you select a program and the station is blocked or a limit has been reached, you can temporarily unlock your Digital Satellite Receiver using your passcode. See "Locking Your Receiver" on page 57 for information about the passcode.

3 Select the program you want.

If you select a current program, the Program Guide closes. For information about selecting a future program, see "One Button Timer & Rec" on page 60.

➜

Using the Category Guide

The Category Guide shows programs in the category you select (such as movies, sports, etc.). Program information is available for up to three days in advance. You can open the Category Guide using the Main Menu or by pressing the CATEGORY button.

1 **Press the CATEGORY button.**

The Category Guide opens and the current program appears in the Media Window Display.

2 **Highlight and select the category you want.**

The program list changes each time you select a different category. Skipped stations do not appear (see page 50).
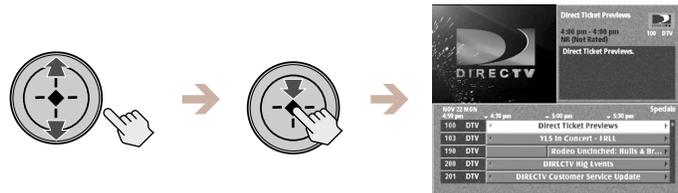
3 **Highlight and select the program you want.**

If you select a current program, the Program Guide closes. For information about selecting a future program, see "One Button Timer & Rec" on page 60.

RM-Y802
Remote Control

�½ *Tip*
Press the EXIT button to close the Category Guide and return to the previous station.

38
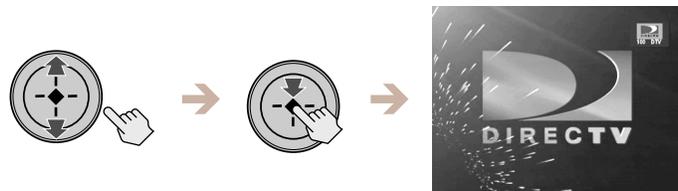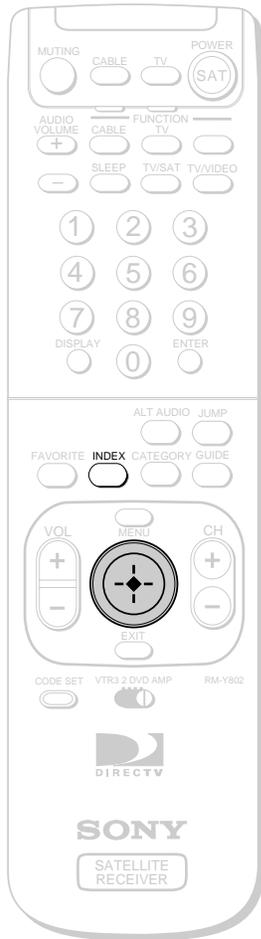
RM-Y802
Remote Control

Using the Station Index

The Station Index displays each station's logo and channel number in a grid format. Program information is available for the current time only. You can open the Station Index using the Main Menu or by pressing the INDEX button.

1 **Press the INDEX button.**

The Station Index opens and the current program appears in the Media Window display.

2 **Highlight the station you want.**

The sound and the picture in the Media Window display change as you highlight different stations.
Skipped stations do not appear (see page 50).

3 **Select the station you want.**

The Station Index closes and the program broadcast by the station you selected appears on your TV screen.

Tips
• Press the EXIT button to close the Station Index and return to the previous station.
• To view the current program while checking the program information of other stations, turn on the Surf feature (see page 49).

**RM-Y802
Remote Control**
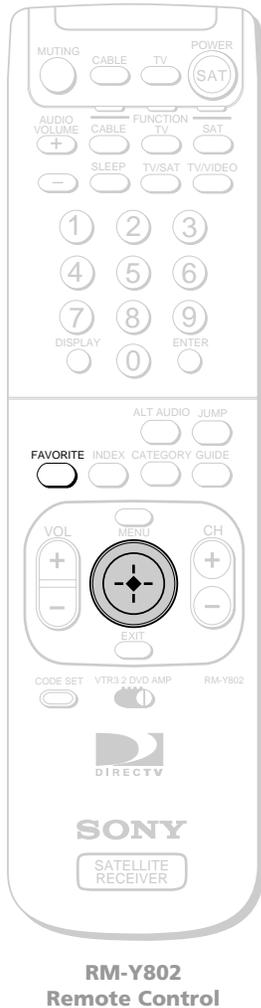
Using the Favorite Stations Guide

The Favorite Stations guide shows four Favorite Titles that you can customize with eight stations each. Program information is available for the current time only.

You can open the Favorite Stations guide using the Main Menu or by pressing the FAVORITE button.

Before you can use the Favorite Stations guide, you must set up your favorite stations in a personal guide by following the procedure on the next page.

1 **Press the FAVORITE button.**

The Favorite Stations guide opens and the current program appears in the Media Window display.

FAVORITE ➔

2 **Highlight and select the Favorite Title you want.**

The station list in the right half of the display changes as you highlight different Favorite Titles.

➔ ➔
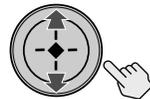
3 **Highlight and select the station you want.**

The Favorite Stations guide closes and the program broadcast by the station you selected appears.

➔ ➔

ꙮ **Tip**
Press the EXIT button to close the Favorite Stations guide and return to the previous station.

Customizing the Favorite Stations Guide
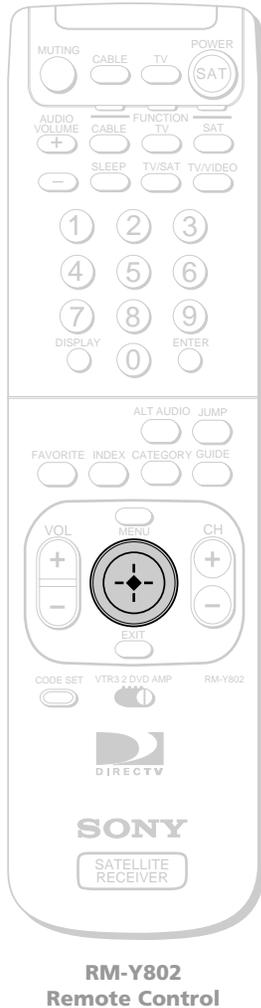
1 Highlight and select the Favorite Title you want to customize.

The station list appears in the right half of the display.

2 Highlight and select "Edit".

The Edit pop-up appears.

3 Highlight and select "Edit Stations".

The station index appears in the right half of the display.

4 Highlight and select a station in the index.

A checkmark appears in the lower left part of the icon to indicate that the station is included in the Favorite Title, and the number in the "Count" box increases by one.

5 Repeat step 4 to add up to eight stations to this Favorite Title.

When you have added all the stations you want in this Favorite Title, highlight and select OK.

**RM-Y802
Remote Control**

ϔ *Tip*
Press the EXIT button to close the Favorite Stations guide and return to the previous station.

Note
The "Count" box indicates how many stations are included in the personal guide.

Using the On-Screen Displays

Editing the Title of a Favorite Title
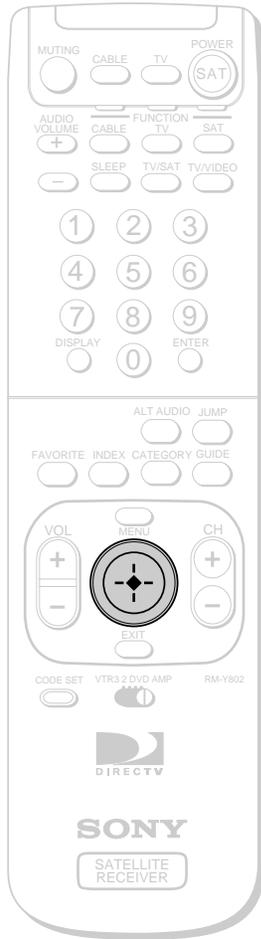
1 **Highlight and select the Favorite Title you want to edit.**
The station list appears in the right half of the display.

2 **Highlight and select "Edit".**
The Edit pop-up appears.

3 **Select "Edit Title" from the pop-up menu.**
The Edit Title display appears in the lower left part of the display.

4 **Enter a seven character title for this Favorite Title.**
You can enter upper and lower case letters, numbers, and symbols in the title.

Move the joystick up and down to select different characters.

| F | a | v | | 1 | | |

Move the joystick left or right to highlight different positions. You can also press ⊹ to move to the next position.

5 **When your title is complete, highlight and select "OK".**
The Edit Title pop-up closes to show the Favorite Stations guide.

**RM-Y802
Remote Control**
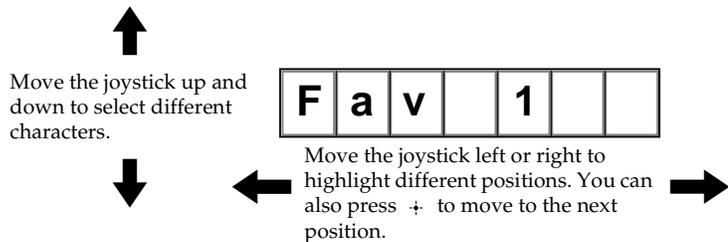
💡 **Tip**
Press the EXIT button to close the Favorite Stations guide and return to the previous program.
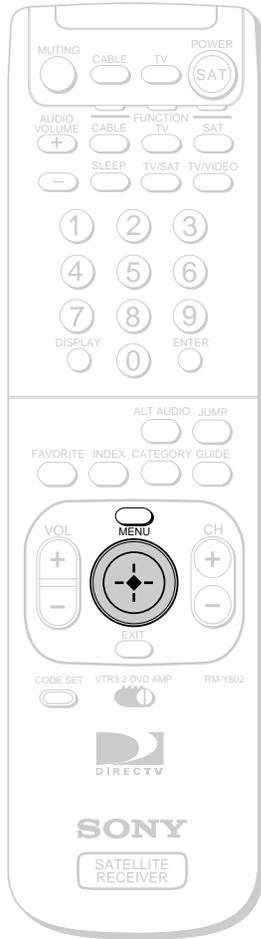
RM-Y802
Remote Control

Using Other Guides

The Other Guides display provides special categories supplied by
DIRECTV. Each category is divided into subcategories to help you find
the exact program you want to watch. Program information is available
for up to three days in advance.

1 **Press the MENU button, then highlight and select**
GUIDES.
The GUIDES pop-up appears.
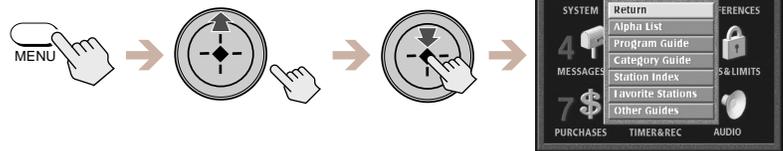
2 **Highlight and select "Other Guides".**
The Other Guides display appears.
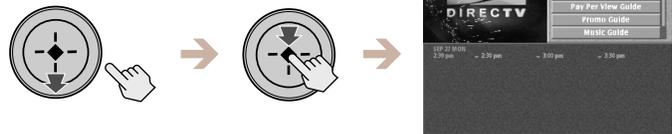
3 **Select the Guide Type you want.**
The available time ranges appear.
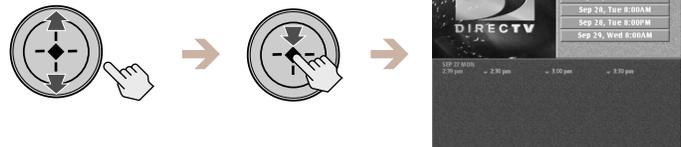
4 **Select the time range you want.**
The available categories appear.
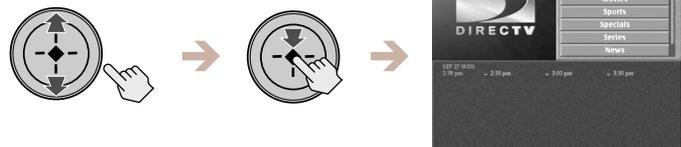
ϙ᠒ *Tip*
Press the EXIT button to close the Other
Guides display and return to the
previous station.

Note
DIRECTV occasionally changes the
contents of the category and subcategory
lists.

43

Using the On-Screen Displays

5 **Select the category you want.**

If the category you select has subcategories, the available subcategories appear.
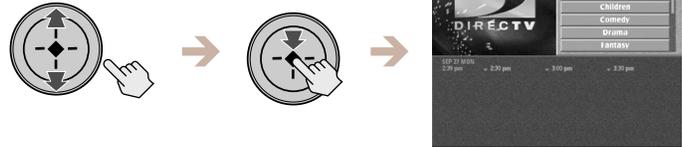
6 **Select the subcategory you want.**

The programs that match your selections appear in the lower half of the display.
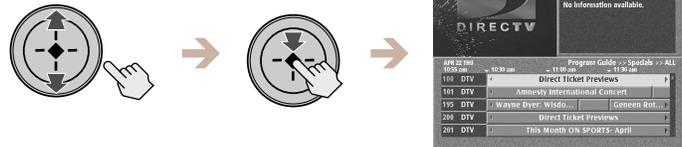
7 **Highlight and select the program you want.**

If you select a current program, the Other Guides display closes. For information about selecting a future program, see "One Button Timer & Rec" on page 60.
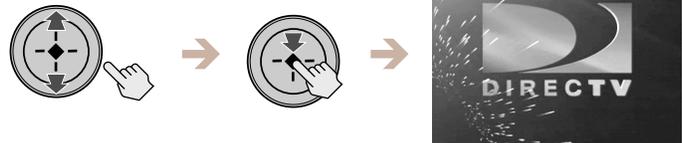
Viewing Pay Per View Programs

Many programs are available as pay per view. By selecting a pay per view program you agree to be charged for that program.

> **Select a pay per view program using any of the methods described in the "Viewing Station and Program Information (GUIDES)" section on pages 35 through 44.**
>
> The Purchase Program display appears. This display shows detailed information about the program including the cost.

Return
Closes the Purchase Program display to show the previous screen.

Purchase
Opens the Purchase pop-up.

Preview
Closes the Purchase Program display to show a preview of the program if available.

Times
Opens the Other Show Times display so you can select another time to view the program.

Help
Opens information about the Purchase Program display.
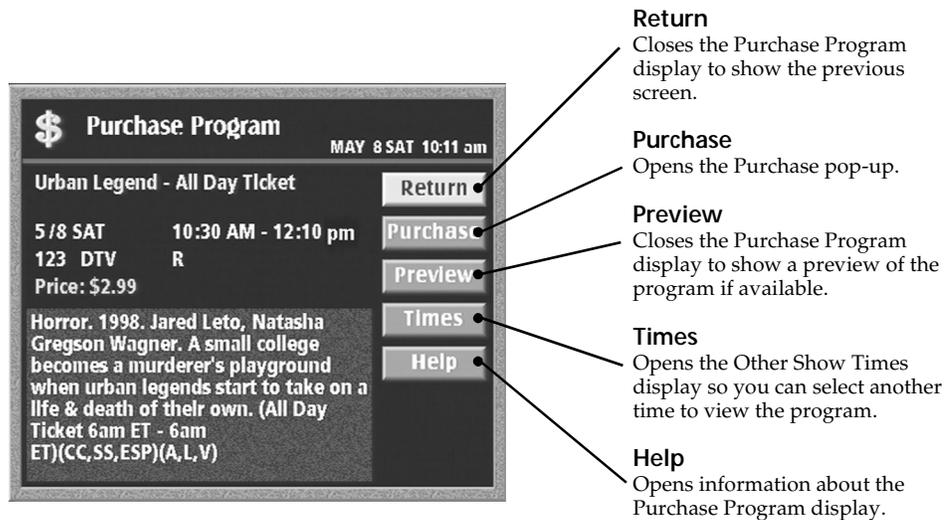
Note
To order pay per view by remote, a DIRECTV® subscription is required and the Digital Satellite Receiver must be continuously connected to a land-based phone line.

Adjusting the Displays (PREFERENCES)

RM-Y802
Remote Control

Using the Preferences Menu

The Preferences Menu lets you change the appearance of the on-screen displays, the stations you want to appear in the program list area, and the order in which the stations are listed.

1 Press the MENU button, then highlight and select PREFERENCES.

The PREFERENCES Menu appears.

2 Highlight and select the item you want to adjust.

Return
Closes the PREFERENCES Menu to show the Main Menu.

Display Options
Lets you change the color scheme of the on-screen displays, choose how the stations are ordered in the guides and select what is displayed in the Media Window display when surfing through the Station Index (see page 47).

Custom Stations
Lets you customize which stations appear in the program guides (see page 50).

Data Service
A future application (see page 51).

Setting Display Options

Display Options lets you choose the color scheme of the on-screen displays and the order in which stations are listed in the program list area. You can also turn the surf option on or off.
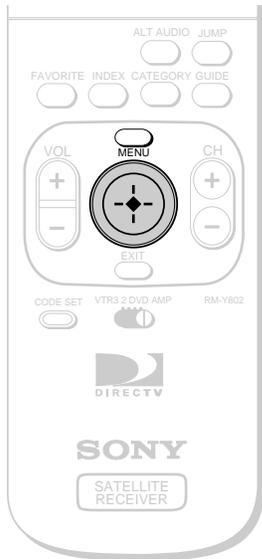
RM-Y802
Remote Control

1 Press the MENU button, then highlight and select PREFERENCES.

The PREFERENCES Menu appears.
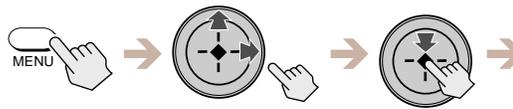
2 Highlight and select "Display Options".

The Display Options display appears.

Colors
Lets you change the color of the on-screen displays (see page 48).

Station order
Lets you select the order in which stations appear in the list area (see page 49).

Surf
Lets you view the Current Program in the Station Index while viewing other Program information (see page 49).

Return
Closes the Display Options display to show the Main Menu.

Help
Opens information about the Display Options display.

Using the On-Screen Displays

Changing the Color Scheme

1 **Highlight and select "Colors" from the Display Options display (see page 47).**
The Colors pop-up appears.
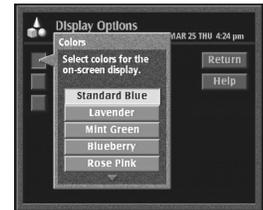
2 **Highlight and select the color scheme you like.**
The display changes colors as you highlight each color scheme.

**RM-Y802
Remote Control**

48
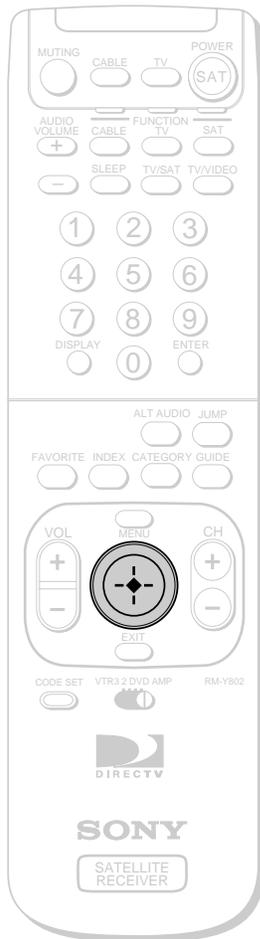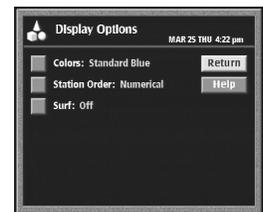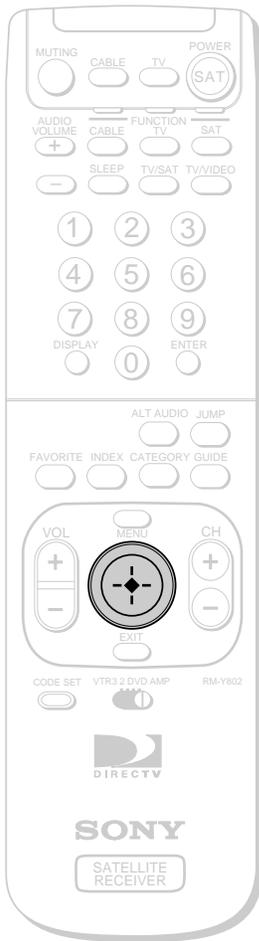
Changing the Station Order

You can select numerical or alphabetical for the order in which stations appear in the List Area of the Program Guide, Category Guide and Other Guides display.

1 Highlight and select "Station Order" from the Display Options display (see page 47).
The Station Order pop-up appears.
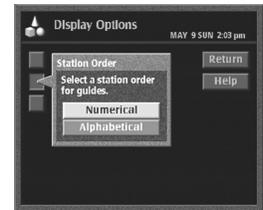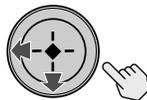
2 Highlight and select the order you like.
The Station Order pop-up closes to show the Display Options display.
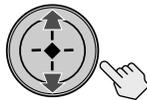
Changing the Surf Setting

When the Surf setting is On you can view the current program in the Media Window display of the Station Index while viewing the program information of other programs as you highlight them in the Station Index.

1 Highlight and select "Surf" from the Display Options display (see page 47).
The Surf pop-up appears.
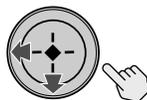
2 Highlight and select "On" or "Off".
The Surf pop-up closes to show the Display Options display.

Using the On-Screen Displays

49

**RM-Y802
Remote Control**

Setting Up Custom Stations

The Custom Stations display lets you choose which stations will be skipped in the Program Guide, Category Guide and Station Index, and when you change channels using the CH +/− buttons.
You can reduce the number of stations that appear by skipping unwanted stations.

1 **Press the MENU button, then highlight and select PREFERENCES.**
The PREFERENCES Menu appears.
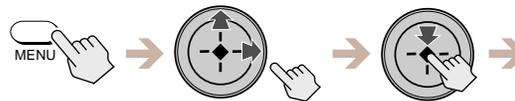
2 **Highlight and select "Custom Stations".**
The Custom Stations display appears.

Return
Closes the Custom Stations display to show the Main Menu.

Cancel
Closes the Custom Stations display and cancels your changes.

Auto
Scans all stations and automatically skips any stations to which you do not subscribe.

Clear All
Removes all skip settings.

Help
Opens information about the Custom Stations display.

"X" Skip Mark
Shows that the station will be skipped when using the Program Guide, Category Guide, Station Index, or when using the CH +/− buttons.

50

3 Highlight and select a station icon to add or remove the "X" mark.

The "**x**" mark indicates that the station will be skipped when you open the Program Guide, Category Guide or Station Index, or change channels using the CH +/– buttons.
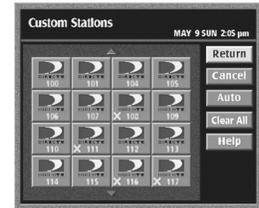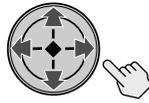
4 Highlight and select "Return".

The Custom Stations display closes to show the Main Menu.

Selecting Data Services

The Data Services feature is reserved for future applications.

Viewing Messages (MESSAGES)

RM-Y802
Remote Control

Your service provider may occasionally send messages to your Digital Satellite Receiver to inform you of changes to your service and other special announcements.

1 **Press the MENU button, then highlight and select MESSAGES.**
The Messages display appears.
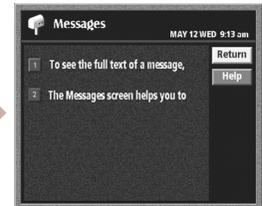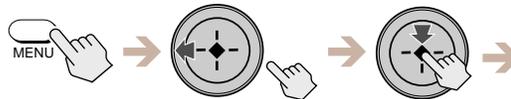
2 **Highlight and select the message you want to read.**
The message pop-up appears.

Delete
Closes the message pop-up and deletes the message.

Return
Closes the message pop-up and saves the message.
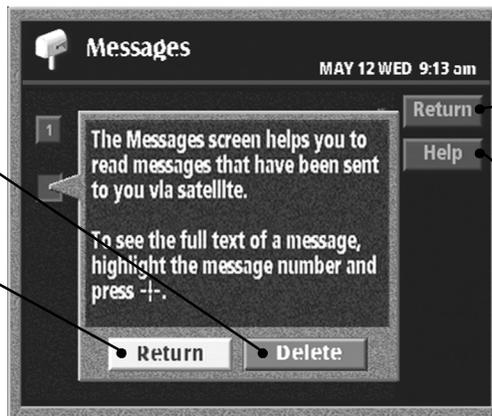
Return
Closes the Messages display to show the Main Menu.

Help
Opens information about the Messages display.

3 **Highlight and select "Return" or "Delete".**
The message pop-up closes to show the Messages display.

Note
Your receiver can hold a total of between 10 and 20 new and old messages, depending on the size of the messages. Your receiver will continue to hold a message until you delete it or until the AC Power Cord is disconnected. If your receiver's memory is full, you must delete old messages before you can receive new ones.

52

Setting Locks and Limits (LOCKS & LIMITS)

Using the Locks & Limits Display

The Locks & Limits feature gives you control over access to your Digital Satellite Receiver. You can restrict program viewing by cost, ratings, and station. You can also set a lock to prevent the ordering of pay per view programs.

RM-Y802
Remote Control

1 **Press the MENU button, then highlight and select LOCKS & LIMITS.**

The Locks & Limits display appears.

2 **Highlight and select "Edit".**

The Locks & Limits edit display appears.
The following pages describe how to change the settings for each of these items.

Receiver Status
Shows if your Digital Satellite Receiver is now locked or unlocked.

Spending Limit
Sets a maximum limit on charges per event (see page 54).

Rating Limit
Sets a maximum limit on rated content (see page 55).

Pay Per View
Blocks access to pay per view programs (see page 55).

Stations Blocked
Blocks access to specific stations (see page 56).
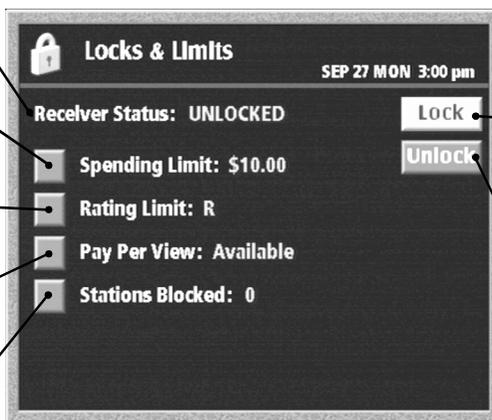
Lock
Opens the passcode pop-up. You must enter your passcode to lock the receiver.

Unlock
Opens the passcode pop-up for unlocking your receiver.

Note
You must lock the receiver before any locks or limits take effect (see page 57).

53

Changing the Spending Limit

The spending limit pop-up lets you limit the amount you can spend per event on pay per view purchases.
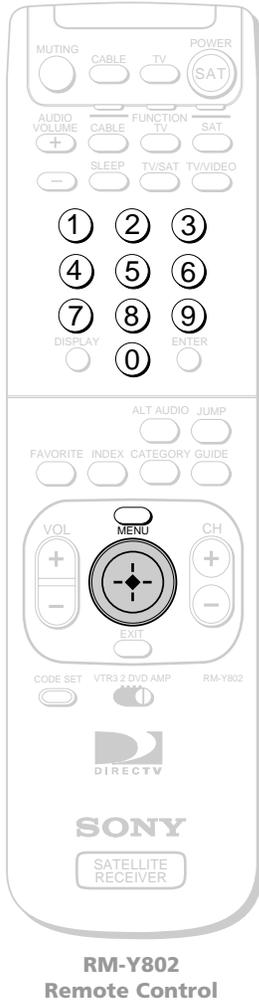
1 **Highlight and select "Spending Limit" from the Locks & Limits edit display (see page 53).**
The Spending Limit pop-up appears.
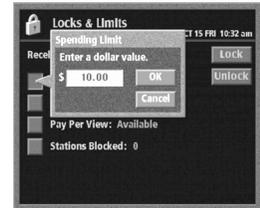
2 **Press the 0–9 buttons to enter the dollar value.**
You can enter a value of less than $656.
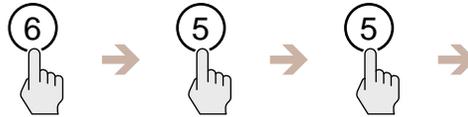
3 **Highlight and select "OK".**
The Spending Limit pop-up closes to show the Locks & Limits edit display.
Select "Cancel" to close the Spending Limit pop-up without saving changes.

RM-Y802
Remote Control

54

Changing the Rating Limit

The Rating Limit pop-up lets you limit programs according to the content rating.

1 **Highlight and select "Rating Limit" from the Locks & Limits edit display (see page 53).**
The Rating Limit pop-up appears.
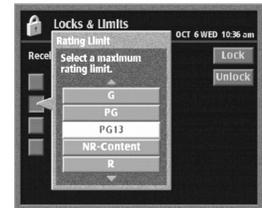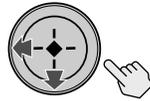
2 **Highlight and select the highest content rating you want your Digital Satellite Receiver to access.**
The Rating Limit pop-up closes to show the Locks & Limits edit display.
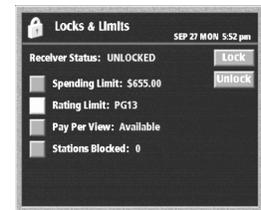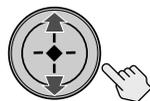
Changing the Pay Per View Access Setting

The pay per view access setting lets you block access to pay per view stations.

1 **Highlight and select "Pay Per View" from the Locks & Limits edit display (see page 53).**
The Pay Per View Access pop-up appears.
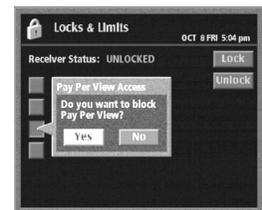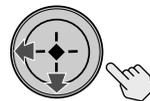
2 **Select "Yes" to block access to pay per view programs.**
Select "No" to allow access to pay per view programs.

RM-Y802
Remote Control

Changing the Stations Blocked Settings

The Stations Blocked feature lets you block access to specific stations.

1 **Highlight and select "Stations Blocked" from the Locks & Limits edit display (see page 53).**
The Stations Blocked display appears.
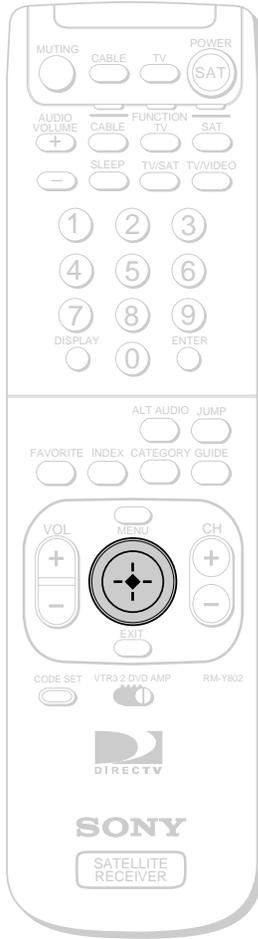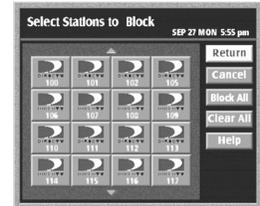
2 **Highlight and select a station icon to block that station.**
The block symbol appears in the station icon to indicate that the station is blocked.
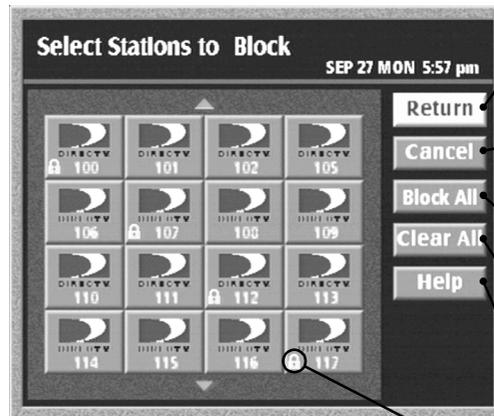
Return
Closes the Stations Blocked display.

Cancel
Closes the Stations Blocked display without saving your changes.

Block All
Blocks all stations.

Clear All
Unblocks all stations.

Help
Opens the help display.

Block Icon
Shows that this station will be blocked.

RM-Y802
Remote Control
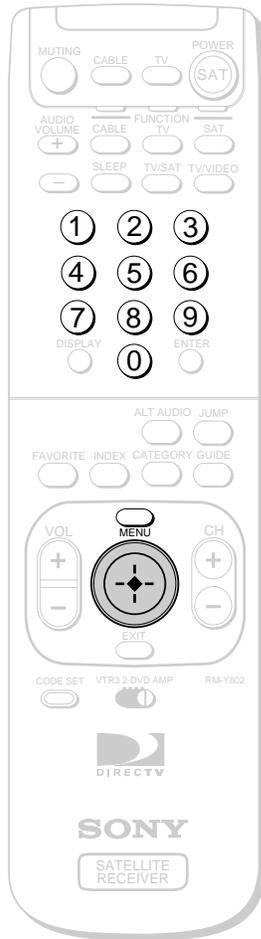
RM-Y802
Remote Control

Locking Your Receiver

After you have made the changes you want to the Locks & Limits settings, you must enter a passcode to lock the receiver.

1 **Press the MENU button, then highlight and select LOCKS & LIMITS.**

The Locks & Limits display appears.
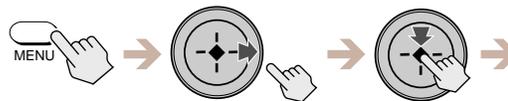
2 **Highlight and select "Edit", then select "Lock".**

The Lock Receiver pop-up appears.

3 **Enter a four digit passcode using the 0–9 buttons.**

Each number you enter appears as an asterisk (*) which keeps your passcode secret.
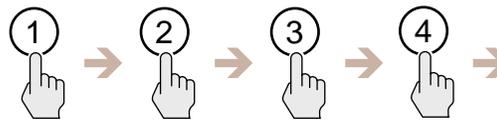
4 **Enter your passcode again.**

This confirms your selection of a passcode number.

5 **Highlight and select "Return".**

The Main Menu appears.
Your receiver is now locked with your passcode using the locks and limits you have set.

᯿ *Tip*

Do not forget your passcode.
You will need this number to unlock your system or make any changes to the locks or limits you have set. If you forget your passcode, contact your program provider for assistance.

**RM-Y802
Remote Control**

Unlocking Your Receiver

If you want to make changes to the Locks & Limits settings, you must enter your passcode to unlock the receiver.

1 **Press the MENU button, then highlight and select LOCKS & LIMITS.**

The Locks & Limits display appears.
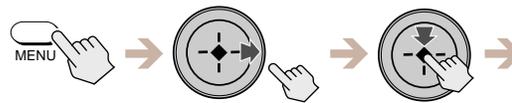
2 **Highlight and select "Edit".**

The Unlock Receiver pop-up appears.

3 **Enter your four digit passcode using the 0–9 buttons.**

Each number you enter appears as an asterisk (*) which keeps your passcode secret.
The Locks & Limits edit display appears.
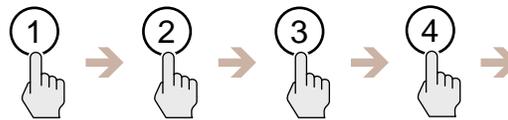
4 **Highlight and select "Unlock".**

Your receiver is now unlocked.

5 **Highlight and select "Return".**

The Main Menu appears.

💡 **Tip**
You can temporarily unlock your Digital Satellite Receiver with your passcode if you select a program from a guide and the station is blocked or a limit has been reached.

58

**RM-Y802
Remote Control**

Checking Your Purchases

You can view a history of the pay per view purchases you have made. This display also shows the future purchases you have ordered and those that you have canceled.

1 **Press the MENU button, then highlight and select PURCHASES.**

The Purchases display appears.
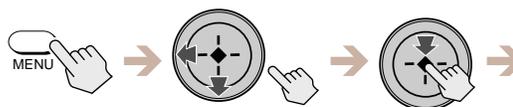
2 **Highlight and select the purchase number you want to view.**

The information pop-up for that purchase appears.
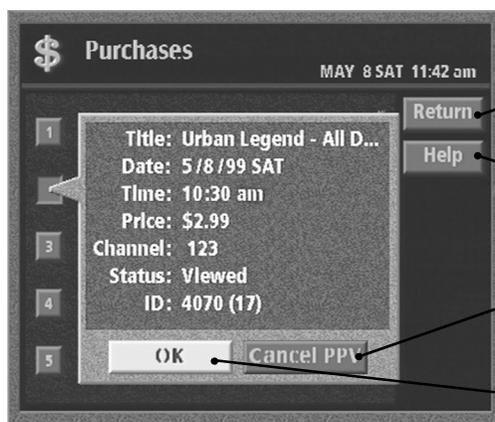
Return
Closes the Purchases display to show the Main Menu.

Help
Opens information about the Purchases display.

Cancel PPV
Cancels the pay per view program.

OK
Closes the information pop-up to show the Purchases display.

‍💡 **Tip**
You can purchase pay per view programs from any guide. See "Viewing Pay Per View Programs" on page 45.

3 **Highlight and select "OK".**

The information pop-up closes to show the Purchases display.

Using the On-Screen Displays

59

Scheduling Programs (TIMER & REC)

Using One Button Timer & Rec

You can easily set the timer to view or record programs by selecting future programs directly from program guides.

To record a future program use the VCR Control feature to turn on your VCR and start recording automatically. For information on how to set up the VCR Control feature, see page 26.

Highlight and select a future program using any of the methods described in "Viewing Station and Program Information (GUIDES)" on pages 35 through 45.

Return
Closes the future program pop-up to show the current guide.

Tune to Station
Closes the program guide to show the current program of the selected station.

Add to Timer & Rec
Adds the program to the Timer & Rec display for recording, and opens the schedule pop-up.

Add to Timer
Adds the program to the Timer & Rec display for tuning, and opens the schedule pop-up.

Once
Adds the program to the Timer & Rec display for one time tuning and/or recording.

Monday–Friday
Adds the program to the Timer & Rec display for the remaining week days of the current week for tuning and/or recording.

Weekly
Adds the program to the Timer & Rec display for tuning and/or recording on the same day of the following four weeks.

Daily
Adds the program to the Timer & Rec display for tuning and/or recording every day for the next 30 days.

☿ Tips
• You can set up the Digital Satellite Receiver to send program information to your VCR so it records the information at the beginning of the recording. See page 28 for information.
• Your Digital Satellite Receiver has a Program Data Download feature and will automatically send the following information when you record a program with a Sony SmartFile VCR: program title, program category, program date/time and duration.
  For further information regarding the SmartFile function, refer to your Sony SmartFile VCR Operating Instructions.

Notes
• When using the VCR Control feature to record a future program, make sure that the VCR is turned off before the program begins. The VCR Control feature will turn on your VCR and start recording.
• When you schedule two or more continuous events to be recorded, the Auto Title Insert and Program Data Download features will only send information about the first program.

60

**RM-Y802
Remote Control**

Using the Timer & Rec Feature

The Timer & Rec feature lets you set up the Digital Satellite Receiver to automatically tune to a program scheduled at a future time. You can also use the One Button Timer & Rec feature to set up the timer by selecting a future program.

To record a future program, use the VCR Control feature to turn on your VCR and start recording automatically. For information on how to set up the VCR Control feature see page 26.

1 **Press the MENU button, then highlight and select TIMER & REC.**

The Timer & Rec display appears.
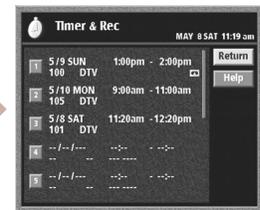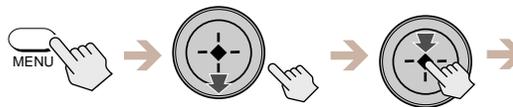
2 **Highlight and select the next available timer event number.**

The Date/Day field is highlighted and the current date appears.

Date and day   Start time   End time

Channel number and station name

Program title

Return
Closes the Timer & Rec display to show the Main Menu.

Help
Opens information about the Timer & Rec display.

Record Event icon
Shows that an event will be recorded.

Note
When using the VCR Control feature to record a future program, make sure that your VCR is turned off before the program begins. The VCR Control feature will turn on the VCR and start recording.

Using the On-Screen Displays

61

3 **Follow the steps below to set the timer.**
Move the joystick in the direction indicated in these steps.

① **Press ▲/▼ to select from the following.**
- Any date up to 30 days from the current date
- EVERY SUN
- EVERY MON
- EVERY TUE
- EVERY WED
- EVERY THU
- EVERY FRI
- EVERY SAT
- MON–FRI
- DAILY

② **Press ✦ or ➡ to move to the next item.**

③ **Press ▲/▼ to change the starting hour. Then, press ✦ or ➡ to move to the next item.**

④ **Press ▲/▼ to change the starting minute. Then, press ✦ or ➡ to move to the next item.**

⑤ **Press ▲/▼ to change the ending hour. Then, press ✦ or ➡ to move to the next item.**

```
┌───┐   ──/──/──        ──:── ──  ─  ──:── ──
│ 1 │
└───┘   ─── ───    ─── ────
```

⑧ **Press ✦.**
The Timer & Rec pop-up appears.
Highlight Timer & Rec or Timer and press ✦.

⑦ **Use the number buttons or press ▲/▼ to select the channel number. Then, press ✦ or ➡ to move to the next item.**

⑥ **Press ▲/▼ to change the ending minute. Then, press ✦ or ➡ to move to the next item.**

4 **Highlight and select "Return" to close the Timer & Rec display.**
The Main Menu appears.

💡 *Tips*
- Shortly before beginning a scheduled timer event, an information box appears on your screen. You can press the EXIT button on your remote control to cancel the timer event.
- If the Auto Title Insert feature is on (see page 28), the Auto Title will appear 10 seconds before the scheduled program.

**RM-Y802
Remote Control**

Editing Timer Events

You can easily edit or delete timer events.

1 **Press the MENU button, then highlight and select TIMER & REC.**

The Timer & Rec display appears.
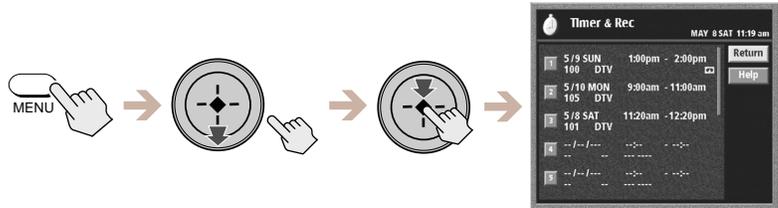
2 **Highlight and select the number of the event you want to edit.**

The edit pop-up appears.
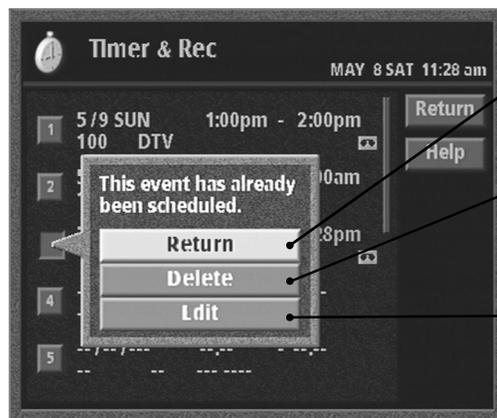
Return
Closes the edit pop-up to show the Timer & Rec display.

Delete
Removes the event from the list. Higher numbered events move up to fill the gap.

Edit
Closes the edit pop-up to highlight the date of that event.
See page 62 for instructions on how to change the timer settings.

Setting Audio Options (AUDIO)

RM-Y802
Remote Control

Using the Audio Display

You can set your Digital Satellite Receiver to play the audio track in the language you prefer if that language is available. You can set the language for the current program and as the default language for all programs when that language is available. You can also set your Digital Satellite Receiver to receive Dolby Digital audio signals (SAT-A55 only).

1 **Press the MENU button, then highlight and select AUDIO.**

The Audio display appears.
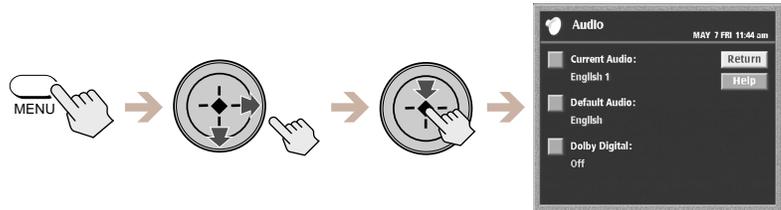
2 **Highlight and select the setting you want to change.**

Current Audio
Opens a pop-up that displays the languages available for the current program.

Default Audio
Opens a pop-up that displays the eight available default languages. When a program broadcasts an audio track in the default language, that language is automatically selected.

Dolby Digital (SAT-A55 only)
Opens a pop-up that lets you set your Dolby Digital options.
Choose "Auto Select" (if you have a Dolby Digital audio system) to enjoy surround sound whenever a station broadcasts a Dolby Digital audio track. Select "Off" if you do not have a Dolby Digital audio system.

Return
Closes the Audio display to show the Main Menu.

Help
Opens information about the Audio display.

☼ **Tip (SAT-A55 only)**
You can also use the ALT AUDIO button on the remote control to select among the currently available tracks.

64

Setting Up the Remote Control

**RM-Y802
Remote Control**

The RM-Y139 and RM-Y802 remote controls can be programmed to operate your other audio/video equipment.

1 **Find the code(s) for the manufacturer of the device you want to operate with this remote control.**
You can find these codes on pages 66 and 67.

2 **Press the CODE SET button.**
The function indicators begin flashing.

3 **Press the 0–9 buttons to input the manufacturer code, then press the ENTER button.**
The function indicator goes off, and the remote is setup to operate that device.
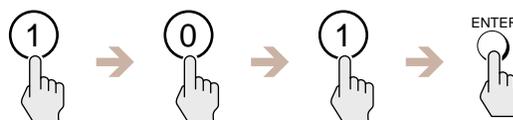
4 **Test the remote control.**
Press the POWER button for that equipment, then press other operation controls such as the CH +/− buttons.
If the device does not respond to the remote control, repeat from step 2 and enter a different manufacturer code in step 3.

💡 **Tips**
- Remember to aim the remote control at the device you are trying to operate.
- To control extra VTRs (VCRs), a DVD player or an amplifier with the RM-Y802 remote control, slide the device switch to VTR2, 3, DVD or AMP after you have set up the remote with the correct manufacturer code.

Manufacturer Codes

TV Codes

Manufacturer	Code
Sony	101
Admiral (M. Wards)	102, 114, 109
ABC	112
Bell & Howell (M. Wards)	114, 109, 138
Broksonic	103, 112
Craig	122, 123, 120, 121
Croslex	111
Curtis Mathis	103, 119, 123
Daewoo	135, 136, 103
Daytron	113
Emerson	122, 113, 120, 121, 123, 103, 115
Fisher	125
General Electric	102, 118, 103, 107
Goldstar	103, 113, 112, 130
Hitachi	131, 113, 103, 132
JC Penney	103, 102, 130, 107
JVC	128, 129
KTV	133, 113, 103, 123, 134
LXI (Sears)	102, 103 111, 125, 119, 112
Magnavox	111, 112, 113, 107
Mitsubishi/MGA	124, 103, 112
NEC	103, 112
Panasonic	118, 116, 117, 107
Philco	111, 118, 109
Philips	111
Pilot	103
Pioneer	137, 118, 119
Portland	103, 108
Quasar	110, 107
Radio Shack	102, 112, 124, 123
RCA/Proscan	102, 103, 104, 105,106, 107, 108
Samsung	126, 112, 113, 103
Sanyo	125
Scott	123, 112
Sharp	114, 113, 115
Signature 2000 (M. Wards)	114, 109
Sylvania	111, 112, 108
Symphonic	123, 139
Tenika	109
Toshiba	119, 114
Videch	131, 103, 112
Wards	113, 103, 115, 112
Zenith	108, 110

VCR Codes

Manufacturer	Code
Sony	301,302, 303
Aiwa	338
Audio Dynamic	314, 347
Bell & Howell (M. Wards)	330, 343
Broksonic	317, 319
Canon	309, 308
Citizen	332
Craig	315, 302, 332
Curtis Mathis	304, 338, 309
Daewoo	341, 312, 309
DBX	314, 336, 337
Dimensia	304
Emerson	319, 320, 316, 317, 318, 341
Fisher	330, 334, 335, 333
Funai	338
General Electric	329, 304, 309
Go Video	322, 339, 340
Goldstar	332
Hitachi	306, 304, 305, 338
HQ	315
Instant Replay	309, 308
JCPenney	309, 305, 304, 330, 314, 336, 337
JVC	314, 336, 337
Kenwood	314, 336, 332, 337
LXI (Sears)	332, 305, 333, 334, 330, 335, 338
Magnavox	310, 308, 309
Marantz	314, 336, 337
Marta	332
Memorex	309, 335
Minolta	305, 304
Mitsubishi/MGA	323, 324, 325, 326
Multitech	325, 338, 321
NEC	314, 336, 337
Olympic	309, 308
Optimus	327
Panasonic	308, 309, 306, 307
Pentax	305, 304
Philco	308, 309
Philips	310, 308, 309
Pioneer	308
Quasar	306, 308, 309
RCA/Proscan	304, 305, 308, 309, 310, 311, 312, 313

VCR Codes (continued)

Manufacturer	Code
Realistic	309, 330, 328, 335, 324, 338
Sansui	314
Singer	315
Samsung	322, 313, 321
Sanyo	330, 335
Scott	312, 313, 321, 335, 323, 324, 325, 326
Sharp	327, 325, 328
Shintom	315
Signature 2000 (M. Wards)	336, 327
Sylvania	310, 308, 309, 338
Symphonic	338
Tashiro	332
Tatung	314, 336, 337
Teac	314, 336, 338, 337
Technics	309, 308
Teknika	338, 342
Toshiba	312, 311
Wards	327, 328, 335, 331, 332
Yamaha	330, 314, 336, 337
Zenith	331

DVD Codes (RM-Y802 Only)

Manufacturer	Code
Sony	601
Panasonic	604
Pioneer	605
RCA	602
Toshiba	603

AMP (Amplifier) Codes (RM-Y802 Only)

Manufacturer	Code
Sony	501
Denon (Sharp)	516, 517, 518
Harmon	519
JVC	506, 507, 508
Kenwood	504, 505
McIntosh	520
Onkyo	512, 513
Pioneer	502, 503
Technics	509, 510, 511
Yamaha	514, 515

Cable Box Codes (RM-Y802 Only)

Manufacturer	Code
Hamlin/Regal	222, 223, 224, 225, 228
Jerrold/G.I.	201, 202, 203, 204, 205, 206, 207, 208, 218
Oak	227, 228, 229
Panasonic	219, 220, 221
Pioneer	214, 215
Scientific Atlanta	209, 210, 211
Tocom	216, 217
Zenith	212

Other Information

Location and Function of Controls

Front Panel
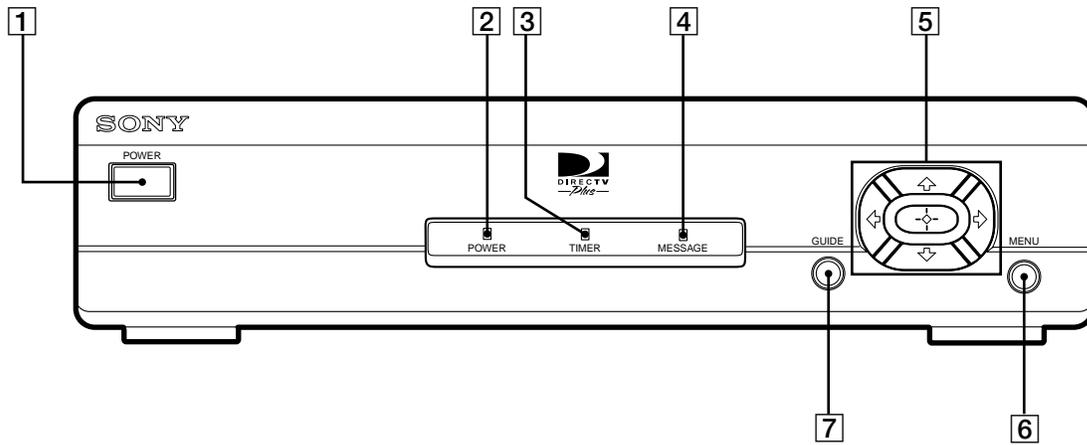
1 **POWER Button**
Turns your Digital Satellite Receiver on and off.

2 **POWER Indicator**
Indicates whether the Digital Satellite Receiver is on or off.

3 **TIMER Indicator**
Indicates that the Timer is set.

4 **MESSAGE Indicator**
Indicates that you have a new message.

5 **Arrow and ⊹ Buttons**
The arrow buttons move the highlight in the on-screen displays. The ⊹ button selects the highlighted item.

6 **MENU Button**
Opens the Main Menu.

7 **GUIDE Button**
Opens the Program Guide.

SAT-A55 Back Panel
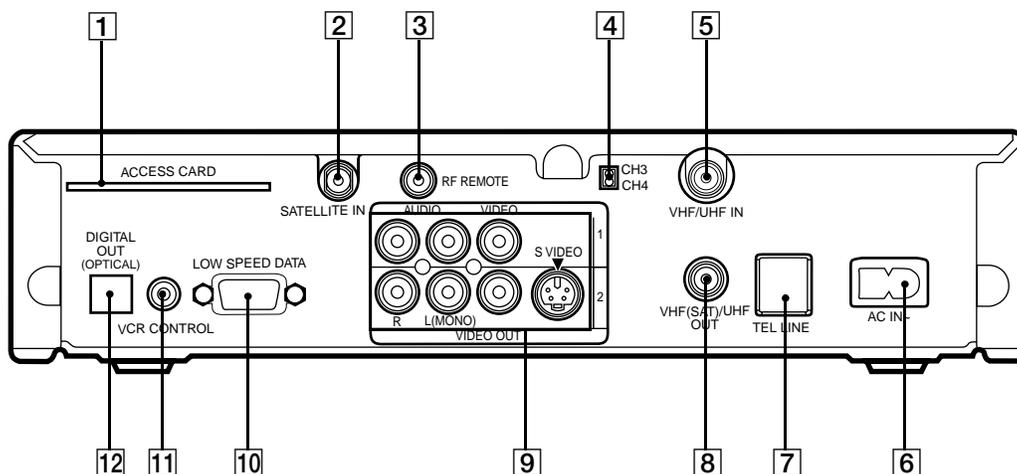
1 **ACCESS CARD slot**
Do not remove the Access Card unless instructed
to do so by your service provider.

2 **SATELLITE IN jack**
Inputs satellite signals from your Satellite Dish
Antenna using RG-6 coaxial cable.

3 **RF REMOTE jack**
Inputs remote control signals using the RF
Antenna.

4 **CH3/CH4 switch**
When you use an RF connection (VHF(SAT)/
UHF OUT jack), this setting determines the TV
channel on which programs from the Digital
Satellite Receiver can be viewed.

5 **VHF/UHF IN jack**
Inputs off-air signals from your local TV off-air
antenna using coaxial cable. Some antennas
require an adapter (not supplied).

6 **AC IN jack**
Inputs AC power from a power outlet using the
AC Power Cord.

7 **TEL LINE jack**
Connects the Digital Satellite Receiver to a
telephone outlet using a telephone line cable.

8 **VHF(SAT)/UHF OUT jack**
Outputs audio and video signals to the VHF/
UHF input on your TV or VCR using coaxial
cable.

9 **A/V OUTPUT jacks**
Output audio and video signals to your TV and
other audio/video equipment using A/V cables.

10 **LOW SPEED DATA**
Can be used for future products such as Personal
Video Recorders.

11 **VCR CONTROL jack**
Allows the VCR Controller to control a VCR and/
or cable box. Also allows connection of a
monaural cable for use with Sony SmartFile
VCRs.

12 **DIGITAL OUT (OPTICAL)**
Outputs digital audio signals to the digital optical
input of your audio receiver.

SAT-B55 Back Panel
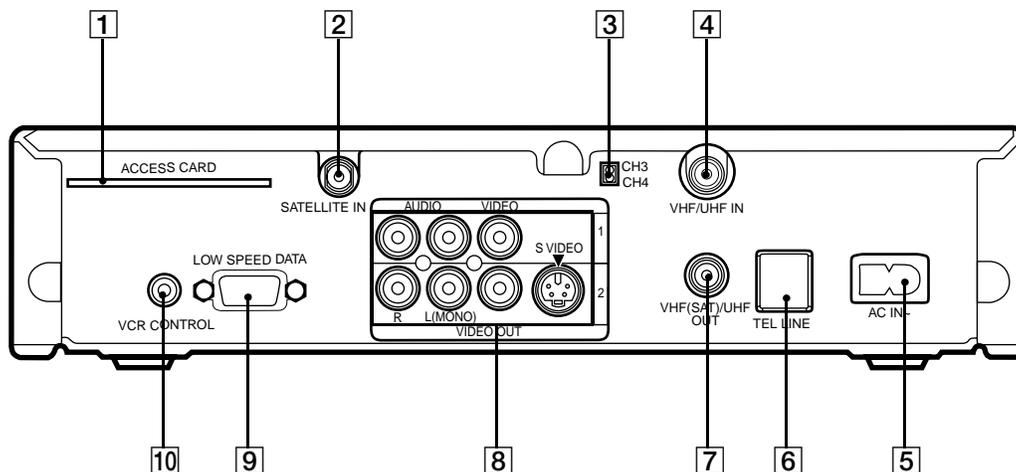
1 **ACCESS CARD slot**
Do not remove the Access Card unless instructed to do so by your service provider.

2 **SATELLITE IN jack**
Inputs satellite signals from your Satellite Dish Antenna using RG-6 coaxial cable.

3 **CH3/CH4 switch**
When you use an RF connection (VHF(SAT)/ UHF OUT jack), this setting determines the TV channel on which programs from the Digital Satellite Receiver can be viewed.

4 **VHF/UHF IN jack**
Inputs off-air signals from your local TV off-air antenna using coaxial cable. Some antennas require an adapter (not supplied).

5 **AC IN jack**
Inputs AC power from a power outlet using the AC Power Cord.

6 **TEL LINE jack**
Connects the Digital Satellite Receiver to a telephone outlet using a telephone line cable.

7 **VHF(SAT)/UHF OUT jack**
Outputs audio and video signals to the VHF/ UHF input on your TV or VCR using coaxial cable.

8 **A/V OUTPUT jacks**
Output audio and video signals to your TV and other audio/video equipment using A/V cables.

9 **LOW SPEED DATA**
Can be used for future products such as Personal Video Recorders.

10 **VCR CONTROL jack**
Allows the VCR Controller to control a VCR and/ or cable box. Also allows connection of a monaural cable for use with Sony SmartFile VCRs.

Specifications

Input Jacks

UHF/VHF IN	75 ohm f-type
SATELLITE IN	75 ohm f-type
RF REMOTE (SAT-A55)	
AC IN (120 V, 60 Hz)	

Output Jacks

	Cable Type
S-VIDEO OUT	4-pin mini DIN
VIDEO (2)	RCA type
OPTICAL OUT (1) (SAT-A55 only)	Optical Rectangular
AUDIO R/L (2)	RCA type
VHF (SAT)/UHF	75 ohm f-type
Low-Speed Data	9-pin D-Sub Female
TEL LINE	RJ-11
VCR CONTROL (1)	VCR Controller (or monaural cable for Sony SmartFile VCRs)

General

Input Frequency	950–1450 MHz
Power Requirements	120 V, 60 Hz
Power Consumption	20 W max
Dimensions (w/h/d)	$11 \times 2\,^5/_8 \times 9$ inches ($280 \times 66.5 \times 228.5$ mm)

Weight

SAT-A55

Set:	6.0 lbs (2.7 kg)
Unit:	3.6 lbs (1.6 kg)

SAT-B55

Set:	5.4 lbs (2.5 kg)
Unit:	3.4 lbs (1.5 kg)

Supplied Accessories

Remote Control	RM-Y802 (SAT-A55) RM-Y139 (SAT-B55)

Size AA Batteries (2)

Access Card (1)

Audio/Video Cable (1)

Coaxial RF Cable (1)

Telephone Line Cord (1)

AC Power Cord (1)

VCR Controller (1)

S-Video Cable (1) (SAT-A55)

RF Antenna (1) (SAT-A55)

Optional Sony-brand Digital Satellite Receiver Accessories

Local TV Antenna

ANJ-AA1

Installation Kit

ANJ-DS2

Amplifier

EAC-DA1

Diplexer

EAC-DD1

Voltage Switch

EAC-DV2

RF Universal Remote Commander® Remote Control

RM-Y802

Design and specifications are subject to change without notice.

Other Information

Troubleshooting

Problem	What you can do

Poor picture quality or no picture

- If you are receiving only a few stations, (only 2 or 3 channels for example), call your service provider to have your programming activated.
- Some pay per view programs may be protected by Macrovision® copy protection at the discretion of the copyright owner. You may want to connect the Digital Satellite Receiver directly to your TV.
- Check the connections to your TV and other equipment (see pages 7–13).
- Make sure that your TV and other equipment are set to the input source to which you connected your Digital Satellite Receiver, for example, channel 3 or 4, Video 1 or 2 (see pages 9–10).
- Check the Satellite Dish Antenna's signal strength (see page 23).
- Make sure the RG-6 coaxial cable is properly connected to the Satellite Dish Antenna.
- If the cable distance between the Satellite Dish Antenna and the Digital Satellite Receiver is more than 100 feet, you must use the Sony Amplifier EAC-DA1.
- Make sure your Access Card is inserted correctly (see page 13).
- Move any antenna cables that may be directly above your Digital Satellite Receiver.
- Change the setting of the CH3/CH4 switch on the back of the Digital Satellite Receiver. This could improve picture quality only if you are using the UHF/VHF IN jack of the Digital Satellite Receiver to connect a local TV antenna or cable company service.

Poor picture quality or no picture when it rains or snows

- Heavy rain or snow may degrade the strength of the signal coming from the satellite to your Satellite Dish Antenna. To limit any negative effects during degraded conditions, make sure that your professional installer has aimed your Satellite Dish Antenna so that you are receiving a high signal strength level (see page 23, or refer to your Satellite Dish Antenna Installation Instructions).

You cannot turn on the unit

- Make sure that the AC Power Cord is plugged in (see page 13).
- If the AC Power Cord is plugged in, unplug the AC Power Cord, wait a few minutes, then plug in the AC Power Cord again.

You cannot access a program

- Make sure you subscribe to the station you are trying to access. Your service provider can tell you to which stations you subscribe.
- Make sure the station you are trying to access is not set to be skipped (see pages 50–51).
- Make sure the system is not locked (see page 58).
- Use the Program Guide to access the station (see page 37).
- Press the SAT FUNCTION button on the remote control before you select a channel (see page 20).

Problem	What you can do
You cannot order a pay per view program	• Make sure your Digital Satellite Receiver is connected to a telephone line (see page 8). • Make sure the system is not locked (see page 58). • Use the Program Guide to access the station (see page 37). • If the message "Purchase information not available" appears, you must contact your service provider to order the program. • Your Access Card may be full. If so, contact your service provider. • It may be too late to order the program you want. If so, check for other show times (see page 45).
You cannot find the station of the pay per view program that you ordered	• See "Checking Pay Per View Purchases" on page 59 to get information (station, start time, etc.) about programs that you have ordered.
You cannot cancel a pay per view order	• You cannot cancel pay per view orders that you have watched. Contact your service provider for details.
The program highlighted in the Program Guide does not appear	• Highlight and select the program. Although the program you highlight appears in the Media Window display, you must press the ⊹ button to complete your selection (see page 37).
You cannot see any Favorite Stations	• Set up your personal Favorite Titles before you try to use the Favorite Stations guide (see page 41).
Locks & Limits feature not working properly	• Make sure that the Spending, Rating, Pay Per View, and Stations Blocked are set as you want them (see pages 53–56). Then, make sure that the system is locked (see page 57).
You cannot access the Locks & Limits screens	• The system must be unlocked before you can make changes to the Locks & Limits (see page 58).
You cannot unlock the system	• Make sure that you entered the passcode correctly. If you have lost or forgotten your passcode, contact your service provider.
Language of audio track is incorrect or audio track is not available	• Check the default language setting. The program provider may not broadcast all of the languages in the Default Audio pop-up (see page 64). • Some programs may not offer audio tracks.

Other Information

Troubleshooting (continued)

Problem	What you can do
You cannot record programs with your VCR	• Make sure that your VCR is connected correctly (see page 10). • If you want to use the VCR Control feature, make sure that the VCR Controller is connected correctly (see page 11). Also make sure that you have selected the correct VCR Manufacturer Code (see page 27). • If you are using the VCR Control feature to record a future program, make sure that your VCR is turned off before the program begins. The VCR Control feature will turn on the VCR and start recording. • Make sure that the program you are trying to record doesn't conflict with any Locks & Limits you have set. • If you are trying to record a pay per view program, you must first order the program (see page 45). • Some pay per view programs may be protected by Macrovision copy protection at the discretion of the copyright owner. If so, it may not be possible to record these programs.
Access Card problems	• Make sure your Access Card is inserted correctly (see page 13). • Contact your service provider with any other Access Card problems.
Remote control does not work	• Make sure that the batteries are inserted correctly and that the batteries are not weak (see page 7). • Remove and then reinsert the batteries without pressing any buttons on the remote control. • To operate your TV or other equipment, make sure that the remote control is set up to operate that equipment (see page 65). If the batteries are removed or become weak, you may need to set up the remote control to operate other equipment again. • Press the FUNCTION button on the remote control of the equipment you want to operate (SAT, TV, VTR, and/or CABLE). These buttons will flash to show which equipment the remote control is set to operate. • SAT-A55 model only: If there is a problem when using the RF function, check that the RF Antenna is connected correctly (see page 12). • SAT-A55 model only: Make sure that the remote control and the Digital Satellite Receiver are both using the same security code (see page 33–34).
Audio noise	• SAT-A55 model only: If you connect the DIGITAL OUT jack to equipment that is not Dolby Digital compatible, set the Dolby Digital option to "off" (see page 64). Not all optical jacks on audio systems are Dolby Digital compatible.
"Frozen" picture or display	• Press both the GUIDE and ARROW DOWN buttons at the same time on the front panel of the Digital Satellite Receiver to reset the receiver.

If you are unable to resolve problems with your system, see "Customer Support" inside the front cover.

74

Notes

FCC Regulations and Information

Your Digital Satellite Receiver has been registered by the Federal Communication Commission (FCC) as not being harmful to the telephone network when connected directly to the telephone lines. In order to fully comply with the Rules of the FCC, the following instructions should be read carefully and followed completely where applicable:

1. The Federal Communication Commission (FCC) has established Rules which permit this device to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin phones.

2. If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service.

3. The telephone company may make changes in its technical operations and procedures; if such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the changes. You will be advised of your right to file a complaint with the FCC.

4. If the telephone company requests information on what equipment is connected to their lines, inform them of:

   a. The telephone number to which this unit is connected.

   b. The ringer equivalence number.

   c. The USOC jack required.

   d. The FCC Registration Number.

5. Items (b) and (d) are indicated on the label. The Ringer Equivalence Number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the RENs of all devices on any one line should not exceed five (5). If too many devices are attached, they may not ring properly.

Service Requirements

In the event of equipment malfunction, all repairs should be performed by our Company or an authorized agent. It is the responsibility of users requiring service to report the need for service to our company or to one of our authorized agents.

For service, call 1-800-838-7669.

Declaration of Conformity

Trade Name: Sony

Model No.:   SAT-A55/SAT-B55

Responsible Party: Sony Electronics Inc.

Address: 1 Sony Drive, Park Ridge, NJ. 07656 USA

Telephone No.:   201-930-6972

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Radio Interference Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception (which you can determine by turning the equipment off and on), you are encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna (the antenna for radio or television that is receiving the interference)

• Change the position of the Digital Satellite Receiver with respect to the radio or television equipment that is receiving the interference

• Move the Digital Satellite Receiver away from the equipment that is receiving the interference

• Plug the Digital Satellite Receiver into a different outlet so that the Digital Satellite Receiver and the equipment receiving the interference are on different branch circuits

Shielded cables and I/O cords must be used for this equipment to comply with the relevant FCC regulations. Changes or modifications not expressly approved in writing by Sony Electronics Inc., void the user's authority to operate this equipment.

If these measures do not eliminate the interference, you should consult your Digital Satellite Receiver dealer or an experienced radio/television technician for additional suggestions. In addition, you may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402 Stock No. 004-000-00345-4.

Limited Warranty

Digital Satellite Receivers

SONY ELECTRONICS INC. ("SONY") warrants this Product (including any accessories) against defects in material or workmanship as follows:

1   LABOR. For a period of 90 days from the original date of purchase, if the Product is determined to be defective, SONY will repair or replace the Product at no charge. After this 90 day period, you must pay for all labor charges.

2   PARTS. For a period of one (1) year from the original date of purchase, SONY will supply, at no charge, new or rebuilt replacements in exchange for defective parts. Any replacements will be warranted for the remainder of the original warranty period or ninety (90) days from installation by SONY's authorized facility, whichever is longer.

3   ACCESSORIES. Parts and labor for all accessories are for one (1) year.

4   IN-HOME. For a period of one (1) year from installation date, if the unit was professionally installed by a SONY authorized Digital Satellite Receiver Installer and the LNB (Electronic Antenna Element) fails to function properly, SONY will repair or replace the LNB with a new or rebuilt part. Labor to repair or replace the LNB (after 90 days from purchase) will be at your expense. If no problem is found, or any other item fails, it will be your responsibility to pay the installer their regular rate for an in-home service call.

To obtain warranty service, you must take the Product, or deliver the Product freight prepaid, in either its original packaging or packaging affording an equal degree of protection, to a SONY authorized Digital Satellite Receiver service facility. Please see the telephone number at the end of this section for a number to call to locate the closest facility.

This warranty does not cover customer instruction, installation, setup adjustments or signal reception problems.

This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of, or to any part of the Product, including the antenna. This warranty does not cover improper installation (if self-installed), loss of use of the product, or wasted programming charges due to product malfunction. This warranty does not cover damage due to improper operation or maintenance, connection to improper voltage supply, or attempted repair by anyone other than a facility authorized by SONY to service the Product. This warranty does not cover Products sold AS IS or WITH ALL FAULTS. This warranty is valid only in the United States.

Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is within the Warranty period must be presented to obtain warranty service.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. IN NO EVENT SHALL SONY BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT. UNDER NO CIRCUMSTANCES SHALL SONY'S LIABILITY, IF ANY, EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

This warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. In addition, if you enter into a service contract with The Sony Partnership® service within 90 days of the date of sale, the limitation on how long an implied warranty lasts does not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

For your convenience, SONY ELECTRONICS INC. has established telephone numbers for frequently asked questions. To locate the servicer or dealer nearest you, for assistance or resolution of a service problem, or for product information or operation, call:

SONY SATELLITE SYSTEM INFORMATION CENTER
1-800-838-7669 (Sony)

For an accessory or part not available from your authorized dealer, call:

1-800-488-7669

About Sony Customer Support

Every DIRECTV System manufactured by Sony comes with Sony's Express Support at no charge to you. In the event of a system failure, our Express Support Program can have a replacement receiver on its way to you via overnight Federal Express (for calls Monday-Friday until 7:30 pm Eastern Time; Saturday delivery depends upon zip code). All it takes is a valid credit card to cover a security deposit, and Sony will pay freight in both directions. Our Express Support continues with our 800 number, staffed by dedicated technical representatives who can answer questions on dealer locations, system operation, installation, hookup, accessories, and how to get the most out of your home entertainment system. Sony's ExpressSupport[SM] program: another expression of our commitment to excellence in customer service.

Index

Other Information

79

PRINTING THE SERVICE MANUAL

The PDF of this service manual is not designed to be printed from cover to cover. The pages vary in size, and must therefore be printed in sections based on page dimensions.

NON-SCHEMATIC PAGES

Data that does NOT INCLUDE schematic diagrams are formatted to 8.5 x 11 inches and can be printed on standard letter-size and/or A4-sized paper.

SCHEMATIC DIAGRAMS

The schematic diagram pages are provided in two ways, full size and tiled. The full-sized schematic diagrams are formatted on paper sizes between 8.5" x 11" and 18" x 30" depending upon each individual diagram size. Those diagrams that are LARGER than 11" x 17" in full-size mode have been tiled for your convience and can be printed on standard 11" x 17" (tabloid-size) paper, and reassembled.

TO PRINT FULL SIZE SCHEMATIC DIAGRAMS _____

If you have access to a large paper plotter or printer capable of outputting the full-sized diagrams, output as follows:

1) Note the page size(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your large format printer. Confirm that the printer settings are set to output the indicated page size or larger.

3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT TILED VERSION OF SCHEMATICS _____

Schematic pages that are larger than 11" x 17" full-size are provided in a 11" x 17" printable tiled format near the end of the document. These can be printed to tabloid-sized paper and assembled to full-size for easy viewing.

If you have access to a printer capable of outputting the tabloid size (11" x 17") paper, then output the tiled version of the diagram as follows:

1) Note the page number(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your printer. Confirm that the plotter settings are set to output 11" x 17", or tabloid size paper in landscape (☐) mode.

3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT SPECIFIC SECTIONS OF A SCHEMATIC_____

To print just a particular section of a PDF, rather than a full page, access the Graphics Select tool in the Acrobat Reader tool bar.

1) To view the Graphics Select Tool, press the mouse button over the Text Select Tool which looks like: T
   This tool will expand to reveal to additional tools.
   Choose the Graphics Select tool by placing the cursor over the button on of the far right that looks like:

2) After selecting the Graphics Select Tool, place your cursor in the document window and the cursor will change to a plus (+) symbol. Click and drag the cursor over the area you want to print. When you release the mouse button, a marquee (or dotted lined box) will be displayed outlining the area you selected.

3) With the marquee in place, go to the file menu and select the "Print..." option. When the print window appears, choose the option under the section called "Print Range" which says "Selected Graphic".

Select OK and the output will print only the area that you outlined with the marquee.

ON-SCREEN SEARCH OPTION

All of the text within the service manual PDF is content searchable. This means that you can enter any text, word, phrase or reference number that appears in the manual, and the PDF software will search, find and move the cursor to the location where you requested text first appears. This feature can be particularly useful in locating components on a specific schematic or printed wire circuit board (PWB) diagrams.

Follow these steps to effectively locate a component on a schematic diagram:

1) Locate the schematic you want to search by clicking on the corresponding bookmark on the left side of the screen. The view on the right of the screen will then jump to the desired schematic page.

2) Magnify the diagram to at least 400% before conducting a component search. This will enable you to easily view the reference number when it is highlighted on screen. To do this, click on the magnifying glass button on the tool bar at the top of the screen. Move the cursor over the diagram and RIGHT click you mouse. Select the 400% magnification option on the pop-up menu. Click on the button with the icon of the open hand to deactivate the magnification tool

3) Search the diagram (or the entire manual) by clicking on the binocular button tool at the top of the screen. The "Find" window will appear and allow you to type in your desired text. Type in a reference designator, such as R502, and click on the "Find" button. If the component is not on the diagram, but is listed anywhere else in the manual, the cursor will jump to the first location the text is found in the file. To find another instance of that same text, click on the binocular button again and select "Find Again."