Ver. 1

DENON PROFESSIONAL

SERVICE MANUAL

MODEL	JP	E3	E2	EK	E2A	E2C	E1K	EUT
DN-S700		✓	✓					

TABLE TOP SINGLE CD/MP3 PLAYER

- For purposes of improvement, specifications and design are subject to change without notice.
- Please use this service manual with referring to the operating instructions without fail.
- Some illustrations using in this service manual are slightly different from the actual set.

D&M Holdings Inc.

PROFESSIONAL BUSINESS COMPANY

X0457 V.01 DE/CDM 0909

SERVICE MODE

CONFIRMING THE SERVO

What is Service Program

Service program is a special program intended for confirming servo functions etc.

This manual use as DN-S700

Required Measuring Implement

Reference disc (TCD784 or CO-74176)

1. Contents of Service Program

Turn on the power while pressing both B button and the PARAMETER knob to set the service mode of DN-S700. The various check items can be selected with the PARAMETER knob, the various test items can be selected with the A, B, EXIT /RELOOP and BEND buttons. Press either the PARAMETER knob or PLAY/PAUSE button to start the check or test and display the result.

To eject the disc, press the DISC EJECT button.

To cancel the service mode, turn the power off.

	Process No. (TRACK Indication)	Function (Character-display)	Contents
PARAMETER knob	01	µcom Version check (Version No.)	A PARAMETER knob is pushed and a version is checked. 1. System µcom version No. : "Sys_XXXX" 2. DSP soft version No. : "Dsp_XXXX" 3. Servo version No. : "Ser_XXXX"
	02	"TR_Signal" "HF_Signal"	Press the PARAMETER knob to turn the tracking servo off. When the tracking servo is off, press the PARAMETER knob to turn the tracking servo on.
	03	Automatic Servo Adjustment call (Servo Data)	Press the PARAMETER knob to start automatic servo adjustment. When the adjustment is completed, the adjustment data is displayed. The data can be selected by turning the scratch disc. 1. Disc check, CD/CD-RW 2. Focus gain data 3. Focus balance data 4. Focus offset data 5. Tracking gain data 6. Tracking balance data 7. Tracking offset data
	04	"Fo_Gain"	Select the focus gain. Default : 7. Select the data with the jog wheel, then press the PARAMETER knob to enter it. The higher the value, the higher the gain, while the lower the value, the lower the gain. The gain value enables ± 8. * Do not change this without instruction from engineering.
	05	"Tr_Gain"	Select the tracking gain. Default : 2. The operation is the same as for the Fo Gain.
	06	"Block_Error"	The block error rate is displayed.
	07	"PU._Clean"	When the PARAMETER knob is pressed, the pickup moves towards the outer edge of the disc. The pickup lens becomes visible through the slit in the CD mechanism plate. The lens can be cleaned using a cotton swab, etc. (Perform this operation with the top panel/cover removed and the disc ejected.)
	08	Error Code Check (Error Data)	During normal operation, the error code for the error that occurred is displayed. Turn the disc to select up to 10 sets of error data stored in the memory. (See the error code table for a description of the error codes.) • Press the PARAMETER knob to set the error data clear mode. ("Err Clear?" is displayed.) Press the PARAMETER knob again to clear all the error data.
	09	Total Running Time (Total Time)	The total operating time of the spindle motor is displayed. A total of 65,535 hours can be counted, in units of hours. NOTE: If the power is turned off after 59 minutes or less, that hour is not counted. • Press the PARAMETER knob to set the total time clear mode. ("Time Clear?" is displayed.) Press the PARAMETER knob again to clear the total time.

Power supply	Pin No.	Symbol	I/O		Description
Digital I/O = 3.3V Internal = 2.5V	105	CLOK	I		Serial data transfer clock input from CPU.
	106	V_{DD}	—	—	Internal digital power supply.
	107	SENS	O	1, 0	SENS output to CPU.
	108	SCLK	I		SENS serial data readout clock input.
	109	ATSK	I/O	1, 0	Anti-shock input/output.
	110	WFCK	O	1, 0	WFCK output.
	111	XUGF	O	1, 0	XUGF output. Output MNT0, RFCK, SOUT by command switch.
	112	XPCK	O	1, 0	XPCK output. Output MNT1, SOCK by command switch.
	113	GFS	O	1, 0	GFS output. Output MNT2, XROF, XOLT by command switch.
	114	C2PO	O	1, 0	C2PO output. Output MNT3, GTOP by command switch.
	115	SCOR	O	1, 0	High output when the subcode sync, S0 or S1, is detected.
	116	V_{DD}	—	—	Internal digital power supply.
	117	C4M	O	1, 0	4.2336MHz output. 1/4 frequency-division output of the V16M in CAV-W mode and variable pitch mode.
	118	WDCK	O	1, 0	Word clock output. f = 2Fs. GRSCOR output by command switch.
	119	COUT	I/O	1, 0	Track number count signal input/output.
	120	NC	—	—	

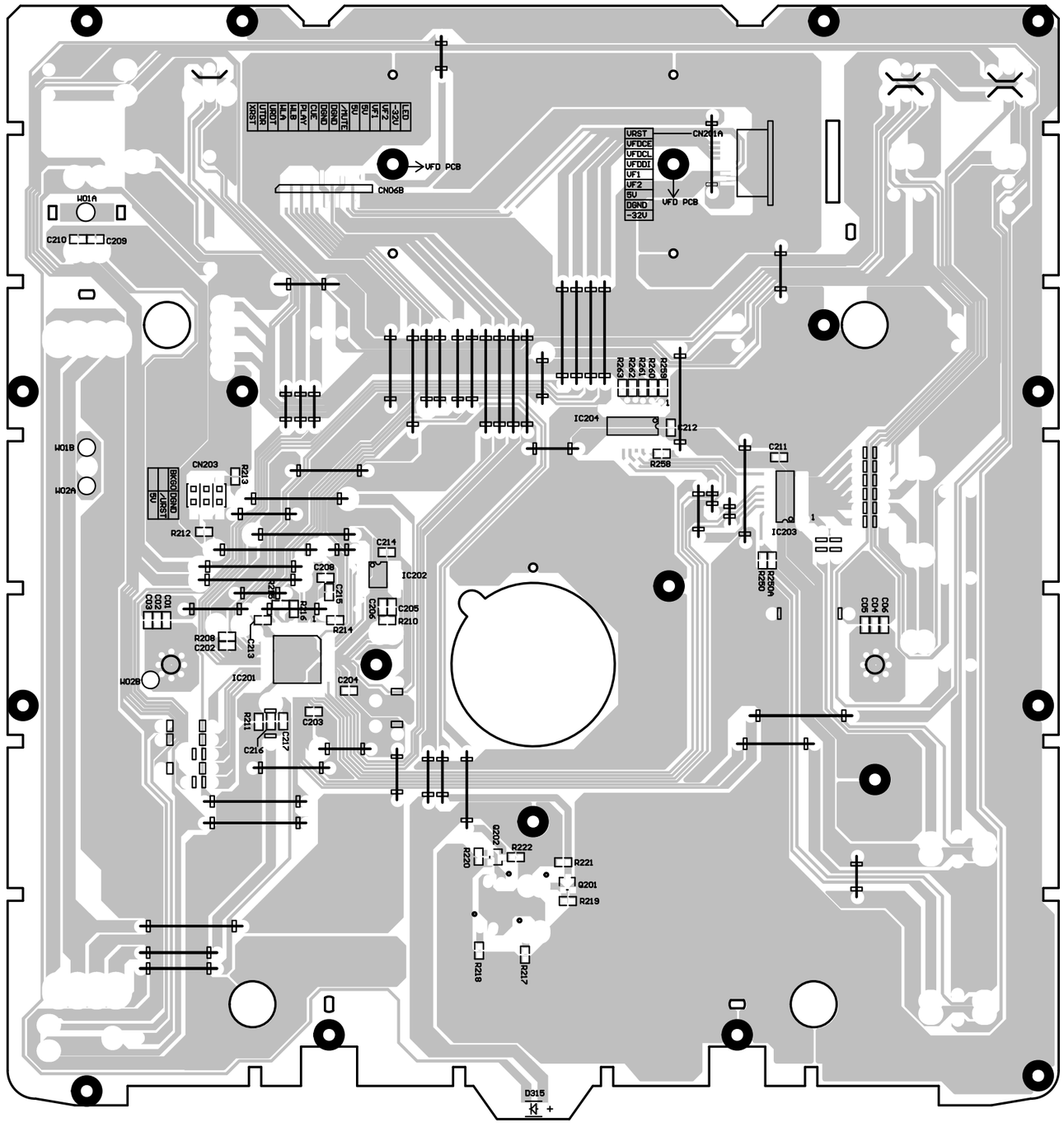
Notes)

- PCMD is a MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window released.)
- XUGF is the frame sync obtained from the EFM signal, and is negative pulse. It is the signal before sync protection.
- XPCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- The GFS signal goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136µs.
- C2PO represents the data error status.
- XROF is generated when the 32K RAM exceeds the ±28 frame jitter margin.
- C4M is a 4.2336MHz output that changes in CAV-W mode and variable pitch mode.
- FSTO is the 2/3 frequency-division output of the XTAI pin.
- SOUT is the serial data output inside the servo block.
- SOCK is the serial data readout clock output inside the servo block.
- XOLT is the serial data latch output inside the servo block.

BA6392FP (IC102)

144 QFP Pin Number	Name	Type	Description
62	EBUIN2/GPI37	I	audio interfaces EBU in 2
63	CORE-VDD		CORE-VDD
64	SCL2/GPIO3	I/O	IIS2 clock line
65	RSTI	I	Reset
66	TOUT1/ADOUT/GPO35	O	timer output 1 / AD output
67	LRCK2/GPIO44	O	audio interfaces EBU out 1
68	OE	O	Output Enable
69	SDA2/GPIO55	I/O	IIS2 data
70	SDATAO2/GPO41	O	audio interfaces serial data output 2
71	SCLK2/GPIO48	I/O	audio interfaces serial clock 2
72	PAD-GND		PAD-GND
73	TEST3	I	test
74	SDATAO1/GPIO25	I/O	audio interfaces serial data output 1
75	LRCK1	I/O	audio interfaces word clock 1
76	LRCK4/GPIO46	I/O	audio interfaces word clock 4
77	SDATAI4/GPI42	I	audio interfaces serial data in 4
78	SCLK1	I/O	audio interfaces serial clock 1
79	SCLK4/GPIO50	I/O	audio interfaces serial clock 4
80	TA/GPIO20	I/O	Transfer acknowledge
81	SDATAI1	I	audio interfaces serial data in 1
82	EBUIN1/GPI36	I	audio interfaces EBU in 1
83	PLLGRDVDD		PLLGRDVDD
84	PLLGRDGND		PLLGRDGND
85	PLLPADGND		PLLPADGND
86	PLLPADVDD		PLLPADVDD
87	PLLCOREGND		PLLCOREGND
88	PLLCOREVDD		PLLCOREVDD

CONTROL PCB UNIT (2/2)



FOIL SIDE

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