DUPLICATE

### WILEY, REIN & FIELDING

1776 K STREET, N W
WASHINGTON 0 C 20006

JENNIFER HINDIN (202) 719-4975 JHINDIN@WRF COM

October 6, 2000

FACSIMILE 202: 719-7049

Ms. Magalie Roman-Salas Secretary Federal Communications Commission 445 Twelfth Street, S.W. Washington, DC 20554 OCT 5 2000

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THE STANDARD LANGUES

Re: Sirius Satellite Radio Inc. and XM Radio Inc.

Dear Ms. Salas:

Enclosed please find a joint letter of Sirius Satellite Radio Inc. (formerly CD Radio Inc.) and XM Radio Inc. (formerly American Mobile Radio Corporation) confirming their compliance with the Federal Communications Commission's receiver design requirements for satellite digital audio radio service.

Please address all questions and responsive filings to this letter to:

Carl R. Frank Wiley, Rein & Fielding 1776 K Street, N.W. Washington, DC 2006 Lon C. Levin c/o Bruce Jacobs Shaw Pittman 2300 N. Street, N.W. Washington, DC 20037

Thank you.

Sincerely,

Jennifer Hindin

cc:

Ronald Repasi Rockie Patterson Rosalee Chiara XM Satellite Radio Inc. 1500 Eckington Place, NE Washington, DC 20002

Sirius Satellite Radio Inc. 1221 Avenue of the Americas New York, NY 10020

October 6, 2000

Ms. Magalie Roman Salas Secretary Federal Communications Commission 445 Twelfth Street, S.W. Washington, DC 20554

Re: Compliance with the Commission's Satellite DARS Interoperable

Receiver Design Requirements

Dear Ms. Salas:

Sirius Satellite Radio Inc. ("Sirius," formerly CD Radio Inc.) and XM Radio Inc. ("XM," formerly American Mobile Radio Corporation) jointly submit this letter to confirm their compliance with the Federal Communications Commission's ("FCC" or "Commission") receiver design requirements for satellite digital audio radio service ("satellite DARS" or "SDARS").

### I. SDARS INTEROPERABLE RECEIVER DESIGN REQUIREMENTS

In October 1997, the Commission granted two satellite DARS authorizations; one to Sirius and one to XM. Sirius' license contained the following interoperability condition:

IT IS FURTHER ORDERED that this authorization is subject to certification by [Sirius] that its final receiver design is interoperable with respect to [XM's] Satellite Digital Audio Radio Service system final receiver design.

Satellite CD Radio, Inc., Application for Authority to Construct, Launch and Operate Two Satellites in the Digital Audio Radio Service, 13 F.C.C. Rcd 7971, 7995 (Oct. 10, 1997) (Order and Authorization) ("Sirius Authorization").

XM's license contained virtually the same interoperability condition:

IT IS FURTHER ORDERED that this authorization is subject to certification by [XM] that its final user receiver design is interoperable with respect to [Sirius'] Satellite Digital Audio Radio Service system final design.<sup>2</sup>

Similarly, Section 25.144(a)(3)(ii) of the Commission's Rules requires each applicant for a satellite DARS system to:

Certify that its satellite DARS system includes a receiver that will permit end users to access all licensed satellite DARS systems that are operational or under construction.

In sum, the Commission's rules and the SDARS licenses require each licensee to certify that its system includes a receiver designed to access the two licensed SDARS systems. Sirius and XM each filed the requisite certification with the FCC after winning the satellite DARS auction<sup>3</sup> and updated these certifications with each subsequent amendment to their applications. As described below, this letter confirms Sirius' and XM's continued compliance with the FCC's receiver design requirements as they prepare to enter into service.

## II. SIRIUS AND XM SHALL SOON OFFER SATELLITE DARS AND MANUFACTURERS MAY INTEGRATE BOTH LICENSEE'S RECEIVERS IN A SINGLE UNIT

Sirius and XM have made great progress toward the development of their satellite DARS systems. At this time, both licensees plan to begin providing commercial satellite DARS by May 2001, nearly two and one half years in advance of the FCC's milestone for entry-into-service. Sirius has already launched its first two satellites and is scheduled to launch its third in November. XM's first satellite launch is scheduled for December.

American Mobile Radio Corporation, Application for Authority to Construct, Launch, and Operate Two Satellites in the Satellite Digital Audio Radio Service, 13 F.C.C. Rcd 8829, 8851 (Oct. 16, 1997) (Order and Authorization) ("XM Authorization").

Satellite CD Radio, Inc., Application to Launch and Operate a Digital Audio Radio Satellite Service in the 2320-2332.5 MHz Frequency Band, 49/50-DSS-P/L-90; 58/59-DSS-AMEND-90; 44/45-DSS-AMEND-92 (filed May 16, 1997) (Submission and Amendment); American Mobile Radio Corporation, For a System Authorization in the 2.3 GHz Satellite Digital Audio Radio Service, 26/27-DSS-LA-93; 10/11-DSS-P-93; 72 SAT-AMEND-97 (filed May 16, 1997) (Amendment).

Despite independent original development of their satellite DARS systems, Sirius and XM have introduced substantial technological overlap.<sup>4</sup> This technological coordination enables an interoperable receiver design. Simply put, a Sirius circuit board and an XM circuit board, each containing their own receiver, can be housed within a single casing. The result, from a consumer perspective, is an integrated two-receiver unit capable of accessing either licensee's satellite DARS programming.<sup>5</sup>

Sirius and XM, however, do not control the actual manufacture, distribution and sale of receivers. Both companies license their receiver technology to radio manufacturers and rely upon such manufacturers to produce satellite DARS receivers. They also depend upon automakers to gain access to the automobile production process for installation of the receivers and retailers to access the market for receivers installed in existing vehicles. In exchange for assuming the risk of introducing new SDARS radios, automakers initially required Sirius and XM to enter into exclusive agreements. XM and Sirius initially signed individually negotiated arrangements with U.S. automakers because of the demand for quick design, production, and introduction of satellite DARS receivers combined with a need for access to automobiles. Doing so enabled the licensees to focus on their primary business operations—the development and provision of satellite DARS programming to the public.

At the early stages of satellite DARS, radio and automakers may respond to uncertain market demand by initially offering radios capable of receiving transmissions from a single satellite DARS licensee. As previously indicated to the Commission, this is in part due to the higher cost and production time for two-receiver radios and the several year delay associated with the development of a unified standard for SDARS radios (discussed below). By responding to XM's and Sirius' fast-approaching entry-into-service dates with an introductory offering of single-receiver radios, automakers will enable consumers to benefit from SDARS quickly and

For example, both Sirius and XM will divide their respective bands in thirds, use Coded Orthogonal Frequency Division Modulation ("COFDM") for their terrestrial repeater modulations, and employ Time Division Modulation ("TDM") for their spacecraft-to-Earth downlinks. XM originally proposed to use FDMA modulation, while Sirius originally planned to employ CDMA.

Sirius and XM also have provided the manufacturers the means to produce interoperable receivers.

Sirius and XM have entered into agreements with several automakers for the installation of single-mode radios that radio manufacturers are currently developing. These agreements will enable consumers to begin receiving satellite DARS programming immediately upon Sirius' or XM's commencement of commercial service. Sirius' alliances are with DaimlerChrysler Corporation, Ford Motor Company, BMW of North America, Inc., Freightliner Corporation and Mercedes Benz USA, Inc. XM has agreements with General Motors Corporation and Freightliner Corporation. However, the licensees have agreed that all future agreements with automakers will require installation of interoperable radios.

economically. In contrast, if automakers offered only two-receiver or unified standard radios at the outset, it would either increase costs or delay services, neither of which would be in the public interest. XM and Sirius are optimistic, however, that manufacturers are recognizing the imminent demand for satellite DARS and will adopt the unified standard for satellite radios.

# III. SIRIUS AND XM WILL CONTINUE TO ADVANCE INTEROPERABILITY THROUGH THEIR EFFORTS TO POOL THEIR TECHNOLOGY TO DEVELOP A UNIFIED STANDARD FOR SATELLITE RADIO

On February 16, 2000, Sirius and XM signed an agreement to develop a unified standard for satellite radios to enable consumers to purchase economically one radio capable of receiving both Sirius' and XM's services. This unified standard will detail the technology to be employed by manufacturers of dual-mode radios. The technology for this unified standard will be jointly developed, funded and owned by the two companies. Sirius and XM expect to invest an aggregate of \$25 million to complete the technology development related to this unified standard. In addition, XM and Sirius will work together to promote adoption of the new standard by creating a service mark for satellite radio. As part of this agreement, Sirius and XM have licensed their intellectual property to one another, have agreed to license any non-core technology, including non-essential features of their systems, to one another at commercially reasonable rates and have resolved the previous patent litigation between them.

Given the current time required for chip design, development and fabrication, Sirius and XM anticipate that economic interoperable chips capable of receiving both services will be produced in volume in mid 2004. The receiver manufacturers will begin producing the new radios and marketing thereafter. The companies also have agreed to introduce interoperable radios in a phased approach. Prior to the commercial availability of an interoperable chipset, customers will be able to purchase an interim interoperable radio with a common wiring harness, head unit, and possibly antenna, and an interchangeable trunk mounted box containing the unique processing elements for either company's wave form. The companies anticipate that customers desiring both services could install two boxes.

Both companies are working with their automobile and radio manufacturing partners to integrate this new unified standard and, to insure the public realizes the benefits of interoperable radios, have agreed that future agreements with automakers and radio manufacturers will specify the unified satellite radio standard. Furthermore, Sirius and XM have agreed that future agreements with retail and automotive distribution partners will be on a non-exclusive basis. Therefore the two licensees have an economic incentive to deploy quickly interoperable receivers.

See Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band, 12 FCC Rcd 5754 (paras. 10-17) (recognizing the substantial public interest benefits of satellite DARS).

Through this collaborative effort to produce a unified standard for satellite radios. Sirius and XM will offer manufacturers the means to produce cheaper and smaller interoperable receivers. The FCC gave the satellite DARS licensees the freedom to integrate ever-advancing technological developments into their interoperable receiver design when it decided not to "mandate the use of one form of technology." Sirius and XM are pleased to notify the Commission that they are taking advantage of this opportunity so that consumers will pay less for smaller interoperable receivers in the future.

#### IV. CONCLUSION

By this letter, Sirius and XM reconfirm for the Commission their compliance with the interoperable receiver design condition in their respective licenses and Section 25.144(a)(3)(ii).

Sincerely,

Sirius Satellite Radio Inc.

Robert D. Briskman

Executive Vice President, Engineering

XM Radio Inc.

John R. Wormington

Senior Vice President, Engineering and Operations

Satellite DARS Licensing Order, 12 F.C.C. Rcd at 5797.